UNIVERSAL REGISTRATION DOCUMENT 2022

Including annual financial report

ENGIE

SUMMARY

Information disclosed in the Annual Financial Report is indicated in the contents by the pictogram AFR

Universal registration document 2022

INCLUDING ANNUAL FINANCIAL REPORT

This Universal Registration Document was filed on March 9, 2023 with the AMF (n° D.23-0082), in its capacity as competent authority under Regulation (EU) 2017/1129, without prior approval pursuant to Article 9 of the aforementioned regulation. The Universal Registration Document may be used for the purposes of a public offering of securities or admission of securities to trading on a regulated market if it is supplemented by a prospectus and, if applicable, a summary of any amendments to the Universal Registration Document. This package of documents is approved by the AMF in accordance with Regulation (EU) 2017/1129.

This is a translation into English of the Universal Registration Document original report issued in French and it is available on www.engie.com. This translation is provided solely for the convenience of English speaking readers. The annual financial report is a reproduction of the official version of the annual financial report which has been repared in ESEF (European Single Electronic Format) and is available also on www.engie.com.

Message from the Chairman of the Board of Directors & the Chief Executive Officer

What is your view of the transformations in the global energy landscape?

Jean-Pierre Clamadieu: The outbreak of war in Ukraine triggered an unprecedented situation on the energy markets with the gradual isolation of Russia which, as recently as 2021, was the leading energy exporter. Against this backdrop, securing supplies and stepping up the energy transition to boost its strategic independence have become top priorities for Europe. This energy transition is all the more urgent as climate change is becoming increasingly visible, through extreme weather and climate phenomena which underline the pressing need to reduce our greenhouse gas emissions. At the same time, with regard to the commitments made by States, no major progress was achieved during COP27.

Notwithstanding its emergency responses, it is vital for Europe to understand that a combination of high energy prices and the implementation in the United States of a highly attractive framework for investors, and in particular those committed to green technologies, could weaken its industrial heritage in the long term. I believe that a European response is essential, by leveraging tools as simple and powerful as those set out in the Inflation Reduction Act.

How has ENGIE addressed the crisis brought about by the war in Ukraine?

Catherine MacGregor: ENGIE has been at the forefront. We have successfully diversified and secured our gas supply source to meet our customers' needs. We have fulfilled our mission alongside other States, by maximizing the use of our gas networks, in terms of transport, distribution, and import and storage terminals. This allowed us to prepare for the winter with confidence.

We have also acted to support both our individual and corporate customers, alongside the public authorities. Our Group has been fully focused and I would like to thank the teams for their unwavering commitment.

At the same time, despite the crisis, we have continued to implement our strategic plan, with the completion of the sale of EQUANS in October marking a major milestone. ENGIE is now refocused on its core businesses and key markets and is in an excellent position to generate growth. We are fully committed to stepping up the energy transition, thanks to a more integrated, more digital and more industrial Group. This includes reinforcing our efforts in terms of health and safety at work, which is a top priority for ENGIE – this year we have launched a plan to rally the entire Group and its subcontractors around this crucial issue.

> "To achieve our ambition of becoming the leader in energy transition, ENGIE relies on all of its talent and expertise"

What consequences will this crisis have on the European energy mix?

Jean-Pierre Clamadieu: For the moment, Europe is ahead of the game in terms of energy transition and has set a target of achieving carbon neutrality by 2050. We cannot run the risk of taking a step backward. On the contrary, we must accelerate this transition to build an energy mix that is diversified, carbon-free, and as affordable as possible. To do so, we must develop renewable energies, nuclear power in the countries that so wish, yet also the flexible production and storage facilities required to ensure a balanced and reliable network. In addition, the use of molecules, essential for the decarbonization of heavy industry and transport, will be a key element. Initially, natural gas will be used, but biogas and hydrogen are in line to rapidly replace it. To ensure the acceleration of this transition, further improve the competitiveness of our industry and provide a level of consumer protection, the European electricity market must evolve: ENGIE has made recommendations in this regard.

How do you see the consequences of this crisis for ENGIE?

Catherine MacGregor: It demonstrates the relevance of our strategy in meeting these challenges. Our vision for a balanced energy mix requires stepping up the development of renewable electricity and gas, while also maximizing the use of existing networks. We have commissioned 3.9 GW of renewable capacity this year, in line with our target of 50 GW by 2025 and 80 GW by 2030. We have also achieved major successes in heating and cooling networks, green mobility and on-site energy production. And we are pursuing our objectives in developing the energies of the future with 4 GW of green hydrogen by 2030 and 10 TWh of biomethane

JEAN-PIERRE CLAMADIEU
Chairman of the Board of Directors

CATHERINE MACGREGOR
Chief Executive Officer

production annually, also by 2030. Green molecules, biomethane, hydrogen and hydrogen derivatives are all essential to the mix as they represent the only solution for decarbonizing heavy mobility and heavy industry and providing the necessary flexibility to the system.

Was 2022 also a year in which the Group consolidated its ESG commitments?

Jean-Pierre Clamadieu: Yes, the Group has of course maintained a significant level of ambition around this and the Board of Directors is particularly attentive to it. We confirm our adhesion to the 10 Principles of the United Nations Global Compact and to the 17 United Nations Sustainable Development Goals, as well as our 2030 ESG objectives. Moreover, we continue to progress along the path that will lead us to be Net Zero in 2045. During our last Shareholders' Meeting, you supported the Group's climate strategy with more than 96% of votes in favor of a resolution covering its key points.

I would add that the Group's main ESG objectives are part of the criteria upon which the calculation of the variable compensation of the Executive Committee and senior management is based.

Finally, the energy transition cannot be a success without ensuring that the benefits and costs of the transition are distributed fairly. We must pay close attention to our stakeholders, employees, territories, customers, and suppliers. This will be one of the objectives which will guide our efforts in 2023.

In order to meet these challenges, what is ENGIE's policy in terms of talent management?

Catherine MacGregor: To achieve our ambition of becoming the leader in the energy transition, ENGIE relies on all of its talent and expertise. We have continued to strive to strengthen the Group's ability to attract, recruit and retain talent in an increasingly competitive market. As of this year, the Group has already met its target of 40% women on its Executive Committee by 2025. We aim to achieve gender equality among managers by 2030.

More generally, diversity, equity and inclusion are priorities for ENGIE. These are the aims of our global policy that was launched in 2022 and which is focused on the following key objectives: equality in terms of gender, origins, LGBTQ+ status, abilities and age status.

Moreover, to further strengthen the commitment of our employees, we launched the Link 2022 employee shareholding plan in September across 21 countries. Almost one in three employees worldwide has subscribed to the plan and I am delighted with the level of employee support for ENGIE's strategy.

ENGIE IS A WORLD LEADER IN ENERGY TRANSITION

OUR PURPOSE

To accelerate the transition to a carbon-neutral economy

Enshrined in the Group's bylaws, "the purpose ("Raison d'être") of ENGIE is to act to accelerate the transition to a carbon-neutral economy, through low-energy solutions that are more respectful of the environment. This purpose brings together the company, its employees, customers and shareholders, and reconciles economic performance and positive impact on people and the planet. ENGIE's action is assessed in its entirety and over time."

ENGIE IN FIGURES[1]

96,000
employees

300,000 km
of gas and electricity transmission and distribution networks

5.3 GW
of nuclear electricity production installed capacity

38 GW
of installed renewable electricity production capacity (+4 GW in 2022)

60 GW
of thermal electricity production installed capacity

190,000
B2B customers

25 GW
of decentralized energy production installed capacity (heating, cooling, electricity, etc.)[2]

22.5 M
B2C energy supply and service contracts

€15bn
green bonds issued since 2014

FINANCIAL RESULTS 2022

€93.9bn
in revenues

€5.2bn
in net recurring income Group share from continuing operations

Economic net debt / EBITDA ratio
2,8 x

€9.0bn
in EBIT

€5.5bn
in growth CAPEX

Proposed 2022 dividend of
€1.40 per share

Rating
Strong investment grade

1) Rounded figures at December 31, 2022
2) At 100%.

EBIT WORLDWIDE

OUR BUSINESSES:

- RENEWABLES
- NETWORKS
- ENERGY SOLUTIONS
- FLEXGEN & RETAIL[3]
- NUCLEAR
- OTHERS (including GLOBAL ENERGY MANAGEMENT & SALES)

2030 CSR OBJECTIVES

43 Mt CO_2 eq.
of greenhouse gas emissions from power generation

Between 40 and 60%
of female managers within the Group (29.9% in 2022)

58%
renewable electricity production capacity

3) *Thermal & Supply.*
4) *Encompassing GEMS, GTT and holding compagnies and Corporate activities.*

Annual Financial Report, Management Report, Board of Directors' Report on corporate governance and other special Report

This Universal Registration Document includes:

- all the items of the Annual Financial Report mentioned in section I of Article L.451-1-2 of the French Monetary and Financial Code, and in Article 222-3 of the General Regulations of the Autorité des Marchés Financiers (AMF), the French Financial Markets Authority;
- all the mandatory information included in the Management Report of the Board of Directors to the Annual Shareholders' Meeting of April 26, 2023, as stipulated in Article L.225-100 of the French Commercial Code;
- all the information included in the Board of Directors' Report on corporate governance as provided for in Article L.225-37 of the French Commercial Code, and
- the special Report on free share allocations provided for in Article L.225-197-4 of the French Commercial Code.

A comparison table between the documents mentioned in these texts and the corresponding headings in this document can be found in Section 7.11 of this Universal Registration Document.

Incorporation by reference

In accordance with Article 19 of Regulation (EU) No. 2017/1129 of June 14, 2017, this Universal Registration Document incorporates by reference the following information, to which the reader should refer:

- for the ENGIE fiscal year ended December 31, 2021: the Management Report, consolidated financial statements prepared according to IFRS and the related Statutory Auditors' report appearing on pages 203 to 222 and 223 to 346 of the Universal Registration Document filed with the AMF on March 9, 2022 under number D. 22-0079;
- for the ENGIE fiscal year ended December 31, 2020: the Management Report, consolidated financial statements prepared according to IFRS and the related Statutory Auditors' report appearing on pages 197 to 220 and 221 to 333 of the Universal Registration Document filed with the AMF on March 17, 2021 under number D. 21–0142;

The information included in these documents, along with the information mentioned above, is replaced or updated by the information included in this Universal Registration Document. These documents are available under the conditions described in Section 7.4 "Documents available to the public" of this Universal Registration Document.

Forward-looking information and market data

This Universal Registration Document contains forward-looking information, particularly in Section 1.1 "History and organization," Section 1.6 "Description of the Group's activities," and Section 6.1.1.1.2 "2023-2025 outlook and guidance." These information are not historical data and therefore should not be construed as a guarantee that the events and data mentioned will occur or that the targets will be achieved, since these are by nature subject to unpredictable events and external factors, such especially as those described in Chapter 2 "Risk factors and control."

Unless otherwise stated, the market data included in this Universal Registration Document comes from internal estimates by ENGIE based on publicly available data.

Note

In this Universal Registration Document, the terms "ENGIE," the "Company," the "Issuer," and the "Enterprise" refer to public limited company ENGIE. The term "Group" refers to ENGIE and its subsidiaries.

A conversion table, a list of units of measurement, abbreviations and acronyms, a glossary of the most frequently used technical terms and a thematic index are featured in Sections 7.6, 7.7, 7.8, 7.9 and 7.10 of this Universal Registration Document.

Copies of this Universal Registration Document are available at no cost on the Company website (www.engie.com), on the website of the AMF (www.amf-france.org), as well as from ENGIE, 1 place Samuel de Champlain – 92400 Courbevoie (France).

1

PRESENTATION OF THE GROUP

1.1 HISTORY AND ORGANIZATION

1.1.1 PRESENTATION

"The purpose ("Raison d'être") of ENGIE is to act to accelerate the transition to a carbon-neutral economy, through low-energy solutions that are more respectful of the environment. This purpose brings together the company, its employees, customers and shareholders and reconciles economic performance and positive impact on people and the planet. ENGIE's action is assessed in its entirety and over time."

ENGIE is a European and world leader[1] in renewable energy production, centralized and decentralized energy networks and associated services, the production of low-carbon electricity and the supply of gas and electricity:

renewable energy production: ENGIE is the second-largest hydropower operator, the number one wind and solar[2] energy company in France and the second-largest developer in Europe. It is one of the global leaders[3] in long-term contracts for companies (corporate PPAs) with over 2 GW signed in 2022, the largest independent hydropower producer in Brazil[1] and a pioneer in floating offshore wind (Ocean Winds);

- **centralized energy networks**: the Group is the leading gas network operator in Europe[1], particularly through independent subsidiaries, with a portfolio that includes transmission networks, distribution networks, and LNG storage and terminals. It is also a major player in Latin America, particularly Mexico, Brazil and Chile, operating gas and electricity transmission networks;
- **decentralized energy networks and energy services:** ENGIE is one of the global leaders[1] which supports cities, local authorities, industrial and service sector customers in the decarbonization of their energy networks. Energy Solutions' activities are divided into three main categories: local energy networks (notably heating and cooling networks, low-carbon mobility), on-site energy production (heating, cooling, electricity production using solar power, energy storage, etc.) and energy performance and management services (consulting, engineering, energy performance services). The Group relies on its key areas of expertise (renewable and low-carbon electricity production, centralized and decentralized networks, energy performance and management services, the supply of gas and electricity) to offer its customers competitive, high value-added solutions that enable them to achieve their carbon-neutrality targets. Thanks to these skills, it can act in different areas to decarbonize power production equipment, set up high-performance urban networks, and offer associated energy and decarbonization efficiency services;
- **flexible electricity production and gas and electricity supply**: the Group is one of the leading power producers in Europe, notably supplying solutions that provide flexibility to the network via its gas-fired power plants. Moreover it is the benchmark operator in nuclear energy in Belgium. ENGIE provides gas and electricity to end-customers worldwide, with more than 22 million contracts. Nearly half of its customers are located outside France. In Europe, ENGIE is one of the top gas sellers and importers. In France, ENGIE is the historic leader of gas marketing and the second-largest producer and supplier of electricity. In Belgium, ENGIE, through its subsidiary Electrabel, is the leading producer and supplier of electricity and supplier of natural gas.

The Group's website is: www.engie.com. Not all the information available on this website is included in this Universal Registration Document.

1.1.2 HISTORY AND EVOLUTION OF THE COMPANY

The Company is the result of the merger of SUEZ into Gaz de France, following the decisions of the Combined General Shareholders' Meetings of Gaz de France and SUEZ of July 16, 2008. The merger took effect on July 22, 2008.

Gaz de France was initially incorporated in 1946 as an EPIC (French public industrial and commercial enterprise). It became a limited liability company with a 99-year term under Law 2004-803 of August 9, 2004, on the public service of electricity and gas and electricity and gas companies (amending Law 46-628 of April 8, 1946).

On July 7, 2005, Gaz de France publicly floated its shares on the stock market. The Company's shares were first listed on July 7, 2005.

Law 2004-803 of August 9, 2004, as amended by Law 2006-1537 of December 7, 2006, governing the energy sector and Decree 2007-1784 of December 19, 2007, authorized the transfer of the Company from the public to the private sector. On July 22, 2008, Gaz de France absorbed SUEZ in a merger which entailed transferring the majority of the Company's share capital to the private sector. The new Company took the name GDF SUEZ.

SUEZ itself was the result of the merger in 1997 of Compagnie de Suez and Lyonnaise des Eaux. SUEZ became an international industrial and services group whose objective was to meet essential requirements in electricity, gas, energy and industry services, water and waste management.

The deregulation of European energy markets in the early 1990s accelerated the international development of both Gaz de France and SUEZ, which progressively expanded their activities beyond their respective traditional markets, both in Europe and internationally.

(1) Competitive positions established on the basis of specialist work within the Group, carried out using available information published by stakeholders or entities providing external analysis (Bloomberg and Global Data). They are established within the scope of the Group as at 12/31/2022.

(2) Source BNEF.

(3) Ranked number 2 in the world based on corporate PPA sales volumes in 2021 according to the Bloomberg "Energy Market Outlook" report in the first half of 2022.

Thus, on February 3, 2011, GDF SUEZ completed a merger with International Power. In 2012, it reaffirmed its strategy to become a leading player on the global energy market, finalizing the purchase of shares held by the minority shareholders of International Power on June 29.

On July 29, 2015, the Extraordinary General Shareholders' Meeting approved a change in the Company name, and adopted "ENGIE" as its new legal name.

The SUEZ Environnement Company shareholders' agreement expired on July 22, 2013, and was not renewed. The cooperation and shared functions agreement and the financing agreement between the Company and SUEZ Environnement Company have also come to an end. The Company then used the equity method to consolidate SUEZ Environnement Company's activities in its financial statements, rather than full consolidation.

In early March 2016, the two companies signed an agreement providing for the contribution by ENGIE to SUEZ of all of the share capital of SUEZ IP, which owned all intellectual property rights related to the SUEZ brand. On October 5, 2020, ENGIE sold the majority of its stake in SUEZ, i.e. 29.9% of the capital, to Véolia. On January 18, 2022, ENGIE contributed its remaining 1.8% stake in SUEZ to the public tender offer initiated by the VEOLIA Group.

On May 14, 2020, the shareholders' meeting approved the introduction to the bylaws of the Company's purpose: "*The purpose ("Raison d'être") of ENGIE is to act to accelerate the transition to a carbon-neutral economy, through low-energy solutions that are more respectful of the environment. This purpose brings together the company, its employees, customers and shareholders and reconciles economic performance and positive impact on people and the planet. ENGIE's action is assessed in its entirety and over time.*"

On October 4, 2022, ENGIE completed the disposal to the Bouygues group of EQUANS, the operating entity in charge of multi-technical services, which represented a major step in the implementation of the Group's strategic plan.

1.1.3 ORGANIZATION OF THE GROUP

At the end of 2022, ENGIE comprised four Global Business Units (GBU), two operating entities and a group of pooled support and operational functions at both regional and Group level (see Section 1.6 "Description of the Group's activities"). One last group contains the holding company and Corporate activities, mainly including the entities responsible for the Group's centralized financing.

The Group is thus organized around the following components:

- **the Group's four key business lines are organized into Global Business Units**, responsible for their results at the global level and the implementation of the strategy within their business segments: GBU Renewables, GBU Energy Solutions, GBU Networks and GBU FlexGen & Retail. Activities related to nuclear and energy management have been organized into dedicated operating entities (respectively, Nuclear and Global Energy Management & Sales, separate from the GBU);
- **the Group's functional departments guide the support fonctions, in support of General Management** and in coordination with the GBU, draw up and roll out Group policies, and guide financial and non-financial performance. The functional departments are organized into four areas;
- **the support functions are organized by geographic area (regional hubs) and at the individual country level.** They have a key role in terms of support for the GBU's activities and the development of synergies. All of the regional hubs are managed at the Group level by a specific Department named Transformation & Geographies.

The structure works on the principle of a matrix between the business line entities and the functional departments, structured into different geographic areas.

1.1.3.1 Description of the Global Business Units and operating entities

The four GBU are responsible for their results within their respective business segments, at the Group level.

They are, therefore, responsible, within their respective scopes and the framework established by the General Management[(1)] for:

- development strategy definition, decisions and arbitrage related to investments;
- industrial assets management, operational excellence, safety and security;
- performance processes, resources, expertise and the roll-out of digital tools.

The operating activities in the countries report to the corresponding GBU.

The different GBU are positioned as follows:

- GBU Renewables develops and operates electricity production assets based on solar power, onshore and offshore wind and hydroelectric power;
- GBU Networks delivers the energy in particular through independent subsidiaries. In order to do this, it develops and operates gas transmission and distribution networks, storage and LNG terminals, as well as electricity transmission lines. It is also responsible for biomethane production;
- GBU Energy Solutions develops decentralized, low-carbon infrastructures (heating and cooling networks, decentralized low-carbon energy supply, mobility, etc.), and associated energy efficiency services;

(1) Within the limits of the provisions of the Energy Code and the regulatory constraints applicable to entities forming part of GBU Networks.

- GBU FlexGen & Retail produces and sells energy. It produces electricity at thermal power plants and supplies gas and electricity to individual customers. It also develops hydrogen production capacity.

GBU Renewables and GBU FlexGen & Retail are both developing battery storage solutions to supplement their production assets.

The Nuclear and GEMS operating entities have similar responsibilities to the GBU in their respective business segments. They are positioned as follows:

- the Nuclear operating entity is dedicated to the operational management of nuclear production units in Belgium and the rights held in the French power plants;
- the GEMS operating entity is responsible, at the global level, for the supply of energy and the management of risks and optimization of assets on the markets. It sells energy to companies and offers energy management services and solutions to support the decarbonization of the Group and its customers.

Each GBU and operating entity is overseen by an Executive Vice President, who is a member of the Executive Committee. These GBU and entities are therefore in charge, under a single authority, of managing the entire business at the global level.

1.1.3.2 Description of support functions and geographical structure

The support functions contribute to the Group's performance, by supporting the performance of the GBU and the operating entities. They are managed by the corporate Group's functional departments and are structured regionally and nationally.

The Group's functional departments are responsible, within their respective areas, for drawing up and rolling out Group policies and guiding performance. They are structured into four areas:

- Corporate Secretariat, Strategy, Research & Innovation, and Communication;
- Finance, Corporate Social Responsibility, and procurement;
- Digital and Information Systems; and
- Human Resources.

Stronger and structured coordination at the Group level ensures the operational efficiency of the processes and the implementation of the policies drawn up by the Group.

Each of these areas is overseen by an Executive Vice President, who is a member of the Executive Committee.

At the geographical level, the support functions are pooled in four regional hubs: Europe (excluding France); North America; South America; and Asia, the Middle East and Africa. The aim of the regional hubs is to support the activity of the GBU in the region, overseeing the coordination of all of the support functions and supporting transformation in the transition phase.

In the countries, the country managers are responsible for the support functions and for relations with local stakeholders.

An Executive Vice President, who is a member of the Executive Committee, is responsible for supervising the geographic areas and the Group's transformation.

In addition to the management of the Group's geographical platform's regional hubs, the Transformation & Geographies Department is also responsible for:

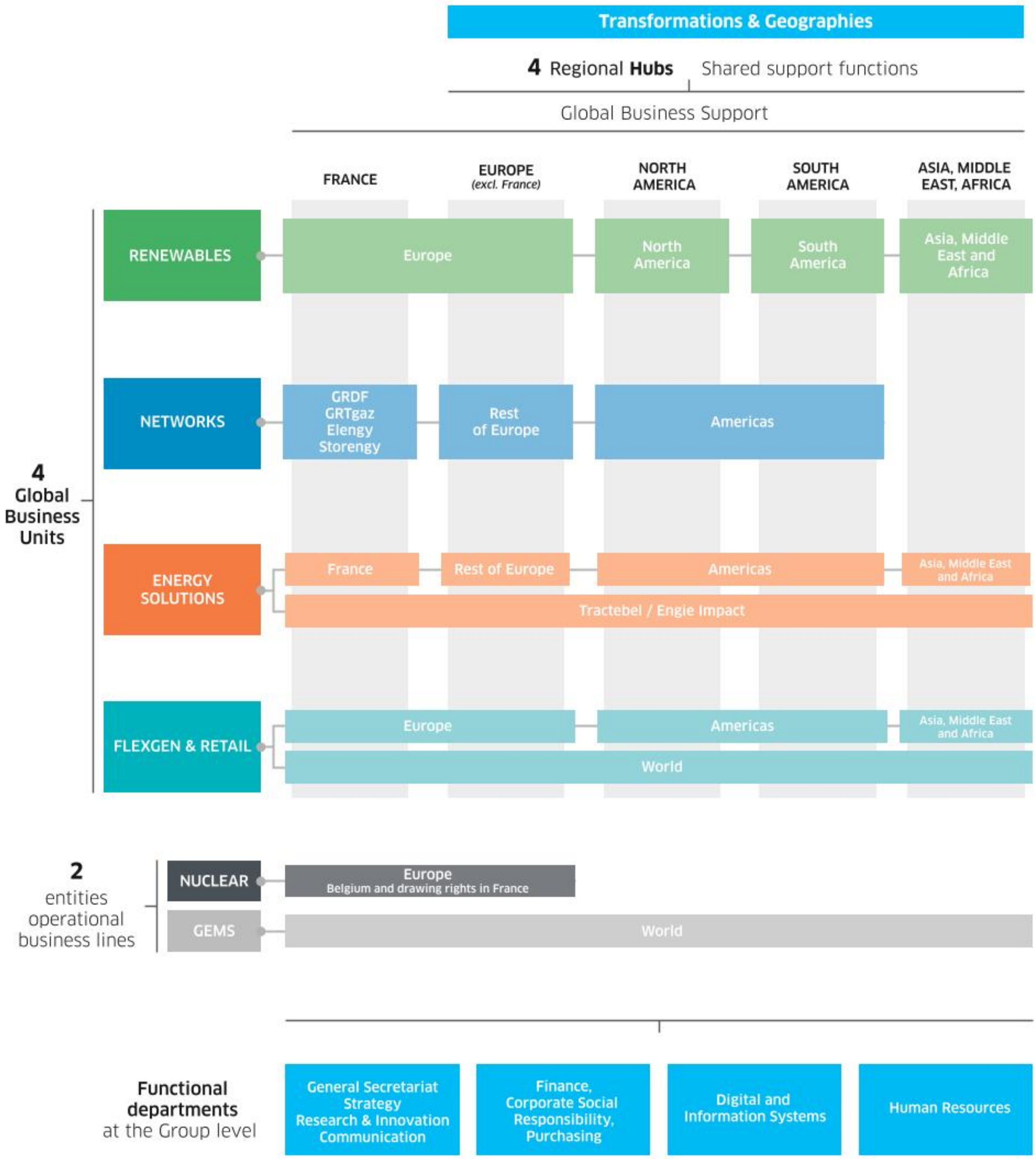
- supervising and managing the Group's transformation projects;
- supervising and supporting the Group's industrial projects;
- all activities relating to the health and safety of individuals (employees and subcontractors) and industrial assets in terms of objectives set by the Group in this area (No Life at Risk – No Mind at Risk – No Asset at Risk).

The Company operates its own business. The number of subsidiaries directly or indirectly controlled by the Company was 2,255 at the end of 2022. In addition to the lists provided in Section 6.2.2 "Notes to the consolidated financial statements" – Note 2, "Main subsidiaries at December 31, 2022" and Section 6.4.2 "Notes to the parent company financial statements" – Note 4.4, "Subsidiaries and affiliates," a list of subsidiaries can be found on the Group's website (https://www.engie.com/en/finance-area, regulated information section).

The presentation of the Company's activities and the strategic economic assets of its main subsidiaries as well as their geographical location are presented in Section 1.6 "Description of the Group's activities."

SIMPLIFIED ORGANIZATION FOCUSED ON STRATEGY IMPLEMENTATION

Activities structured around four business lines



Pooling of support functions and operationnal management

1.2 STRATEGY AND OBJECTIVES

In 2022, against a backdrop of the unprecedented energy crisis in Europe, the Group fulfilled its responsibilities - notably in terms of supply security and the operation of its networks and power generation resources - while continuing to implement the strategic road map drawn up in May 2021. This road map allows it to focus on becoming a more integrated industrial Group and the leader of the energy transition.

1.2.1 A STRATEGIC ROAD MAP THAT IS WELL ON ITS WAY TO BEING IMPLEMENTED

In 2022, the Group continued to strengthen its integrated industrial dimension, based on GBU and business line entities, as well the strategic refocusing which began in 2020, in line with the May 2021 strategic road map.

Following, notably, the disposals in 2022 of EQUANS (multi-technical services) to Bouygues and of ENDEL (industrial maintenance and energy services) to Altrad, ENGIE is now focusing its development on renewable energy (electricity and gas) and decentralized networks to decarbonize our customers. The Group's aim was also to reduce its geographical footprint to further improve its focus and strengthen its presence in key countries. The objective set was to achieve less than 30 geographic areas in 2023. An additional four countries exited the Group's scope in 2022 (exit of 18 countries in 2021) other than the exit from seven countries achieved through the disposal of EQUANS. This took the number of countries in which the Group is present to 31 at end-2022. The financial resources released by these disposals enable an ambitious investment program to be established to accelerate the Group's target activities.

1.2.2 AN EFFECTIVE COMMITMENT TO THE ENERGY TRANSITION

In line with the purpose adopted in 2020, the Group aims to be a leader in the carbon-neutral energy transition. Driven by the acceleration in decarbonization and demand for low-carbon energy, ENGIE is very well positioned to step up and meet the demand of citizens, politicians and industrial players. Being able to mobilize additional energy drivers to serve the transition, the Group has core competencies throughout the value chain, from production, transmission, distribution, and service through to the end-consumer. Its integrated model, strong positions in renewable energy, and both centralized and decentralized networks, allow it to generate synergies that are essential for the roll-out of ambitious decarbonization programs to its customers. It can also mobilize its cross-functional capacity in financial structuring, project design and management, as well as its global digital platforms, to benefit the two drivers of the transition: a greener energy supply and more efficient and smarter energy usage.

ENGIE has thus set its carbon-neutrality target for 2045 on scopes 1, 2 and 3[(1)]. It aims to halve the carbon-intensity of the energy it produces between 2017 and 2030, and to avoid the emission of 45 million tons of CO_2 by its customers. Carbon budgets have been assigned to each Group activity. Exit from coal is scheduled for 2025 in Europe and 2027 worldwide, with the emphasis on closing and reconverting power plants and helping industry actors with their transition plans. The performance share plans allocated primarily to executives are, in part, conditional upon achieving carbon targets.

In addition to energy efficiency and saving measures, and the electrification of a certain number of uses, the success of the energy transition depends on the development of renewable gases (low-carbon hydrogen, biomethane, synthetic methane) and heating, which are essential for industrial uses and heavy mobility in particular. In terms of green gases, ENGIE has expertise that enables it to develop positions throughout the entire value chain: production, networks, mobility ecosystems and purchase and sale. By 2030, the Group aims to commission 4 GW of hydrogen production capacity and produce 10 TWh per year of biomethane production. It will be able to make use of synergies between its activities and the support of French and European investment plans.

1.2.3 STRATEGIC OBJECTIVES STRUCTURED BY BUSINESS LINE

The Group's commitment to the energy transition is structured through strategic objectives for each business line, which focus on operational excellence and industrial know-how:

- **Renewables: to develop green power generation resources within an integrated system**; the acceleration of investments in renewable energy has resulted in a medium-term target of an average addition of 4 GW between 2022 and 2025 and an average of 6 GW per year between 2026 and 2030, in order to become a leader on the renewables market. Investments in onshore wind, solar power and offshore wind will continue. ENGIE is a major player in hydropower generation, particularly in Brazil and France and now also in Portugal. The development of these capacities have synergies with the Group's BtoB energy supply activities, via PPAs.
- **Networks: to invest in high-performance networks for the energy transition, supporting balanced, carbon neutral energy mixes;** the high-performance operation of the French gas networks through independent subsidiaries and their adaptation to the development of biomethane and hydrogen will be prioritized; at the global level heavy investment in the gas and electricity networks should be expected in the coming years. This responds to the challenges of access to energy in emerging countries and everywhere else, and of adaptation to the injection and delivery of renewable energy to implement the energy transition. In addition, the development of gas networks is supported wherever this allows for action to decarbonize the energy system. Production of green gas (biomethane) is a priority.

(1) Scopes 1, 2, and 3 cover all of the Group's direct and indirect greenhouse gas emissions.

- **Customer decarbonization: to propose large-scale integrated decarbonization solutions based on long-term contracts**. The Group is focusing on the development of decentralized energy networks (district heating and cooling networks, on-site customer utilities production, decentralized solar, urban networks and low-carbon mobility) and on associated services. A commissioning target of additional 8 GW between 2020 and 2025 has been set. ENGIE offers its customers integrated solutions to meet their decarbonization needs, based on long-term contracts, that provide visibility and resilience as well as attractive growth potential.
- **FlexGen & Retail: to develop and operate activities with low carbon content and support the transition of current electricity systems**; besides investments in renewables, the Group is pursuing the targeted development of thermal capacity, in line with the established carbon reduction trajectory. According to the specific needs of each country in which the Group operates, it fulfills the need for flexibility of the electricity system and supports countries where coal is a significant element of the energy mix with the first stage of decarbonization. The withdrawal of the coal capacity has been confirmed for 2027, and the decarbonization of gas-fired power plant using biomethane and hydrogen is in development. Faced with growing demand for the supplies of carbon-free energy and management of consumption, new offers are being developed for individual customers. For business customers, green energy offers are also proposed, along with long-term contracts and energy efficiency commitments. The Group is also developing complementary activities, such as desalination, electricity storage (by batteries or pumped storage) and is interested in carbon capture and storage. Production of green gas (hydrogen) is also a priority.
- **Energy management and sale to key industrial accounts**: management of the energy markets remains a strong point of the Group and is based on recognized financial and market expertise and now fully encompasses renewable energy.
- **Nuclear: with a view to halting the extension of the units by 2025, in accordance with Belgian law**, the Group has been supporting the transition of the Belgian power system, while complying with the highest nuclear safety standards. It is also taking part in discussions with the government on the possible extension of two units.

1.2.4 INTERNAL PERFORMANCE

Improving internal performance is a key area of the new strategic road map, in order to support the Group's growth in the long term.

A plan has thus been established for the period 2021-2023, with a savings target of €600 million. Targets have been assigned to the GBU, support functions and Regional hubs. This plan is based on various drivers: (i) operational excellence, (ii) the turnaround of loss-making entities and a reduction in overheads. At the end of 2022, ENGIE had generated cumulative savings of around €500 million and should be in a position to achieve the plan's objective by the end of 2023.

A continuous improvement leading to an additional net contribution to EBIT annually of around €0.2 million is provided for under the 2023-2025 plan.

ENGIE's success relies on the women and men who make up the Group and represent its biggest performance driver. The Group must be able to rely at all times on skills tailored to its changing needs. Accordingly, the human resources function plays a major role:

- anticipating and identifying the needs of the GBU and businesses and the emerging trends; developing and adapting expertise for our new business solutions and challenges;
- strengthening the Group's ability to attract, recruit and retain the talents of today for tomorrow in an increasingly competitive market.

1.3 RESEARCH, TECHNOLOGY AND INNOVATION

1.3.1 DESCRIPTION AND ORGANIZATION

Being a major player in the energy transition means understanding and mastering new trends, technologies and business models. Supporting ENGIE's ambition, Research & Innovation (R&I) aims at developing and integrating innovative and differentiating tools and solutions to keep the Group's leading position. Thanks to its expertise, ENGIE has the ability to identify, experiment with and roll out the solutions that will make the energy transition possible. Its work is carried out in areas in line with the Group's strategy, chosen in close collaboration with the operating entities, simultaneously addresses all time scales, coordinates various means of intervention and combines internal expertise, partnerships and collaborations.

A decision was taken to introduce a new streamlined R&I on January 1, 2022, to obtain a competitive advantage on strategic issues for the Group. In this context, six additional business models were defined and consolidated under single control within ENGIE R&I:

- **Research Programs**: oversee research programs with a medium-term outlook;
- **Labs** (CRIGEN and Cylergie (France), Laborelec (Belgium), Lab Singapore (Singapore)): provide the expertise needed to implement research programs and provide support services to GBU;
- **Incubation**: incorporate innovation in the Group's strategic activities and incubate new opportunities;
- **ENGIE Ventures**: promote "outside-in" innovation through minority investments in start-ups;
- **Ecosystems & Expertises**: develop a culture of innovation within the Group, reconciliation of external ecosystems (start-ups) and ensure the development of R&I talent;
- **Management & Performance**: set the pace for the definition and implementation of the R&I strategy and guide the financial and operational performance of R&I.

At end-2022, ENGIE's R&I teams included more than 600 employees.

The alignment of R&I priorities with the Group's strategic objectives and growth targets is ensured by specific governance, based on ongoing dialog between the entities and the GBU. R&I priorities for 2022 notably include renewable energy systems (solar power, onshore and offshore wind), green gases production and use (hydrogen, biomethane) or the development of decentralized energy networks (district heating & cooling, decentralized solar power, low carbon emission cities and mobility).

1.3.2 RESEARCH ACTIVITIES

Research activities are consolidated within the Labs and overseen by the "Research Programs" entity.

1.3.2.1 Description

Research teams work in CRIGEN, Cylergie, Laborelec and Lab Singapore's Labs on all aspects of detecting, testing and developing new technologies, thus helping the performance and differentiation of the Group's various business lines. Research centers and teams can also provide the necessary expertise and technical support for key operations in business entities and innovation projects (for instance, EU Innovation Fund, Green Deal projects and majors tenders). They provide a medium- and long-term technological vision which informs the Group's decisions.

In 2022, Group technological Research and Development expenditure amounted to €135 million.

Three inaugurations for Research can be mentioned for 2022:

- the H2 Lab at CRIGEN;
- the new bio-LNG test bench in Montoir-de-Bretagne (France);
- the agrivoltaic pilot in Laqueuille (France).

1.3.2.2 Scientific and technological partnerships

ENGIE R&I carries out collaborative work with external, industrial and academic partners. This exchange of expertise allows ENGIE to bring new technologies and customer offers to maturity, as well as to explore and elaborate more long-term subjects. ENGIE R&I thus works with external partners, universities, SMEs and start-ups, on a portfolio of around 100 collaborative projects. Among these partners, ENGIE R&I collaborates in particular with NREL, the CEA and EnergyVille.

ENGIE R&I takes part in European research projects, as well as in projects co-funded by French and Belgian public bodies. For example, ENGIE partners more than 60 research projects in the European Commission's HORIZON program. The Group is a member of several academic chairs co-funded by the ANR, of the Energy and Prosperity chair with the Institut Louis Bachelier, École Polytechnique, ENSAE and the Institut Polytechnique de Paris' Energy4Climate (E4C) Interdisciplinary Center. ENGIE has also entered a partnership with the Singapore Institute of Technology (SIT).

Since 2009, ENGIE is supported by a scientific committee which brings together nine world-renowned scientists covering the major disciplines relating to the Group's activities.

1.3.3 INNOVATION ACTIVITIES

Innovation activities are consolidates within Incubation, ENGIE Ventures, and Ecosystems & Expertise.

1.3.3.1 Incubation

Incubation has defined a customer/needs-based approach to develop new offers and businesses, in close cooperation with the GBU, to stand out in their current and future markets. New growth drivers have been created via two areas:

- an Acceleration studio: where new service offers are designed, tested and prototyped, ensuring customer orientation and sales impact for ENGIE;
- a start-up studio: where start-ups are created to serve new market segments, open up new business opportunities, or test new innovative business models and attractive solutions, while limiting exposure to risk.

1.3.3.2 Engie Ventures

Since its creation in 2014, ENGIE Ventures has invested more than €200 million in around fifty start-ups. In 2022, investments in 13 innovative start-ups (including five new). These investments were in priority growth sectors for the Group such as technological tools for e-fuels, hydrogen production, the streamlining of cooling networks, but also software for the streamlining of renewable energy production, to generate electricity flexibility, as well as for digital twins. ENGIE Ventures also invested in a replicable green steel production project based on green hydrogen. Around 200 relevant start-ups were identified in 2022.

The main objective of these investments is to identify emerging technologies and business models in ENGIE's business lines, and provide priority access to these innovations through selective partnerships, in the pursuit of a balanced return on investment.

ENGIE Ventures' direct investment portfolio currently includes 25 active start-ups, which are listed on www.engieventures.com. The strategy of investing in other external funds has no longer been a priority since 2019.

1.3.3.3 Ecosystems & Expertises

The role of Ecosystems & Expertises is to develop a culture of innovation within the Group and ensure the development of R&I talent. In this regard, the Department leads a community of Group innovators and promotes the emergence of internal innovation. Ecosystems & Expertises also promotes the development of innovation through partnerships such as Innoenergy, the European Institute of Innovation and Technologies, which facilitates contact with targeted start-ups that can enhance the Group's offering or solve problems.

Two key events can be mentioned in relation to 2022:

- The Innovation Awards, which allowed 1,500 employees to present innovations developed during the year to boost the value creation of GBU, and also on subjects including health and safety and cybersecurity;
- The VivaTech technology conference in Paris in June 2022 was an opportunity for the Group to showcase its innovation ecosystem (internal and start-ups).

1.4 FINANCIAL PERFORMANCE

1.4.1 2022 HIGHLIGHTS

Acceleration in Renewables, infrastructures and renewable gases

ENGIE added 3.9 GW of renewable capacity in 2022, including 1.8 GW of onshore wind, 1.2 GW of solar and 1.0 GW of offshore wind, taking total renewable installed capacity at 100 % to c. 38 GW at the end of 2022. Geographically, the 3.9 GW additions include 2.6 GW in Europe (mainly in UK, Spain and France), 0.8 GW in US and 0.4 GW in Latin America. The Group is therefore on track with its target to add 4 GW on average per year of renewable capacity until 2025. This ambition is fuelled by a growing pipeline that totalled 80 GW at end of December 2022, up 14 GW compared to December 2021.

Ocean Winds, ENGIE's joint venture with EDPR dedicated to offshore wind continues to grow strongly. In December, Ocean Winds was awarded a lease area for a floating offshore wind site of 2 GW capacity in California.

In 2022, the Group continued supporting its customers in their decarbonisation efforts by signing a total amount of 2.0 GW of green Power Purchase Agreements (PPAs).

Energy Solutions has achieved major wins in District Heating and Cooling (DHC) and sustainable mobility in the 2022, including 12,000 electric vehicle charging points mainly in Belgium and Singapore. In 2022, c. 1 GW net installed capacity has been added in distributed energy infrastructures.

In Brazil, the internalization of TAG O&M activities has been successfully completed and the two power transmission lines, Gralha Azul and Novo Estado, are now close to full completion.

ENGIE continues to unlock the potential of renewable gases: 492 biomethane production units, with a yearly production capacity of up to 8.3 TWh are connected to ENGIE's networks in France. On hydrogen, the European Commission has approved up to €5 billion in public support. ENGIE has submitted five projects across Belgium, France, the Netherlands and Spain, and all of them have been selected.

Simplifying and refocusing

The disposal plan financial target of at least €11 billion by the end of 2023 has been achieved with €11.0 billion already closed or signed, with EQUANS being the main contributor.

On geographic rationalization, the Group will be operating in 31 countries, down from 70 in 2018, once closing of the signed deals is effective. ENGIE exited seven countries as part of the EQUANS disposal and targets to be in less than 30 countries by the end of 2023.

Disciplined capital allocation

In 2022, total Capex amounted to €7.9 billion. Growth Capex reached €5.5 billion, of which 58% dedicated to Renewables, 20% to Networks and 13% to Energy Solutions, thus fully aligned with ENGIE's strategic roadmap.

Performance plan delivering

In a context of rising inflation, ENGIE maintained its momentum on cost efficiency and is on track to achieve its 3-year target, with a net EBIT contribution in 2022 of €0.4 billion.

Update on Belgian nuclear assets

In line with the planned nuclear phase-out in Belgium, the Doel 3 reactor was shut down in September 2022 and the Tihange 2 reactor in February 2023.

In January 2023, ENGIE and the Belgian federal government set a framework for the extension of the nuclear reactors Doel 4 and Tihange 3, signing the Heads of Terms and Commencement of LTO Studies Agreement which builds on the Letter of Intent signed on 21 July 2022, with the objective to extend the operational lifetime of both reactors for ten years, for a total production capacity of 2 GW.

This agreement in principle comprises three conditions, including the establishment of a legal structure dedicated to the two extended nuclear units equally owned by the Belgian State and ENGIE, the framework for a cap on future nuclear waste management costs, and a set of guarantees to ensure the proper execution of the nuclear operator's commitments. With this agreement, both parties confirm their objective to make reasonable endeavours to restart the Doel 4 and Tihange 3 nuclear units in November 2026.

In December 2022, ENGIE was informed on the new parameters considered by the Commission for Nuclear Provisions (CPN) for the calculation of the nuclear provision for the dismantling and spent fuel management of Belgian nuclear power plants following the triennial revision. Based on these parameters, nuclear provisions have increased by €3.3 billion, of which €2.9 billion borne by Synatom, compared to ENGIE's initial proposal of an increase of €0.9 billion. ENGIE considers the increase by €2.9 billion unjustified and has submitted an adapted proposal to the CPN.

Update on European proposals for windfall taxes

ENGIE's two most significant power generation countries in the EU, have passed new measures into Law to address inframarginal rent in relation to power prices.

In Belgium, an inframarginal rent cap was implemented retroactively, from August 1, 2022 to June 30, 2023, at a level depending on the power production's technology. A possible extension of this period will be evaluated next April. ENGIE's nuclear assets, owned and operated via its subsidiary Electrabel, fall into the scope of this measure: normative revenues exceeding €130/MWh are subject to the new levy but with a mechanism limiting potential double taxation with existing nuclear taxes.

In France, the Finance Bill for 2023 provides for a rent cap applicable over a period of 18 months, (from 1 July 2022 until 31 December 2023). The cap ranges from €40/MWh to €175/MWh depending on the power production technology. The excess revenue is subject to a tax rate of 90%. ENGIE is mainly impacted through its drawing rights on two EDF nuclear power plants (Chooz B and Tricastin, 1.2 GW, 9 TWh of annual output at an availability rate of 85%) subject to a €90/MWh cap and its gas power plants (1.4 GW capacity) subject to a €40/MWh cap on the clean spark spread.

In Italy, the Government has already enacted an "extraordinary solidarity contribution" on energy companies calculated on a variation of VAT-taxable basis between October 2021 and April 2022 versus the same duration a year earlier, at a rate of 25%. ENGIE has been significantly and adversely impacted due to an ill-designed methodology, not representative of the excess revenues over the period.

The overall impact of extraordinary taxes in Europe is close to €0.9 billion in 2022, 85% in EBIT and 15% in corporate income tax.

ENGIE playing a leading role in security of supply and contributing to support energy affordability

As gas infrastructure owner, operator, and gas supplier, ENGIE has played a crucial role in Europe.

In France, ENGIE's networks activities have operated at record high utilisation rates, with LNG terminals working at nearly full capacity, two-fold increase in transit at GRTgaz including reversed flows from France to Germany, and gas storage levels filled at 82% as at December 31, 2022 compared to c. 53% at December 31, 2021.

ENGIE has contributed €1.1 billion in 2022 to existing Government profit-sharing mechanisms for Belgian Nuclear (specific tax framework) and French hydro (CNR).

ENGIE has pledged to support its French customers with €90 million in measures for vulnerable customers and a €60 million fund for industrial/tertiary customers affected by rising energy prices. ENGIE has also launched platforms for retail and SME customers to monitor and save energy.

addition, the Group has engaged with various local authorities to provide support through payment facilities. The overall impact of delayed payment plans worldwide is close to €1.0 billion. The Group is more focused than ever to work collaboratively with clients on energy efficiency to reduce their energy bill and achieve their decarbonisation goals.

ENGIE is contributing to public policy measures to address high energy prices

In France, ENGIE has increased working capital support for the tariff shield mechanism, now including small-sized enterprises as well as customers under market prices. Most of ENGIE's B2C gas and power contracts in France benefit from protection against price increases through this tariff shield mechanism or fixed prices over the lifetime of the contract.

The Group is supporting the implementation of social tariffs in Belgium and a price cap mechanism in Romania and Chile. In addition, the Group has engaged with various local authorities to provide support through payment facilities. The overall impact of delayed payment plans worldwide is close to €1.0 billion. The Group is more focused than ever to work collaboratively with clients on energy efficiency to reduce their energy bill and achieve their decarbonisation goals.

ENGIE has also recognised the engagement of its employees around the world with an exceptional bonus of €1,500 awarded to each employee in an unprecedented energy situation to support in a high inflation environment.

Progress on Net Zero ambition and key ESG targets

In 2022, greenhouse gas emissions from energy production were reduced to 60 million tons, a decrease of 44% compared to 2017, and in line with the target of 43 million tons by 2030. 2022 results were positively impacted by the weather and a lower utilization rate of our CCGTs.

ENGIE increased the share of renewables in its portfolio to 38% at the end of 2022 from 34% at the end of 2021 with the addition of 3.9 GW of renewables.

ENGIE continues to progress on coal exit with the signing in September of the disposal of Pampa Sul in Brazil and the closure of Tocopilla in Chile which comprises a total of 0.6 GW installed capacity. ENGIE is committed to exiting all coal assets in continental Europe by 2025 and globally by 2027, including coal generation for district heating and cooling networks. At the end of 2022, coal represented 2.6% of ENGIE's centralized power generation portfolio.

On gender diversity, ENGIE had 30% women in management at the end of 2022 and is implementing action plans towards its ambition of managerial parity of 40% to 60% between men and women.

Health & Safety

In 2022, ENGIE and its subcontractors experienced severe work-related accidents including four fatalities among ENGIE and five fatalities in EQUANS entities. A major company-wide response and comprehensive action plan are being deployed by the ENGIE leadership, to re-assess all safety standards and procedures in every activity and geography to ensure the application of the highest safety standards across the Group and its subcontractors.

Dividend policy reaffirmed and €1.40 per share proposal for 2022

ENGIE is focused on delivering a progressively growing and sustainable dividend for shareholders.

The Board has reaffirmed the Group's dividend policy with a payout ratio of 65-75% of net recurring income Group share, and a floor of €0.65 per share for the 2023 to 2025 period.

For 2022, the Board has proposed a payout ratio of 65%. This translates to a dividend of €1.40 per share, which will be proposed for shareholder approval at the Annual General Meeting on 26 April 2023.

1.4.2 FINANCIAL OBJECTIVES FOR 2023-2025

When presenting its 2021 annual results ENGIE updated its financial objectives for 2023-2025 (see Section 6.1).

The progress on the execution of the strategic plan solidifies the foundation for ENGIE towards delivering long-term growth while achieving its purpose of carbon neutrality.

The Group anticipates delivering growth in the medium-term primarily fueled by investment in Renewables and improved results from Energy Solutions, alongside a stable contribution from Networks. GEMS is projected to further enhance the integrated business model securing energy supply, optimising and managing risks for ENGIE and third parties. Nuclear contribution, due to the ongoing phase-out capacity plan in Belgium, has been excluded from the EBIT indication.

European commodity price assumption in the guidance for residual merchant exposure: the price assumption used in the guidance for 2023-2025 provided today is based on the European forward prices as at 31 December 2022.

ENGIE outlook for 2023 to 2025:

In billions of euros	2023 Results	2024 Results	2025 Results
EBIT excluding Nuclear	6,6 - 7,6	7,2 - 8,2	7,5 - 8,5
NRIgs guidance	3,4 - 4,0	3,8 - 4,4	4,1 - 4,7

ENGIE remains committed to a "strong investment grade" rating and continues to target a leverage ratio of below or equal to 4.0x economic net debt to EBITDA.

ENGIE targets growth Capex of €22-25 billion between 2023 and 25, an increase of 50% versus the previous 2021-23 plan, with 40% being already committed. These will be split 55-65% for Renewables, 10-15% for Networks, and 10-15% for Energy Solutions. Around 10% will be dedicated to ramping up in renewable gas and batteries. Capital allocation is based on a strict discipline of financial and ESG-related criteria. The contribution to 2023-25 EBIT of new capacities commissioned should amount to €1.5bn. Return On Average Capital Employed excluding nuclear should benefit from this rigorous process to drive value creation: Group ROACE excluding nuclear is expected to increase to between 7% and 9% in a sustainable way from 6% in 2021.

Maintenance Capex should amount to €7 to 8 billion between 2023 and 2025, of which around 50% in French regulated infrastructure activities.

Around €9bn will go towards the funding of Belgian nuclear provisions over 2023-2025.

ENGIE will continue to drive efficiency by strong control of general and administrative costs, increasing support functions efficiency, and turning around underperforming businesses. The Group is aiming for a positive net impact on EBIT of €0.6 billion in 2023-25.

Main drivers for 2022-2025 EBIT evolution by activity:

2022	Activities	Expectations for main EBIT evolution drivers vs 2022		2025
EBIT excluding Nuclear €8.0 billion	**Renewables**	Investments contribution, higher prices	+ +	**EBIT excluding Nuclear indication €7.5 billion to €8.5 billion**
	Networks	Inflation, temperature normalization, investments and portfolio management, regulatory reviews in France	= -	
	Energy Solutions	Investments contribution, EVBox contribution improvement and continued improvement of performance	= +	
	FlexGen (ex Thermal)	Dilution, normalization of spreads, higher fleet availability	=	
	Retail (ex Supply)	Temperature normalization, margin increase, growth in B2C services and power customer portfolio	= +	
	GEMS	Decrease of prices and volatility but still high	- - -	
	Nuclear	Higher prices, lower volumes	= +	

Convention: each "+" sign amounts to c. €+500m, each "-" sign amounts to c. €-500m, "=+" sign amounts to a variation between 0 and +250, "=-" sign amounts to a variation between -€250m to €0m.

1.4.3 2022 KEY FINANCIAL FIGURES

In millions of euros	2022	2021	2020 restated [(a)]	2020	2019	2018 restated [(b)]	2018
1. Revenues	**93,865**	**57,866**	**44,306**	**55,751**	**60,058**	**56,967**	**60,596**
of which generated outside France	59,617	33,525	25,640	33,311	35,635	33,306	35,612
2. Income							
EBITDA	13,713	10,563	8,908	9,276	10,366	9,236	9,236
• Current operating income [(c)]	9,045	6,145	4,493	4,578	5,726 [(d)]	5,126	5,126
• Net income, Group share	216	3,661	(1,536)	(1,536)	984	1,033	1,033
• Net recurring income, Group share	5,510	3,158	1,703	1,703	2,683	2,425	2,425
• Net recurring income from continued operations, Group share	5,223	2,927	1,726	1,703	2,683	2,458	2,458
3. Cash flow							
Cash flow from operating activities	8,586	7,312	7,589	7,589	8,178	7,873	7,873
of which cash generated from operations before financial income and income tax	12,415	9,806	8,506	8,788	9,863	8,464	8,464
Cash flow from investment	(4,290)	(11,042)	(4,046)	(4,046)	(7,193)	(6,095)	(6,095)
Cash flow from (used in) financing activities	(2,979)	4,848	(561)	(562)	212	(1,928)	(1,928)
4. Balance sheet							
Shareholders' equity	**34,253**	**36,994**	**28,945**	**28,945**	**33,087**	**35,551**	**35,551**
Total equity	39,285	41,980	33,856	33,856	38,037	40,941	40,941
Net debt	24,054	25,350	22,458	22,458	25,919	21,102	21,102
Net debt excl. internal debt E&P/EBITDA	1.75	2.40	2.42	2.42	2.50	2.28	2.28
Total assets	235,490	225,333	153,182	153,182	159,793	153,702	153,702
5. Per-share data *(in euros)*							
• Average outstanding shares [(e)]	2,419,985,959	2,419,429,772	2,416,072,154	2,416,820,377	2,412,518,837	2,396,308,756	2,396,308,756
• Number of shares at period-end	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011
• Earnings/(loss) per share [(e)]	0.06	1.46	(0.71)	(0.71)	0.34	0.37	0.37
• Net recurring income/(loss) Group share, per share [(e)]	2.24	1.26	0.63	0.63	1.04	0.95	0.95
• Dividend paid [(f)]	1.40	0.85	0.53	0.53	0	1.12	1.12
6. Total average workforce	**98,020**	**174,027**	**175,873**	**175,873**	**262,139**	**249,795**	**249,795**
• Fully consolidated entities	96,116	171,754	173,398	173,398	170,475	158,505	158,505
• Proportionately consolidated entities	479	717	748	748	756	780	780
• Entities consolidated using the equity method	1,424	1,556	1,727	1,727	90,908	90,510	90,510

(a) Comparative data at December 31, 2020, were restated due to the classification of EQUANS assets held for sale as "Discontinued operations," in accordance with IFRS 5 (see Note 2 of Section 6.2.2 "Notes to the consolidated financial statements" of the 2021 Universal Registration Document).

(b) Some of the December 31, 2018 data have been restated due to the retrospective application of the new presentation of operational derivatives (with impact on Revenues) but not IFRS 16 due to the transition method applied (see Note 1 of Section 6.2.2 "Notes to the consolidated financial statements" of the 2019 Universal Registration Document).

(c) Excluding MtM of operating derivatives but including share in net income of equity method entities.

(d) Figure restated in 2019: 5,819.

(e) Earnings per share calculated on the basis of the average number of shares outstanding, net of treasury shares (see Note 12 Section 6.2.2 "Notes to the consolidated financial statements").

(f) 2022: proposed to the OGM. In 2018, the annual dividend of €0.75 was supplemented by an extraordinary dividend of €0.37 per share for a total of €1.12 per share.

1.5 CSR PERFORMANCE

The Group's Corporate Social Responsibility performance (CSR) is an essential part of its overall performance. It is based on CSR commitments and a CSR policy at the Group level (see Section 1.5.1), as well as sectoral policies, action plans with dated and quantified CSR targets (see Section 1.5.2). It is externally assessed, requested or not by the leading CSR rating agencies (see Section 1.5.3).

The Group's Non-Financial Statement (NFS) details the governance of the CSR policy, its results, material challenges and the main CSR risks relating to the Group's activities (see Chapter 3).

In 2022, the Group voted a "Say-on-Climate" resolution during its Shareholders' Meeting on April 21 approving its climate plan for carbon-neutrality by 2045 and calculated its activities' eligibility and alignment rates within the meaning of the European taxonomy for the second year. The results are shown in Section 3.1.5.

1.5.1 CSR POLICY

CSR drives the Group's purpose, which is to accelerate the transition to a carbon-neutral economy, reconciling economic performance and a positive impact on people and the planet. This purpose, included in the bylaws by the Shareholders' Meeting in May 2022, guides the development of the business strategy through:

- the development of sustainable business, which involves identifying environmental and societal issues and transforming them into opportunities for the Group's businesses;
- the management of the CSR risks and impacts of its projects and activities and its value chain, i.e. relating to the environment, social acceptability, health and safety, human resources, ethics, and governance.

ENGIE published its first CSR policy in 2014 (it was updated in 2020), and in 2016 had set six CSR targets for 2020. Work carried out in this area helped define a new set of 19 CSR objectives for 2030.

The CSR commitments and policies are systematically approved by the Group Executive Committee and the Board of Directors' Ethics, Environment and Sustainable Development Committee (EESDC). These commitments reflect the Group's commitment to the energy transition and demonstrate both its compliance with the various legal and regulatory requirements in the different areas of CSR, as well as its determination to make a positive contribution, anticipate and manage the possible impact of its activities on its scope of influence as best as possible. Another aim of the CSR commitments and policies is to create value for all stakeholders.

All these objectives align perfectly with the 17 Sustainable Development Goals for 2030 established by the United Nations. These 19 CSR 2030 objectives also reflect the acceleration of the Group's strategy approved in July 2020. They also mirror the Group's materiality matrix, which was updated in December 2020 following a consultation process with stakeholders and management (see Section 3.3).

Climate change constitutes today a major environmental challenge for our society in general. To take on this challenge, the Group has committed to:

- a greenhouse gas (GHG) reduction plan;
- a climate vigilance plan;
- a natural resources consumption reduction program, and finally;
- a business model adaptation program to make it resilient to climate change while complying with the requirements of a fair transition.

ENGIE thus includes an internal carbon price in its decision-making process on the major investment decisions under the responsibility of the Group Investment Committee. This system is complementary to the carbon budgets allocated to the entities in order to meet the Group's 2030 target in terms of GHG emissions.

The Group also takes 9 CSR criteria into account for its major investment projects, assessed using risk analyses. These criteria mainly relate to: ethics, GHG emissions, social impact, human resources, environmental management of ecosystems, cooperation with stakeholders, sustainable procurement, and employee health and safety.

Lastly, an increasingly sizeable part of the Group's investments is successfully funded through green bonds, demonstrating the market's recognition of their durability (see Section 5.3).

1.5.2 ACHIEVEMENT OF CSR TARGETS BY 2030

In 2020, the Group set itself 19 ambitious targets to be achieved by 2030, in order to meet its CSR commitments by this deadline. These targets were reviewed in 2022 and have now been increased to 21 targets, with the two additional targets relating to the SBTi certification of the Group's well below 2°C obtained in February 2023.

These 21 targets have been broken down into 17 targets monitored by the EESDC and four other operational targets.

Of the 17 targets monitored by the EESDC, eight key targets are published below over a three-year period. Their results for 2021 and 2022 are presented excluding EQUANS, whereas the results for 2020 include EQUANS.

Based on the Group's purpose, all these targets are part of a continuous improvement approach, taken in response to growing expectations of the Group's various stakeholders interested in CSR risk management and the alignment of its performance with national or international sustainable development goals.

Themes	Indicators	2030 targets	2022 results	2021 results	2020 results
CO_2 energy generation	GHG emissions (scopes 1 and 3) for energy generation (in Mt CO_2 eq.) in accordance with SBT commitments(1)	43	60	65	68
CO_2 gas sales	GHG emissions relating to the use of sold products (in Mt CO_2 eq.) in accordance with SBT commitments(1)	52	61	65	62
Renewables	% of renewable energy in the electricity production capacity mix, in accordance with SBT commitments(1)	58%	38%	34%	31%
Decarbonization of our customers	Customer GHG emissions avoided by ENGIE offers and products (in Mt CO_2 eq.)	45	28	27	21
Decarbonization of our suppliers	% of top 250 preferred suppliers (excluding energy) certified by or aligned with the SBT initiative(1)	100%	23%	20%	15%
Health and safety	Total lost-time injury frequency rate	≤ 2.3	2.0	2.5	2.7
Gender diversity	% of women in Group management	[40-60%]	29.9%	28.9%	24.1%
W/M equity	Gender pay gap	< 2%	1.73%	-	-

(1) SBT (Science-Based Targets) is an international initiative to scientifically validate companies' greenhouse gas (GHG) reduction programs in line with Paris Agreement commitments.

GHG emissions from energy generation in 2022 (60 Mt CO_2 eq.) were significantly down on 2021 (65 Mt CO_2 eq.). They break down into 28 Mt for emissions from controlled assets (scope 1) and 32 Mt for emissions from assets consolidated by the equity method (scope 3). The full effect of the withdrawal from the Jorge Lacerda coal business in Brazil was taken into account in 2022.

GHG emissions associated with the use of sold products (scope 3) stood at 61 Mt CO_2 eq., down compared with 2021 (65 Mt CO_2 eq.) as a result of a decrease in gas sales due to a warmer climate in 2022 than in 2021.

The Group's renewable capacity share was 38%, an improvement on 2021 (34%) as a result of the strategy to develop renewable capacity which was up +4GW in 2022. This increase was in line with the Group's public commitments in terms of new renewables capacity.

The CO_2 emissions avoided for customers thanks to the Group's offers and services in 2022 (28 Mt CO_2 eq. avoided) increased compared with 2021 (27 Mt CO_2 eq.). This increase was driven by a rise in green energy purchases/sales and by the increase in energy production from decentralized networks (on-site facilities and heating and cooling networks).

The decarbonization level of the top 250 preferred suppliers reached 23% in 2022, up on 2021. This improvement was due to action plans put in place across these preferred suppliers to encourage them to commit to SBT alignment or certification. The Group also continued to support all preferred suppliers in their journey to decarbonization, not just the top 250 preferred suppliers.

The total lost-time injury frequency rate (including subcontractors on sites with controlled access) reached 2.0, representing an improvement compared with 2021 (2.5 excluding EQUANS). As a reminder, the exit of EQUANS from the scope of consolidation in 2022 resulted in the Group adopting last year a more ambitious target for 2030 moving from 2.9 to 2.3.

The proportion of women in management is 29.9%, up 1 percentage point compared with 2021 (28.9% excluding EQUANS). This improvement is the result of the continued effects of the fifty-fifty program, dedicated to the Group's cultural transformation in terms of welcoming and retaining female talent, thereby accelerating and supporting the promotion of gender equality.

The gender equity indicator, previously referred to as the EgaPro index, was replaced in 2022 by the gender paygap indicator which measures the pay gap between men and women. The objective for 2030 was set at a maximum difference of 2% at the Group level. This indicator is a continuation of the EgaPro index and reflects a more ambitious target by switching to a more understandable international indicator. The result in 2022 was 1.73% and exceeded forecasts. This was driven by results in France (40% of the Group's total workforce). As the monitoring of this indicator was introduced in 2022, the 2030 target may be reviewed in 2023.

Most of the Group's social indicators (see Section 3.4), environmental indicators (see Section 3.5), and societal indicators (see Section 3.6) are audited by an independent third party (see Section 3.10).

1.5.3 CSR RATINGS

ENGIE's CSR performance was again recognized in 2022 by the S&P Global rating agency with a score of 81/100, unchanged from 2021. The Group confirmed its inclusion in the World Dow Jones Sustainability Index (DJSI).

The Group was given a rating of A1 with a score of 70/100 in 2022 by the Moody's ESG (formerly VE - VigeoEiris) rating agency, up 2 points on 2021. With this score, the Group appears in the four indices associated with this rating i.e. Euronext VigeoEiris World 120, Europe 120, Euro 120 and France 20.

In 2022, the Sustainalytics rating agency assessed the Group's CSR risk as medium, as in 2021, with a rating of 29.2 (slight deterioration compared with 28.5 in 2021).

The MSCI rating agency upgraded the Group's rating in 2022 to AA and increased its scoring to 6.5/10, referencing it in its MSCI EMU ESG and Europe ESG indices.

The ECOVADIS rating agency assessed the Group in 2021 with a score of 77/100.

Finally, as it does every year, ENGIE also answers the CDP (ex-Carbon Disclosure Project) climate change questionnaire. In 2022, with an A- ranking, the Group maintained its position on the list of leaders in terms of strategy and actions to combat climate change. In terms of the protection of water resources, the Group was rated B following its answers to the CDP Water questionnaire. Finally, the Group was rated B, focusing its efforts on sustainable management of wood resources, following its answers to the CDP Forest questionnaire.

Finally, the Group showed an improvement on the panel of five benchmark agencies (S&P Global, Moody's ESG, MSCI, Sustainalytics and CDP Climat) and excellent overall CSR ratings with performances which greatly exceeded the averages of the rating sectors of these agencies.

1.6 DESCRIPTION OF THE GROUP'S ACTIVITIES

In the context of its new organization, implemented on July 1, 2021, ENGIE is made up of four Global Business Units (GBU) associated with the Group's four main business lines (Renewables, Networks, Energy Solutions, FlexGen & Retail production & energy supply) and two operating entities (Nuclear and Global Energy Management & Sales (GEMS)).

Energy crisis in Europe: extraordinary conditions and regulatory changes

The Group in a time of crisis

The Russian-Ukrainian conflict, which began in February 2022, is a human and economic crisis of a scale not seen in Europe since the Second World War. It moreover triggered an energy crisis due to a combination of a reduction in the Russian gas supply since the end of 2021, low water conditions at the beginning of 2022 and, in France, reduced availability levels for the French nuclear fleet.

As of the beginning of the crisis, ENGIE took the necessary steps to ensure the security of the supply in Europe and support its customers' procurement power.

The Group diversified its gas supply sources, notably by increasing LNG imports from other producers, such as Norway and the United States. To do so, it made full use of its gas networks, in terms of transport, distribution, import terminals and storage, which played an important role. Gas volumes rose markedly and ENGIE changed the direction of gas flows within Europe itself: GRTgaz transported French gas to Germany. LNG terminals operated at record levels, in France, and ELENGY reached its maximum capacity- the Group's storage levels were at 100% at the beginning of the winter.

ENGIE also supported the procurement power of its individual and corporate customers via various measures. In France, for example, it introduced an additional subsidy for its low-income customers and created a €60 million support fund for struggling SMEs. In Belgium and Romania respectively, ENGIE supported the implementation of social tariffs and a price cap mechanism. The Group also strives, alongside local authorities, to provide support through payment facilities.

ENGIE also works with its customers to improve their energy efficiency, and thus reduce their energy bills and allow them to achieve their decarbonization objectives.

At the same time, the Group continued to follow its road map to step up the use of renewable energies.

Regulatory changes

The reduction in Russian oil and gas exports created unprecedented volatility in gas, and also electricity, prices due to the role played by gas-fired power plants in marginal electricity production. This volatility was compounded by factors specific to the availability of electricity production resources in 2022. This impact on the cost of energy has accelerated discussions regarding the structure of energy markets and energy security in Europe.

The current increase in wholesale energy prices in Europe has led to the implementation by governments of measures aimed at protecting consumers from the direct impact of price increases. A wide range of measures have been adopted by European States: certain countries have introduced taxes on extraordinary profits (France, Belgium, Italy, Romania, Spain and the United Kingdom in particular), the majority have implemented measures aimed at reducing VAT on energy and supporting the most vulnerable players (one-off payments, social premiums).

The European Commission has taken measures aimed at ensuring supply security, notably by setting gas storage filling targets.

In terms of pricing, the Council of the European Union adopted the Regulation (EU) 2022/1854 of October 6, 2022 on an emergency intervention to address high energy prices.

This regulation included the application of a cap on revenue from electricity production using inframarginal technologies and should be implemented in all Member States between December 1, 2022 and June 30, 2023. Member States transcribed this regulation, and introduced exceptional taxation, with material variations between Member States and compared with the EU's mechanism, notably in terms of duration, scope of application, amount of the cap, and the method for calculating revenue - with certain States keeping tax mechanisms with a completely different base.

The main impact for ENGIE should be seen in Belgium, France and Italy (in addition to the extraordinary contribution already in place enacted before the adoption of the EU's regulation).

Thus, in **France**, the Finance law for 2023 provides for a cap on revenue from electricity production using inframarginal technologies but also from gas production units (CCGT) over an 18-month period, from July 1, 2022 to December 31, 2023. The amount of the cap varies in €/MWh (plus fuel and CO_2 costs) depending on the electricity production technology used. Surplus revenue is taxed at a rate of 90%.

In France, the ENGIE Group is therefore affected in terms of drawing rights on two EDF nuclear power plants (Chooz B and Tricastin, 1.2 GW, i.e. annual production of around 9 TWh based on an availability rate of 85%) subject to a €90/MWh cap, in terms of its cogeneration plants subject to a €110/MWh or €60/MWh cap, and in terms of its gas-fired power plants (capacity of 1.4 GW) subject to a €40/MWh cap.

Renewable assets will be less affected due either to existing royalties for hydro power plants ("hydro power royalties"), or to the application of a regulated price mechanism (for wind and solar for example).

In **Belgium**, the cap on revenue from electricity production using inframarginal technologies was effective retroactively, from August 1, 2022 to June 30, 2023, at a level that varies according to the electricity production technology. A possible extension to this period will be reviewed next April. ENGIE's nuclear assets, owned and operated by its subsidiary Electrabel, fall within the scope of this measure: regulatory revenue calculated which exceeds €130/MWh, as is the case for existing nuclear tax, is subject to this new payment but with a mechanism in place that limits any double taxation with existing nuclear tax.

In **Italy**, the government has already adopted an "extraordinary solidarity contribution" for companies in the energy sector. The latter is calculated on a change in the VAT taxable base between October 2021 and April 2022, compared with the same period one year earlier, at a rate of 25%. ENGIE was significantly and negatively impacted by a €309 million payment, recognized in its accounts at end-June, calculated based on a contribution that was poorly designed and not representative of surplus profits for the period. Moreover, in its Finance law for 2023, the Italian government has introduced an additional temporary solidarity tax.

ENGIE reserves the rights to contest the taxes which, in its opinion, do not comply with the current legal framework and introduce unfair discrimination between operators or technologies, notably in Belgium and Italy.

1.6.1 GBU RENEWABLES

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues *(in millions of euros)*	6,216	3,653	+70.1%
EBIT *(in millions of euros)*	1,627	1,191	+36.6%
Installed capacity *(GW at 100%)*	38	34	+11%

1.6.1.1 Missions, organization and strategy

Missions

The role of GBU Renewables is to develop, build, finance, operate and maintain renewable electricity production assets in line with ENGIE's purpose to act to accelerate the transition to a carbon-neutral economy. To do so, the GBU focuses its industrial, financial and energy management expertise on five main technologies:

- hydropower;
- solar power;
- onshore wind;
- offshore wind; and
- battery storage collocated with a renewable asset.

Organization

GBU Renewables is organized around four operating regions: Europe, North America, South America and AMEA (Asia, Middle East and Africa); three operational support departments: Business Development; Operational Performance; Engineering and Projects; underpinned by three support functions: Legal & Ethics; Finance & Strategy; Human Resources, Communication & CSR. ENGIE's offshore wind activities are exclusively managed by Ocean Winds, a joint venture with EDP Renovàveis, and coordinated by the Europe region.

The GBU is rolling out a sound industrial growth strategy based on the following pillars:

- being a leader in the renewables market, reaching 50 GW of installed capacity in 2025 and 80 GW in 2030. An additional 42 GW must be installed over the 2023-2030 period to achieve this objective. The vast majority of the future investments should be focused on the five priority markets of the GBU, namely US, France, Brazil, Chile and offshore wind;
- focusing the Group's development on a (develop-to-own) model that keeps the assets on the balance sheet in mature geographic areas where ENGIE is the operator and manages the development risk;
- strengthening competitiveness by improving operational excellence, in particular through the creation of a global industrial platform to capture scale benefits in engineering, procurement and operation and maintenance (O&M);
- differentiating the Group by virtue of its project development, energy management and operations monitoring expertise.

1.6.1.2 Activities in Europe

1.6.1.2.1 France

In France, ENGIE is the number one generator of onshore wind and centralized solar power[1], and also holds the number two position in hydroelectricity. The GBU aims to strengthen the Group's leadership in onshore wind and significantly accelerate growth in solar power. It mainly positions itself on public tenders and contributes to the emergence of corporate tenders (corporate PPA). The GBU is currently developing the largest solar power energy and battery storage project in continental Europe (1 GW Horizeo project) to drive this growth market. In 2022, ENGIE commissioned almost 350 MW of new solar and wind capacity in France, and acquired, from Ostwind, 174 MW in operating wind assets.

The scope of activities in France comprises three subsidiaries owned by ENGIE, either solely or in partnership:

- ENGIE Green (100% owned by ENGIE), the French wind and solar leader based in Montpellier with around 540 employees, which operates 3,595 MW installed capacity (2,344 MW onshore wind, 1,249 MW solar power and 3 MW batteries);
- SHEM (Société Hydro-Électrique du Midi, 100% owned by ENGIE), based close to Toulouse: high-head hydroelectricity power generation (784 MW installed) in the South-West of France;
- CNR (Compagnie Nationale du Rhône, in which ENGIE is the principal shareholder with a 49.97% stake), based in Lyon, with 3,106 MW hydroelectricity installed capacity along the Rhone river and its subsidiary CN'Air with 877 MW onshore wind and solar installed capacity at end 2022.

Regulatory changes

The Multi-Year Energy Schedule, published in April 2020, which contains a tender schedule and an objective for offshore wind and solar power (particularly ground-mounted), is to be updated in 2023.

The tender specifications organized by the Energy Regulation Commission (Commission de Régulation de l'Energie, CRE) include new measures, particularly regarding carbon footprint and social appropriation of renewable assets.

The French Finance law for 2021 provided for the possibility of a renegotiation of public support mechanisms for photovoltaic installations. The renegotiation of these mechanisms is still underway, based on the October 2021 regulation, and is expected to continue until the beginning of 2023: the final price reduction will be decided by the CRE and the French ministers responsible for energy and budgets at the end of the safeguarding process.

The financial impact has been mitigated by the activation of a safeguard clause which makes it possible to review the economic viability of the assets in question.

The conflict between Russia and Ukraine and the resulting energy crisis has also led to several regulatory changes to support the development of renewable energies:

- an 18-month period of sale at market price for renewable energy projects before the activation of the contract-for-difference (CfD);
- the possibility to increase the maximum capacity of facilities by 140%;
- the indexation of the future CfD that takes into account current high prices.

Finally, the law relating to the acceleration of renewable energy production was adopted in January 2023. The law aims to facilitate the installation of new and renewable energy sources to help make up for time lost in this field.

1.6.1.2.2 Rest of Europe

In addition to its leadership position in France, the Group aims to accelerate its business in the rest of Europe by developing a strong portfolio of projects, with different maturities and in targeted geographies.

In Europe, (excluding France), the Group operates at end-2022, 1.9 GW of hydro (mainly in Iberia), 3.5 GW of onshore wind (mainly in Spain, Portugal and Belgium) and 0.3 GW of solar power (mainly in Spain and Italy). In 2022, ENGIE commissioned almost 185 MW of renewable capacities in Europe (excluding France and Ocean Winds), mainly in Italy, Belgium and Spain. The Group also finalized the acquisition, with Crédit Agricole Assurances, of Eolia Renovables, one of the largest renewable energy producers in Spain, with 899 MW of operating assets and 1.2 GW of projects under development.

In hydropower production, ENGIE, in partnership with Crédit Agricole Assurances and Mirova, has a strong position in **Portugal** with a 1.7 GW hydro portfolio in the north-east of the country. The Group is also present in **Spain** with a portfolio of small hydro power plants (totaling 65 MW) and **Germany** where it operates the Pfreimd hydro power plant (137 MW pumped storage and 5 MW run of river).

The Group operates 3.5 GW of onshore wind assets at the end of 2022, mainly in **Spain** (1.4 GW), **Belgium** (545 MW, number one position), **Portugal** (489 MW, via TrustWind, a 50-50 joint-venture with Marubeni), **Italy** (338 MW), **Norway** (208 MW), **Germany** (165 MW), **Poland** (138 MW) and **Romania** (98 MW).

The Group also has 324 MW of solar power assets, mainly in **Spain** (124 MW), **Italy** (96 MW), the **Netherlands** (41 MW), **Poland** (40 MW), **Romania** and the **United Kingdom**.

1.6.1.2.3 Offshore wind activities through Ocean Winds (OW)

Ocean Winds (OW) is a 50-50 joint venture, owned and created in 2019 by EDP Renovàveis and ENGIE, combining the existing and developing offshore wind project portfolios of both companies (fixed and floating), mainly in Europe, the United States and selected geographies in Asia. At end-2022, the joint venture operates 1,464 MW, via Moray East (952 MW in the United Kingdom), commissioned this year, Seamade (487 MW in Belgium) and WindFloat Atlantic (25 MW in Portugal). The joint venture has several projects under development, including 8 GW of volume secured via auction this year in the United States and Scotland.

(1) Source BNEF

1.6.1.3 Activities in North America

North America is a priority market for ENGIE's growth in renewable energy, with a large proportion of assets contracted to corporate customers through corporate PPA agreements. In 2022, the Group also signed 409 MW of corporate PPA in the United States.

At end-2022, ENGIE's operational asset portfolio consisted of 3.6 GW of onshore wind (2.9 GW in the United States and 0.7 GW in Canada) and 1 GW of solar in the United States. The vast majority of this operational portfolio is located in five markets: ERCOT (Electric Reliability Council of Texas), SPP (Southwest Power Pool), PJM (Pennsylvania, New Jersey, Maryland) and MISO (Midcontinent Independent System Operator) in the United States and in Ontario, Canada. In 2022, ENGIE commissioned 760 MW (408 MW of wind, 352 MW of solar), and acquired 12 GW of solar and battery projects under development.

Regulatory changes

The Inflation Reduction Act (IRA), which was signed into law in the United States on August 16, 2022, generates estimated potential investment of US$370 billion (around €350 billion) in renewable energies over the next ten years. The IRA includes federal tax credits to encourage investment in renewable energy technologies and to fight against climate change through carbon storage, the production of renewable fuels and the installation of renewable energy equipment production resources. The package of measures includes more than US$60 billion (around €57 billion) to support the "generation of clean energy along the United States coastline." This law should double the pace of renewable energy development.

1.6.1.4 Activities in South America

Two out of ENGIE's five key markets are in South America (Brazil and Chile), where the Group has strong positions with 12.1 GW of hydropower (mainly in Brazil), 1.9 GW of onshore wind and 1.4 GW of solar power. In 2022, 308 MW of new renewable electricity production capacity was commissioned by the Group in South America, mainly in Chile.

In **Brazil**, ENGIE operates 11.8 GW of hydropower, 1.3 GW of onshore wind and 0.3 GW of solar power.

ENGIE Brasil Participações Ltda (EBP, 100% ENGIE affiliate), holds 68.71% of the share capital of ENGIE Brasil Energia (EBE), which is responsible for the centralized electricity generation and transportation business. EBP has a 40% interest in Energia Sustentavel do Brasil Participações S.A. which owns the Jirau hydroelectric power plant (3,750 MW). ENGIE has reinforced its presence in Rio Grande do Norte, where it has been operating a photovoltaic generation asset since 2017, with the development in the municipality of Assú of a project portfolio of around 0.8 GW.

In **Chile**, through its 60%-owned subsidiary ENGIE Energia Chile (EECL), ENGIE has 783 MW of renewable capacity, including 45 MW from hydroelectric generation, 438 MW from solar power and 300 MW from onshore wind. In 2022, ENGIE commissioned 232 MW of solar projects and acquired, in the province of Chiloe, 101 MW of operating wind assets alongside 151 MW of wind projects under development.

In **Mexico**, the Group operates 874 MW (698 MW from solar power, 145 MW from onshore wind and 31 MW from batteries).

In **Peru**, ENGIE, through ENGIE Energia Peru (61.77% owned by ENGIE), operates 255 MW of hydropower production and 41 MW solar power. ENGIE is currently building the largest wind farm in the country: the Punta Lomitas project (260 MW), taking over the power sale contract from the Ilo21 coal-fired power plant that will cease to operate (Section 1.6.4.2.2 Americas).

1.6.1.5 Activities in Asia, Middle-East and Africa

ENGIE operates 2.3 GW of capacity in the region, of which 1.2 GW solar power.and 1.1 GW onshore wind power.

In **India**, ENGIE holds a portfolio of around 1.1 GW in renewable energy, including 806 MW solar power and 268 MW onshore wind. In 2022, the Group secured 400 MW in new solar projects through a call for tenders organized by the State of Gujarat.

ENGIE also operates other onshore wind farms in **Morocco** (Tarfaya, 316 MW in partnership with Nareva), **Egypt** (Ras Ghareb, 263 MW, in partnership with Orascom), **Australia** (Willogoleche, 119 MW and Canunda, 46 MW, in partnership with Mitsui/ICG), **South Africa** (West Coast One, 94 MW) and **Mongolia** (55 MW). In 2022, the Group stepped up its development in Egypt, with the start of the construction of a 500 MW wind farm and the signature of a memorandum of understanding to develop a 3 GW wind project.

ENGIE also operates solar assets in **South Africa**, of which 200 MW of concentrated solar power and 18 MW of solar power, in **Senegal** (Kahone, 60 MW of solar power) and more recently in **Malaysia** with the commissioning of a 100 MW project.

1.6.2 GBU NETWORKS

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues *(in millions of euros)*	6,961	6,700	+3.9%
EBIT *(in millions of euros)*	2,371	2,314	+2.5%
Length of gas distribution networks *(in km)*	255,394	267,594	-4.6%
Length of gas transmission networks *(in km)*	39,504	39,360	+0.4%
Length of electricity transmission networks *(in km)*	4,882	3,394	+43.8%

1.6.2.1 Missions, organization and strategy

GBU Networks(1) is responsible, in particular, via independent subsidiaries, for developing, operating and maintaining gas (distribution and transmission networks, storage and LNG terminals) and electricity networks, as well as the production of biomethane, in France and abroad. ENGIE is the leading gas networks operator in Europe. These networks and their decarbonization are a key challenge of the energy transition. Natural gas, in the form of biomethane or synthetic methane and then hydrogen in the longer term, is a key vector in enabling the transition by replacing coal, which is much more polluting, and by ensuring the flexibility and overall security of integrated energy systems. The electricity networks, meanwhile, are inextricably linked to the development of renewable energy, which has to be connected and distributed, and new uses such as electric mobility.

The strategy implemented can be summed up in five points:

- carrying out the necessary actions and projects to ensure the security of the gas supply in Europe;
- maximizing the value of networks;
- shifting the portfolio, traditionally built around gas networks in France, toward international activities and electricity;
- promoting biomethane, and more generally low-carbon gas, production in France and in a certain number of target countries abroad;
- converting assets to hydrogen.

Besides this strategic road map, GBU Networks is also tasked with:

- managing and optimizing the necessary expertise;
- ensuring the operational performance and digitization of assets and processes;
- reducing or offsetting CO_2 and methane emissions;
- overseeing personal health and safety.

Market and competitive environment

There is very little, or even no, competition between the various players due to the nature of transmission and distribution assets and the regulated nature of their markets. In Europe, which is ENGIE's main market, the main network grid managers are EDF, National Grid, Enel and E.ON with exposure mostly to electricity networks.

The business model is almost entirely regulated (uncertainty surrounds the model that will be used to develop hydrogen networks); an independent national regulator establishing a network remuneration method with formulas whose components are generally reviewed every four or five years.

The biomethane market remains local and fragmented with a large number of players (local developers, companies specialized in biomethane production, oil and gas companies, utilities). Leaders are emerging among these but they are building their development on local markets: Archaea Energy in the United States, Malucelli in Brazil, SGN in the United Kingdom.

1.6.2.2 Activities in France

1.6.2.2.1 GRDF

In France, GRDF, an independent subsidiary of ENGIE, develops, operates and maintains distribution networks (201,000 km of networks) and delivers gas for consumers. GRDF is tasked with giving all natural gas suppliers and biomethane producers equal access to its network. Its business plan includes three objectives: (i) strive for operational excellence in the performance of its business lines; (ii) make gas an energy of the future by demonstrating its relevance in the energy mix; and (iii) build a responsible, more open and collaborative business model with all the business lines.

The distribution activity has specific features related to its classification as a local utility. Each municipality where natural gas supply is available grants a concession to an authorized distributor to operate the natural gas utility in its territory. Concessions are entered into or renewed based on a standard agreement established jointly by the French national federation of concession-granting and state-controlled municipalities (Fédération Nationale des Collectivités Concédantes et Régies or FNCCR), the Urban Landowners' Association (Association Foncière Urbaine or AFU) and GRDF. The concession-granting bodies then carry out controls to ensure the proper execution of the obligations arising from these concession agreements. In 2022, a new standard concession agreement was adopted by the FNCCR (the French national federation of concession-granting and state-controlled municipalities), France Urbaine (the French association for metropolises, urban communities and large cities) and GRDF. This agreement embodies several major changes: in addition to challenges relating to the network's security and modernization, it focuses on an improved response to territorial challenges to support the local energy transition; clear management and control of investment decisions (investment blueprints / multi-annual investment programs); the implementation of service quality indicators, with penalties for GRDF in the event of failure to meet commitments. More than one hundred new agreements have been signed with large cities, metropolises and energy syndicates based on this new standard. These long-term agreements - up to 30 years - demonstrate the value recognized by the authorities of the gas network in the energy transition over the long term.

Distribution structures belong to the municipalities even when they are built and financed by GRDF. GRDF, the concession operator has exclusive use of these structures. The Energy Code recognizes the entitlement of the historical concession operators, i.e., GRDF and 22 local distribution companies (ELD), to exclusive service areas. As holders of a "distribution

(1) *Within the limits of the provisions of the Energy Code and the regulatory constraints applicable to entities forming part of GBU Networks.*

monopoly" they are the sole operators with which the conceding municipalities may renew the concession. The grounds for terminating a concession contract early are strictly controlled (listed exhaustively) as is the date the concession can be terminated (it cannot be in the first half of the contracted term). Termination also requires two years' notice and the concession-granting authority must pay compensation to the concession operator for early termination.

Apart from the exclusive service areas of GRDF and the local distribution companies, all municipalities not supplied with natural gas may entrust their public gas distribution to the authorized operator of their choice, following competitive bidding.

Regulatory changes

Apart from this specific case of public service delegations recently awarded after a competitive bidding process, GRDF's activity is remunerated by a tariff set by the CRE. The current tariff, "ATRD6," has applied since July 1, 2020 for a period of four years across GRDF's exclusive service area. It takes into account all major projects that GRDF will take on during the period, such as the end of the smart meter roll-out in 2023 and the gas changeover project (conversion from B gas to H gas in northern France). The roll out of these two major industrial projects is on schedule.

In 2022, more than 10 million smart meters were installed. The project to convert gas with low calorific power ("B" gas), mainly originating in the Netherlands, to gas with high calorific power, which is more widespread in France, successfully continued in 2022. In addition to the major dynamic of including biomethane in the networks, GRDF also rolled out its R&D program to prepare for the inclusion in the network of new renewable gases (blended hydrogen, methanation or dedicated networks; pyro-gasification; hydrothermal gasification).

The CRE changed the compensation rate of the regulated asset base of GRDF to 4.10% (real before tax) for 2020-2023. Once a year, the CRE decides on any necessary tariff changes to fit the current context. After a slight decrease of -0.4% on July 1, 2020, the tariff increased by 0.7% on July 1, 2021 and has decreased by 0.81% since July 1, 2022.

1.6.2.2.2 GRTgaz

GRTgaz is an independent ENGIE subsidiary owned by ENGIE, SIG and SIG's employees, which have respective stakes in its capital of 60.8%, 38.6% and 0.6%.

GRTgaz operates over most of France, developing, operating and maintaining a gas transmission network consisting of more than 32,000 km of buried pipeline and 26 compression stations. This network transmits gas between suppliers, biomethane producers and consumers (distributors or industrial companies directly connected to the transmission network). GRTgaz operates its network in a secure and optimized way and provides transmission services to network users; it has a public service mandate to guarantee the continuous supply of gas to consumers, and facilitates better integration of the European gas markets.

GRTgaz, with its subsidiaries Elengy, which operates three LNG terminals in France, and GRTgaz Deutschland, which operates the MEGAL transmission network in Germany, plays a key role on the European gas networks stage.

GRTgaz activity in France is highly supervised: first of all, France's Energy Code stipulates that the construction and operation of natural gas transmission pipelines are subject to a specific and non-transferable authorization issued by the competent administrative body. Moreover, the business of GRTgaz is conducted within a general framework designed to guarantee the independence of the grid manager in terms of the production and supply of natural gas. This framework was officially recognized by the certification issued by the CRE in its resolution dated January 26, 2012, which was renewed on July 6, 2017. Finally, the retail business of GRTgaz is conducted within a regulated framework which guarantees a relative stability for the company's revenue, which is mainly generated through the sale of annual and multi-annual transmission capacity at a tariff set by the CRE to cover its expenses and ensure a fixed return on investment. Thus, by resolution of January 20, 2020, the CRE defined the methodology and set the tariffs for the use of transmission networks in France known as "ATRT7," applicable for 2020-2023. In this context and applying the methodology and inflation assumptions used, the gas transmission tariff applicable at April 1, 2022 (ATRT7) was -0.33% on the main network and -0.68% on the regional network (CRE resolution of December 16, 2021) compared with the tariff applied since April 1, 2021. This resolution does not alter that of April 1, 2020, which set the remuneration rate of the regulated asset base of GRTgaz at 4.25% – real before tax – for 2020-2023.

GRTgaz, a player in the energy transition, invests in innovative solutions that favor the development, injection into the networks and use of renewable, low-carbon gas (biomethane and hydrogen), and thus contributes to the achievement of carbon neutrality.

GRTgaz is contributing to the growth of hydrogen as an energy carrier by developing hydrogen transmission networks projects within the fastest growing hydrogen production and consumption basins: Dunkirk (Dhune project), Sarre (MosaHyc project), Alsace (Rhyn project), Marseilles, etc.

The year 2022 saw a substantial decrease in Russian gas imports to Europe, which led to a major increase in LNG imports to compensate. Flows which previously came from countries to the east of France decreased markedly, or even reversed, with France at times becoming a gas exporter to the east, notably to Germany.

This change was made possible by the network of GRTgaz, which has been significantly enhanced over the past 10 years, and by the rationalization of its use, which authorized an increase in the injection of gas from LNG terminals into the network, and outbound exports to Germany. GRTgaz has also started work to connect a FSRU (a floating LNG terminal) at Le Havre within one year. In addition, the production of biomethane has continued to increase, reaching an injection capacity of 8.4 TWh/year during the third quarter of 2022. These developments have improved the security of the energy supply and boosted European gas solidarity.

The year 2022 also saw a fall in gas consumption in France, notably in the industrial sector (due to high gas prices) and the residential sector (due to temperatures that were higher than reference temperatures, which limited heating needs). As the revenue of GRTgaz mainly consists of transmission capacity sales, the impact of short-term changes in volumes actually consumed in France is minimal.

Finally, 2022 saw the launch of a European hydrogen pipeline project. During the EU-Mediterranean summit held in Alicante on December 9, 2022, French President Emmanuel Macron, his Spanish and Portuguese counterparts Pedro Sanchez and Antonio Costa, as well as President of the European Commission Ursula von der Leyen, announced the launch of the H2Med project (formerly BarMar), a pipeline project aimed at transporting renewable hydrogen from Spain to France and the rest of Europe. In addition to a subsea pipeline between Spain and France, the project will include an interconnection between the Spanish town of Zamora (North West) and the Portuguese town of Celorico da Beira (North East). With Chancellor Olaf Scholz announcing Germany's approval of the project on January 22, 2023, the hydrogen pipeline will now be extended as far as Germany. H2MED could transport two million tons of hydrogen each year, i.e. 10% of the European Union's estimated hydrogen needs. The estimated cost of the project is €2.5 billion and will be operational in 2030. In this context, GRTgaz has signed a memorandum of understanding with Spanish gas transmission network manager Enagás, French gas transmission network manager Teréga and Portuguese gas transmission network manager REN. This agreement represents their formal commitment to work together in a coordinated manner to jointly develop H2MED.

1.6.2.2.3 Elengy

LNG terminals are port facilities that allow liquefied natural gas (LNG) to be received and regasified. Elengy has developed additional services since 2012, such as the reloading of LNG tankers, transshipment between vessels, and LNG tank truck loading.

Elengy is one of the largest European LNG terminal operators, with three LNG terminals in France. The facilities operated by Elengy had a total regasification capacity of 21.5 billion m^3 (Gm^3) of gas per annum as of December 31, 2022.

The year 2022 saw record business with 20 billion m^3 actually unloaded at the Elengy terminals.

Since the beginning of the crisis, French LNG terminals have been operating at maximum capacity and a specific trade procedure for subscribing additional capacity was implemented for the Fos-Cavaou terminal: +11 TWh in 2022, +13 TWh in 2023 and +30 TWh in 2024. This sale was made possible thanks to the technical and regulatory de-bottlenecking of the terminal. Investments could increase the regasification capacities of our terminals.

In 2017, GRTgaz, ENGIE's independent subsidiary, acquired Elengy. In 2020, Elengy purchased the shares owned by TotalEnergies in their joint subsidiary, Fosmax LNG. Elengy now owns 100% of its three terminals.

Facilities

Commissioned in 1972, the Fos Tonkin terminal is located on the Mediterranean coast and receives LNG primarily from Algeria. Its dock can accommodate vessels carrying up to 75,000 m^3 of LNG while its tank has a total capacity of 80,000 m^3. Its commercial capacity has been reduced to 1.5 Gm^3 per year since January 1, 2021.

The Montoir-de-Bretagne terminal, commissioned in 1980, is located on the Atlantic coast and receives LNG from various sources. It has a regasification capacity of 10 Gm^3 of gas per annum and three tanks with a total capacity of 360,000 m^3 of LNG. It also has additional capacity of two docks that can accommodate tankers transporting up to 260,000 m^3 of LNG (Qmax) and enables significant transshipment activity.

The Fos Cavaou terminal, which was commissioned in 2010, now has a regasification capacity of 10 Gm^3 of gas per annum. It has one dock that can accommodate Qmax-size tankers and three tanks with a total capacity of 330,000 m^3 of LNG. The first micro-tanker loading operations began in December 2021.

Work is under way to increase tank loading capacity at the Montoir and Fos Cavaou terminals.

Regulatory changes

The LNG terminals are accessible to all LNG suppliers. Access to regasification is regulated. The current tariff, referred to as "ATTM6" was set by the CRE's resolution of January 6, 2021 and has been in place since April 1, 2021.

The micro-LNG and LNG tanker transshipment and loading services are not regulated.

A new prefectural order dated March 2022 authorizes the optimization of water samples from the Fos Cavaou terminal and now allows it to operate with an increased commercial capacity of 10 Gm^3/year.

1.6.2.2.4 Storengy

With Storengy, the Group is the leader in underground natural gas storage in Europe, with net storage capacity of 12.2 billion m^3.

Gas storage and conversion to renewable gas

In **France**, Storengy SA operates 14 underground storage facilities. Nine of these are in aquifers (total useful storage volume of 9 billion m^3), four are in salt caverns (1 billion m^3) and one is in a depleted field (80 million m^3). Three of these sites are in reduced operation according to precise regulatory procedures (880 million m^3).

Following a reduced start up in 2012, Storengy restarted the Trois-Fontaines-l'Abbaye site in January 2023. Restarting existing facilities will allow some of the gas still in the storage site's reservoir to be withdrawn. Revenue from the sale of this gas will contribute to the decommissioning or reconversion of the site at the end of its operating period, in around ten years' time. This restart is part of the overall project to fully rehabilitate the site in consultation with local partners (administration, public bodies, communities, associations, residents). The first stage, which will begin in 2023 for a period of around ten years, will allow some of the gas still present in the sub-soil to be withdrawn, i.e. around 8 TWh, or the equivalent of 20 years' of consumption for the urban community of Saint-Dizier, Der & Blaise.

In **Germany,** Storengy Deutschland GmbH owns and operates six storage facilities (1.7 billion m3; three salt sites and three depleted sites) and operates a seventh storage facility for a third party.

In the **United Kingdom**, Storengy UK Ltd operates the storage site in saline caverns in Stublach (400 million m3). With 20 caverns, this storage facility is the largest in operation in the UK (the Rough storage facility, the largest gas storage facility in the United Kingdom, is still awaiting re-opening in response to supply security issues relating to the Russian-Ukrainian crisis).

In Europe, Storengy is also preparing to convert storage assets to renewable gas (biomethane, synthetic methane, hydrogen) in order to add value to gas storage in a decarbonized market. To this end, Storengy is developing the HyPSTER project (1MW of electrolysis and 3 tons – up to 44 tons – of H2 storage by 2026) at its Etrez site and the GeoH2 project (2,000 tons of H2 storage by 2027) at its Manosque site. Other projects are being studied at Storengy's sites in the UK and Germany, two markets with major goals for the development of hydrogen and related networks.

Renewable gas production

Storengy is now positioned as a key player in biomethane production through anaerobic digestion in France through its subsidiary, ENGIE BIOZ (26 units in production – 549 GWh/year, 10 sites under construction). This business is being developed, particularly in accordance with the new tariff measures for injection into the natural gas networks, the evolution of systems to guarantee the origin of the biomethane and the establishment of the system of biogas production certificates.

Other anaerobic digestion projects are in various stages of development in other European countries (the United Kingdom, Germany, the Netherlands, Belgium, Poland).

Storengy has also positioned itself on synthetic methane production via methanation, through the Méthycentre pilot project currently under construction and earmarked for commissioning during the first quarter of 2023, in addition to commercial projects (Pau Lescar, as part of a group led by SUEZ).

As well as projects for the storage of hydrogen, Storengy has, lastly, committed to the development of the natural H2 production market in order to develop a supply of low-carbon, competitive H2. This gas is continuously generated deep within the surface of the Earth and can be mined via boreholes. In 2022, Storengy launched a campaign to measure emissions of natural H2, using ENGIE's proprietary technology to identify areas with high potential for the development of this market.

Heating, cooling and power generation from geothermal energy

In partnership with other Group entities, Storengy has developed several heating and cooling network projects in French cities and regions over the years. However, following the strategic reorientation of its activities, in 2022 Storengy ended the development of new geothermal production capacities. These developments are now being carried out by other Group entities.

In Germany, Storengy is the sole shareholder of the engineering firm geoEnergieKonzept, which specializes in shallow geothermal energy. The company works as a service provider for Group entities in Germany as well as for external customers.

Regulatory changes

Storage

The storage regulation adopted by the European Council on June 27, 2022 mainly aims to ensure that gas storage reaches a high fill state in Europe before November 1 (80% for winter 2022-2023, 90% for the following winters).

At the national level, Section 3 of the procurement power act of August 6, 2022 relating to energy sovereignty entrusts storage operators with the mission of building so-called security stocks to meet the minimum fill target before the beginning of winter, as set by the Minister of Energy.

This new regulation enhances the storage regulation in force in France since 2018 which requires, among other things, that suppliers who own storage capacity fill this capacity to a level of at least 85%.

Biomethane

Two orders published in September 2022 aim to increase biomethane production in France:

- The first introduced a change in the purchase price of injected biomethane, by indexing it to the change in the hourly cost of labor and the producer price index. This order should help maintain the economic viability of new biomethane production facility projects during periods of high inflation.
- The second order relates to an extension to the commissioning deadline for the projects, which may be up to 18 months. Under biomethane regulated procurement agreements, which provide producers with access to the regulated tariff for 15 years, projects must be commissioned within a maximum period of three years following the signing of the agreement. Any delay to this maximum deadline reduces the duration of the agreement by an equivalent length of time. Due to the Covid-19 crisis, some projects were delayed and would no longer have been viable due to the reduction in the duration of the agreement. Under certain conditions laid out in the order, the three-year maximum was thus extended by 18 months, which should allow these projects to go ahead.

An order was also published on April 25, 2022 relating to biogas production certificates. This order specifies in particular the compulsory inclusion of biomethane for gas suppliers. Biogas production certificates, for which the sector are still awaiting certain conditions, are a new mechanism that will help restart the development of new projects.

1.6.2.3 Activities in America

ENGIE has become one of the biggest power infrastructure players in South America.

In **Chile**, ENGIE owns a 59.99% stake in ENGIE Energia Chile (EECL). This company operates 2,413 km of electricity transmission lines and 24 substations, with an additional 24 km of transmission lines and 10 substations under construction. EECL also owns 50% of Transmisora Electrica del Norte (TEN). This company operates 1,204 km of transmission lines and four substations, that interconnect Chile's North and Central electricity grids. In 2022, EECL was awarded the tender to build the Totihue substation. In the gas business, ENGIE holds a 63% stake in GNL Mejillones, an LNG regasification terminal with a 5.5 Mm^3/day capacity, located in Northern Chile, and 100% in ENGIE Gas Chile and ENGIE Stream Solutions Chile, companies dedicated to the commercialization of natural gas through distribution pipelines and LNG by trucks. Additionally, its subsidiary EECL holds 100% of Gasoducto NorAndino, an approximately 1,000 km gas pipeline between Argentina and Chile.

In **Mexico**, ENGIE operates eight local distribution companies providing natural gas to nearly 664,200 customers through a 13,964 km network, and three gas transmission companies operating around 1,311 km of pipelines. In December 2021, the transmission agreement with the Mayakan gas pipeline's main customer, which accounted for 96% of the capacity contracted until 2025, was extended until 2050 for the same volume.

In **Argentina**, in October 2022, ENGIE sold its 70% stake in Litoral Gas, a gas distribution company with more than 740,000 customers, operating 13,350 km of network as well as its 70.8% stake in Energy Consulting Services (ECS), a company that sells electricity and gas and provides energy advisory services.

In **Peru**, ENGIE owns a 62% stake in ENGIE Energia Peru, via which it operates more than 900 km of power transmission lines.

In **Brazil**, in December 2017, ENGIE entered the power transmission business. ENGIE Brazil Energia (EBE) won an auction for the Gralha Azul project, 1,000 km transmission lines and five substations in the southern state of Paraná. In January 2020, ENGIE purchased the Novo Estado projects from Sterlite, the holder of a concession for the construction, operation and maintenance of 1,800 km of transmission lines in the states of Pará and Tocantins, also including the construction of a new substation and upgrades to three existing substations in the two states. The Gralha Azul project has been fully operational since July 2022 and the Novo Estado project, which has already been operating at a capacity of 50% since September 2022, will be fully operational by February 2023. In 2022, EBE was awarded the Gavião Real project, in the state of Para, for the construction of a new 230/138 kV substation and a transmission line of 1.5 km for a total investment of €18 million.

In natural gas pipeline infrastructures, ENGIE has concluded the acquisition of 100% of TAG assets in 2020. This acquisition took place through the consortium comprising the ENGIE Group, holding 65%, and the Caisse de Dépôt et Placement du Québec (CDPQ), that holds the remaining 35%. TAG is one of the biggest natural gas transmission companies on the regulated market in Brazil, with a network of pipelines of approximately 4,500 km in operation and 100 km under construction, representing 45% of the country's total gas infrastructure. TAG has 11 gas compression facilities, 14 gas reception points (including two LNG terminals in operation and a third under construction) and 90 gas delivery points in operation and two under construction. TAG transports natural gas to 10 gas distributors (LDCs), refineries, fertilizer plants and electric power plants. In 2022, TAG signed:

- GASFOR II, a gas pipeline of 84 km (loop within the existing network), COD scheduled for July 2023;
- a connection to the Sergipe LNG terminal with a gas pipeline of 25 km, COD in April 2024;
- 11 new customers representing 12% of TAG's total revenue in 2022, including Shell, Equinor, Galp and two natural gas distribution companies, among others.

TAG inaugurated its supervision and control center in Rio de Janeiro in March 2022.

Lastly, ESOM, the company incorporated by ENGIE to provide maintenance for TAG's 4.5 thousand km of network has been fully operational since July 2022.

In the **United States**, ENGIE continues to administer the Neptune LNG port, located off the coast of Boston, Massachusetts. Neptune has obtained a further three-year extension of the suspension of its operating status, which will now expire in June 2025. The suspension status benefits ENGIE by reducing annual operation costs, as certain activities are not required during the suspension period.

In **Canada**, ENGIE holds a 40% stake in Intragaz, a company owning and operating two natural gas underground storage sites in depleted reservoirs in the Quebec region, with a 157 million m3 total capacity. Expansion is under way to increase the withdrawal rate by 25%, with commissioning scheduled before the end of 2023. The Intragaz tariff which was set to expire at the end of 2023 has been renewed with no meaningful impact on the rate of return, with a streamlined method for adjusting the Intragaz rate of return based on the change in Énergir's rate of return over the 2023-2032 period. ENGIE disposed of its stake to ENERGIR at the beginning of January 2023.

Regulatory changes

In **Chile**, during 2022 the National Energy Commission published its definitive technical report of the four-year tariff review process for regulated transmission for the period 2020-2023. The results have been revised and validated by a Panel of Experts established in the Chilean regulation. The publication date for the decree on these 2020-2023 transmissions tariffs has still not been announced, as the Ministry of Energy withdrew the decree from the process requesting the regulator made corrections, which were made during the third week of January 2023.

Brazil:

- A new gas law was published in April 2021, but no new regulation by the National regulation agency (ANP) since then.
- In order to ensure that the Brazilian gas market is opened up successfully, federal legislation must be harmonized with that of the states as the ANP regulates activities upstream and midstream, whereas each state regulates downstream activities (27 natural gas distribution companies).
- The main risk for gas transmission activities is the bypassing of networks, with projects directly linking gas supply sources to the point of consumption (mainly thermal power plants, which represent around 40% of the country's total demand). The legal framework of the new law requires improvement. To do so, TAG and the Group are part of the public debate with various stakeholders and closely follow regulatory changes and the implementation of the legal framework for the new law at both the federal and local level.

1.6.2.4 Activities in Europe and the rest of the world

ENGIE operates in the area of gas networks in **Romania** via Distrigaz Sud Retele, a subsidiary 99.99% owned by ENGIE Romania, itself 50.99% owned by the ENGIE group. Distrigaz Sud Retele is the country's main natural gas distributor. It covered the southern half of Romania and operated a distribution network of 21,104 km at the end of 2021, serving two million delivery points.

The Group is also active in natural gas storage in Romania through its subsidiary, Depomures, which is 59% owned. It operates a storage facility of 3 TWh, i.e. 10% of the country's natural gas storage capacity.

In **Germany**, ENGIE has a 31.575% stake in GASAG, the Berlin-based gas distribution company. It also covers the Brandenburg region through its subsidiaries. GASAG markets and sells energy and energy services.

Outside Europe, the Group keeps an eye on potential gas network projects in areas where this would improve the decarbonization trajectory.

1.6.3 GBU ENERGY SOLUTIONS

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues *(in millions of euros)*	11,552	9,926	+16.4%
EBIT *(in millions of euros)*	412	350	+17.7%
Decentralized energy production capacity *(GW@100%)*	25	24	+3.3%

1.6.3.1 Missions, organization and strategy

Missions

Energy Solutions is one of the global leaders in[1] decentralized energy networks and associated services. It aims to support town-cities, local authorities, industrial and service sector customers in their decarbonization trajectory. To do so, the GBU provides a wide range of solutions to drive action on three levels: making the energy mix greener, energy efficiency and energy savings.

These solutions are divided into three categories: local energy networks, on-site energy production, and energy management and performance services.

Local energy networks designed on a neighborhood, town or metropolitan scale, allow for the production and delivery of final energy (heating, steam, cooling, electricity) to a large number of users by optimizing the use of green energies available in the area (biomass, geothermal, thermal solar, etc.), while developing energy-efficient technologies.

The GBU provides public authorities with the creation, development, modernization and operation of these networks via asset-based business models, in the following areas:

- heating and cooling networks;
- island-based energy networks;
- low-carbon mobility (electric charging networks, biogas stations, production and distribution of renewable hydrogen (Section 1.6.4.4 "Hydrogen activities"));
- low-carbon public lighting.

The combination of these solutions makes it possible to propose global offers to decarbonize towns and cities, campuses and other territorial units.

On-site energy production depends on networks that allow for the site-wide production (industrial or service sites) of the final energy required for its operation (heating, cooling, electricity, steam, compressed air, etc.).

The GBU provides industrial and services customers with the creation, development, modernization and operation of these networks via asset-based business models, notably allowing:

- final energy production through on-site low-carbon utilities (biomass, thermal solar energy, geothermal energy, fatal heat recovery) and systems to optimize efficiency;
- decentralized solar power.

Energy management and performance services include a wide range of services to support customers in the design stages of their decarbonization trajectory as well as during the execution stage.

The GBU provides:

- consulting services (ENGIE Impact);
- engineering services (Tractebel);
- a range of operational services with:
  - an energy management service and the management of facilities with the aim of greening supply (PPA, own consumption, biomethane),
  - operation and maintenance service of installations producing and distributing heat and cold in buildings with a commitment to energy efficiency in the production process,
  - an energy efficiency service that guarantees an optimum level of energy efficiency, energy saving and quality of energy-based services within the building.

Organization

The GBU is organized around five operating regions: France (two entities), Europe, Asia & the Middle East, the Americas, plus two entities specialized in consulting (ENGIE Impact) and engineering (Tractebel).

The central teams provide:

- support for the development of the operating entities' performance through business line platforms dedicated to the main solutions (training, expertise, best practice, innovation, project resources support);
- management of the global scope via five support functions (Finance; Human Resources; Marketing Strategy – Communication; Legal – Ethics and CSR - HSE Digital Performance - procurement);
- and contribute to improving synergies between the various entities.

Market and competitive environment

There are mainly two types of actors present in one or other of Energy Solutions' business lines:

- Utilities with energy networks and / or services, and with which there is a trend of expanding their geographical footprint and improving their positioning in terms of activities, thus brining them more in line with that of Energy Solutions (Energy Solutions nonetheless remains the only entity to centralize all its activities under a single management mechanism);
- infrastructure funds, which are more focused on network activities, with assets notably in cooling and heating networks and low-carbon mobility.

1.6.3.2 Activities in France

In France, business is conducted under the ENGIE Solutions brand and is dedicated to the BtoB services. It serves all segments: cities and local authorities, the industrial and services sectors.

ENGIE Solutions is the leader in France, Monaco and the Overseas Territories in low-carbon decentralized energy networks and associated energy services, with a base of 16,000 customers.

The 16,000 employees are spread out across the whole of France, both in the mainland and the Overseas Territories.

The development of urban heating networks continued in 2022 as part of the decarbonization approach:

- the signing of a public service delegation contract for the Strasbourg West heating network with the Strasbourg Eurometropolis. The equivalent of 25,000 housing units will be connected to the network in the long term;
- the greening of the City of Meudon's network with the construction, as of 2023, of a geothermal network which will supply renewably sourced energy to residents: a virtuous, carbon-free service which will help limit the impact of fluctuating fossil fuel prices;

(1) Competitive positions established on the basis of specialist work within the Group, carried out using available information published by stakeholders or entities providing external analysis. They are established within the scope of the Group as at 12/31/2022.

- development based on smaller heating networks, for example the creation of the future Toul heating network for a duration of 25 years, which will aim to supply 20 GWh per year of fully renewable energy, of which 80% of public installations.

In terms of sustainable mobility solutions, 2022 saw the development of charging station projects:

- on motorways, for APRR, to expand the charging station network by designing, manufacturing and commissioning 214 charging stations with loads of up to 300 kW, for a duration of 15 years;
- in town and city centers, for INDIGO, for the roll out of fast-charging stations at 35 locations in 20 towns and cities for a duration of 10 years: a first in France in underground parking lots.

ENGIE Solutions continues to support its customers in their energy transition and decarbonization efforts, notably in the industrial sector:

- through the decarbonization project at the headquarters of the yeast producer, LESAFFRE group: provision of a turnkey project (design, construction, financing and operation for a duration of 15 years) for fatal heat recovery from the industrial process at the Marcq-en-Barœul plant. With the installation of heat pumps with total capacity of 19 MW, this site will become one of the largest fatal heat recovery facilities in the food industry sector;
- Novawood is a project for the onsite construction of a 14.6MW biomass cogeneration plant to replace two coal-fired boilers. Commissioned in 2022, this green electricity and heating production facility uses recovered wood as fuel.

In terms of energy management and performance services, development continued with the signing of Energy Performance Agreements, notably with:

- the contract with the Gironde Departmental Council for 118 buildings and a duration of eight years, with an energy saving commitment of 25%, and the achievement of a renewable energy rate of 33% mainly thanks to the implementation of a renewable electricity and solar power panel agreement;
- the renewal of the contract for the delegated management of 23 prison facilities in France and Réunion, with the Department of Justice. This seven-year Energy Performance Contract will help save 14,000 tons of CO2 over its duration, and decrease energy consumption by 13.5%.

Finally, ENGIE Solutions continues to develop the local production of renewable energy for its customers, notably in solar power through its subsidiary Réservoir Sun. The photovoltaic plant installed at Olympique Lyonnais facilities at OL Vallée was inaugurated in December 2022. In the long term, this photovoltaic farm built at sporting facilities with a surface area of around 50,000 m² (i.e. the equivalent of seven soccer fields) could produce 12 GWh of local and carbon-free electricity each year, corresponding to the annual energy consumption of 2,700 households.

1.6.3.3 ENGIE Impact

ENGIE Impact is an entity specializing in providing decarbonization advice to major economic players, particularly cities and regions and industrial or service groups. It helps them, in the context of their ambitions in terms of decarbonizing their activity, to define a strategy, the means necessary for its implementation and the tools to monitor its execution. ENGIE Impact supports more than 1,400 customers worldwide, including a quarter of Fortune 500 companies. In 2022, ENGIE Impact strengthened its partnership with Forvia, by signing a new agreement to roll our solar production solutions at Forvia's industrial sites in more than 14 countries.

1.6.3.4 Tractebel

Tractebel is known as an engineering company of prime standing in the areas of energy, nuclear, water and networks. It supports its customers, both public and private, in their transition to carbon neutrality.

Tractebel, which has 5,000 employees, is active in 30 main countries.

In the energy sector, Tractebel provides its expertise and know-how to customers within and outside the ENGIE Group covering the design, planning, development and supervision of the construction of projects.

In 2022, Tractebel was involved, inter alia, in the following projects:

- new power plants such as the Flémalle combined cycle gas-fired power plant in Belgium for ENGIE;
- wind farms in Africa and Latin America such as Gulf of Suez (Egypt) for ENGIE and Novo Horizonte (Brazil) for an external customer;
- offshore photovoltaic farms, such as Madhya Pradesh (India), and onshore solar farms, such as Calama (Chile);
- Offshore and onshore hydrogen production projects such as RHyno (South Africa), HyNetherlands (Netherlands) and Yuri (Australia).

Tractebel is also in charge of design, project management and construction management for a project to strengthen one of the North-South corridors of the German electricity grid.

Tractebel continues to provide its expertise and know-how in the area of nuclear power to major operators. Tractebel also provides its services to players such as EDF in France, ESKOM in South Africa, as well as ENGIE in Belgium. Tractebel is also involved in the development of the ANGRA 3 construction project in Brazil, as well as new reactors at the Hinkley Point and Sizewell sites in the UK. It also takes part in major projects in the areas of research reactors (PALLAS, the Netherlands), experimental reactors (ITER, France), defense and nuclear waste management infrastructures and small modular reactors (SMRs).

In the water sector, Tractebel is engaged in dams and hydropower projects of all sizes, water irrigation, supply, purification and distribution, and sea or river and coastal protection infrastructures related to climate change. Tractebel is carrying out studies for the Pumping Energy Transfer Station (PETS) of Snowy 2.0 (Australia) and to increase the capacity of Coo (Belgium). It is also involved in purification projects such as UHarakhand (India).

In the urban networks sector, Tractebel helps to engineer buildings, land transportation networks and cities, with the aim of accelerating the development of integrated offerings and decarbonizing districts and regions.

Using Building Information Modeling (BIM) and complex modeling and simulation tools, Tractebel is taking part in various public transport and mobility infrastructure projects in Belgium, Germany, India and Chile and in the Grand Paris Express project (France). The teams are the leading designers of low-energy buildings in Belgium, and this year won an award at the MIPIM (Marché International des Professionnels de l'Immobilier), the international real estate event, for the design of Liège Hospital (Belgium). Lastly, the teams are involved as experts in the development of the low-carbon strategy of Springfield City Group and Monash University (Australia).

1.6.3.5 International activities

1.6.3.5.1 Europe (excl. France)

Italy

The GBU has leading positions in heating networks in the north of Italy and is one of the biggest players in public lighting, with more than 600,000 lighting points under management. The GBU also provides, with its market leader positioning, energy efficiency and on-site utilities solutions to businesses and public customers.

In 2022, the GBU won several public lighting management contracts, notably for the towns of Aoste, Assisi and Fiumicino under the extension of public-private partnership contracts.

Germany

The GBU is a major player in the market of on-site utilities through long-term contracts with industrial or services customers. It actively participates in the installation, operation and maintenance of energy efficiency solutions and has specific expertise, particularly in refrigeration. Lastly, for several decades, the GBU has held stakes in a number of Stadtwerke – i.e. local energy production and distribution companies – making ENGIE a player with strong regional roots in Germany.

In 2022, the GBU commissioned a cogeneration plant in the city of Saarbrücken, allowing it to exit coal which had been used until then within the Stadtwerke.

Spain

The GBU is active in installation and maintenance services, the provision of energy efficiency solutions and on-site utilities. It is a player in cities via several district heating networks, particularly in Barcelona.

In 2022, it developed new innovative projects such as that of a new concentrated solar power plant for a major agri-food sector player.

Portugal

The GBU distributes heating and cooling to the city of Lisbon through its Climaespaço subsidiary and provides O&M services and energy efficiency solutions. In 2022 it developed a portfolio of solar projects as well as an onsite utilities project for an industrial player.

Slovakia and Poland

The GBU is a major player in district heating networks. It also provides installation, operation and maintenance services. The GBU actively develops onsite utilities and decentralized solar activities in both of these countries.

As part of its strategy to exit coal, the GBU commissioned a natural gas cogeneration plant in 2022 and converted two coal-fired boilers to decarbonize the urban heating network of the Polish city of Słupsk.

In 2022, the GBU was awarded several contracts to develop and implement solar power projects with Slovakian industrial and service sector customers.

Belgium

The GBU is a large player in decentralized solar via the Sun4Business joint venture with the Orka group.

In 2022, it also won a major electric mobility concession call for tender in Flanders for the installation of 5,600 charging stations.

Romania

The GBU is developing its decentralized solar activities and in 2022 signed a third-party investment contract for 8.6 MWp with Saint-Gobain.

1.6.3.5.2 The Americas

United States

The GBU is involved in energy efficiency solutions, particularly for the public sector – local governments, schools and hospitals – and has been developing major partnerships for several years, particularly for universities. The GBU continues to develop its decentralized solar solutions with 340 MW installed in 2022.

Brazil

The GBU is also active in the development and implementation of integrated solutions focused on reducing costs and improving infrastructure for businesses and cities. Its activities mainly include energy efficiency, energy management and public lighting. In 2022, it was awarded one the largest public-private partnerships for public lighting in Brazil in the city of Curitiba with 160,000 lights to upgrade, a partial roll out of an intelligent control system and the maintenance and operation of assets.

1.6.3.5.3 Asia, Middle East and Africa

Persian Gulf countries

ENGIE holds a 40% stake in Tabreed (National Central Cooling Company PJSC), the leader in urban cooling networks in GCC countries. The company distributes the equivalent of a million tons of cold energy. Tabreed has had several commercial successes since 2020 with the acquisition of the cooling networks of Downtown Dubai and the cooling plants of Masdar (UAE).

The GBU also provides energy operation and maintenance services and onsite utilities to industrial customers in the region.

South East Asia

The GBU has strong capacity in technical maintenance, energy efficiency and district cooling systems, to provide turnkey low-carbon offerings.

The GBU continues the construction of major projects developed in recent years, notably an integrated district cooling network with Jurong Town Corporation (JTC) for the digital quarter of Punggol in Singapore, as well as onsite utility projects for several industrial players.

In 2022, the GBU won another call for tender for the installation of 4,500 charging stations in Singapore, in partnership with ComfortDelGro.

1.6.4 GBU FLEXGEN & RETAIL[(1)]

1.6.4.1 Missions, organization and strategy

The GBU FlexGen & Retail includes the following activities:

- thermal production (electricity production from gas, diesel, coal and biomass, energy pumped storage and battery storage);
- seawater desalination;
- BtoC energy supply (sales of electricity and gas, energy services, energy access);
- Large-scale production of low-carbon hydrogen. The GBU is also responsible for coordinating all hydrogen activities within the Group.
- Battery storage. The GBU is responsible for coordinating all battery activities within the Group.

These activities share the same challenge – but also the same opportunity – related to the reduction of CO_2 emissions.

The GBU contributes to the Group's development and to preparation for the future by generating nearly a quarter of its EBITDA. It brings industrial expertise and digital know-how. Besides balancing the Group's financial exposure via Retail activities, the activities of GBU FlexGen & Retail compensate for the intermittent nature of renewable energy by contributing upstream flexibility (flexible thermal production and electricity storage) and downstream flexibility (load shedding or shifting of consumption of BtoC customers). They also provide solutions for decarbonizing industry with low-carbon hydrogen. The GBU therefore plays a key role in the energy transition.

Market and competitive environment

In thermal electricity production, the top 10 (excluding China) is mainly composed of European (ENGIE, Enel, Fortum, RWE, etc.) and Asian players (KEPCO, Marubeni, TCWA, Mitsui). These top ten companies represent total thermal capacity of 300GW (c. 17% ENGIE). At end-2021, these players had 24GW of secured projects for new production plants across the globe, of which 83% in gas and 17% in coal, driven mainly by Asian players.

In battery storage, around 8.5 GW of capacity was either installed or in the advanced development stage at the end of 2021 for the main European players, mainly for utilities (ENEL, ENGIE and EDF), followed by renewable energy developers (NEOEN, Eunice, Eren, etc.) and investment funds.

In low-carbon hydrogen production, there is a strong concentration of projects in Europe and Australia (90% of the total projects announced) with a faster-than-expected commissioning of European projects (by 2030 at the latest) and the creation of consortia aimed at reducing production costs. By 2030, ENGIE, Air Liquide, Orsted, EDF and Iberdrola each aim to achieve at least 3GW in installed electrolysis capacity.

1.6.4.2 Flexible production activities (FlexGen)

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues *(in millions of euros)*	7,129	4,089	+74.3%
EBIT *(in millions of euros)*	1,768	1,183	+49.5%
Centralized gas-powered electricity production capacity *(GW@100%)*	34.8	34.8	-
Centralized coal-powered electricity production capacity *(GW@100%)*	2.2	2.2	-
Electricity storage capacity by pumped storage *(GW@100%)*	3.3	3.3	-

1.6.4.2.1 Europe

The market in Europe is accelerating its transition to less carbon-intensive energy generation. The European energy market, guided by European and national regulatory changes, is experiencing a major short- and medium-term program of shutting down coal-fired production sources, coupled with the phasing out of nuclear power in Germany. In this context, natural gas power plants now have a key role to play by offering the necessary flexibility in the energy markets, alongside emerging solutions such as batteries. Governments (Belgium, Italy, France and UK) are introducing various compensation mechanisms for power generators (remuneration capacity mechanisms, strategic reserves, etc.). These mechanisms allow existing capacity to remain operational.

In Europe, ENGIE manages a portfolio of thermal generation assets with installed capacity of 19.5 GW in seven European countries (France, Belgium, the Netherlands, Italy, the UK, Portugal and Spain), including its own power plants and decentralized customers' assets. Installed capacity broken down by technology is as follows: gas (14.6 GW), hydro pumped storage (3.3 GW), biomass & other (1.3 GW).

In addition, in Europe, ENGIE offers energy supply, operation and/or maintenance solutions to large industrial sites. It relies on proximity to its customers and its strong references to help them face the challenges of the energy transition.

Regulatory changes

Following the promulgation of the European Green Deal, the European Commission proposed the accelerated reduction of CO_2 emissions between now and 2030. Various European countries have started to phase out electricity production from coal. These marked trends have resulted in an acceleration of the study of solutions for decarbonizing their assets, while mechanisms for the remuneration of electricity capacity are also emerging to ensure security of supply.

1.6.4.2.2 The Americas

In North America, ENGIE owns and operates the West Windsor 126 MW combined cycle natural gas power plant in Ontario, Canada. West Windsor is entirely under contract with the Ontario Independent Electricity System Operator. In addition, ENGIE holds a stake of 35% in EcoElectrica, a 534 MW natural gas combined cycle power plant in Puerto Rico, which includes an LNG storage tank of 160,000 cubic meters and unloading facilities. EcoElectrica serves the island under a long-term agreement with PREPA (Puerto Rico Electric Power Authority).

(1) *Formerly Thermal & Supply.*

In **Brazil**, ENGIE Brasil Energia (EBE), a subsidiary of the Group, operates a 317 MW coal-fired power plant at Pampa Sul. The signature for the sale of the plant took place in September 2022 (the transactions should be completed during the first half of 2023).

In **Peru**, ENGIE, via ENGIE Energía Perú, operates ChilcaUno and ChilcaDos, two natural gas combined cycle power plants located near the capital, Lima, and the open cycle power plants, Peaky and Nodo Energetico (natural gas/diesel), both located in the city of Ilo in southern Peru. These plants represent 2,081 MW in total. In 2022, ENGIE also operated the Ilo21 coal-fired power plant, which was decommissioned on December 31, 2022 as part of ENGIE's decarbonization strategy in Peru.

In **Chile**, ENGIE, via ENGIE Energía Chile, has a large thermal network in the north of the country. In Tocopilla, the Group operated two coal-fired power plants of 266 MW, which were withdrawn from service on September 30, 2022, and operates a natural gas combined cycle plant of 355 MW. In Mejillones, it owns a natural gas combined cycle plant of 237 MW, two coal-fired power plants of 110 MW each, which will be withdrawn from service in 2025, a coal-fired power plant of 348 MW which could be converted to natural gas in 2025, and two fluidized bed coal-fired power plants of 362 MW which could be converted to biomass in 2025. In addition to these generation assets, a 1,081 km gas pipeline is operated to supply gas to the power plants and to import Argentine gas when this is available. Lastly, 54 MW of gas turbines and diesel engines are part of EECL's generation fleet. Two ports historically designed to import coal from thermal power plants present an opportunity for conversion for import or export activity (of copper ore, for example).

In **Mexico**, ENGIE Mexico operates two gas-fired cogeneration plants with a combined capacity of nearly 301 MW.

1.6.4.2.3 Africa, Middle East and Asia

In **Singapore**, ENGIE holds a 30% stake in Senoko Energy, operating a portfolio of power generation assets with a combined capacity of 2,565 MW. Senoko is present in the BtoB electricity retail market and is also the BtoC retail market which has been fully open since May 1, 2019.

In the **Gulf Cooperation Council** (GCC) countries, ENGIE acts as an asset developer, owner and operator. ENGIE sells the electricity and water it produces under long-term public power and water contracts. ENGIE is one of the leading private power and water developers and operators in the region. The total power generation capacity of 29 GW serves more than 40 million people (in Saudi Arabia, the United Arab Emirates, Oman, Bahrain, Qatar and Kuwait). The desalination facilities in operation or under construction produce nearly 4.4 million m^3 of water/day. In 2022, ENGIE won the Mirfa 2 contract in Abu Dhabi with capacity of 545,000m^3 of water per day.

In **Pakistan**, ENGIE owns 100% of two combined cycle gas turbine (CCGT) plants with total capacity of 931 MW. The electricity produced is sold under long-term PPAs to the distribution companies.

In **Africa**, ENGIE holds a minority stake in South Africa in two open cycle "peak" diesel plants with total capacity of 1,003 MW and a minority stake in Morocco in the coal-fired power plant of Safi with total production capacity of 1,250 MW. ENGIE also won the call for tender for the Dakhla desalination plant (113,000 m^3/day) associated with a wind farm (72 MW). The first hydrogen project (Rhyno) aimed at powering an Anglo American truck with green hydrogen is now in the final commissioning stage.

In **Australia**, ENGIE has several minority stakes in gas power plants with a total capacity of 857MW. It has also launched the construction of the Yuri hydrogen-production project which combines a solar farm, batteries and an electrolyzer to provide Yara with green hydrogen.

1.6.4.3 Retail activities

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues *(in millions of euros)*	16,810	10,396	+61.7%
EBIT *(in millions of euros)*	-7	232	NA
Number of BtoC gas energy and services contracts *(in millions)*	10,866	10,829	+0.3%
Number of BtoC electricity energy and services contracts *(in millions)*	9,108	8,881	+2.6%

The Energy Supply business is concentrated in France, Belgium, Italy, Romania, the Netherlands and Australia. ENGIE targets both individual customers and small business customers. The business is based on the provision of energy contracts (gas and electricity) and the sale of decarbonization services.

In all the markets where ENGIE operates, the aim is to become a leading provider of energy and energy transition solutions.

To achieve this, the priorities are to market:

- **green energy contracts** with digital solutions for budget-based or comfort-based consumption management;
- **green comfort services**: installation, maintenance and surveillance of high-performance thermal equipment (heat pumps, very high performance boilers, hot water tanks, wood-fired boilers);
- **clean mobility services**: installation of charging points, charging solutions, electric vehicles leasing, etc.;
- **energy decentralization services** (solar roof equipment, management of fixed or on-board batteries and load-matching of the electrical power demanded);
- **balancing and capacity services to electricity system players** through virtual plantsthat aggregate the flexibilities of residential customers.

ENGIE holds a portfolio of almost 20 million energy contracts (19.8 million at the end of 2022) and continues to grow its service contracts (2.9 million service contracts at the end of September 2022, the same as at end 2021). In France, ENGIE is still the leader in gas sales and the main challenger in electricity sales. In Belgium, the Group is the leader in both gas and electricity and, in Romania, is the leading gas supplier. On the decarbonization services market, for retail and small corporate customers, the Group implements numerous solutions that have made it a reference player and contribute to its growth.

Sales of green electricity contracts continued to increase and at the end of 2022, 66% of electricity contracts managed by ENGIE were green (6 million).

To support its customers in the current unprecedented energy price crisis, ENGIE has introduced several major initiatives across all countries, in particular:

- adjustments to monthly payments and the staggering or spreading of payments;
- large-scale communication plans to raise customer awareness of energy saving measures;
- showcasing a range of offers which favor controlled consumption and a balanced energy system. In France, for example, customers can therefore benefit from remote management services for their consumption and budget (for both gas and electricity) and services that allow them to consume less and in a better way by removing pressure from the network at peak times. The "Mon Pilotage Elec" ("My Electricity Management") and "Mon Bonus Engie" ("My Engie Bonus") offers allow customers to shift consumption at critical moments for the network;
- the reinforcement of its customer relation centers in Belgium;
- the payment of €100 on average in aid to all energy voucher beneficiaries in France.

Decarbonization services are also progressing despite a shortage of equipment and longer supply lead times in a global market with strong demand and growth potential: in France, +122% in solar roof sales and +260% in the number of charging stations for electric vehicles installed, in Belgium, +35% in charging station sales.

At the same time, ENGIE improved the penetration rate of offers launched in 2021 to allow its customers to consume less and in a better way: "Mon pilotage gaz" ("My Gas Management") (France), which enables consumption to be managed according to budget instructions, "Mon pilotage élec" (My Electricity Management") (France) which enables consumption to be managed based on temperature instructions, a storage management offering to optimize own consumption of solar power (Belgium), electric vehicle roaming (Belgium, France), installation of photovoltaic panels (Italy, Romania), behavior-centered load shedding (Australia), etc.

In 2022, France was awarded certification by electricity carrier RTE allowing it to contribute, with its individual customers, to the real-time balancing of electricity production and consumption at the European level.

Regulatory changes

In France, ENGIE supplies 2.3 million BtoC customers with gas at regulated tariffs, which by law are set to disappear at end-June 2023. Price caps and cushions have been introduced for both gas and electricity.

In other countries (Romania, Italy), measures were also implemented by government to mitigate price increases for customers (tariff freezing, decrease in VAT) and in Belgium the number of households entitled to the social energy tariff was extended.

ENGIE Energy Access

ENGIE Energy Access develops innovative off-grid solar solutions for homes, public services and businesses, providing customers with access to clean, affordable energy. Solar home systems and mini-grids promote economic development, enabling productive use of electricity and creating business opportunities for entrepreneurs in rural communities.

ENGIE Energy Access is Africa's leading off-grid company with a presence in nine countries (Benin, Ivory Coast, Kenya, Mozambique, Nigeria, Uganda, Rwanda, Tanzania and Zambia), over 1.3 million customers and over 6.5 million people.

1.6.4.4 Hydrogen activities

1.6.4.4.1 Missions & Strategy

Hydrogen is a key energy vector in the transition, in which ENGIE aims to develop strong positions throughout the entire value chain of hydrogen production, networks, mobility and trading.

In **Europe**, the Group benefits from its portfolio of industrial and local authority customers (GBU Energy Solutions) as well as significant renewable energy production capacity and the commercial know-how of GEMS.

In **France**, the Group is expanding around existing transportation (GRTgaz) and storage (Storengy) infrastructures that are a central part of the future European hydrogen backbone.

Internationally, it is prioritizing projects in countries with low-cost renewables where the Group is strongly positioned, in particular those with public policies in support of the development of hydrogen, with a view to support the energy transition of its customers and develop large-scale green fuel projects.

1.6.4.4.2 Description of activities

GBU FlexGen & Retail coordinates all of the Group's hydrogen activities, which are developed in the various GBU according to their relevant expertise.

Large-scale production of low-carbon hydrogen: ENGIE has a comprehensive and phased approach, developing large-scale projects with its industrial customers in the most favorable geographic areas. The Group designs models for replicable offers for targeted segments. A certain number of large-scale projects are under development with key players, such as Yara in Australia, Enaex in Chile, Gasunie in the Netherlands, TotalEnergies in France and Masdar and OCI in the United Arab Emirates. Most of these projects may, in the longer term, lead to the implementation of large-scale projects (GW scale).

In Europe, ENGIE targets industries that are otherwise hard to decarbonize. Electrification is not possible or financially viable in certain sectors, for which the hydrogen vector is a solution, in particular the steel industry, refining (conventional or bio), and the production of e-molecules (ammonia, methanol, synthetic kerosene, etc.).

Excluding Europe, ENGIE focuses on areas with low-cost renewables, such as the United States, Australia, Chile, Brazil, Morocco and the United Arab Emirates. The mining industries also form favorable ecosystems in which low-carbon hydrogen will be competitive in the shorter term for use in heavy industrial mobility, for example in South Africa.

ENGIE thus announced in September 2022 the final investment decision for phase one (10 MW) of its green hydrogen production project for the Yara ammonia plant in Western Australia (Pilbara). In 2021, ENGIE also entered into a strategic alliance with Masdar, a major renewables player, aimed at co-developing 2 GW of low-carbon hydrogen projects by 2030 in the United Arab Emirates for a total investment of US$5 billion (€4.8 billion). This alliance led to the signing of an agreement at the beginning of 2022 by both partners with Fertiglobe (a subsidiary 58%- and 42%-owned by OCI and ADNOC respectively) to study the viability of a 200 MW electrolysis facility, supplying hydrogen for the production of green ammonia by Fertiglobe as of 2025.

Finally, the signature of a Memorandum of Understanding between ENGIE and South Korean steelmaker POSCO, for the joint development of green hydrogen projects in the Middle East, Australia and Latin America, aims to support the decarbonization of the steel production process.

ENGIE has set a target of 0.6 GW of electrolysis capacity in 2025 and 4 GW in 2030.

Mobility: ENGIE, through GBU Energy Solutions, is one of the leading players in France in the development of regional hydrogen ecosystems for mobility and industrial uses. It finances, designs and operates decentralized systems for the production of hydrogen by electrolysis and charging points for public and private transport operators.

ENGIE installed three hydrogen stations in France in 2022, and aims to have more than 100 hydrogen charging points by 2030.

Moreover, ENGIE and Alstom announced a partnership agreement in April to implement low-carbon hydrogen logistics and refueling solutions for a fuel cell system for rail freight, that powers electric locomotives on non-electrified sections of the network. Nestlé Waters will be the first company to benefit from the solution as of 2025.

Networks: The adaptation and conversion of its hydrogen development infrastructures is a priority for the Group. GRTgaz is heavily involved in the development of a European hydrogen backbone with the first concrete projects, such as the MosaHYc project and the RHYn project launched in 2022. In the longer term, GRTgaz is involved in H2MED, the hydrogen pipeline connecting Portugal and Spain to France and Germany (Section 1.6.2.2.2.). Storengy is developing an underground hydrogen storage service, seeking to combine a production and storage site to enable a reliable and flexible supply of hydrogen (HyPSTER and HyGreen projects). The Group aims to have a hydrogen transmission network of 170km in 2025 and 700 km in 2030, and to have 270 GWh of storage in 2025 and 1 TWh in 2030 (Section 1.6.2.2.2 "GRTgaz" and Section 1.6.2.2.4 "Storengy").

Hydrogen trading: GEMS aims to develop a leadership position on the wholesale hydrogen market, developing a portfolio of diversified supply, sale with services adapted to the requirements of each customer, and electricity and gas supply to hydrogen production sites.

In terms of innovation, ENGIE supports investment in the development of hydrogen technologies. The Group has also developed a proprietary technology to identify areas of high production of natural, low-carbon and competitive hydrogen, which Storengy aims to mine through boreholes. In 2022, ENGIE also inaugurated its H_2 Lab, a research and innovation center dedicated to low-carbon hydrogen, equipped with testing facilities for the entire H_2 value chain, from production through to use.

Regulatory changes

As part of its carbon-neutral trajectory, the European Union intends to develop the production of low-carbon hydrogen on a huge scale with an ambitious target of 40 GW of electrolysis capacity in Europe by 2030. This target was increased with the RePowerEU plan, following the invasion of Ukraine by Russia and the EU's decision to minimize dependency on Russian natural gas, which aims to produce 10 Mt H_2 per year on European soil and to import an additional 10 Mt H_2. Binding targets for consumption and limitation of greenhouse gas emissions have been set in the industry as part of the European Fit for 55 package and are being discussed for heavy mobility as part of the ReFuel EU initiatives. These are positive changes that demonstrate a strengthened political will, but have yet to be implemented in practice. ENGIE is working to reduce the existing obstacles to project development and to improve the regulatory framework.

1.6.5 NUCLEAR

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues[1] *(in millions of euros)*	35	56	-37.7%
EBIT *(in millions of euros)*	1,026	959	+6.9%
Nuclear-powered electricity production capacity *(GW@100%)*	5.3	6.2	-14.7%

(1) Contributing revenues after the elimination of intra-group transactions of €2,653 million on December 31, 2022 (€1,705 million at December 31, 2021).

1.6.5.1 Missions & Strategy

The Nuclear operating entity is dedicated to the operational management of the seven nuclear reactors in Belgium and the rights held by EDF's two power plants in France.

The operating entity is structured around the following priorities:

- to ensure the optimum availability of nuclear power plants during their operational phase, thus contributing to the production of carbon-free electricity; and
- to prepare for the shutdown and monitor the decommissioning of the first reactors (Doel 3 in 2022, Tihange 2 in 2023) in both technical and organizational terms.

Moreover, the ENGIE Group entered into discussions with the Belgian government regarding the possibility of extending the operating life of the Doel 4 and Tihange 3 nuclear reactors. A letter of intent was signed by both parties in July 2022, which was confirmed and reinforced by a non-binding agreement in principle in January 2023. These documents provide for extended agreements in principle by March 15 and a binding agreement by June 2023.

Nuclear safety is a key part of these priorities. The current nuclear safety system is being continuously strengthened, in close collaboration with the nuclear safety authorities.

1.6.5.2 Description of activities

The entity has sites in Doel, Tihange and Brussels in Belgium. Electrabel operates, in compliance with the strictest nuclear safety standards, the Doel and the Tihange nuclear power plants. In 2022, these plants represent a total installed capacity of 5,943 MWe (including 897 MWe in partnership with the EDF Group). Since September 23, 2022, the Doel 3 power plant (1,006 MW) has been permanently shut down. The Group also has 1,118 MWe of rights in the Tricastin and Chooz B power plants in France.

The legal framework in place provides for the gradual withdrawal from the operation of nuclear power plants in Belgium between 2022 and 2025. Following a decision dated March 18, 2022, the Belgian government decided to take the necessary measures to extend the operating life of Doel 4 and Tihange 3 by ten years. A non-binding letter of intent was signed by the Belgian government and the Group in July 2022. Discussions are underway with a view to reach a binding agreement by June 2023. The legal framework defines, amongst other things, the economic parameters governing the extension of the operating life of Tihange 1, Doel 1 and Doel 2 until 2025 and the mechanism to calculate the nuclear contribution to be paid by Electrabel (draft law relating to the cap on revenue from electricity production markets under way).

The Group assumes obligations resulting from the April 11, 2003 Belgian Law, as amended by the Law dated July 12, 2022, relating to the provisions made for the decommissioning of nuclear power plants and for the management of spent nuclear fuel. The Law of July 12, 2022 provides in particular for the full financing of nuclear provisions by 2030 and a strengthening of the control of the Commission for Nuclear Provisions on certain decisions relating to the capital of Electrabel and to Synatom. Following the three-year review of nuclear provisions carried out in 2022 under the authority of the Commission for Nuclear Provisions, the technical scenarios for downstream management of the nuclear fuel cycle were revised.

The discount rates of nuclear provisions stand at 3% for provisions for the downstream nuclear fuel cycle, and 2.5% for provisions for dismantling nuclear power plants, with inflation unchanged at 2%. Nuclear provisions stand at €19 billion. The next review is scheduled for 2025.

1.6.6 OTHER - INCLUDING GLOBAL ENERGY MANAGEMENT & SALES (GEMS)

Key figures

	At Dec. 31, 2022	At Dec. 31, 2021	Total change *(in %)*
Revenues *(in millions of euros)*	45,163	23,046	+96.0%
of which GEMS	*45,137*	*22,870*	*+97.4%*
EBIT *(in millions of euros)*	1,848	-85	NA
of which GEMS	*2,618*	*507*	*NA*
Energy volumes sold to BtoB customers *(TWh)*	350	337	+3.9%

The "Other" reportable segment covers the BtoB energy and supply management and optimization (Global Energy Management & Sales (GEMS)) of GTT, as well as of corporates and holdings. The major share of results for the "Other" segment is attributable to GEMS.

1.6.6.1 Missions and Strategy of GEMS

With offices in 15 countries and eight trading platforms, the GEMS entity operates around the world. to provide energy & energy management solutions to support ENGIE and its customers in their transition toward a carbon neutral economy. GEMS's mission is twofold:

- optimize the value of the Group's power, gas and renewable assets, manage the portfolio risks on behalf of the Group through markets and contribute to the competitiveness of the Group's Global Business Units;
- ensure a secure and sustainable energy future for more than 190,000 external customers by developing innovative and competitive commercial activities.

In addition to its leading position in the European wholesale natural gas and electricity markets, GEMS aims at developing the same leadership position in renewable and low-carbon gases (biomethane, hydrogen). More broadly, the entity pursues its plan to expand its green energy management portfolio, which includes renewable energy, low-carbon and green gases, sustainable biomass, guarantees of origin and green certificates. In this respect, GEMS develops the management of long-term renewable energy purchase agreements "Green PPAs."

Due to the Ukrainian conflict, in 2022 the Group diversified its supply sources to improve, in the short term, the security of supply. This has been done in particular via new (non-Russian) gas and Liquefied Natural Gas (LNG) purchases.

1.6.6.2 Activities of GEMS

GEMS activities are divided into four main areas of expertise.

Energy supply: GEMS delivers natural, green and low-carbon gas (biomethane, hydrogen), power, renewable energy purchase agreements, LNG and biomass to business customers and major industrial customers, as well as to ENGIE's other sales entities.

Asset management & flexibilities services: with regard to power asset management, GEMS dispatches and optimizes ENGIE's power generation assets as well as third party assets. Concerning gas asset management, GEMS manages the gas upstream supply, transportation and storage capacity portfolio, and valorizes and optimizes gas asset flexibility through the markets.

Risk management & market access: GEMS manages the risks of the physical & financial energy portfolio with bespoke hedging strategies, competitive market access & first-class market expertise.

Green & low-carbon energy solutions: GEMS offers customized solutions to help customers achieve their Environmental, Social and Governance (ESG) goals (guarantees of origin, energy tracing, offsets, energy efficiency) through market leadership and innovation. The entity also develops the following activities: purchase and sale of biomethane, renewable and low-carbon hydrogen to develop a diversified supply portfolio and services adapted to each customer; power and gas supply for hydrogen production facilities, as well as their optimization.

In 2022 ENGIE secured contracts and launched partnerships including:

- ENGIE has booked the remaining capacity of the Eemshaven LNG terminal, belonging to Gasunie's subsidiary EemsEnergyTerminal. ENGIE has also booked new regasification capacity at the Fos Cavaou LNG terminal. With this new capacity added to its current LNG portfolio, ENGIE has strengthened its energy diversification strategy and increased its capacity to supply LNG to Europe;
- AXA IM Alts and ENGIE acquired a minority stake in The Shared Wood Company (SWC), which develops nature-based solutions projects. They will support SWC's growth by providing financing for forestry and sustainable land-use projects and by off-taking the high-quality carbon emission avoidances and carbon removals generated by these projects and operations. This investment represents an excellent opportunity to access high-quality nature-based carbon offsets to accelerate our customers' transition to carbon neutrality;
- O-I and ENGIE signed a long-term agreement for ENGIE to supply renewable electricity to O-I's European sites. O-I is one of the main US glass-packaging manufacturers. ENGIE also signed two renewable electricity procurement agreements with the leading German glassmaker Schott. In Australia, ENGIE signed a renewables PPA to supply renewable electricity to Charter Hall Group, a major real estate investment management company;
- ENGIE and Google Cloud signed a new partnership agreement to develop an AI-based energy solution to optimize the value of ENGIE's wind portfolio on the electricity markets in the short term. This project will facilitate transactions for the developers of wind assets and will create advantages for wind power producers, thus accelerating the energy transition.

1.6.7 GROUP BUSINESS MODEL

The Group's business model is presented in Section 3.2.

1.7 REAL ESTATE, PLANT AND EQUIPMENT

The Group owns or leases a significant amount of industrial real estate around the world. Many Group activities involve operating very large plants that the Group only partially owns.

As of December 31, 2022, the Group operated electricity power plants, LNG terminals and storage facilities in over 31 countries.

The tables below show the main facilities currently in operation, either wholly or partially owned by the Group. Leased properties are discussed in Note 13 to Section 6.2.2 “Notes to the consolidated financial statements.”

Power plants (capacity > 400 MW excluding units under construction)

Country	Site/plant	Total capacity[1)] *(MW)*	Type of plant
South Africa	Avon	669	Fuel-oil fired
Saudi Arabia	Fadhili	1,499	Natural gas
	Marafiq	2,744	Natural gas
	Ju’aymah	468	Natural gas
	Shedgum	468	Natural gas
	Uthmaniyah	467	Natural gas
	Riyadh PP11	1,729	Natural gas
Australia	Pelican Point	489	Natural gas
Bahrain	Al Dur	1,224	Natural gas
	Al Ezzel	941	Natural gas
	Al Hidd	929	Natural gas
Belgium	Amercœur	451	Natural gas
	Coo	1,080	Hydraulic pumping
	Doel	1,928	Nuclear
	Drogenbos	460	Natural gas
	Herdersbrug	480	Natural gas
	Tihange	3,008	Nuclear
Brazil	Cana Brava	439	Hydroelectric
	Estreito	1,068	Hydroelectric
	Jaguara	413	Hydroelectric
	Jirau	3,750	Hydroelectric
	Miranda	404	Hydroelectric
	Ita	1,442	Hydroelectric
	Campo Largo	688	Wind
	Machadinho	1,135	Hydroelectric
	Salto Osòrio	1,072	Hydroelectric
	Salto Santiago	1,415	Hydroelectric
Chile	Mejillones	1,129	Coal-fired and natural gas
	Tocopilla	432	Natural gas, coal- and fuel oil-fired
United Arab Emirates	Fujairah F2	2,000	Natural gas
	Mirfa	1,600	Natural gas
	Shuweihat 1	1,500	Natural gas
	Shuweihat 2	1,496	Natural gas
	Taweelah	1,590	Natural gas
	Umm Al Nar	1,532	Natural gas
Spain	Cartagena	1,199	Natural gas
	Castelnou	791	Natural gas
France	CombiGolfe	435	Natural gas
	CyCoFos	428	Natural gas and steelworks gas fired plant
	DK6 (Dunkirk)	788	Natural gas and steelworks gas fired plant
	Génissiat	423	Hydroelectric
	Montoir-de-Bretagne	435	Natural gas

Country	Site/plant	Total capacity[1] (MW)	Type of plant
Italy	Torre Valdaliga	1,134	Natural gas
	Vado Ligure	782	Natural gas
	Voghera	404	Natural gas
Kuwait	AzZour North	1,519	Natural gas
Morocco	Safi	1,250	Coal
Oman	Barka 2	674	Natural gas
	Barka 3	737	Natural gas
	Sohar	585	Natural gas
	Sohar 2	737	Natural gas
Pakistan	Uch 1	551	Natural gas
Netherlands	Eems	1,925	Natural gas
	Flevo	869	Natural gas
Peru	Chilca	917	Natural gas
	ILO Nodo	600	Fuel-oil fired
	ILO 31	564	Fuel-oil fired
Puerto Rico	Ecoelectrica	534	Natural gas
Portugal	Bemposta I&II	438	Hydroelectric
	Elecgas	839	Natural gas
	Picote I&II	433	Hydroelectric
	Turbogas	990	Natural gas
Qatar	Ras Laffan B	1,025	Natural gas
	Ras Laffan C	2,730	Natural gas
United Kingdom	First Hydro	2,088	Hydraulic pumping
	Moray East	950	Offshore wind
Singapore	Senoko	2,564	Natural gas and fuel oil

(1) Capacity of assets in which ENGIE holds a stake, all of which are taken into account irrespective of the real ownership percentage.

Natural gas underground storage (> 550 Mm^3 of total useful storage volume [1])

Country	Location	Total useful storage (Mm^3) volume[1]
France	Gournay-sur-Aronde (Oise)	1,310
France	Germigny-sous-Coulombs (Seine-et-Marne)	820
France	Saint-Illiers-la-Ville (Yvelines)	680
France	Chémery (Loir-et-Cher)	3,600
France	Céré-la-Ronde (Indre-et-Loire)	570
France	Étrez (Ain)	690
France	Cerville (Meurthe-et-Moselle)	650
Germany	Uelsen	840

(1) Useful storage volume held by ENGIE, all of which is taken into account irrespective of the real ownership percentage.

LNG Terminals

Country	Location	Total regasification capacity ($Gm^3(n)$/per annum)[1]
France	Montoir-de-Bretagne	10
France	Tonkin (Fos-sur-Mer)	1.5
France	Cavaou (Fos-sur-Mer)	10
Chile	Mejillones	2.0
Puerto Rico	Penuelas	2.7

(1) Capacity of assets held by ENGIE, all of which are taken into account irrespective of the real ownership percentage.

2

RISK FACTORS AND CONTROL

The material, specific risks to which the Group is exposed, based on its own assessment, are described below. They are divided into six categories of risks:

- political and regulatory risks;
- risks deriving from climate and environmental issues;
- economic and competitive risks;
- financial risks;
- operational risks;
- social and societal risks.

Compared with the 2021 Universal Registration Document, a sub-chapter has been dedicated to risks relating to nuclear activities.

The risks presented have been assessed and prioritized on the basis of "net risk," in other words the quantification of risk after taking into account the means of management established.

The summary table below covers the most important risks in each category, classified in decreasing order of criticality (probabilized impact).

Risks	Criticality	Change (versus 2021)	URD sections and references
Political and regulatory risks			
Risk of a downward trend in the return on gas distribution, transmission, storage and regasification assets in France		stable	2.2.1.1
Risk of State intervention in wake of the marked increase in energy prices		stable	2.2.1.2, Notes 7.1 and 8.4 of Section 6.2.2 "Notes to the consolidated financial statements"
Risk of changes in regulations in Brazil in various business sectors (electricity production and sales, transportation of gas), including changes in taxes		stable	2.2.1.3
Risk on the security of gas supply in Europe for winter 2023/2024		new	2.2.1.4
Risks deriving from climate and environmental issues			
Risk of climate change affecting energy demand and generation		stable	2.2.2.1and NFS 3.3.1 risk F
Risk of adaptation of industrial assets		new	2.2.2.2 and NFS 3.1.5
Economic and competitive risks			
Risk of adaption of business models due to the energy transition in a context of heightened competition on some of the Group's activities		new	2.2.3.1, NFS 3.1.5 and Note 13.4 of Section 6.2.2 "Notes to the consolidated financial statements"
Financial risks			
Commodities market risk		stable	2.2.4.1 and Note 15.1 of Section 6.2.2 "Notes to the consolidated financial statements"
Pension funding risk		stable	2.2.4.2 and Note 18 of Section 6.2.2 "Notes to the consolidated financial statements"
Counterparty risk		stable	2.2.4.3 and Note 15.2 of Section 6.2.2 "Notes to the consolidated financial statements"
Operational risks			
Cybersecurity		stable	2.2.5.1 and NFS 3.3.1 risks C and D
Risk of industrial accident		stable	2.2.5.2 and NFS 3.3.1 risk A
Supply risk for the construction of renewable energy plants		stable	2.2.5.3
Social and societal risks			
Risks related to human resources		stable	2.2.6.1 and NFS 3.3.3
Risks associated with health and safety at work		stable	2.2.6.2 and NFS 3.3.3 risk S

Risks	Criticality	Change (versus 2021)	URD sections and references
Risks relating to nuclear activities			
Industrial risks relating to nuclear activities	Medium	stable	2.2.7.1, NFS 3.3.1 risk B and Note 17.2 of Section 6.2.2 "Notes to the consolidated financial statements"
Regulatory and financial risks relating to nuclear activities	Medium	stable	2.2.7.2 and Note 17.2 of Section 6.2.2 "Notes to the consolidated financial statements"

Level of criticality legend: Low / Medium / High

Other, less significant risks or risks unknown to date could also affect the Group. If these risks were to materialize, they could have a negative impact on the Group's operations, financial position and earnings, image and outlook, and / or on the ENGIE share price. Certain risks that are critical for the Group are listed in the following sections but are not expanded on as they are either already covered in detail in the NFS (see Chapter 3 "Non-financial statement and CSR information") or are not specific to ENGIE.

2.1 RISK MANAGEMENT PROCESS

2.1.1 ENTERPRISE RISK MANAGEMENT POLICY

The Group has adopted an Enterprise Risk Management (ERM) policy, the principles of which are consistent with professional standards (including ISO 31000 and the Federation of European Risk Management Associations). The policy sets out ENGIE's ambition to "manage its risks in order to ensure its performance."

The Group's Enterprise Risk Management Policy applies to the Group's businesses and controlled entities, while observing the rules of governance that apply to each entity.

This policy promotes risk-taking at a reasonable level from a legal perspective, acceptable to generally held opinion and economically viable. It stipulates that all managers are Risk Managers. Generally, the Management Committees of the Group's entities are the main bodies that determine the actions to be taken to manage risks, except when a specific risk committee is created, such as for market risk.

The Head of Risk Management is responsible for ensuring the effectiveness of the risk management system. He coordinates the designated Chief Risk Officers of each of the operating entities and Corporate Functions. These Chief Risk Officers assess the entity's or Function's overall risk exposure and ensure that risk mitigation plans are implemented.

Risk analysis and coordination of action plans are performed in collaboration with all the Group's functional lines.

Each year, the Group's ERM process begins with a risk review by the Executive Committee. An ERM campaign is then launched across the Group, setting out guidelines for risk management throughout the year. It highlights priority risks, each of which is coordinated by an Executive Committee member and will be monitored specifically by one of the Board's standing committees (see Section 4.1.2.4 "Committees"). It results in a new Group risk review that is presented to the Executive Committee, then to the Audit Committee. After examining the review, the Audit Committee gives its opinion on the effectiveness of the risk management system to the Board of Directors.

Knowledge of risks resulting from the reporting of operating entities and functional departments is supplemented by interviews with directors, an analysis of publications by external analysts and a review of major events.

2.1.2 CRISIS MANAGEMENT

To prepare for the occurrence of all types of crises and minimize their impacts, ENGIE has established a global crisis management system. The Group is thus equipped with a major incidents warning and reporting system. Crisis analysis is carried out by a duty officer at the local level who may, when necessary, activate a locally run crisis unit. Decision-making to manage a crisis is made at the relevant organizational level, according to the principle of subsidiarity.

Business continuity plans were prepared and updated for the crisis scenarios identified by the Group and its entities.

To test the robustness of the organization and to ensure continuous improvement, the entities carry out a minimum of one crisis drill per year across a functional and geographic scope that meets regulatory requirements. Additional training sessions are also delivered for internal stakeholders. An annual report is prepared so that lessons can be learned and initiate the identified improvement actions in association and shared with all entities.

However, the existence of this system does not eliminate the risk that the Group's activities and operations might be disrupted in crisis situations. Moreover, this system cannot guarantee the absence of the risk of impacts on third parties or on the environment.

2.1.3 RISK AND INSURANCE COVER

ENGIE's Risk Management and Insurance Department is responsible for preparing, establishing and managing insurance programs in the areas of Group asset protection (against property damage and loss of earnings), personal protection, third-party claims (civil liability) and automobile insurance, and for prevention.

For each of these areas:
- the amounts insured depend on the financial risks resulting from potential claim scenarios and coverage conditions offered by the market (available capacities and tariff conditions);
- financing is optimized: low or moderate hazard risks are covered by self-insurance plans, through deductibles and retentions or through the use of the Group's reinsurance company whose commitments on a cumulative basis represent a maximum estimated loss of approximately 0.15% of the Group's 2022 revenues.

However, the Group could, in certain cases, be required to pay out sizable compensation not covered by the current insurance program or could incur very high costs that its insurance policies do not reimburse or reimburse inadequately. Although the Group has excellent insurance coverage, specifically with regard to civil liability and environmental risks, it could be liable beyond the maximum insured amount or for events not covered (primarily due to the common insurance exclusions).

2.1.3.1 Civil liability

A civil liability program for corporate officers and managers covers the representatives of ENGIE, its subsidiaries and Group representatives within its equity holdings.

A general civil liability program (including for environmental damage) has been taken out for all the subsidiaries for a total amount of €645 million. This program predominantly provides first-euro coverage or coverage for amounts in excess of the underlying coverage taken out by some entities (usually up to USD 50 million, i.e. €50 million).

2.1.3.2 Nuclear civil liability

As an operator of nuclear units in Doel and Tihange, Electrabel's civil liability is governed by the Paris and Brussels Conventions (the 2004 protocols of amendment to said conventions came into force on January 1, 2022), which aim to ensure that victims receive compensation and to encourage solidarity among signatory countries, and by the Belgian Law of July 22, 1985, (amended by the Laws of June 29, 2014 and December 7, 2016).

This liability falls exclusively on the operator of the facility where the nuclear accident occurs. In return for this strictly objective liability, the amount of the compensation is capped per accident at €1.2 billion. Beyond this limit, the signatory countries to the conventions have created a mechanism that provides additional compensation.

The nuclear civil liability insurance program taken out by Electrabel on January 1, 2023, on the insurance market, complies with the revised Paris and Brussels Conventions and with Belgian national law requiring the operator to provide financial guarantees or to take out civil liability insurance up to €1.2 billion.

2.1.3.3 Property damage

The Group's entities have property insurance covering the facilities that they own, lease or manage on behalf of third parties, with the exception of gas transmission and distribution network pipelines and heat networks in France. The main programs provide cover based either on replacement value or on contractual limits per loss event. In the latter case, the limits are set on the basis of major scenarios estimated in accordance with insurance market rules and available offers (cost and capacity).

Insurance covering business interruption and additional operating costs is taken out based on each risk analysis and in consideration of existing assistance plans.

Construction projects are covered by "Erection All Risks" programs taken out by the owner or operator, project manager or prime contractor.

2.1.3.4 Employee protection programs

The operating entities develop programs covering employees against the risk of accidents and for medical expenses, in accordance with legislation in effect and pursuant to company agreements.

2.2 RISK FACTORS

2.2.1 POLITICAL AND REGULATORY RISKS

The Group is sensitive to the structural and economic risk factors that affect the energy sector. These risks are all analyzed and assessed as part of strategic planning processes that allow the Group to anticipate certain changes in the external environment and prepare for them. The Group's research and innovation road map and organization also help to deal with strategic developments (see Section 1.3 "Research, technology and innovation").

In terms of Section 2.2.1 "Political and regulatory risks" of the 2021 Universal Registration Document, different risks are no longer covered in this Section:

- risks relating to nuclear activities are now all covered in Section 2.2.7 "Risks relating to nuclear activities;"
- country risk, and in particular Nord Stream 1 and 2 for which ENGIE acts as minority shareholder and financial backer respectively, is presented in Notes 1.3, 10, 14 and 15.2.2.1 of Section 6.2.2 "Notes to the consolidated financial statements;"
- the criticality of the risk of disagreement with the Australian regulator over the conditions for rehabilitating the Hazelwood coal mine has decreased when compared with other Group risks and is presented in Note 17.3.2 of Section 6.2.2 "Notes to the consolidated financial statements;"
- the criticality of the risk associated with renewal of hydraulic concessions in France has decreased markedly and no longer needs to be presented.

2.2.1.1 Risk of a downward trend in the return on gas distribution, transmission, storage and regasification assets in France

DESCRIPTION

Criticality:

Tariffs for access to gas infrastructures (distribution, transmission, storage, regasification terminals) in France are regulated. The tariffs are fixed by the French Energy Regulation Commission (CRE), which may change their level and structure if it deems this justified, particularly in view of financial market trends, the analysis of the accounting of the operators and foreseeable changes in operating and investment costs. These tariffs also include performance incentives. In most cases, they are reviewed every four years, following a public consultation process and public hearings.

On January 24, 2020, the CRE published the resolutions setting the gas infrastructure tariffs (distribution, transmission, storage) applicable for a period of approximately four years (ATRD 6, ATRT 7, ATS 2).

With regard to regasification tariffs (ATTM 6), the CRE published the resolution fixing the tariffs for the use of regulated LNG terminals on January 7, 2021, with an application date of April 1, 2021 for a principle period of four years. This is in line with the previous tariff but includes an acceleration in asset depreciation for the Montoir-de-Bretagne terminal.

The next Transport (ATRT 8), Distribution (ATRD 7) and Storage (ATS 3) tariff review has been launched for implementation in 2024. Regarding ATTM 7 regasification tariffs, a review should be launched in 2024 with a targeted implementation of 2025. In case of decrease of return on assets, of partial taken into account in the return on assets, of operational and strategic risks related to the business, of investments decline, of non-coverage of certain charges, or in the case of a particularly strict incentive regulation, the contribution of gas infrastructure assets to the Group's results and the profitability of its investment in this business could decline.

RISK MANAGEMENT MEASURE

Risk trend: STABLE

The Group is in discussions with the CRE in the context of the tariff review system, which places great emphasis on dialog with all stakeholders. In addition to introducing measures to develop the production of green gas and ensuring it is competitive in the long term, the Group is defending positions that aim to ensure the security of the country's supply (see also Section 2.2.1.4 "Risk on the security of gas supply in Europe for winter 2023/2024"), a fair return on assets that is adapted to the new short and long-term economic environment, and the adequate coverage of its costs in order to maintain a high standard of service and to enable the necessary investments for the energy transition. ENGIE also promotes the recognition of the flexibility provided by the gas system to the energy system and its valuation. It also strives to enhance its performance in order to establish a competitive tariff trajectory.

2.2.1.2 Risk of State intervention in wake of the marked increase in energy prices

DESCRIPTION

Criticality:

The sharp rise in wholesale energy prices started at the end of 2021 / beginning of 2022 and was exacerbated by the conflict between Ukraine and Russia. This led European States, including France, Italy and, to a lesser extent, Romania and Portugal, to adopt price stabilization mechanisms to protect end-consumers.

Specifically in France, the 2022 price cap consisted of:

- freezing the Regulated Gas Tariff (TRV) as of November 2021 at the October 2021 tariff level until December 2022;
- capping the increase in the Regulated Electricity Tariff at 4%, including tax, in February 2022. This increase limitation was made possible by a decrease in the internal tax on final energy consumption (TICFE), an increase in the volumes of electricity that EDF sells to its competitors under the ARENH (regulated access to historic nuclear electricity) mechanism, and a partial tariff freeze.

In terms of gas, the Finance laws for 2022 and 2023 established that the State should cover losses of income resulting from the freeze of the Regulated Gas Tariff (TRV) as public service costs for the incumbent energy player ENGIE and alternative suppliers selling offers that are indexed to the regulated tariff.

The Finance law for 2023 extended this price cap once again, until June 30, 2023. The 2023 price cap will limit increases in TRVs to 15%, including tax, as of January 1, 2023 for gas and as of February 1, 2023 for electricity. It will also introduce a “tariff cushion” for electricity sector customers who are not eligible to TRVs (companies and local authorities). This cushion will take the form of flat-rate aid on 50% of these customers’ consumption.

These measures are in addition to those taken by the Council of the European Union through Regulation (EU) 2022/1854 of October 6, 2022 on an emergency intervention to address high energy prices. This regulation notably aims to capture part of the intramarginal rent generated by the increase in energy prices. The text was transcribed in a very diverse manner in the Member States with regard the scope and duration of adoption, calculation methods and applicable caps per technology, discussions regarding the capping of gas prices in Europe and the electricity market review with the ARENH mechanism in France (which is expected to evolve with the reorganization of EDF).

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group is working with the various national regulators to ensure better coordination between regulatory proposals and their objectives and with the aim of alerting them of tangible implementation issues.

Therefore, following the adoption of Regulation (EU) 2022/1854 of October 6, 2022, the Group intervened with authorities in France, Belgium and Italy to ensure the well-balanced transcription of the Regulation. More targeted actions are also introduced in certain Member States that had applied demonstrably discriminatory measures with regard to the Group (for example: Italy, Belgium).

The situation is nevertheless particularly volatile and it cannot be ruled out that the mechanism for capturing intramarginal rent will be extended over time and/or modified, through the European Regulation and/or unilaterally by the Member States. Some consumer protection measures continue to be introduced (e.g.: measures supporting very small enterprises that are not eligible to electricity TRVs requested of suppliers by the French government).

The Group is also closely following initial talks surrounding the electricity market design reform, announced for 2023, and which may have a significant impact on European energy players.

2.2.1.3 Risk of changes in regulations in Brazil in various business sectors (electricity production and sales, transportation of gas), including changes in taxes

DESCRIPTION

Criticality:

The Group is exposed to changes in the regulation of Brazil's electricity markets, such as the reduction of subsidies or the introduction of new taxes for producers. Brazilian authorities may announce new initiatives in line with a modernization of the electricity market design. to open the market to competition, improve its functioning and ensure the necessary investments in the country's networks.

Brazil represents 3% of Group revenues. ENGIE invests in the transportation of gas, through its subsidiary TAG, and electricity (construction of the Gralha Azul and Novo Estado transmission lines). The activities of Gralha Azul, Novo Estado and TAG are regulated.

In 2021, the Brazilian government approved a law aimed at creating the conditions to open up the gas market, after years of monopoly by the state-owned oil giant, Petrobras. The publication of the framework and recommendations of this new law and the harmonization of legislation between federal states and the Brazilian federal government are the next key stages. In the gas chain, the production and the transmission activities are regulated by a federal agency (ANP), while downstream activities are a State monopoly, regulated by local agencies. Currently, the main risk is related to the transmission system "bypass" project (direct connection of energy sources to local energy distributors or to end-consumers). This project may reduce the capacity of gas transported, leading to an increase in tariffs and the risk of a multiplication in bypass demands.

The Brazilian tax system is complex and could potentially evolve. Several disputes are underway relating to the application of tax, and settling these disputes could take several years (see Note 23.5.2 of Section 6.2.2 "Notes to the consolidated financial statements"). Moreover, numerous modifications to taxation may be adopted in the years ahead, in particular relating to VAT (PIS COFINS), dividends (not taxed to date), or corporation tax. The effects are not yet known and may offset each other out.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

Thanks to its presence in France and internationally, the Group has extensive experience in market design. This experience is made available to the Brazilian institutions, including through participation in the formal process of revising the market design in Brazil. Changes in the design of the electricity and gas markets will affect all companies active in these sectors. Other companies present in electricity generation or gas transmission in Brazil share the Group's opinion and have taken action to ensure the neutrality, and even positivity, of developments in market design. Politically speaking, Brazil's need to continue to attract foreign investment limits the risks.

In Brazil, the Group closely monitors any regulatory and legislative reforms to anticipate any changes in these fields as best as possible and introduce measures to limit any negative impact on the profitability of its businesses.

The current objective for the transmission activity is to avoid the various "bypass" projects and to obtain the clear definition of the legal rules for the new law.

To do so, TAG and the Group are part of the public debate with various stakeholders and closely follow regulatory changes and the implementation of the legal framework for the new law at both the federal and local level.

Moreover, to accelerate the process of opening up the market and as the publication of this legal framework has been delayed, TAG has suggested solutions to the National Regulatory Agency.

In terms of fiscal aspects, a law was enacted after the market was opened up. This regulation aims to define gas transmission operations and their fiscal impact (notably VAT). The law is expected to be improved in order to meet the challenges relating to the new market and its operation. Proposals are currently being discussed within professional bodies in the sector with various stakeholders at the federal and state level.

2.2.1.4 Risk on the security of gas supply in Europe for winter 2023/2024

DESCRIPTION

Criticality:

Against the geopolitical context of 2022 generated by the conflict between Russia and Ukraine, the risk of malicious acts affecting the Group's tangible assets is higher whether through acts of sabotage to the networks or attacks using malware. European sanctions against Russia may escalate as far as an embargo on Russian gas exports to Europe.

The security of the gas supply in Europe may be impacted by these risks and, more specifically, expose the Group to difficulties to reach required stock levels or an overload of its regasification or storage facilities.

RISK MANAGEMENT MEASURES

Risk trend: NEW

The Group has implemented a tangible asset protection policy: sensitive sites are subject to protective measures tailored to the local situation and revised according to the threat status. The Group has introduced a system to catalog incidents and gather feedback to improve risk assessment and prevention in order to limit the impact of any malicious acts. Their analysis is included in a quarterly report and makes it possible to implement the necessary, strategic and operational prevention and mitigation measures.

To meet winter 2023/2024 supply commitments, the Group has contracted additional volumes, diversified its supply source notably through an increase in Liquefied Natural Gas (LNG) volumes, and continues to strive to replace the quantities of Russian sourced gas. Moreover, the Group's LNG terminals are operating at record levels since the beginning of the year and are marketing additional unloading capacity in response to the situation. In addition, conditions for marketing storage capacity have been relaxed by the regulators to facilitate filling and the Group is stepping up its growth in green gases, in particular biomethane.

All of these measures, which have generated an unprecedented increase in activity at the Group level, are being implemented in accordance with each facility's safety standards and guidelines.

ENGIE is also actively taking part in discussions regarding the government measures that are being considered in Europe.

2.2.2 RISKS DERIVING FROM CLIMATE AND ENVIRONMENTAL ISSUES

The Group's businesses are exposed to numerous rules and regulations relating to respecting and protecting the environment and persons or to the energy transition. The risk of adaption of business models due to the energy transition in a context of heightened competition on some of the Group's activities is presented in Section 2.2.3.1 and includes the Position of gas in the French energy mix risk described in Section 2.2.2.1 of the 2021 Universal Registration Document.

Issues associated with soil pollution are specifically being monitored (see Section 3.5.4.11). Provisions are made for these issues in the financial statements when sites are decommissioned and rehabilitated (see Note 17.3 of Section 6.2.2 "Notes to the consolidated financial statements").

Risks relating to climate and environmental issues are discussed in greater detail in Chapter 3 "Non-financial statement and CSR information" in Sections 3.1.3 Climate trajectory (related to the recommendations of the TCFD - Task Force on Climate-related Financial Disclosures and Main Environmental Risks) and 3.3.1 Main environmental risks.

2.2.2.1 Risk of climate change affecting energy demand and generation

DESCRIPTION

Criticality:

Information presented here and in Section 3.3.1 "Transition relating to climate change – Risk F" reflects the financial risks associated with the effects of climate change and the measures taken by the company to mitigate them by implementing a low carbon strategy in all the components of its activity.

In the short term, weather phenomena (e.g. temperature variation, flooding, wind, drought, heat waves) affect energy generation (in the case of lack of water in dams in particular) and energy demand (e.g. gas supply during a warm winter). They have a direct effect on the Group's results.

In the longer term, climate change could have a greater impact on the Group's activities, for example through changes in regional or seasonal energy demand, changes to the network's production, the obligation to reduce CO_2 equivalent emissions and heightened regulations, conflicts over water use, increases in sea and river levels and temperatures, the preservation of natural carbon sinks and conflicts over biomass use.

Hydropower production is the most exposed technology. Significant fluctuations in production are expected by 2050 in certain regions (between -18% and +10%, under the median scenario retained). A marked increase in infra-annual fluctuations in production is also expected.

By 2050, the impact of chronic risks are however limited on solar and wind production.

These impacts are already visible today: drought in France and Portugal during summer 2022 had a €130 million impact on Group EBIT.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

(see also Section 3.5.4 "Group actions")

To adapt its offering to fluctuations in annual demand, ENGIE optimizes its portfolio of assets, its gas resources (by load-matching its supplies and managing its underground storage), and its power generation fleet.

To manage this risk in the longer term, ENGIE acts on different levels:

- the Group has completed a strategic review of the impact of climate change in the countries in which it operates. In order to better understand climate change and its impact on ENGIE, a partnership was forged with the Pierre Simon Laplace Institute to model future changes in energy production as accurately as possible and the impact of extreme events on all of the Group's technologies in various regions of the world. These analyses are being integrated into the Group's investment projects to assess the impact of climate change as early as possible and to favor the most suitable technologies and geographic areas to drive the Group's growth;
- the Group is gradually developing adaptation plans to prepare for an increase in extreme weather events;
- the Group has followed the work of the TCFD (Task force on Climate related Financial Disclosure) and has given itself until 2023 to gradually implement these recommendations.

2.2.2.2 Risk of adaptation of industrial assets

DESCRIPTION

Criticality:

In addition to fluctuations in energy generation, climate change has a direct impact on all facilities. The increase in the number of extreme events may have an impact on the Group's business: damage to facilities, supply disruption, impact on employee's health, or a reduction in insurance coverage.

Brazil and Australia appear to be the countries most exposed to acute risks, it being noted that, for Brazil, due to the size of the country, risks materialize in different ways depending on the region. Conversely, countries in Northern Europe (Belgium, the Netherlands, Germany) appear the least exposed to chronic and acute risks. Exposure is measured by combining climatic risks with the relative capacity of each country to deal with them.

RISK MANAGEMENT MEASURES

Risk trend: NEW

Operational risk management consists of implementing adaptation plans for each of our sites and new projects that are exposed to climate change.

To do so, the first driver is to integrate the physical risk of climate change into the Group's risk monitoring process (Enterprise Risk Management).

Following the development of a site prioritization methodology in 2020 and the definition of a list of priority sites (which is updated annually) since 2021, the Group launched a pilot scheme in 2022 at 28 priority sites as well as GRTGaz and GRDF sites, to draw up adaptation plans for four extreme events (heatwaves, drought, flooding and extreme winds).

In 2023, work will focus on ensuring that the methodology is in line with European taxonomy requirements (see Section 3.1.5) and the rolling out of these adaptation plans for the four extreme events considered to all of ENGIE's priority sites.

2.2.3 ECONOMIC AND COMPETITIVE RISKS

Compared with Section 2.2.3 “Economic and competitive risks” of the 2021 Universal Registration Document, the risk of a decrease in revenues from electricity production plants in the Gulf when long-term contracts expire is no longer considered as a critical risk for the Group.

Risks relating to environmental challenges are developed in greater detail in Chapter 3 “Non-financial statement and CSR information” (see Section 3.3.1 Main environmental risks).

2.2.3.1 Risk of adaption of business models due to the energy transition in a context of heightened competition on some of the Group’s activities

DESCRIPTION

Criticality:

The energy transition brings about several changes in the business lines in which the Group operates: the decentralization of energy generation and sales, the emergence of digital technologies and smart energy which has an impact on the electricity and gas value chain, changes in trading activities with new products and markets to support customer decarbonization, French regulations in support of decarbonization through greater electrification. Competition is intensifying on these various energy markets, with key players (oil companies, etc.) becoming increasingly active throughout the entire value chain.

In France, the dominant strategy of the energy policy, based on the national energy regulations adopted (SNBC (Stratégie Nationale Bas-Carbone – National Low-Carbon Strategy), PPE (Programmation Pluriannuelle de l’Énergie – Multi-Year Energy Schedule), LEC (Loi Énergie-Climat – Climate and Energy Law) and the “RE2020” (Réglementation Environnementale 2020 – the 2020 environmental regulation)) and targeting decarbonization through a strengthened and rapid electrification of uses, may have a major influence on the natural gas market. This vision entails a number of risks, in particular the increase in peak electricity needs and the additional cost necessary to meet them, as well as the recurrent challenge of balancing the electricity grid for which the gas vector (natural and progressively green gases) could provide adapted solutions, especially given the current energy context, could provide appropriate solutions.

Within other geographic areas (notably the United States), heightened competition in renewable energy makes growth objectives more difficult to achieve, in particular against a backdrop of increasing supply chain tensions (see Section 2.2.5.3 “Supply risk for the construction of renewable energy plants”). This competition was notably facilitated by the Inflation Reduction Act (IRA) voted in August 2022 which offers ambitious support to the development of renewable energy, for the benefit of local players.

RISK MANAGEMENT MEASURES

Risk trend: NEW

In terms of the development of renewable energy, and in particular in the United States, a geographic area of growth for the Group, ENGIE has stepped up its investment strategy, notably via external growth (recent acquisitions) and the securing of its solar panel supply chain.

Downstream, the Group regularly develops new offers to meet changing customer demand: digitization, green offers, and development of “carbon-neutral” solutions.

It continually improves the operating performance of the networks it operates and is progressively greening their energy mix.

The Group has strengthened, with French public bodies and the European authorities, its promotion of gas as indispensable to the acceleration and achievement of a resilient and affordable energy transition in various areas (including the defense of heating use via the development of hybrid heat pumps, the competitiveness of green gases, the market design of biomethane and the energy complementarity).

The Group has defined a strategy for the development of renewable gases, with the launch of an Industrial and Commercial Plan to expand production of biomethane of agricultural origin (effluent and crop growing residues) in several European countries and the transition to industrial scale of this production line in France. Downstream of the production chain, the Group’s transmission and distribution networks are adapting their infrastructures to enable the transmission of biomethane to customers as inexpensively as possible. The Group is also developing second-generation biomethane production lines, using biomass pyrogazeification. The Group is leading the way in projects related to green hydrogen which has been identified as a key component of the future French energy mix. These projects range from green hydrogen production through water electrolysis, to storage with saline cavities conversion projects, to the transport of this molecule (projects to reconvert existing networks for the transmission of pure hydrogen, improving conditions for injection into the networks).

Moreover, the Group intends to rebalance its portfolio of networks in terms of technologies (electricity via the construction and operation of high-voltage lines) and geographic areas (development outside the European Union to growth countries).

2.2.4 FINANCIAL RISKS

Compared with Section 2.2.4 “Financial risks” of the 2021 Universal Registration Document, currency risk remains a critical risk for the Group but is no longer a specific risk.

The Group is exposed to currency risk, defined as the impact on the financial position and income statement of exchange rate fluctuations, in the performance of its operational and financial activities. As this risk is generic for the activity of a Group that is present in different countries, it is not presented in detail in this chapter, but is nevertheless of high criticality. The breakdown by currency of outstanding borrowings and net financial debt, as well as an analysis of foreign exchange risk sensitivity are presented in Note 15.1.3 and Note 15.1.4 respectively of Section 6.2.2 “Notes to the Consolidated financial statements.”

As part of the Group’s currency risk policy, transactional risk is subject to systematic hedging as soon as this risk is material and almost certain to arise and subject to hedging on a case-by-case basis during the examination of investment projects. Finally, translational risk is covered by partial hedging strategies subject to a reasonable hedging cost and sufficient market liquidity in relation to the risk of currency depreciation.

The risk on the return on the amount of provisions invested by Synatom toward nuclear decommissioning and the management of spent fuel is covered in the paragraph dedicated to risks relating to nuclear activities in Section 2.2.7.

The tax risk specific to ENGIE’s activities is referred to in Section 2.2.1.2 “Risk of state intervention in wake of the market increase in energy prices.”

2.2.4.1 Commodities market risk

DESCRIPTION

Criticality:

The Group is chiefly exposed to two kinds of energy commodity market risk: price risk directly related to fluctuating market prices, and volume risk (weather risk and/or risk depending on economic activity) mainly in Europe (Belgium, France, Spain, Italy, the Netherlands, the United Kingdom, etc.), the United States, Australia and South America (Brazil, Chile, etc.). The Group is exposed to these risks, particularly with regard to gas, electricity including capacity certificates (CRM - Capacity Remuneration Mechanism), CO2 and other green or white products related to the energy transition (Guarantees of Origin, green certificates, energy savings certificates) (see Note 15.1.1 of Section 6.2.2 “Notes to the consolidated financial statements”).

Exposure to price risk is focused on nuclear power, hydropower and thermal gas assets. Renewable assets, a large share of which are under contract until 2030, generate very little exposure to price risk but are exposed to risks relating to their intermittent nature. Electricity and gas sales activities are hedged as close to sales as possible to limit pricing and volume risks.

With the exception of trading activities, market risks are assessed by means of their impact on EBITDA. Accordingly, the main risk indicators for managing the energy portfolios include sensitivity to unit price changes, EBITDA at Risk, portfolio hedging ratios and stress tests based on predefined unfavorable scenarios. For trading activities, and in accordance with market standards, risk indicators include sensitivities, Value at Risk (VaR), drawdowns and stress tests (see Note 15.1.1 of Section 6.2.2 “Notes to the consolidated financial statements”).

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group has implemented a specific governance process to manage market and counterparty risks based on:

- the general principle of separation of risk management and risk control;
- a Group-level Energy Market Risks Committee that is responsible for validating risk policies and monitoring consolidated exposure;
- the monitoring of market, counterparty and liquidity risk mandates relating to margin calls;
- the centralization of market activities within the GEMS entity; and
- a specific risk control function coordinated by the Finance Department.

Part of its electricity production activity, particularly outside Europe, is covered by long-term Power Purchase Agreements (PPA) and complemented by Corporate PPAs in renewable electricity production activities.

The Group also uses hedging products to provide its customers with hedging instruments and to hedge its own positions.

In response to the major volatility of margin calls (the mechanism implemented to manage counterparty risk), the Group has significantly enhanced its oversight system for these margin calls and has notably developed instruments aimed at reducing the volatility induced.

2.2.4.2 Pension funding risk

DESCRIPTION

Criticality:

A significant portion of the Group pensions commitments and the assets associated with these plans are concentrated in France and in Belgium. Other defined-benefit pension plans are mainly located in Europe and Brazil.

In recent years, the Group has terminated a number of defined-benefit plans and replaced them with defined-contribution plans.

The Note 18 of Section 6.2.2 "Notes to the Consolidated financial statements" details the items measured and recognized.

The calculation of commitments is estimated via actuarial methods using methodologies, assumptions and models to assess liabilities or determine asset allocations and associated risks that could have a significant impact on hedging levels and financing requirements.

Substantial commitments exist in the form of other post-employment benefits and other long-term employee benefits, in addition to pension liabilities. These mainly comprise energy-related benefits provided to retired employees under the social regime of the Electric and Gas Industries sector (EGI) the value of which could be revised upward in a context of high energy prices.

Hedging levels and financing requirements for the Group's pension plans vary according to the performance of financial markets and asset allocations, as well as interest and inflation rates and changes in the applicable legal and regulatory framework.

For some plans outside the scope of the EGI, ENGIE may be required to fully or partly finance any difference between the market value of these assets and the hedging levels projected for these plans, or any insufficiency in the return on the assets in respect of the guaranteed minimum average rates.

Overall, the funds recorded a mostly negative performance in 2022 due to the decline in the bond and equity markets against a backdrop of rising interest rates, the return of inflation and geopolitical tension.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group has implemented a policy to cover pension commitments specific to each of the countries and legislation concerned.

Within the scope of the special EGI regime in France, the scheme is financed through the outsourcing of assets within the framework of life insurance contracts.

For the majority of international schemes, liabilities are covered through the funding of pension funds in which the Group strives to be present in governance, as far as legislation allows.

The energy benefit in kind granted to the personnel within the scope of the EGI during the retirement period is not covered.

2.2.4.3 Counterparty risk

DESCRIPTION

Criticality:

Due to its financial and operational activities, the Group is exposed to the risk of default by its counterparties (customers, suppliers, partners, intermediaries, and banks) – see Note 15.2 of 6.2.2 "Notes to the consolidated financial statements."

The impact of this may be felt in terms of payment (non-payment for services or deliveries made), delivery (non-delivery of supplies or services that have been paid for), assets (loss of financial investments), or loss of earnings in the event of customer bankruptcy or additional costs in the event of supplier default. The current decline in the global economic environment, the historic surge in energy prices and the conflict between Russia and Ukraine have increased this risk.

The development of green offers through Corporate PPAs over longer periods than traditional sales increases counterparty risks. Moreover, these contracts are often signed with counterparties that are not always rated Investment Grade (AAA to BBB- rating).

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The financial soundness of customers is assessed before contracts are signed, using the same methods and tools across the entire Group.

These risks are managed via framework agreements that use standard mechanisms such as third-party guarantees, netting agreements and margin calls, or dedicated hedging instruments. The operational activities may also involve prepayments or suitable recovery procedures (especially for retail customers).

Finally, the increase in the risk of default by our counterparties has led the Group to monitor its arrears and to take into account, when assessing its expected credit losses, forward-looking information which best reflects the situation in a certain number of economic sectors considered as the most critical.

2.2.5 OPERATIONAL RISKS

With regards to the Risk factor Chapter in the 2021 Universal Registration Document, this Operational risks section combines the previous categories entitled "Industrial risks" (excluding nuclear which is covered in 2.2.7.1) and "Other operational risks."

The following risks are not covered in detail in the 2022 Universal Registration Document:

- risk relating to major projects: the Group acts as owner for various industrial construction or decommissioning projects (gas or electricity infrastructure for production or storage) for which profitability depends on cost control and construction deadlines, operating performance, external phenomena (e.g. natural disasters and strike action), regulatory and fiscal uncertainties, and changes in the competitive environment and energy markets over the medium- and long-term. The inflationary context put pressure on these projects in 2022 and this risk continues to be monitored by the Group notably by a dedicated team which supervises projects over €30 million. This risk is not covered in detail in the chapter as it is a generic risk in the energy business;
- acquisition and integration: in 2022 the Group continued to make major disposals as well as plans for acquisitions, albeit on a smaller scale than in the past;
- risk of malicious acts on tangible and intangible assets: this risk is discussed via the paragraphs covering various risks, in particular Section 2.2.1.4 "Risk on the security of gas supply in Europe for winter 2023/2024."

2.2.5.1 Cybersecurity

DESCRIPTION

Criticality:

The use of modern technologies (connected objects, mobility, the cloud, data analyses, artificial intelligence, etc.) exposes the Group to the threat of cyber attacks. The digitization of administrative procedures such as the coordination of power generation resources, the supervision of energy services or gas networks may lead, in the event of a cyber attack, to the risk of an interruption to service or loss of productivity, coupled with a possible reputational impact and potential contractual fines or penalties.

The cybersecurity risk covers a series of alarming events such as ransomware attacks (extortion), the cyber sabotage of industrial control systems, the theft of personal data (for example belonging to customers) or sensitive information.

Although ENGIE has seen, like all other companies and local authorities, an increase in attempted cyber attacks since the beginning of the Covid-19 crisis, the Group was well-prepared for remote working due to its "cloud first" approach and was not particularly affected by this increase thanks to a good level of cyber security across its IT networks.

In 2022, in the context of the conflict between Russia and Ukraine and the energy crisis, the risk of a cyber attack against the energy sector increased according to the French National Agency for Information Systems Security (ANSSI). At ENGIE, the number of attempted cyber attacks, including against industrial assets, remained relatively stable. However, an increase in phishing attempts was noted.

The continued development of the Group's digitization, the integration of new entities and the creation of joint ventures, coupled with the limitation of available cyber-insurance covers, may also contribute to a marked increase in this risk despite the constant progress made by ENGIE in terms of cyber security.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group continually adjusts its prevention, detection and protection measures for all of its information systems and critical data. It therefore has:

- a Security Operation Center (SOC), which is responsible for the surveillance of its critical networks and applications (management and process) and the detection of incidents. The center intervenes on a global basis and is jointly operated with Thales; its coverage notably extends to the Group's regulatory changes and constraints;
- a Computer Emergency Response Team (CERT) which ensures the correct response to cyber attacks within the Group and interaction with partner or governmental bodies such as the French National Agency for Information Systems Security;
- stringent controls for access to its internal and cloud platforms. The use of collaborative cloud-based tools, which are secured with a two-factor authentication, has allowed the Group to continue its operations during the Covid-19 pandemic without increasing its cyber risk exposure;
- devices to prevent network and system intrusion, including in the cloud, and to encrypt sensitive data;
- an awareness-raising program for cyber risks including mandatory training in best cyber security practices for all employees;
- cyber-insurance cover.

To comply with the regulations (e.g.: European Regulation 2016/679 on personal data protection, European Directive 2016/1148 on the security of networks and information systems), assessments are organized for the sites or applications concerned and some Group entities have taken steps to obtain ISO 27001 certification of the security of their information systems. ENGIE also works in partnership with a cyber rating agency to ensure a continuous independent review of its cybersecurity.

Major attacks are managed by a specific cyber-incident response system and a cyber-crisis management system that completes the Group's crisis management system. Sensitive system reboot exercises are carried out, to test the Group's resistance in the event of incidents such as ransomware attacks.

The organizational, functional, technical and legal cybersecurity measures are subject to continuous controls that include testing (intrusion, social engineering and phishing).

2.2.5.2 Risk of industrial accident

DESCRIPTION

Criticality:

The areas of activity in which the Group operates carry industrial risks capable of causing harm to individuals, property or the environment, in line with its profile as an energy company. These risks could expose the Group to claims for civil, criminal and/or environmental liability, with a strong potential impact on its reputation. These may relate to facilities that belong to the Group or are managed by it on behalf of customers, or facilities where employees work. The process safety of the facilities that the Group operates is one of its major concerns. The handling of these risks is subject to in-depth monitoring and specific targeted investments, and audits of the facilities in question are performed regularly.

Industrial facilities and Seveso sites

The Group operates and builds systems for gas transmission, distribution and storage, regasification, gas liquefaction and bio-methanization. It also operates and builds gas-fired electricity production plants, hydro facilities, wind farms and photovoltaic facilities and provides services in an industrial environment. Some of these facilities are classified as "upper tier" Seveso sites.

Risks of industrial accident can stem, for example, from operating incidents, design or construction flaws, or from external events (including third-party actions and natural disasters). These accidents could cause injuries, loss of life, property or environmental damage, activity interruptions and operating losses.

To date, the Ukrainian crisis and its consequences in the energy market has not had an impact on the process safety of the facilities operated by the Group.

The operation of all industrial assets was maintained by controlling the related risks and reinforcing surveillance in terms of cyber-attack risks to the industrial control systems or related to the risk of potential malicious acts against the Group's facilities.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group carries out its industrial activities in compliance with a framework of safety regulations, including the "Seveso III[1]" European Directive. These industrial risks are controlled by implementing safety management systems based on the principle of continuous improvement. These systems aim to reduce the level of residual risk by responding to the highest risks as a priority. Moreover, process safety is specifically incorporated (standards and benchmarks) into the Group's audit and internal control programs. In addition, ENGIE hires external experts to audit its industrial assets. Regular audits are carried out by the competent local authorities.

The protection of industrial control systems is included in the Group's IT system security policy roll out.

For the greatest part, these risks are covered by insurance policies. In the event of a major claim, these policies could prove insufficient (see Section 2.1.3 "Risk and insurance coverage").

(1) Directive 96/82/EC amended and superseded by Directive 2012/18/EU (Seveso III).

2.2.5.3 Supply risk for the construction of renewable energy plants

DESCRIPTION

Criticality:

Against a global backdrop of energy transition, the low-carbon technology suppliers are in high demand by all energy players. These suppliers are also impacted by the geographical predominance of manufacturing certain raw materials in regions where there are allegations of forced labor that have recently resulted in national and international reactions and, in particular, economic sanctions.

As an example, in the United States, the Group is developing solar farms and imports the majority of its solar panels for these farms from Chinese provinces. Since June 2021, due to allegations of forced labor in these provinces, the US authorities have banned, under the Withhold Release Order, certain Chinese producers of raw materials and have introduced import restrictions for other suppliers who may use these products from the regions implicated. In addition, the price of these raw materials as well as the cost of international shipping has risen considerably.

These different factors may lead to delays and budget overspends exceeding the project contingencies and result in customer complaints.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group is developing different strategies to limit its dependence on key suppliers and supply chain risks:

- by diversifying its sources of supply: the Group is working on building partnerships not only with its usual compliant suppliers, but with producers from outside high-risk countries that are located as close as possible to end-users;
- in the United States, the Group has charged a specialist control body to conduct audits on the traceability protocols of solar panel suppliers and their capacity to comply with US import regulations;
- in the longer term, the Group is working on improving the technologies used and on recycling materials from its old farms via its research centers;
- the Group's key suppliers are monitored by the partner EcoVadis. The regular assessment of ethics, environment, sustainable procurement, work and human rights elements helps ensure the monitoring of suppliers. This assessment is taken into account during the selection of new suppliers;
- finally, ENGIE is part of several sector initiatives in solar and wind to share and help improve its risk management practices.

ENGIE does not wish to procure supplies from Chinese manufacturers that are unable to provide proof that they have not used forced labor. In 2020, ENGIE introduced a specific heightened vigilance action plan to identify and manage these risks. ENGIE has agreed to ensure compliance with international laws and actively monitors the situation to ensure that no forced labor is used anywhere along its supply chain. This action plan was renewed in 2022 for solar and extended to the "wind" procurement category for new Chinese suppliers. The main measures implemented include:

- in-depth due diligence on suppliers carried out by independent experts;
- supply chain evidence requested from suppliers;
- written commitment from suppliers not to use forced labor;
- sending out questionnaires in which suppliers have to provide evidence that they ban forced labor;
- contract terminations if suppliers breach their responsibilities. In this regard, each supplier contractually guarantees that it complies with local and international regulations governing forced labor, from the procurement of raw materials through to the delivery of a product.

These measures are also covered by the Group's vigilance plan which is presented in Section 3.9 "Vigilance plan."

2.2.6 SOCIAL AND SOCIETAL RISKS

The Group is also exposed to risks whose the direct financial impact is difficult to assess, but the non-financial impact of which is considered significant. These risks are developed in more detail in Chapter 3 "Non-financial statement and CSR information" and are not covered in detail in this section if they do not present a risk that is specific to ENGIE's business.

This mainly relates to ethical risks and reputational risks. The 2021 risk related to "security of people (terrorism, crime, social protest, etc.)" presented in Section 2.2.7.4 of the 2021 Universal Registration Document is now covered by different risk categories (operational risks or social and societal risks).

2.2.6.1 Risks related to human resources

DESCRIPTION

Criticality:

The risk analysis approach relating to human resources revealed two main risks:

Risk of loss of skills and talents, high turnover:

in a tight employment market, difficulties recruiting and retaining the resources necessary for business (in particular in technical fields) are growing.

This market is characterized by a more attractive oil and gas sector which results in greater competition in terms of "employer brand" between its various players. In certain emerging sectors (such as hydrogen or renewables, etc.), this competition is heightened with skilled labor still rare. Moreover, the deprioritization of certain markets and geographic areas as part of the introduction of the Group's new strategy is also facilitating the early departure of employees.

Psychosocial risks related to the Group's transformation:

The restructuring of the Group which began in 2021 and continued in 2022 increases psychosocial risks. Through its annual ENGIE&ME survey, the Group notes a feeling of limited employee involvement in the decision-making process, a lack of visibility of the latter regarding the Group's future and an improved work/life balance.

See Section 2.2.6.2 Risks associated with health and safety at work.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

Risk of loss of skills and talent, of high turnover:

The Group is committed to the following measures:

- optimizing the recruitment process (digitization, reduction in the number of interfaces and "Time to staff" timelines, etc.);
- developing apprenticeships as the ideal way to access to the jobs of the future, in response to the current shortage of technical-related jobs, especially through the creation of ENGIE's Apprentice Training Center (Centre de Formation d'Apprentis or CFA) and of the "Academy of Energy and Climate Transition professions";
- giving every employee the opportunity to receive training on a yearly basis in the key skills of his or her activity;
- improving the leadership of managers, rolling out of ENGIE Ways of Leading, to make employees more involved in the Group's transformation;
- developing engaging and supportive career plans;
- favoring internal mobility within ENGIE's geographic areas.

Psychosocial risks related to the Group's transformation:

In addition to the measures set out in Section 2.2.6.2 Risks associated with health and safety at work, the Group is introducing measures to support employees whose jobs are discontinued and support focused on mobility for those whose skills are no longer in line with the Group's needs. The Group is introducing change management measures to all levels of its organization to continue its restructuring and roll out its strategy.

Finally, the Group is continuing to adapt to new ways of working (homeworking, the design of work spaces, etc.) to meet employees' needs.

2.2.6.2 Risk associated with health and safety at work

DESCRIPTION

Criticality:

The Group is committed to eradicating serious and fatal accidents and continuing to reduce occupational accidents among its employees, subcontractors and temporary workers, to improving well-being at work and to preventing psychosocial risks.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group's General Management decided, following accidents which occurred in 2021, to implement a major transformation plan called ENGIE One Safety focusing on improving the safety culture and managerial leadership and promoting commitment and vigilance among all individuals to protect their lives and those of others. This transformation plan is notably based on an in-depth assessment of employee and subcontractor health and safety culture conducted in early 2022 by a specialist consultancy firm.

This transformation plan includes the tightening of safety rules defined by the Group. It also includes the definition of a new training and coaching program dedicated to all operational managers. This program is intended to improve the efficiency of managerial safety rituals, such as safety visits, to promote the appropriate safety behavior of employees and subcontractors with regard to risks. This innovative training program was tested at several pilot entities in 2022, to ensure it was well-adapted to the specificities of the Group before its widespread roll out.

The Group has also rolled out a major prevention campaign dedicated to electrical risks, one of the main causes of serious and fatal accidents within the Group. It also has launched a large-scale awareness-raising campaign to strengthen the health and safety culture of all Group employees and remind them of the importance of complying with the Life-Saving Rules.

The various provisions introduced are described in Section 3.4.7 "Health and safety policy."

2.2.7 RISKS RELATING TO NUCLEAR ACTIVITIES

In Belgium, Electrabel, a Group subsidiary, owns and operates seven pressurized water reactors at two nuclear power stations at Doel and Tihange. Two reactors in this fleet, Doel 3 and Tihange 2 were permanently shut down on September 23, 2022 and January 31, 2023 respectively.

Electrabel has established governance principles for the operation, maintenance and decommissioning of nuclear power plants based on its experience as an operator and service provider. It is also active in employee recruitment, training and retention, both for facilities in operation and nuclear services entities, and is involved in developing new services. These activities are subject to several kinds of risks, at the regulatory and political level, in operational terms for both the maintenance and decommissioning of power plants, at the financial level, and also from the point of view of social and societal risks.

2.2.7.1 Industrial risks relating to nuclear activities

DESCRIPTION

Criticality:

First and foremost, nuclear activities are subject to the risk of increase in the cost of **processing and storing various categories of radioactive waste** in accordance with the technical requirements of ONDRAF (the national body for radioactive waste and enriched fissile materials).

ONDRAF could require the application of stricter acceptance criteria for short-lived waste with low or medium levels of radioactivity (Category A). In the past, category A waste was conditioned in accordance with the acceptance criteria at the time. Finally, ONDRAF tariffs could rise, leading to an increase in the waste-disposal tariffs for radioactive waste generated by the operation of power plants.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

Regarding the treatment of waste:

- A working group was set up with ONDRAF to process the problem of the category A waste storage solution;
- The appeals filed against permits are closely monitored;
- Considering to the accreditation of the conditioning of resins and concentrates, the program to validate the process is still underway. In the meantime, this waste is stored in tanks on the sites.

DESCRIPTION	RISK MANAGEMENT MEASURES
Electrabel is developing two plans to construct new buildings for temporary storage of spent fuel at the Tihange and Doel power plants. These buildings are required for the temporary storage of spent fuel on the sites, to continue activities there and prepare the sites for decommissioning. At Tihange, the project was granted the required operating and planning permits on January 26, 2020 and February 21, 2020 respectively. Appeals for annulment were filed against these permits by local citizens. These appeals, which do not have suspensive effect, are currently underway. At Doel, the project was granted the required operating and planning permits on May 31, 2021 and July 14, 2021 respectively. To the best of the Group's knowledge, no appeals have been submitted. There is also a processing risk for certain medium-level nuclear waste barrels following the discovery of a gel-like substance on their surface that damaged them. Waste conditioning processes were subjected by ONDRAF to additional and stricter tests with more rigorous acceptance criteria. As a result, the accreditations for a number of processes were either not renewed or were withdrawn. Without these accreditations, the processing of this kind of waste must be outsourced. Secondly, the **risk of one or more nuclear units not being available for technical, security** or nuclear safety reasons could have a negative impact on performance objectives. The industrial performance and safety of Electrabel's nuclear facilities have improved over the 2020-2022 period and the key indicators are performing well. The availability of the nuclear generation fleet at the end of December 2022 was 84%, corresponding to a production of 41.6 TWh. The availability of the nuclear generation fleet was 92% in 2021. It was a very specific year in terms of availability with a level unrivaled since 2000. Unavailability can be caused by several factors: • technical problems relating to aging facilities or the reliability of certain equipment; • an insufficient number of qualified operators onsite; • saturation of temporary radioactive waste storage. Finally, since the commissioning of the first reactor in 1974, the Doel and Tihange sites in Belgium have not experienced any major **nuclear safety incidents** that could have resulted in danger to employees, subcontractors, the general population or the environment. However, they could present civil liability risks for Electrabel, specifically in the event of a nuclear accident or the discharging of large quantities of radioactive material into the environment.	**Regarding the risk of the fleet not being available:** • the management of the aging of the generation fleet is closely monitored; • a policy and specific measures to maintain skills have been introduced; • several procedures for the accreditation of new suppliers or additional equipment are underway with the authorities. The first accreditation has been obtained for a new container supplier and the first containers are currently being manufactured. **Regarding the security of facilities and nuclear safety,** Electrabel has implemented an internal and industrial control system in accordance with the extremely high standards of the profession, which operates on several levels: • the Safety Report establishes the control structures for the design, operating procedures and defines dedicated human resources; • safety principles are integrated into the operational management of the power plants; • compliance with the principles is subject to managerial supervision at several levels; • compliance with the principles is subject to independent controls of the operational organizations; • the system relies on numerous, documented and quantified control points, as well as audits. All individuals working at Group nuclear power plants have the appropriate qualifications and are aware of their personal responsibility with regard to nuclear safety, in particular control room operators. During operations, compliance with safety and security rules and conditions at the facilities are subject to inspection by the Belgian Federal Agency for Nuclear Control (FANC), assisted by Bel-V, its technical support subsidiary. Independent checks are also carried out by Electrabel's nuclear safety department, which reports directly to its Chief Executive Officer, independently of the line management of the nuclear power sites. In addition, the two nuclear sites have OHSAS 18001, ISO 45001, ISO 14001 and EMAS certification. Electrabel takes into account feedback and external peer reviews in order to continue to improve the safety and security of its facilities (the most severe natural disasters, risks of cyber-attack and sabotage). The terrorist risk is addressed with the competent authorities of the Belgian State. In order to strengthen the safety culture at Doel and Tihange, Electrabel, in agreement with the FANC, has set up the CORE (COmmon REsponsibility) plan, which concerns the central functions and the two nuclear sites. The plan was successfully completed and was closed by the FANC in August 2019. The measures taken form an integral part of the management system and are monitored during management system inspections. The internal nuclear safety department, as well as the FANC and peers from the World Association of Nuclear Operators (WANO) have all noted an improvement in terms of the safety culture within Electrabel, the gradual withdrawal from nuclear also requiring particular vigilance.

2.2.7.2 Regulatory and financial risks relating to nuclear activities

In terms of the security of Belgium's supply and the approaching scheduled shutdown date for the Doel 1, Doel 2 and Tihange 1 nuclear units, the "risk of a posteriori invalidation of the law authorizing the extension of the operating life of the Doel 1, Doel 2 and Tihange 1 nuclear units in Belgium" is no longer included in the Group's critical risks. The Group continues to work in partnership with the Belgian State as part of the regularization process.

DESCRIPTION

Criticality:

In Belgium, all nuclear waste management is the responsibility of ONDRAF, the Belgian National Agency for Radioactive Waste and Enriched Fissile Material. ONDRAF proposes, as a national policy, that high level radioactive waste and/or long-lived waste be stored in deep geological repositories and not in long-term storage facilities.

Spent nuclear fuel is currently stored at generation sites.

Given a series of changes in the nuclear fuel market, the nuclear power supply company has suggested that the partial fuel reprocessing scenario to allow the processing of MOX historically used in Belgian power plants, can no longer be the reference scenario. The Commission des Provisions Nucléaires (Belgian Commission for Nuclear Provisions) confirmed this scenario. Contrary to previous assessments, the reference scenario used no longer includes the cost of a reprocessing contract nor the associated allowances for contingencies, but includes an assumption of the direct evacuation of MOX to deep storage. Should circumstances change, the calculation of costs could be reviewed. It is up to the nuclear power supply company, Synatom, an Electrabel subsidiary in which the State has a golden share, to propose and quantify a technical scenario that is likely to be approved by the Belgian government.

Costs associated with the management of spent fuel and the dismantling of plant and equipment are included in the costs of nuclear electricity production and are the subject of provisions. The assumptions and sensitivities regarding the assessment of these amounts are detailed in Note 17.2 of Section 6.2.2 "Notes to the consolidated financial statements."

In accordance with the law, a process of reviewing nuclear provisions is undertaken every three years under the control of an independent administrative authority, the Commission for Nuclear Provisions (CPN). In December 2022, the CPN communicated its latest decision to Synatom on the re-evaluation of the provisions of the Belgian nuclear power plants for the decommissioning and management of spent fuel.

The provisions will be subject to another triennial review in 2025. This may result in an increase in provisions due, for example, to a further decline in the discount rate or a higher estimate of the costs of decommissioning and waste management relating to this business.

Synatom invests the amount of provisions paid by Electrabel to cover the costs of decommissioning nuclear power plants and the management of spent fuel on the financial markets – see Note 17.2.4 of Section 6.2.2 "Notes to the consolidated financial statements." If, when using the funds, it turns out that the amounts provisioned were insufficient, Electrabel should compensate for the difference.

In the shorter term, the value of Synatom's investments is protected by a guaranteed value agreement between Electrabel and Synatom under which if, at the end of the agreement (in 2025), the market value is lower than the book value, Electrabel must cover the difference in value.

RISK MANAGEMENT MEASURES

Risk trend: STABLE

The Group works in partnership with the CPN for the review of nuclear provisions.

The Group provides the Belgian government with evidence to demonstrate that it is in a position to meet the costs relating to the decommissioning of plants and the management of spent fuel.

The Group contributes directly to working groups with ONDRAF on the technical, legal and financial aspects of radioactive waste management and storage.

Investment management is entrusted to a team led by a chief investment officer. An investment committee composed of experts, who are all Synatom Directors, is responsible for overseeing investment decisions. These are guided by an investment policy based on a controlled risk profile aimed at achieving the Group's performance objectives and a strong diversification of risks and is supported by a strict risk control policy.

2.3 INTERNAL CONTROL PROCEDURES

2.3.1 INTERNAL CONTROL OBJECTIVES

2.3.1.1 Legal framework of application

ENGIE's internal control complies with the Financial Security Act adopted on August 1, 2003 and is based on the COSO II model of the Committee of Sponsoring Organizations of the Treadway Commission and the AMF reference framework. It is guided by a Group Policy which sets out, with regard to the applicable regulatory framework, the expectations and objectives of the Internal control function.

2.3.1.2 Internal control objectives

The purpose of ENGIE's internal control is to provide reasonable assurance of the control of activities in terms of the following objectives:

- appropriate implementation and optimization of operations;
- the reliability of financial information; and
- compliance with laws and regulations as well as with instructions and guidelines set by General Management.

On this basis, ENGIE's internal control system continuously adapts to take into account challenges facing the Group in terms of constant regulatory changes, the transformation of its organization and development of new business lines, as well as the growth of digital technology which is a source of new operational risks but also of opportunities.

2.3.2 INTERNAL CONTROL ORGANIZATION AND STAKEHOLDERS

2.3.2.1 Organization of internal control

The ENGIE Group has set up an internal control management program called "INCOME" (**IN**ternal **CO**ntrol **M**anagement and **E**fficiency) which is activated according to the risks and managerial challenges of each business line.

Internal control is first and foremost a managerial responsibility that applies at all levels within the Group so that each manager, as the "first line of management," is responsible for the design of an appropriate internal control system and for overseeing its efficiency.

In this respect, the entities, countries and regions have their own internal control teams, first and second level respectively, which are responsible for managing the roll out of the internal control system within their scope; they act at this level in support of management and have a matrix-style connection between the Internal control function (functional) and local management (hierarchical).

The Internal Control Department reports to the Finance Department and has a global and cross-divisional responsibility in this area. Its main duties include keeping the Group Internal Control Policy and the program's "reference framework" up to date, directly and indirectly supervising the actions of the Internal Control function within the Group, and managing and coordinating the system as a stake holder of the "second line of management" with other functions (see Section 2.3.2.3.3).

The internal control function is composed of all of these elements.

2.3.2.2 General compliance framework

2.3.2.2.1 Ethics and compliance

In line with its values and its undertakings, ENGIE aims to act in compliance with the laws and regulations in force in the countries where it operates in all circumstances. To this end, the Group has established an ethics policy that guides its strategic decisions, management and professional practices. It also has the necessary tools to measure compliance with this undertaking (see Section 3.8 "Ethics and compliance").

2.3.2.2.2 Information systems

The IT solutions strategy, policies and standards are defined by the Group Digital and Information Systems Department. The security of information systems of the sectors and central functions of the Group is the responsibility of the corresponding functional departments, in accordance with these policies and standards. The standardization of these business line applications and the security of the Industrial Control Systems (ICS) are overseen under the responsibility of the Global Business Unit (GBU). The regions and entities are responsible for the security and resilience of their Information Systems and ICS under the supervision of the GBU and the Group Digital and Information Systems Department. The Group Digital and Information Systems Department manages cross-divisional security actions, including awareness-raising actions, as well as the connection of Information Systems and industrial facilities to the Group's cybersecurity supervision platform (Global Security Operations Center).

2.3.2.2.3 Internal policies and standards

The functional departments implement and distribute Group Policies that aim to define, according to the area in question, the main provisions applicable at all levels of the organization, in line with ENGIE's objectives and values.

ENGIE's internal control system systematically refers to these Policies in the establishment of its reference framework, notably with regard to its compliance objective.

Decisions, standards and procedures setting out the Group's methods of operation supplement these Policies.

In this respect, the Finance Department provides the procedures and rules intended to ensure the reliability of the accounting and financial information applicable to the Group's entities. The Internal Control Department provides all employees with:

- the Group Internal Control Policy as well as a methodological guide to which the entities must refer, to help them define, assess and coordinate an internal control system adapted to the nature of their activities;

- internal control standards drawn up in close cooperation with the functional departments (see Section 2.3.2.3.3 “Second line of management”), which set out the risks relating to activities in the relevant fields and the key controls designed to manage them;
- tools to assess the general control environment and the management of fraud risk, as well as practical guides covering cross-divisional subjects which include the segregation of duties, the management of accreditation and access rights to Information Systems, the protection of tangible and intangible assets, and the role of Directors representing the Group within the entities owned.

All of these Policies, standards and procedures are available on the Group’s Intranet site.

2.3.2.3 The system’s stakeholders

The stakeholders and their respective roles are presented according to a management model with three lines, overseen by ENGIE’s governance bodies.

2.3.2.3.1 The Group’s governance bodies

The Board of Directors ensures the correct functioning of the Group’s internal control. The Executive Committee defines the organization and responsibilities of managers and ensures compliance with the delegations of authorities. An annual review of internal control is submitted to the Executive Committee and the Audit Committee.

2.3.2.3.2 First line of management

The operational managers, who are responsible for the internal control of their organizations, constitute a key element of the system. Following the reference framework defined by the Group, they ensure that control activities are implemented, analyze the results, correct any deficiencies and endeavor to improve the efficiency of their system.

The Management Committees of the GBU, regional hubs and operating entities are responsible for establishing and overseeing the internal control covering the scope of their activities.

2.3.2.3.3 Second line of management

This line of management is organized into sectors, overseen by the Group’s corporate departments. In addition to the Internal Control Department, whose duties were described in Section 2.3.2.1 above, the following Departments are the main stakeholders of the second line of management.

The **Finance Department** carries out internal accounting and financial control (see Section 2.3.3 below). Within this department, the Risks Management & Insurance Department is involved in risk identification, loss prevention, and the definition and implementation of hedging strategies.

The **Societal Responsibility Department** monitors ENGIE’s CSR compliance, particularly with regard to environmental and social matters. It proposes Group policies in this area, assesses the RSE maturity of the Group’s various businesses, monitors the achievement of 2030 CSR targets and is in charge of regulatory environmental reporting.

The Group Procurement Department defines the principles and rules of the procurement Charter and Governance. Internal controls are defined to cover all procurement processes, from the selection of suppliers through to the payment of the final invoice.

The **Corporate Secretariat** helps to make the Group’s operations and the decisions of its managers legally secure, particularly in the following areas: commitments, litigation, arbitration, studies and actions to protect the criminal liability of the Group and its managers, embargo, company law, financial and stock market regulation, intellectual property law, competition law and regulation and financial law.

Within the Corporate Secretariat, the Legal, Ethics and Compliance Department manages the legal line and legal framework of the Group’s activities. The Ethics, Compliance & Privacy Department, which is attached to it, manages the ethics line and ensures compliance with ethical principles.

The Group’s Human Resources Department sets the framework and all rules aimed at ensuring compliance with local legislation, compliance with human resources management practices in terms of the Group’s social and societal commitments, in terms of employment, diversity and inclusion, respect for human rights, health and safety, and data confidentiality and integrity.

The Transformation & Geographies Department is responsible for supervising the Transformation Office, the Health and Safety Department, and the Projects Operational Department. It also manages the Group’s geographical platform’s Regional hubs, as well as the Global Business Support structure responsible for the Group’s shared services centers.

Within the Transformation and Geography Department, (i) the Transformation Office Department is responsible for supervising and managing the Group’s transformation projects, (ii) the Group’s Health and Safety Department is responsible for all activities at the Group level relating to the health and safety of individuals and industrial security in terms of the objectives set by the Group in these areas (No Life at Risk – No Mind at Risk – No Asset at Risk) and relating to crisis management, and (iii) the Projects Operational Department supervises and supports the Group’s industrial projects.

The Digital and Information Systems Department defines the internal controls relating to the management of information systems and their security for both the management systems and industrial control systems (ICS). Regular controls are carried out on systems (penetration testing), onsite (ICS controls) and via internal and external risk indicators. Important subjects for internal control, such as the segregation of duties and the management of access rights, are taken into account during the design stage of new information systems and regularly reviewed thereafter under the control of the owners of sensitive applications.

2.3.2.3.4 Third line of management: the Internal Audit Department

Reporting to the Chief Executive Officer, the Internal Audit Department operates throughout the Group in accordance with an annual audit plan based on risk analysis and interviews with the functional and operational managers.

This plan may be expanded at the request of the Executive Committee according to the Group’s priorities.

Submitted for approval to the Audit Committee, the plan is designed to cover all of the Group’s major risks and challenges that it is able to address and enables the management of activities to be checked.

The Internal Audit presents its conclusions to the Audit Committee, the Group’s Executive Committee and the managers of the GBU. It reports to the Audit Committee on its key observations and the progress of related action plans.

2.3.3 INTERNAL CONTROL RELATING TO FINANCIAL INFORMATION

2.3.3.1 Organization and stakeholders

The **Accounting Department** is in charge of financial reporting, preparing the parent company financial statements of ENGIE, producing the consolidated financial statements, and liaising with the Statutory auditors and the accounting departments of the AMF. It establishes the Group's accounting principles and oversees their implementation to ensure compliance with the accounting standards. It monitors the evolution of standards and their impact on the Group's financial statements. Within the Accounting Department, the Group Consolidations Department and the Accounting Standards Department optimize the handling and resolution of complex technical problems. These departments strengthen the quality and standardization of the analyses performed and the positions taken.

The **Financial Planning & Analysis Department** is tasked with establishing the analysis and reports required by General Management for the economic and financial coordination of the Group. It draws up and maintains the Group's management control toolkit and oversees the rolling out of these toolkits to the various entities. It guides the Management Control sector in defining and implementing processes and tools. It coordinates the Group's performance program.

The **Tax Department** is responsible for defining and rolling out the Group's tax policy. It coordinates the validation of tax returns and transfer pricing documentation and ensures that tax data are uniformly reported. It is hierarchically responsible for all tax activities. Generally speaking, it is closely supported by the Finance Departments of the GBU and the hubs, which assume responsibility for tax in terms of compliance and transparency.

The **Financial Systems and Processes Department** is a centralized activity at the corporate level that is responsible for the process and IS strategy of the Finance Function and for the determination and coordination of the IT processes and solutions policies, rules and standards applicable to the sector. Applications and infrastructure are distributed to the entities in accordance with the policies defined by corporate. The Financial Systems and Processes Department oversees the implementation of the Group's IS security policy within the sector and monitors and plans IS spending and investments.

The consolidated reporting entities all use the SAP BFC software package for the consolidation of the Group's financial statements and the SAP BPC software package for the Group's management reporting. SAP BFC is jointly managed by the Accounting IT Center of Expertise (which handles administrative tasks and system configuration and provides operating assistance to users) and the Information Systems Department, which is in charge of specific underlying infrastructures.

The **Investor Relations Department** is in charge of relations with institutional investors and analysts. With regard to management information, the Financial Planning & Analysis Department is the Investor Relations Department's only source of information. Other information arising from the legal reporting process, that is classed as regulated information pursuant to AMF rules, is provided by the Group Accounting Department. Lastly, the department oversees and coordinates the process of market communication (financial information and information on major transactions) in collaboration with the Corporate Secretariat.

Through the functional lines, all of these corporate departments oversee the internal control of their respective fields via the Finance Departments of the GBU and regional hubs. These Finance Departments are responsible for producing the separate financial statements of the legal entities and converting them according to IFRS. The consolidation of this data converted according to IFRS standards is carried out by Corporate as well as the implementation of internal control procedures at all operating subsidiaries and the decentralized management control (see Section 2.3.3.3 "Setting objectives and coordination").

The Finance Department also uses the current "Missions and operating principles of financial communication" procedure, which sets out management principles for the Group's financial communication and defines its activities relating to investor and analyst relations as well as market intelligence.

2.3.3.2 Consolidation process

The **Accounting Department** is in charge of producing the consolidated financial statements. It is supported by the **Financial Planning & Analysis Department** and the management reporting teams of the GBU and the hubs. It updates the accounting principles manual and closing instructions shared before the consolidation phases.

Each of these entities carries out controls in its own area of responsibility to ensure that Group accounting standards and policies have been circulated and applied correctly. Corporate implements second-tier controls of information prepared by the GBU and hubs, which do the same regarding data provided by the reporting entities.

The Chief Executive Officers and Chief Financial Officers of the GBU, as well as the Chief Financial Officers of the geographical hubs, attest to the quality and comprehensiveness of the financial information provided to the Group in a representation letter. Discussions with the Statutory Auditors enhance the quality of financial information, particularly in the case of complex situations that are open to interpretation.

2.3.3.3 Setting objectives and coordination

The Group's four GBU and business entities produce a Medium Term Business Plan (MTBP), a budget and budget re-estimates. The **Financial Planning & Analysis Department** prepares instructions for this purpose for each GBU, including details such as macroeconomic hypotheses, financial and non-financial indicators, the timetable and the segmentation of the scope of activity. Each GBU is responsible for sending these instructions to the subsidiaries and reporting entities within its scope after tailoring them to the specific characteristics of its business activity.

The Executive Committee approves for each GBU the objectives set for the following year, the corresponding budget and the outlook beyond the current year derived from the budget process and the MTBP. The testing process for the impairment of goodwill and long-term assets is based on this data. The Group's consolidated budget and MTBP are presented to the Audit Committee and the Strategy, Investment and Technology Committee before being submitted to the Board of Directors.

2.3.4 MANAGEMENT OF INTERNAL CONTROL

Management plays a key role in coordinating the internal control system according to a cycle that is generally annual by ensuring, with respect to the principle of reasonable assurance, that it remains relevant to the challenges and risks within its scope of responsibility. As part of the Group's internal control program and its methodology guidelines, it ensures that the following five actions are carried out:

- an analysis of the general control environment;
- an assessment of the risks of process malfunctions;
- the creation or update of the controls deemed appropriate;
- a regular assessment of the efficiency of the systems in place and the potential implementation of corrective measures as part of a continuous improvement approach;
- communication and commitment at all levels.

For all of these actions, the Group provides the entities with the necessary tools and each entity uses and adapts these tools according to their specific requirements.

More specifically, with regard to the assessment of the efficiency of the systems in place (point above), the Group continued in 2022 with the initiative relating to the development and roll out of automated controls through the use of data available in transactional processes to contribute to the management of the risks of non-compliance (for example, compliance with Embargo measures or the regulation governing payment terms).

Several dozen controls are therefore currently automated, mainly in the field of procurement, but also sales and taxation. The information resulting from the implementation of these automated controls and their monitoring is included in the documentation supporting the results of the control assessment.

For the scope which already benefits from the introduction of this solution, the **benefits seen** from the implementation of these controls relate to:

- **the level of coverage** through the ability to process all data versus a sample-based approach which, by nature, is more limited;
- **support provided to line managers** in their activities to continuously improve the functioning of the processes in question and the quality of data through access to lists of anomalies to be addressed as well as indicators and scorecards to facilitate the monitoring of actions;
- **the traceability of controls**, thanks to the sharing of their results at all levels of the organization allowing the functional departments involved to coordinate the internal control system in a more accurate manner for the control activities automated in this way.

As the solution has proven its added value in terms of improving the hedging of risks inherent to the business in that it is a useful addition to the existing internal control system by making it more digital, the Group intends to continue to invest in this solution to extend both the scope of implementation and the type of areas targeted.

In terms of the concept of commitment (point above), management's responsibility is made official by the drafting and signature of an annual letter of acknowledgment which sets out the manager's opinion on the efficiency of the internal control system within his or her scope of responsibility by attaching the major action plans deemed suitable to address any weaknesses identified.

This commitment is applied throughout the chain of management to provide ENGIE's General Management and Audit Committee with reasonable assurance as to the deployment and efficiency of its internal control system.

3

NON-FINANCIAL STATEMENT AND CSR INFORMATION

French ordinance 2017-1180 dated July 19, 2017 and French Decree 2017-1265 dated August 9, 2017 transposed European Directive 2014/95/EU, also called the non-financial reporting Directive (NFRD), as regards disclosure of CSR information by companies via the Non-Financial Statement (NFS).

Pursuant to this legislation, the ENGIE Group's NFS comprises the following elements:

- a presentation of the governance of CSR performance in Section 3.1 "Corporate Social Responsibility," together with: the Board of Directors' diversity policy, described in Section 4 "Corporate Governance," the Vigilance Plan described in Section 3.9 "Vigilance Plan," and the rules of ethics described in Section 3.8 "Ethics and compliance";
- a description of the Group's activities presented in a summary form by major business segment in Section 3.2 "Business model," and in a detailed form in Section 1.6 "Description of the Group's activities";
- an analysis of the CSR risks relating to the areas referred to in the NFRD Directive, detailed in Section 3.3 "Analysis of the main CSR risks and challenges."

3.1 CORPORATE SOCIAL RESPONSIBILITY

The fundamental principles of Corporate Social Responsibility (CSR) are elaborated on in the Group's purpose which is enshrined in its bylaws (see the "ENGIE at a glance" Section).

Rethinking the global energy landscape has today become a necessity in the face of global warming. The urgency of climate change requires the implementation of a lower-carbon, more decentralized, more digitized and more pared-back energy system.

That being said, the quest for positive impacts on the climate must not come at the expense of the population and nature. This threefold challenge involving the Climate, Nature and Humanity drives the Group's societal approach.

3.1.1 CSR POLICY AND GOVERNANCE

ENGIE's Corporate Social Responsibility policy sets out the Group's CSR priorities and commitments to bring together everyone's skills, create shared value for all its stakeholders and contribute to the achievement of the Sustainable Development Goals defined by the United Nations. By acting for a positive impact on people and the planet, the Group contributes to ensuring its *leadership*, over the long term, as a benchmark player in energy transition. This policy is detailed in Section 1.5.1.

The Corporate Social Responsibility (CSR) Department relies on a network of designated coordinators in the business units (GBU, GEMS (Global Energy Management & Sales) and Nuclear) and geographical entities (national and regional *hubs*). To engage employees as widely as possible on these subjects, the CSR Department uses a network of Chief Sustainability Officers (CSO) across the business lines and regional hubs.

The CSR Department provides regular presentations to the Board of Directors' Ethics, Environment and Sustainable Development Committee (EESDC) on the latest CSR topics (Science-Based Targets or SBT, Task force on Climate-related Financial Disclosures *or TCFD*, tracking CSR objectives and commitments, discussions with civil society, CSR ratings, etc.).

The CSR Department takes joint leadership with the Finance Department of the Green Financing Committee, overseeing projects likely to be financed by green bonds regularly issued on the market by the Group.

The CSR Department has leadership of the Climate Committee, in which the Finance Department and the relevant GBU participate. This committee is notably responsible for overseeing the Group's decarbonization commitments, in line with the *Science Based Targets*.

Lastly, the CSR Department takes joint leadership with the Finance Department of the Adaptation & TCFD Committee, charged with overseeing the achievement of financial transparency commitments made in the TCFD initiative (Task Force on Climate related Financial Disclosures) and to monitor the Group's plans to adapt its assets to climate change.

The CSR Department takes joint leadership with the Legal, Ethics and Compliance Department of the Duty of Vigilance Committee, charged with overseeing measures to prevent serious violations relating to human rights and fundamental freedoms, the health and safety of individuals and the environment that might arise from the activities of the Group and the subsidiaries it controls.

The CSR Department regularly meets with a range of stakeholders (NGOs, investors, rating agencies, customers, opinion leaders, and experts), and organizes panels and discussion forums, as well as a Stakeholder Committee, to work on the sustainability of offerings and projects related to the Group's operational teams. Employees receive regular training on themes related to sustainable development and stakeholder engagement.

Each year, at its Shareholders' Meeting, ENGIE publishes an integrated report on its overall financial, environmental, social and societal performance. Which, to ensure its relevance, it discusses in advance with its main stakeholders.

3.1.2 2030 CSR OBJECTIVES

In 2020, the Group has set itself 19 CSR objectives for 2030 in line with its purpose and its new strategic orientations.

These targets were reviewed in 2022 and have now been increased to 21 targets, with the two additional targets relating to the ongoing certification of the Group's well below 2°C GHG emissions trajectory.

These 21 targets have been broken down into 17 targets monitored by the EESDC and four other targets which are only monitored by the Executive Committee.

Of the 17 targets monitored by the EESDC, eight key targets are published in Section 1.5.2.

Each objective has an Executive Committee member as a sponsor and a manager who works in partnership with the functional line concerned to take the necessary action to achieve it. The CSR Department coordinates and monitors these CSR objectives for senior management, the EESDC and the Board of Directors.

3.1.3 CLIMATE TRAJECTORY (RELATED TO THE RECOMMENDATIONS OF THE TCFD: TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES)

3.1.3.1 Climate governance

The Board of Directors validates the climate transition strategy and its associated objectives. This subject is central to its work, particularly when the Board holds its strategy seminar and makes investment decisions, which are researched by the Strategy, Investment and Technology Committee (SITC).

Regarding climate, the Board relies on the work of the Ethics, Environment and Sustainable Development Committee (EESDC), which is specially charged with reviewing the risks and opportunities connected with climate change and making its recommendations to the Board.

The Ethics, Environment and Sustainable Development Committee (EESDC) studies and decides on climate-related issues in particular points concerning the implementation of TCFD recommendations, decarbonization objectives and climate policy of the Group. This role was confirmed by its inclusion in the Internal Regulations of the Board of Directors in 2019.

In order to fulfill this mission, the EESDC relies on an annual climate assessment, an analysis of climate-related risks and opportunities (see Sections 2.2.2.2 and 3.1.3.3), as well as other more specific elements (e.g. progress on the adaptation plan). Climate risk is one of the seven primary risks reviewed by the Board of Directors on an annual basis. These reports are prepared by the CSR Department, which also includes a chapter dedicated to climate change in its CSR reporting to the EESDC.

The CSR Department leads the steering committee for the Group's decarbonization objectives notably to ensure that the Group's decarbonization trajectory is in line with the commitments made under the SBTi initiative. The CSR Department also oversees the Group's adaptation work with support from the Research & Innovation teams. All of this work is carried out in close coordination with the Strategy Department, the Finance Department, as well as with all the Global Business Units.

The Group has also set up training sessions for directors so that they can ensure that they have sufficient skills to fulfill their roles. The climate is one of the training topics.

The CSR Department also makes proposals to the Appointments, Compensation and Governance Committee on the criteria for compensating the Chief Executive Officer in relation to ENGIE's main non-financial challenges. This proposal was accepted and the Group's energy-related GHG emission performance is one of these.

The Audit Committee identifies the primary risks, including climate risk and the integration of climate considerations into the assumptions used for financial guidance and the calibration of risk insurance coverage.

Finally, the Strategy, Investment and Technology Committee integrates climate challenges and objectives in its investment decisions.

3.1.3.2 Strategy

In line with its purpose (see the "ENGIE at a glance" Section) and the Say on Climate resolution adopted by the April 21, 2022 Shareholders' Meeting, the decarbonization of the economy is at the heart of the Group's strategy. This also takes the form of long-term commitments to achieve Net Zero across all scopes (Scopes 1, 2 and 3) by 2045 and of medium- to long-term commitments that project GHG emissions on a path compatible with the Paris Agreement (see Section 3.1.4).

In order to define its commitments, the Group has studied the resilience of its business model by comparing it to different decarbonization scenarios and by varying the assumptions for the development of its activities.

These commitments are already reflected in the Group's processes: for example via the allocation of annual budgets until 2030 to the main businesses (GBU) integrated within the Group's investment processes, and bi-monthly reporting of the consumption of these budgets within the context of new investments.

The impact of climate change on the Group's strategy is being studied as well. An in-depth process is currently under way, with the issue being approached by country or by major climate region where ENGIE has an interest. The study covers four areas:

- the impact of climate change on country risk;
- the value of existing assets;
- the strategic objectives out to 2030;
- the strategic issues specific to the countries in question.

This study, which is based primarily on three IPCC climate scenarios, was completed in the second half of 2022 and was used for the initial mapping of climate-related risks.

Moreover, climate change can also bring new opportunities: it encourages the development of new technologies and solutions, which also are opportunities for the Group, particularly in terms of:

- development of renewable energy for electricity;
- development of green gas (biomethane and green hydrogen);
- more offers of decarbonization support and solutions for our customers.

3.1.3.3 Risk management

Climate change carries risks for the Group (see Section 3.3).

The transition risks to which the Group is exposed mainly result from the strengthening of emissions regulations and decarbonization policies, changes in market and consumer behavior, and technological developments. The Group has been setting itself greenhouse gas emissions targets since 2012. Since 2017, the year after the Paris Climate Agreement came into force, the Group has reduced its direct emissions by 53% and total emissions by 30%. It is set to achieve ambitious objectives by 2030 (certified by SBTi) and Net Zero in 2045. As well as the emissions of its own industrial assets, the Group acts throughout its value chain, including suppliers, work practices, and support for customers as they decarbonize their footprint.

Physical risks are inherent in the assets and activities of the Group that might be exposed to the impacts of climate change. The collaboration of the CSR Department with the Group's operating entities has made it possible to identify the climate indicators that affect the Group's activities (rising temperatures, floods, droughts, wind, and heat waves). The Group has also forged a partnership with the Pierre Simon Laplace Institute to obtain climate change data for the periods to 2030 and 2050.

With these items, the Group is able to make a list of priority operating sites whose local resilience to climate change is being studied. Analyses of all ENGIE production facilities are under way, evaluating the financial impact of climate change on the Group's business activities. In addition to risk management, insurance coverage and short-term continuity plans, a plan to adapt our high-risk assets for 2030 and 2050 is being drafted. These adaptation plans were defined in 2022 within a restricted scope and will be rolled out more widely in 2023.

3.1.3.4 Indicators and targets

ENGIE has a robust panel of key performance indicators (KPI) that enable it to measure its carbon footprint with all the desired level of detail. These indicators allow it to precisely control changes in its GHG emissions. The results of the decarbonization targets are shown in Section 1.5.2.

3.1.4 SCIENCE-BASED TARGETS CERTIFICATION

The Science-Based Targets (SBT) initiative aims to encourage companies to take ambitious climate action by validating the compliance of their forecast chronicles of CO_2 eq emissions with the commitments of the Paris Agreement.

Mindful of its environmental responsibility, ENGIE obtained SBTi "2°C trajectory" certification in February 2020.

For this, the Group is committed to reducing:

- the carbon intensity of its electricity production (scopes 1 and 3) by 52% by 2030 compared to 2017;
- emissions from the use of products sold (scope 3) by 34% by 2030 compared to 2017.

This certification demonstrates ENGIE's aim of becoming a major player in the energy transition to a carbon neutral world.

In May 2021, the Group went a step further by committing to a "well-below 2°C" trajectory by 2030, with a view to being net zero-carbon by 2045.

In this context, ENGIE is committed to ending its coal activity in 2025 for continental Europe and in 2027 for the rest of the world for all its coal assets.

This exit from coal will be achieved, in order of priority, through closures, conversions and disposals of power plants. If the closure of a coal-fired power plant is indeed preferable to its disposal from an environmental point of view alone, its implementation faces two limits: ENGIE is almost never the sole decision-maker in this matter and closure may not be possible if the coal-fired power plant contributes to the energy security of a State or a region.

Whenever ENGIE determines to dispose of a coal-fired power plant, it weighs CSR considerations in choosing a buyer. The proceeds from the disposal also enable the Group to finance the development of renewable capacities that are beneficial to the climate.

Concerning natural gas, the Group's ambition is to gradually replace fossil gas by green gas through the development of biomethane and green hydrogen. These measures complement the Group's commitment to the strong development of renewable energy for electricity, in its ambition to transition to a low-carbon society.

In February 2023, the Group obtained SBTi "well-below 2°C" certification for its decarbonization trajectory. For this, the Group has set itself particularly two new 2030 targets:

- the carbon intensity for energy production (Scope 1) and energy consumption (Scope 2) must be lower than 110 g CO_2 eq. per kWh;
- the carbon intensity of energy sales produced (Scopes 1 and et 3) and purchased (Scope 3) must be lower than 153 g CO_2 eq. per kWh.

3.1.5 EUROPEAN TAXONOMY

3.1.5.1 Methodology for the classification of activities

In order to orient European capital expenditures toward sustainable operations and achieve carbon neutrality by 2050, the European Union has adopted, with Regulation 2020/852 of June 18, 2020 and two delegated acts (2021/2139) dated June 4, 2021 and (2022/1214) dated March 9, 2022, a European taxonomy approach which lists the economic activities deemed environmentally sustainable.

The Group followed a four-step process to identify the activities which are eligible and aligned in accordance with the European Regulation governing the taxonomy of sustainable activities (2020/852) across all the countries in which the Group operates for 2022. The process exclusively covered mitigation and adaptation to climate change objectives as these are the only two objectives for which the European Commission has published a delegated act covering the criteria to be applied. The Group is mainly focused on the climate change mitigation objective, in line with its decarbonization strategy.

The **first stage** consisted of studying the eligibility of activities and dividing the Group's economic activities into two categories: eligible and non eligible. To do so, the Group determined which of its activities strictly corresponded to an economic activity described in one of the delegated acts (2021/2139) or (2022/1214). The main activities deemed eligible were those of GBU Renewables (wind, solar, hydropower and geothermal electricity production), GBU Energy Solutions (heating production and distribution with or without gas of biomass cogeneration, energy efficiency services), and the GBU FlexGen & Retail (electricity storage, production of electricity from natural gas). For GBU Networks, activities relating to making injected, transported and distributed gas were taken into account in proportion to the green gas transported in the networks. For nuclear power production, as the extension of the two Belgian units have not been finalized, Belgian nuclear facilities were considered as non eligible. Only the drawing rights of two French power plants identified as eligible by EDF were considered as eligible.

The **second stage** consisted of determining among the eligible activities, those whose priority was to make a substantial contribution to the mitigation or adaptation to climate change objective by assessing their compliance with the technical review criteria presented in the delegated acts. The criteria of 100 gCO_2/kWH in the life cycle analysis does not currently allow for the selection of the Group's electricity production from natural gas assets. Among the technical review criteria, the activity is considered as aligned if:

- for hydroelectric generation: the hydroelectric power plant was a "run of the river" type or can demonstrate a power-flux ratio of more than 5 W/m^2;

- for the heating networks: the energy system was efficient as defined by the EU (a system using at least 50% of energy from renewable sources, 50% in residual heat, 75% heat produced through cogeneration or 50% using a combination of this energy and heat);
- for the installation of energy efficiency equipment or energy performance services in the buildings: the activity is related to one of the activities described.

The **third stage** related to compliance with technical review criteria ensuring no prejudice to the other environmental objectives (Does Not Significantly Harm - DNSH). Risk management relating to climate change, water resources, the circular economy, the erosion of biodiversity and air pollution is covered by a specific section of our environmental policy. The compliance assessment was carried out by environmental coordinators based on the following main elements:

- the analysis of risks relating to climate change (physical risks), water stress, pollution (NO_x, SO_x, PM), the protection of protected zones which is updated each year as part of environmental reporting on sites in operation;
- the preparation of an environmental management plan as part of the Group's voluntary CSR objectives;
- EMAS and ISO 14001 certification for facilities with the highest environmental impact such as hydropower production sites.

The **fourth stage** related to the Group's compliance with minimum safeguards. This compliance is achieved thanks to the policies of the Group's Ethics, Compliance & Privacy Department and in particular the policy relating to human rights which refers to these major international standards, through the analysis of risks and duty of vigilance action plans, as well as the system for whistleblowing and reporting ethics incidents. A description of the system and the vigilance plan are available in this 2022 Universal Registration Document (see Sections 3.8 and 3.9) and on the Group's website: www.engie.com/en/ethics-and-compliance/whistleblowing-system and www.engie.com/en/ethics-and-compliance/vigilance-plan.

Activities considered as aligned are those which correspond favorably to the four stages described above.

3.1.5.2 Calculation method for indicators

Regulation 2021/2078 dated July 6, 2021, requires this Non-financial statement (NFS) to publish, as of 2022, the percentage of eligibility and alignment of business activities for listing in this taxonomy using three indicators defined by said taxonomy:

- revenues;
- capital expenditure (CAPEX);
- operating expenses (OPEX).

Revenues, CAPEX and OPEX indicators used for these eligibility rate calculations are strictly in line with the taxonomy definitions.

Revenues is the Group's published revenues, i.e. it excludes revenues from entities consolidated using the equity method (like Ocean Winds, partnership with EDPR in offshore wind), and revenues from discontinued operations.

The **CAPEX indicator** defined by the taxonomy is different from the one used by ENGIE in its management dialog and in its financial communication to the market. In particular, the taxonomy does not include financial investments in entities consolidated using the equity method, as well as disposals of DBSO/DBOO Partnerships.

ENGIE CAPEX and taxonomy CAPEX can be reconciled as follows:

Data at December 31, 2022, in millions of euros	Capital expenditure (CAPEX)(1)	Taxonomy CAPEX
Tangible and intangible investments	6,379	6,379
(-) Change in tangible and intangible investment liabilities	*0*	836
Entry into scope of tangible and intangible investments arising from "Business combinations"	0	779
Changes in scope of consolidation on financial net debt - acquisition	371	
Takeover of subsidiaries net of cash and cash equivalents acquired	289	0
(+) Cash and cash equivalents acquired	*14*	*0*
Acquisitions of interests in entities consolidated by the equity method and joint arrangements	407	0
Acquisitions of equity and debt instruments	(175)	0
Change in loans and receivables issued by the Group and others	2,877	0
(+) Others	*(11)*	*0*
Changes in ownership interest in controlled entities	0	0
(-) Impact of DBSO activity-related disposals	*(472)*	*0*
(-) Synatom financial investments / Disposal of Synatom financial assets	*(1,822)*	
Right of use assets (IFRS 16)	0	1196(2)
TOTAL	**7,858**	**9,191**

(1) See Note 5.6 of Section 6.2.2 "Notes to the consolidated financial statements".
(2) See Note 13.3.1 "Tangible fixed assets".

In 2022, ENGIE adapted its chart of accounts to strictly adhere to the definition adopted by the European regulation for the **OPEX indicator**, i.e. direct costs not recognized as assets for research and development, the renovation of buildings, short-term leases, maintenance and repairs, and any other direct expense relating to the routine maintenance of property, plant & equipment.

The results of this work are given in the three tables below, with a breakdown of the results by segment.

2022 revenues used by the taxonomy

Segment	Eligible Revenues (€ million): A	Aligned revenues (€m): B	Total Revenues (€ million): C	Percentage of eligibility of revenues: (A/C)	Percentage of alignment of revenues: (B/C)
Renewables	6,102	5,735	6,216	98%	92%
Networks	469	467	6,961	7%	7%
Energy Solutions	7,514	5,838	11,552	65%	51%
FlexGen & Retail	9,001	1,696	23,939	38%	7%
Nuclear	372	372	35	-	-
Other (of which GEMS)	10	0	45,163	0%	0%
TOTAL	**23,468**	**14,109**	**93,865**	**25%**	**15%**

2022 Capital expenditure (CAPEX) used by the taxonomy

Segment	Eligible CAPEX (€ million): A	Aligned CAPEX (€m): B	Total CAPEX (€ million): C	Percentage of eligibility of CAPEX: (A/C)	Percentage of alignment of CAPEX: (B/C)
Renewables	4,491	4,327	4,504	100%	96%
Networks	345	345	2,155	16%	16%
Energy Solutions	602	514	936	64%	55%
FlexGen & Retail	384	76	784	49%	10%
Nuclear	109	109	224	49%	49%
Others			587	0%	0%
TOTAL	**5,930**	**5,370**	**9,191**	**65%**	**58%**

2022 Operating expenses (OPEX) used by the taxonomy

Segment	Eligible OPEX (€ million): A	Aligned OPEX (€ million): B	Total OPEX (€ million): C	Percentage of eligibility of OPEX: (A/C)	Percentage of alignment of OPEX: (B/C)
Renewables	571	556	591	97%	94%
Networks	38	37	800	5%	5%
Energy Solutions	556	460	766	73%	60%
FlexGen & Retail	240	38	531	45%	7%
Nuclear	33	33	207	16%	16%
Others	0	0	6	0%	0%
TOTAL	**1,438**	**1,124**	**2,901**	**50%**	**39%**

In 2022, ENGIE recognized taxonomy-eligible revenues of 25% and taxonomy-aligned revenues of 15%, taxonomy-eligible CAPEX of 65% and taxonomy-aligned of CAPEX of 58%, and taxonomy-eligible OPEX of 50% and taxonomy-aligned OPEX of 39%.

These Group figures (excluding EQUANS) mask great disparities from one business line to another.

The majority of GBU Renewables activities are eligible (98% for revenues, 100% for CAPEX) and almost all aligned (92% for revenues, 100% for CAPEX).

The majority of GBU Energy Solutions activities are eligible (65% for revenues, 64% for CAPEX) and mostly aligned (51% for revenues, 55% for CAPEX). The activities of the GBU FlexGen & Retail are minimally eligible and aligned with the taxonomy (38% for revenues, 49% for CAPEX on eligibility and 7% for revenues, 10% for CAPEX on alignment) given the share of production activities.

On the other hand, the three gas network activities (transport, distribution and storage) will gradually become eligible and aligned as they are converted to renewable gas and hydrogen storage. Nuclear activities are eligible and aligned for those corresponding to drawing rights on French plants identified as eligible and aligned by EDF.

Lastly, other activities (including *GEMS)* are neither taxonomy-eligible nor taxonomy-aligned.

It should be noted that 72% of growth CAPEX (see Note 5.6 of Section 6.2.2 "Notes to the consolidated financial statements") for 2022 are eligible and 68% aligned, which is significantly higher than the percentages calculated for industrial CAPEX alone (growth and maintenance). These indicators attest a much better image of the Group's commitment to a carbon-neutral economy which are reflected in its financial investments.

The taxonomy analysis of the 2023-2025 CAPEX plan is presented in the tables below and includes the CAPEX indicator defined under taxonomy and the CAPEX growth indicator as monitored at Group level (see Note 5.6 of Section 6.2.2 "Notes to the consolidated financial statements").

2023-2025 capital expenditure (CAPEX) used by the taxonomy

Segment	Percentage of eligibility	Percentage of alignment
Renewables	100%	100%
Networks	22%	22%
Energy Solutions	79%	71%
Other activities	57%	16%
Capital expenditure used by the taxonomy (Growth and maintenance CAPEX) 2023-2025	**67%**	**62%**

2023-2025 growth investment expenditure (CAPEX)

Segment	Percentage of eligibility	Percentage of alignment
Renewables	100%	100%
Networks	53%	53%
Energy Solutions	73%	66%
Other activities	50%	22%
2023-2025 growth investment expenditure(1)	**80%**	**76%**

(1) See Note 5.6 of Section 6.2.2 "Notes to the consolidated financial statements."

The calculation of eligibility and alignment in terms of 2023-2025 CAPEX supported by expected expenditure for GBU Renewables and GBU Energy Solutions activities which represent more than half of the Group's CAPEX expenditure.

The three tables in the double pages below present the standard templates used for the publication of information related to 2022 data on the Revenue, CAPEX and OPEX indicators according to the Commission Delegated Regulation (EU) No. 2021/2178 dated July 6, 2021.

Proportion of turnover from products or services associated with Taxonomy-aligned economic activities - disclosure covering year 2022

Economic activities (1)	Codes (2)	Absolute turnover (3)	Proportion of turnover (4)	Substantial contribution criteria: Climate change mitigation (5)	Substantial contribution criteria: Climate change adaptation (6)
		M€	%	%	%
A. TAXONOMY-ELIGIBLE ACTIVITIES					
A1- Environmentally sustainable activities (Taxonomy-aligned)					
Electricity generation using solar photovoltaic technology	4.1	437	0,5%	3,1%	0,0%
Electricity generation from wind power	4.3	859	0,9%	6,1%	0,0%
Electricity generation from hydropower	4.5	4,502	4,8%	31,9%	0,0%
Electricity generation from bioenergy	4.8	224	0,2%	1,6%	0,0%
Transmission and distribution of electricity	4.9	335	0,4%	2,4%	0,0%
Storage of electricity	4.10	753	0,8%	5,3%	0,0%
Thermal energy storage	4.11	2	0,0%	0,0%	0,0%
Storage of hydrogen	4.12	0	0,0%	0,0%	0,0%
Transmission and distribution networks for renewable and low-carbon gases	4.14	170	0,2%	0,9%	0,3%
District heating/cooling distribution	4.15	1,687	1,8%	11,9%	0,0%
Cogeneration of heat/cold and electricity by bioenergy	4.20	108	0,1%	0,8%	0,0%
Production of heat/cool from geothermal energy	4.22	1	0,0%	0,0%	0,0%
Production of heat/cool from bioenergy	4.24	131	0,1%	0,9%	0,0%
Electricity generation from nuclear energy in existing installations	4.28	372	0,4%	2,6%	0,0%
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30	45	0,0%	0,3%	0,0%
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31	10	0,0%	0,1%	0,0%
Anaerobic digestion of bio-waste	5.7	25	0,0%	0,1%	0,1%
Renovation of existing buildings	7.2	-17	0,0%	-0,1%	0,0%
Installation, maintenance and repair of energy efficiency equipment	7.3	1,342	1,4%	9,5%	0,0%
Cogeneration of heat/cold and electricity by bioenergy	7.4	114	0,1%	0,8%	0,0%
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5	7	0,0%	0,0%	0,0%
Installation, maintenance and repair of renewable energy technologies	7.6	410	0,4%	2,9%	0,0%
Data-driven solutions for GHG emissions reductions	8.2	45	0,0%	0,3%	0,0%
Close to market research, development and innovation	9.1	3	0,0%	0,0%	0,0%
Professional services related to energy performance of buildings	9.3	2,546	2,7%	18,0%	0,0%
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)	**TOTAL**	**14,109**	**15%**	**100%**	**0%**
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)					
Electricity generation using solar photovoltaic technology	4.1	57	0,1%		
Electricity generation from wind power	4.3	216	0,2%		
Electricity generation from hydropower	4.5	395	0,4%		
Electricity generation from bioenergy	4.8	0	0,0%		
Transmission and distribution of electricity	4.9	100	0,1%		
Storage of electricity	4.10	1	0,0%		
District heating/cooling distribution	4.15	359	0,4%		
Production of heat/cool from geothermal energy	4.22	2	0,0%		
Construction and safe operation of new nuclear power plants, for the generation of electricity or heat, including for hydrogen production, using best-available technologies	4.27	29	0,0%		
Electricity generation from nuclear energy in existing installations	4.28	32	0,0%		
Electricity generation from fossil gaseous fuels	4.29	6,758	7,2%		
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30	852	0,9%		
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31	10	0,0%		
Urban and suburban transport, road passenger transport	6.3	43	0,0%		
Infrastructure enabling low-carbon water transport	6.15	3	0,0%		
Construction of new buildings	7.1	29	0,0%		
Installation, maintenance and repair of energy efficiency equipment	7.3	148	0,2%		
Cogeneration of heat/cold and electricity by bioenergy	7.4	2	0,0%		
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5	3	0,0%		
Close to market research, development and innovation	9.1	13	0,0%		
Professional services related to energy performance of buildings	9.3	309	0%		
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**9,359**	**10%**		
TOTAL (A.1 + A.2)		**23,468**	**25%**		
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES					
Turnover of Taxonomy-non-eligible activities (B)		**70,398**	**75%**		
TOTAL (A + B)		**93,865**	**100%**		

Codes (2)	DNSH criteria (Does Not Significantly Harm) Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of turnover, year 2022 (18)	Category "enabling activity" (20)	Category "transitional activity" (21)
	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	%	E	T
4.1		YES		YES		YES	YES	0,5%		
4.3		YES	YES	YES		YES	YES	0,9%		
4.5		YES	YES			YES	YES	4,8%		
4.8		YES	YES		YES	YES	YES	0,2%		
4.9		YES		YES	YES	YES	YES	0,4%	E	
4.10		YES	YES	YES		YES	YES	0,8%	E	
4.11		YES	YES	YES		YES	YES	0,0%	E	
4.12		YES		YES	YES	YES	YES	0,0%	E	
4.14	YES	YES	YES		YES	YES	YES	0,2%		
4.15	YES	YES	YES		YES	YES	YES	1,8%		
4.20		YES	YES		YES	YES	YES	0,1%		
4.22		YES	YES		YES	YES	YES	0,0%		
4.24		YES	YES		YES	YES	YES	0,1%		
4.28		YES	YES	YES	YES	YES	YES	0,4%		
4.30		YES	YES		YES	YES	YES	0,0%		T
4.31		YES	YES		YES	YES	YES	0,0%		T
5.7		YES	YES		YES	YES	YES	0,0%		
7.2		YES	YES	YES	YES	YES	YES	0,0%		T
7.3		YES			YES		YES	1,4%	E	
7.4		YES					YES	0,1%	E	
7.5		YES					YES	0,0%	E	
7.6		YES		YES			YES	0,4%	E	
8.2		YES		YES			YES	0,0%	E	
9.1		YES	YES	YES	YES	YES	YES	0,0%	E	
9.3		YES					YES	2,7%	E	
TOTAL								15%		
4.1										
4.3										
4.5										
4.8										
4.9										
4.10										
4.15										
4.22										
4.27										
4.28										
4.29										
4.30										
4.31										
6.3										
6.15										
7.1										
7.3										
7.4										
7.5										
9.1										
9.3										

3

Proportion of CAPEX from products or services associated with Taxonomy-aligned economic activities - disclosure covering year 2022

CAPEX				Substantial contribution criteria	
Economic activities (1)	Codes (2)	Absolute CAPEX (3)	Proportion of CAPEX (4)	Climate change mitigation (5)	Climate change adaptation (6)
		M€	%	%	%
A. TAXONOMY-ELIGIBLE ACTIVITIES					
A1- Environmentally sustainable activities (Taxonomy-aligned)					
Electricity generation using solar photovoltaic technology	4.1	1,504	16,4%	28,0%	0,0%
Electricity generation from wind power	4.3	1,729	18,8%	32,2%	0,0%
Electricity generation from hydropower	4.5	994	10,8%	18,5%	0,0%
Electricity generation from bioenergy	4.8	2	0,0%	0,0%	0,0%
Transmission and distribution of electricity	4.9	7	0,1%	0,0%	0,1%
Storage of electricity	4.10	66	0,7%	1,2%	0,0%
Storage of hydrogen	4.12	8	0,1%	0,1%	0,0%
Transmission and distribution networks for renewable and low-carbon gases	4.14	221	2,4%	4,0%	0,1%
District heating/cooling distribution	4.15	285	3,1%	5,3%	0,0%
Cogeneration of heat/cold and electricity by bioenergy	4.20	0	0,0%	0,0%	0,0%
Electricity generation from nuclear energy in existing installations	4.28	109	1,2%	2,0%	0,0%
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30	0	0,0%	0,0%	0,0%
Anaerobic digestion of bio-waste	5.7	127	1,4%	2,4%	0,0%
Installation, maintenance and repair of energy efficiency equipment	7.3	30	0,3%	0,5%	0,0%
Cogeneration of heat/cold and electricity by bioenergy	7.4	25	0,3%	0,5%	0,0%
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5	0	0,0%	0,0%	0,0%
Installation, maintenance and repair of renewable energy technologies	7.6	182	2,0%	3,4%	0,0%
Data-driven solutions for GHG emissions reductions	8.2	0	0,0%	0,0%	0,0%
Close to market research, development and innovation	9.1	1	0,0%	0,0%	0,0%
Professional services related to energy performance of buildings	9.3	79	0,9%	1,5%	0,0%
Capex of Environmentally sustainable activities (Taxonomy-aligned) (A.1)	**TOTAL**	**5,370**	**58%**	**100%**	**0%**
A2- Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)					
Electricity generation using solar photovoltaic technology	4.1	79	0,9%		
Electricity generation from wind power	4.3	94	1,0%		
Electricity generation from hydropower	4.5	7	0,1%		
Transmission and distribution of electricity	4.9	0	0,0%		
District heating/cooling distribution	4.15	46	0,5%		
Production of heat/cool from geothermal energy	4.22	0	0,0%		
Electricity generation from fossil gaseous fuels	4.29	278	3,0%		
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30	40	0,4%		
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31	0	0,0%		
Installation, maintenance and repair of energy efficiency equipment	7.3	12	0,1%		
Installation, maintenance and repair of renewable energy technologies	7.6	3	0,0%		
Capex of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**560**	**6%**		
TOTAL A1+A2		**5,930**	**65%**		
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES					
Capex of Taxonomy-non-eligible activities (B)		**3,262**	**35%**		
TOTAL A+B		**9,191**	**100%**		

Codes (2)	DNSH criteria (Does Not Significantly Harm): Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of CAPEX, year 2022 (18)	Category "enabling activity" (20)	Category "transitional activity" (21)
	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	%	E	T
4.1		YES		YES		YES	YES	16,4%		
4.3		YES	YES	YES		YES	YES	18,8%		
4.5		YES	YES			YES	YES	10,8%		
4.8		YES	YES		YES	YES	YES	0,0%		
4.9	YES	YES		YES	YES	YES	YES	0,1%	E	
4.10		YES	YES	YES	YES	YES	YES	0,7%	E	
4.12		YES	YES	YES	YES	YES	YES	0,1%	E	
4.14	YES	YES	YES		YES	YES	YES	2,4%		
4.15		YES	YES		YES	YES	YES	3,1%		
4.20		YES	YES		YES	YES	YES	0,0%		
4.28		YES	YES	YES	YES	YES	YES	1,2%		
4.30		YES	YES		YES	YES	YES	0,0%		T
5.7		YES	YES		YES	YES	YES	1,4%		
7.3					YES		YES	0,3%	E	
7.4		YES					YES	0,3%	E	
7.5		YES					YES	0,0%	E	
7.6		YES					YES	2,0%	E	
8.2		YES		YES			YES	0,0%	E	
9.1		YES	YES	YES	YES	YES	YES	0,0%	E	
9.3		YES					YES	0,9%	E	
TOTAL								58%		

Proportion of OPEX from products or services associated with Taxonomy-aligned economic activities - disclosure covering year 2022

OPEX				Substantial contribution criteria	
Economic activities (1)	Codes (2)	Absolute OPEX (3)	Proportion of OPEX (4)	Climate change mitigation (5)	Climate change adaptation (6)
		M€	%	%	%
A1- Environmentally sustainable activities (Taxonomy-aligned)					
Electricity generation using solar photovoltaic technology	4.1	-37	1,3%	3,3%	0,0%
Electricity generation from wind power	4.3	-300	10,4%	26,7%	0,0%
Electricity generation from hydropower	4.5	-222	7,7%	19,8%	0,0%
Electricity generation from geothermal energy	4.6	0	0,0%	0,0%	0,0%
Electricity generation from bioenergy	4.8	-8	0,3%	0,7%	0,0%
Transmission and distribution of electricity	4.9	-10	0,4%	0,1%	0,8%
Storage of electricity	4.10	-18	0,6%	1,6%	0,0%
Storage of hydrogen	4.12	-2	0,1%	0,2%	0,0%
Transmission and distribution networks for renewable and low-carbon gases	4.14	-34	1,2%	2,5%	0,5%
District heating/cooling distribution	4.15	-222	7,7%	19,7%	0,1%
Cogeneration of heat/cold and electricity by bioenergy	4.20	-4	0,1%	0,3%	0,0%
Production of heat/cool from geothermal energy	4.22	0	0,0%	0,0%	0,0%
Production of heat/cool from bioenergy	4.24	-29	1,0%	2,6%	0,0%
Electricity generation from nuclear energy in existing installations	4.28	-33	1,1%	2,9%	0,0%
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30	0	0,0%	0,0%	0,0%
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31	-1	0,0%	0,1%	0,0%
Anaerobic digestion of bio-waste	5.7	-5	0,2%	0,4%	0,0%
Installation, maintenance and repair of energy efficiency equipment	7.3	-19	0,7%	1,7%	0,0%
Cogeneration of heat/cold and electricity by bioenergy	7.4	0	0,0%	0,0%	0,0%
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5	-3	0,1%	0,2%	0,0%
Installation, maintenance and repair of renewable energy technologies	7.6	-27	0,9%	2,4%	0,0%
Data-driven solutions for GHG emissions reductions	8.2	-2	0,1%	0,2%	0,0%
Close to market research, development and innovation	9.1	-4	0,1%	0,3%	0,0%
Professional services related to energy performance of buildings	9.3	-143	4,9%	12,7%	0,0%
OPEX of Environmentally sustainable activities (Taxonomy-aligned) (A.1)	**TOTAL**	**-1,125**	**39%**	**99%**	**1%**
A2- Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)					
Electricity generation using solar photovoltaic technology	4.1	-1	0,0%		
Electricity generation from wind power	4.3	-7	0,3%		
Electricity generation from hydropower	4.5	-10	0,4%		
Transmission and distribution of electricity	4.9	-29	1,0%		
Storage of electricity	4.10	0	0,0%		
District heating/cooling distribution	4.15	-50	1,7%		
Production of heat/cool from geothermal energy	4.22	-1	0,0%		
Electricity generation from fossil gaseous fuels	4.29	-163	5,6%		
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30	-44	1,5%		
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31	-1	0,0%		
Installation, maintenance and repair of energy efficiency equipment	7.3	-8	0,3%		
Professional services related to energy performance of buildings	9.3	0	0,0%		
OPEX of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**-314**	**11%**		
TOTAL A1+A2		**-1,438**	**50%**		
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES					
OPEX of Taxonomy-non-eligible activities (B)		**-1,463**	**50%**		
TOTAL A+B		**-2,901**	**100%**		

Codes (2)	DNSH criteria (Does Not Significantly Harm) Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of OPEX, year 2022 (18)	Category "enabling activity" (20)	Category "transitional activity" (21)
	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	%	E	T
4.1		YES		YES		YES	YES	1,3%		
4.3		YES	YES	YES		YES	YES	10,4%		
4.5		YES	YES			YES	YES	7,7%		
4.6		YES	YES		YES	YES	YES	0,0%		
4.8		YES	YES		YES	YES	YES	0,3%		
4.9	YES	YES		YES	YES	YES	YES	0,4%	E	
4.10		YES	YES	YES		YES	YES	0,6%	E	
4.12		YES		YES	YES	YES	YES	0,1%	E	
4.14	YES	YES	YES		YES	YES	YES	1,2%		
4.15	YES	YES	YES		YES	YES	YES	7,7%		
4.20		YES	YES		YES	YES	YES	0,1%		
4.22		YES	YES		YES	YES	YES	0,0%		
4.24		YES	YES		YES	YES	YES	1,0%		
4.28		YES	YES	YES	YES	YES	YES	1,1%		
4.30		YES	YES		YES	YES	YES	0,0%		T
4.31		YES	YES	YES	YES	YES	YES	0,0%		T
5.7		YES	YES		YES	YES	YES	0,2%		
7.3		YES			YES		YES	0,7%	E	
7.4		YES			YES		YES	0,0%	E	
7.5		YES					YES	0,1%	E	
7.6		YES					YES	0,9%	E	
8.2		YES		YES			YES	0,1%	E	
9.1		YES	YES	YES	YES	YES	YES	0,1%	E	
9.3		YES					YES	4,9%	E	
TOTAL								39%		
4.1										
4.3										
4.5										
4.9										
4.10										
4.15										
4.22										
4.29										
4.30										
4.31										
7.3										
9.3										

The following tables present the standard templates used for the publication of information relating to nuclear and gas activities according to Commission Delegated Regulation (EU) 2022/1214 dated March 9, 2022.

Template 1 - Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to activities related to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	NO
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	NO
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or for industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	YES
	Fossil gas related activities	
4.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	YES
5.	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	YES
6.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuel.	YES

Template 2 - Nuclear and Gas - Taxonomy-aligned economic activities (denominator)

		Amount in millions of euros and proportion as a % - Revenues					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	Economic activities	Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-aligned economic activity which is taxonomy-aligned referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	372	0%	372	0%	0	0%
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%	0	0%	0	0%
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	45	0%	45	0%	0	0%
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	10	0%	10	0%	0	0%
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the Revenue KPI**	**13,682**	**15%**	**13,682**	**15%**	**0**	**0%**
8.	**TOTAL APPLICABLE KPI - REVENUES**	**93,865**	**100%**	**93,865**	**100%**	**0**	**0%**

Row	Economic activities	Amount in millions of euros and proportion as % - CAPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	109	1%	109	1%	0	0%
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the CAPEX KPI**	**5,260**	**57%**	**5,260**	**57%**	**0**	**0%**
8.	**TOTAL APPLICABLE KPI - CAPEX**	**9,191**	**100%**	**9,191**	**100%**	**0**	**0%**

Row	Economic activities	Amount in millions of euros and proportion as % - OPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	-33	0%	-33	0%	0	0%
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	-1	0%	-1	0%	0	0%
7.	**Amount and proportion of taxonomy-aligned other economic activities not referred to in rows 1 to 6 above in the denominator of the OPEX KPI**	**-1,090**	**38%**	**-1,090**	**38%**	**0**	**0%**
8.	**TOTAL APPLICABLE KPI - OPEX**	**-2,901**	**100%**	**-2,901**	**100%**	**0**	**0%**

Template 3 - Taxonomy-aligned economic activities (numerator)

		Amount in millions of euros and proportion as % - Revenues					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	**Economic activities**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the Revenue KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the Revenue KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the Revenue KPI	372	3%	372	3%	0	0%
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the Revenue KPI	0	0%	0	0%	0	0%
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the Revenue KPI	45	0%	45	0%	0	0%
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the Revenue KPI	10	0%	10	0%	0	0%
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in numerator of the Revenue KPI**	**13,682**	**97%**	**13,682**	**97%**	**0**	**0%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-ALIGNED ECONOMIC ACTIVITIES IN THE NUMERATOR OF THE REVENUE KPI**	**14,109**	**100%**	**14,109**	**100%**	**0**	**0%**

		Amount in millions of euros and proportion as % - CAPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	**Economic activities**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in numerator of the CAPEX KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the CAPEX KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the CAPEX KPI	109	1%	109	1%	0	0%
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the CAPEX KPI	0	0%	0	0%	0	0%
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the CAPEX KPI	0	0%	0	0%	0	0%
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the CAPEX KPI	0	0%	0	0%	0	0%

		Amount in millions of euros and proportion as % - CAPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	**Economic activities**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the CAPEX KPI**	**5,260**	**37%**	**5,260**	**37%**	**0**	**0%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-ALIGNED ACTIVITIES IN THE NUMERATOR OF THE CAPEX KPI**	**5,370**	**38%**	**5,370**	**38%**	**0**	**0%**

		Amount in millions of euros and proportion as % - OPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	**Economic activities**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the OPEX KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the OPEX KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the OPEX KPI	-33	0%	-33	0%	0	0%
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the OPEX KPI	0	0%	0	0%	0	0%
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the OPEX KPI	-1	0%	-1	0%	0	0%
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the numerator of the OPEX KPI	0	0%	0	0%	0	0%
7.	**Amount and proportion of other taxonomy-aligned economic activities and not referred to in rows1 to 6 above in the numerator of the OPEX KPI**	**-1,090**	**-8%**	**-1,090**	**-8%**	**0**	**0%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-ALIGNED ECONOMIC ACTIVITIES IN THE NUMERATOR OF THE OPEX KPI**	**-1,124**	**-8%**	**-1,124**	**-8%**	**0**	**0%**

Template 4 - Taxonomy-eligible but not taxonomy aligned economic activities

		Amount in millions of euros and proportion as % - Revenues					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	**Economic activities**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	29	0%	29	0%	0	0%
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	32	0%	32	0%	0	0%
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	6,758	7%	6,758	7%	0	0%
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	852	1%	852	1%	0	0%
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	10	0%	10	0%	0	0%
7.	**Amount and** proportion **of other** taxonomy-eligible but not taxonomy-aligned **economic activities not referred to in rows 1 to 6 above in the denominator of the KPI Revenue**	**1,678**	**2%**	**1678**	**2%**	**0**	**0%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-ELIGIBLE BUT NOT TAXONOMY-ALIGNED ECONOMIC ACTIVITIES IN THE DENOMINATOR OF THE REVENUE KPI**	**9,359**	**10%**	**9,359**	**10%**	**0**	**0%**

		Amount in millions of euros and proportion as % - CAPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	**Economic activities**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%	0	0%	0	0%
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	278	3%	278	3%	0	0%

		Amount in millions of euros and proportion as % - CAPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	Economic activities	Amount	%	Amount	%	Amount	%
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	40	0%	40	0%	0	0%
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	40	0%	40	0%	0	0%
7.	**Amount and proportion of other** taxonomy-eligible but not taxonomy-aligned **economic activities not referred to in rows 1 to 6 above in the denominator of the CAPEX KPI**	**202**	**2%**	**202**	**2%**	**0**	**0%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-ELIGIBLE BUT NOT TAXONOMY-ALIGNED ECONOMIC ACTIVITIES IN THE DENOMINATOR OF THE CAPEX KPI**	**560**	**6%**	**560**	**6%**	**0**	**0%**

		Amount in millions of euros and proportion as % - OPEX					
		CCM+CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
Row	Economic activities	Amount	%	Amount	%	Amount	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%	0	0%	0	0%
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	-163	6%	-163	6%	0	0%
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	-44	2%	-44	2%	0	0%
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	-1	0%	-1	0%	0	0%
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the OPEX KPI**	**-106**	**4%**	**-106**	**4%**	**0**	**0%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-ELIGIBLE BUT NOT TAXONOMY-ALIGNED ECONOMIC ACTIVITIES IN THE DENOMINATOR OF THE OPEX KPI**	**-314**	**11%**	**-314**	**11%**	**0**	**0%**

Model 5 - Taxonomy-non-eligible economic activities

		Amount in millions of euros and proportion as % - Revenues	
		CCM+CCA	
Row	Economic activities	Amount	%
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-noneligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	3,858	4%
4.	Amount and proportion of economic activity referred to row line 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the Revenue KPI	0	0%
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-noneligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in denominator of the Revenue KPI	0	0%
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the Revenue KPI**	**66,540**	**71%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-NON-ELIGIBLE ECONOMIC ACTIVITIES IN THE DENOMINATOR OF THE REVENUE KPI**	**70,398**	**75%**

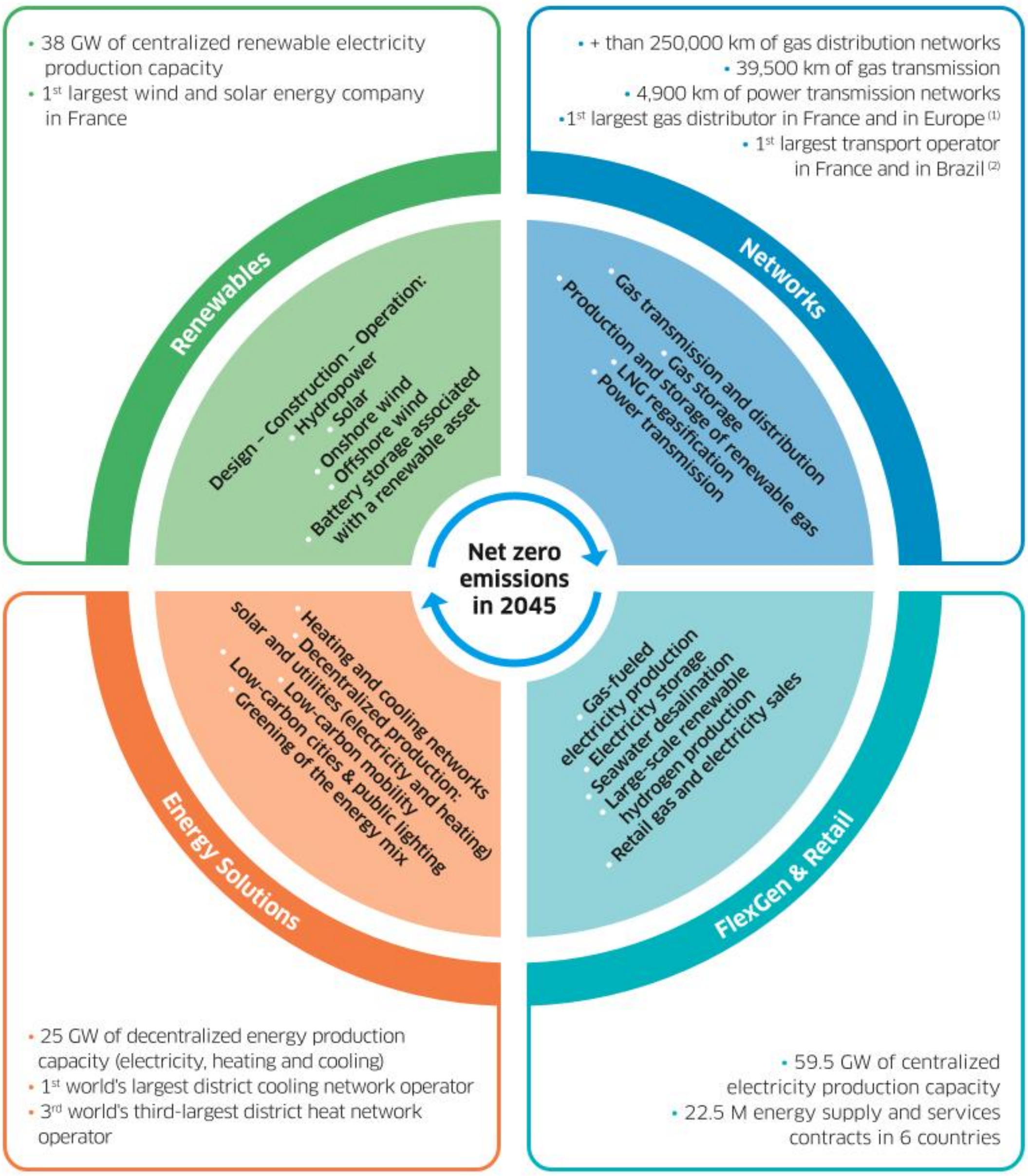
		Amount in millions of euros and proportion as % - CAPEX	
		CCM+CCA	
Row	Economic activities	Amount	%
1.	Amount and proportion of economic activity referred to in row 1 of template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	115	1%
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-noneligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in denominator of the CAPEX KPI	0	0%
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the CAPEX KPI	0	0%
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the CAPEX KPI**	**3,147**	**34%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-NON-ELIGIBLE ECONOMIC ACTIVITIES IN DENOMINATOR OF THE CAPEX KPI**	**3,262**	**35%**

		Amount in millions of euros and proportion as % - OPEX	
		CCM+CCA	
Row	**Economic activities**	**Amount**	**%**
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	-174	6%
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation (EU) 2021/2139 in the denominator of the OPEX KPI	0	0%
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the OPEX KPI**	**-1290**	**44%**
8.	**TOTAL AMOUNT AND TOTAL PROPORTION OF TAXONOMY-NON-ELIGIBLE ECONOMIC ACTIVITIES IN THE DENOMINATOR OF THE OPEX KPI**	**-1464**	**50%**

3.2 BUSINESS MODEL

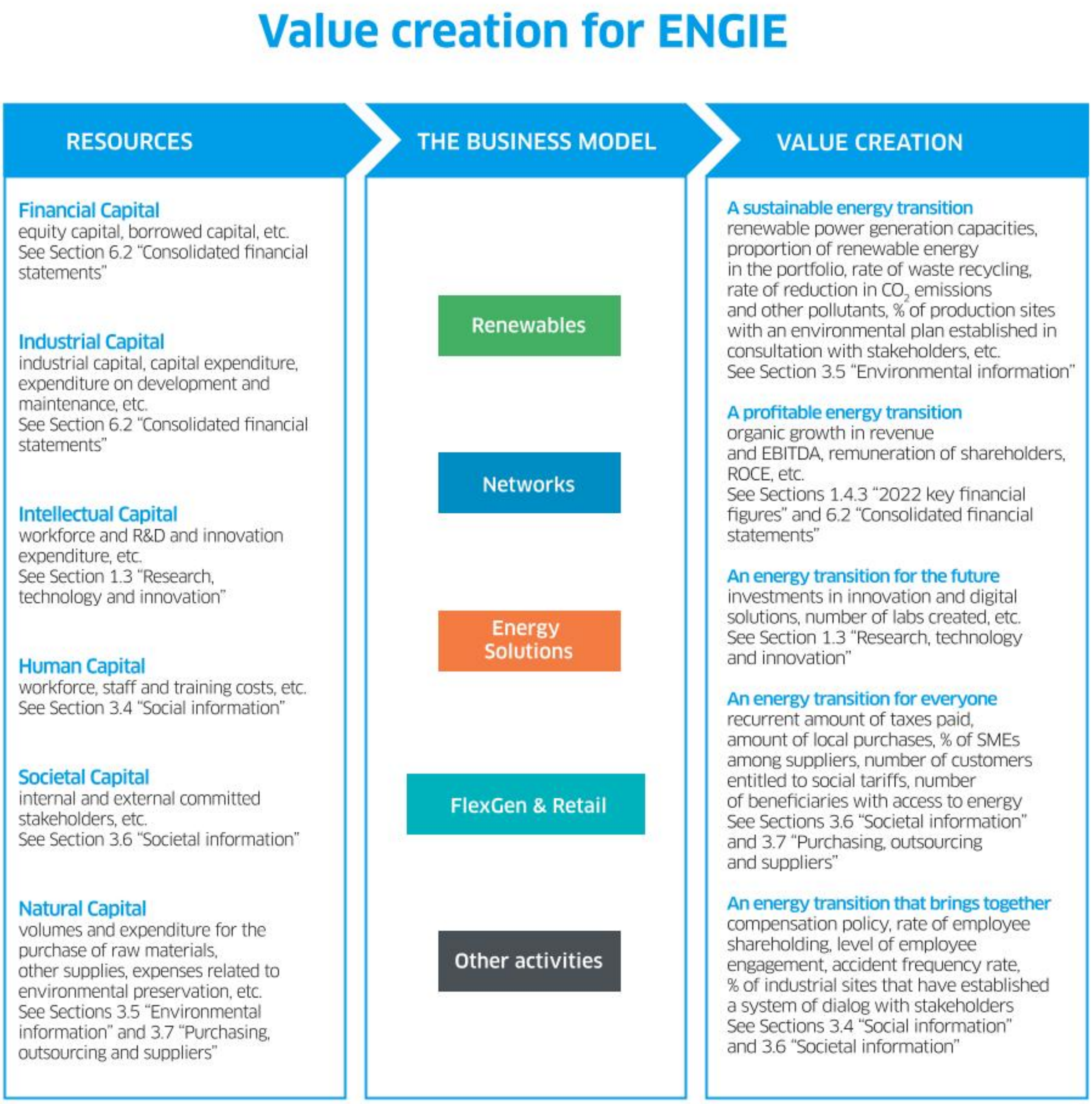
The acceleration of the energy transition is shifting the sector's value toward more environmentally friendly activities and services that are closer to the end customer. It has also created a need to provide responses tailored to each region, incorporating a good understanding of local situations and resources. ENGIE is involved in raising awareness of, and co-constructing, the energy transition with its stakeholders.

The Group's activities, detailed in Section 1.6 "Description of the Group's activities," can be represented as follows:



(1) Through independent subsidiaries.
(2) Through an independent subsidiary.

The Group's four business segments (Renewables, Networks, Energy Solutions, FlexGen & Retail) and Other activities utilize capital or resources of different kinds and create value according to five areas, as shown below. This presentation covers the International Integrated Reporting Council (IIRC) principles.



3.3 ANALYSIS OF MAIN CSR RISKS AND CHALLENGES

To identify the main CSR risks, ENGIE used the most recent version (2020) of its matrix of challenges, called the "materiality matrix" which was created to better reflect the expectations and priorities of its stakeholders (internal and external) and its management and to target its strategy and actions more effectively.

This results in twenty challenges, divided into four categories, namely: seven material, two major, seven decisive and four fundamental.

The fundamental challenges are long-lasting issues that form the essential founding basis for the responsible conduct of the Group's industrial and commercial activities. Therefore, they were not ranked or compared with other challenges.

The other challenges were assessed following interviews with around thirty stakeholders and the analysis of around fifty questionnaires. They were cross-classified using a weighted rating system based on the number of respondents with the aim of balancing the weighting of each type of stakeholder.

They were then classified according to three categories of increasing materiality:

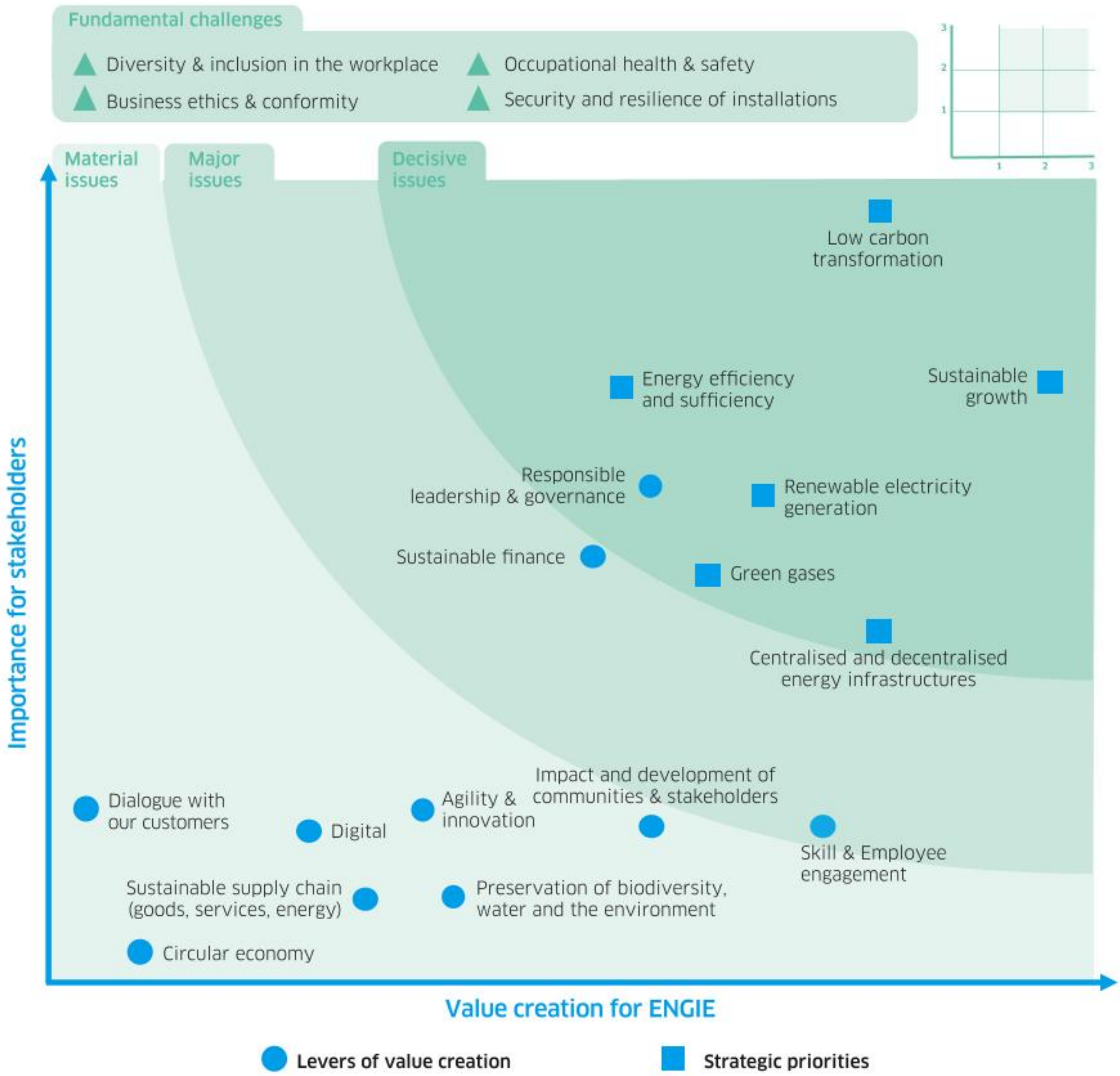
- the material challenges that create value for the Group;
- the major issues that make the most significant contribution to this value creation;
- the decisive issues that make an essential contribution to it, six of which constitute the Group's strategic priorities.

The challenges are positioned on the matrix:

- according to their importance for internal and external stakeholders (vertical axis);
- according to the impact in terms of value creation for ENGIE (horizontal axis).

All issues are classed as medium or high materiality.

The method used to construct the matrix can be found on the Group's website at the following address: https://www.engie.com/en/group/social-responsibility/csr-governance-policies.



The definitions of the 2022 challenges are provided in the following tables:

Challenge	Definition
1. Responsible leadership & governance	Ensure exemplary and transparent leadership and governance, adapted to the strategic challenges; ensure transparency and integrity of information through reliable communication, effective management of potential controversies and ENGIE's brand image; ensure the clarity of the Group's objectives; ensure that the Group's actions are consistent with its purpose.
2. Digital	Put our digital expertise at the service of the energy transition by offering our customers innovative and differentiating solutions and services; leverage these technologies to improve the Group's operational efficiency and to strengthen cohesion between our employees through new collaborative tools.
3. Sustainable growth	Ensure the resilience of the Group's business model as well as the growth of net financial income/(loss) over the long term; guarantee value sharing with all stakeholders (incentive-based compensation for senior management and all employees; ensure shareholder attractiveness and loyalty); limit the risk of stranded assets; ensure stability in terms of financial and CSR ratings.
4. Safety and resilience of installations	Ensure the operating safety of facilities and business continuity by guaranteeing: the security and surveillance of the Group's sensitive sites (nuclear and industrial), the resilience and adaptation of facilities to climatic risks, the cybersecurity of industrial control systems, the confidentiality and protection of the personal data of our employees and customers; ensure the dismantling of nuclear sites under the required security conditions.
5. Employees' skills and commitment	Encourage employees to take ownership of ENGIE's purpose, strategy and values by making them actors in their deployment; strengthen the relationship of trust between management and employees; explore and develop new ways of working adapted to employees' needs; ensure quality social dialog within the Group; to capitalize on employees' skills and support them in their professional development; attract and develop talent; strengthen intrapreneurship in our practices.
6. Occupational health & safety	Guarantee health & safety as well as optimal working conditions for our employees, contractors and subcontractors in all geographic areas where the Group operates.
7. Diversity & inclusion in the workplace	Promote equal opportunities and make equal treatment a reality; ensure non-discrimination with respect to both our employees and our candidates; promote diversity of profiles and experience at all levels of the company.
8. Circular economy	Encourage circularity throughout the value chain by guaranteeing the recycling, reuse and recovery of resources in operations; control the consumption of resources (responsible consumption); ensure efficient use of raw materials.
9. Preservation of biodiversity, water & the environment	Prevent and control the impact of the Group's operations on biodiversity, water and the environment (noise pollution, soil pollution, water and air pollution); be a player and driving force in environmental protection and contribute to the restoration of natural habitats through targeted and concrete commitments.
10. Low-carbon transformation	Acting positively for the environment and the climate by ensuring a clear and ambitious shift toward low-carbon activities, by withdrawing from carbon activities, by developing offers aimed at reducing the carbon footprint of the Group's customers, by controlling the carbon footprint of our supply chains and our working practices (ways of working).
11. Renewable electricity production	Strengthen our investment in a competitive and sustainable portfolio of renewable energy power generation activities and ensure their local acceptability; anticipate new renewable energy sources and be a player in their deployment.
12. Green gases	Sustainably develop the entire green gas value chain (biomethane, hydrogen); raise awareness among our customers and stakeholders of the role of green gases as levers for resilience and performance in the energy transition.
13. Centralized and decentralized energy infrastructures	Pursue the development of gas and electricity energy infrastructures as well as decentralized infrastructures (heating and cooling networks, networks of charging stations for electric vehicles, urban public lighting networks, etc.); take advantage of new technologies for the intelligent and connected management of networks and infrastructures.

Challenge	Definition
14. Agility & innovation	Change the corporate culture toward greater agility and openness to innovation; strengthen our ability to evolve (adaptation of business models and group organization, transformation of working methods, development of intrapreneurship, etc.) in the face of changes in the Group's environment (expectations, uses, etc.).
15. Dialog with our customers	Engage in a strategic dialog with current and historical customers in order to best support them in their low-carbon transformation; make all customers aware of the Group's values and commitments; develop a quality partnership relationship and adapt to the specificities of ENGIE's geographical locations; commit to long-term performance (energy, carbon, etc.) with customers.
16. Business ethics & conformity	Ensure responsible business conduct through robust and transparent ethical practices in operational activities (e.g. anti-corruption, taxation).
17. Impact & development of communities and stakeholders	Work for the respect of human rights throughout our value chain; maintain a continuous and quality dialog with stakeholders; develop new partnership dynamics; contribute positively to territorial development, while respecting local communities and taking into account changing needs; contribute to a fair and efficient energy transition; encourage a more inclusive and equitable economy.
18. Sustainable finance	Work toward sustainable finance through: promoting responsible financial instruments (Green Bonds, etc.), integrate ESG issues into the investment process in order to encourage the development of sustainable activities; demonstrate the alignment of ENGIE's actions with the growing expectations of investors and CSR rating agencies; anticipate and adapt to regulatory changes in this area.
19. Sustainable supply chain (goods, services, energy)	Promote ENGIE's CSR practices throughout its supply chains; foster quality dialog with its suppliers; forge strategic partnerships for sustainable development; control the social and environmental risks related to the activity and geographic location of suppliers of goods, services and energy; favor a diversified panel of suppliers in order to guarantee business continuity.
20. Energy efficiency & sufficiency	Support an individual and collective approach to technical changes, uses, practices and organizational methods aimed at reducing energy consumption; at all levels of the Group: daily work practices, operations, supply chain and at our customers' sites through our offers as well as at the level of our networks.

These 20 challenges generate CSR risks and opportunities. These CSR risks are classified by nature into the following categories:

- environmental;
- societal;
- social;
- and governance.

The main United Nations Sustainable Development Goals (SDGs) that could be impacted by these risks are also indicated.

The risk analysis included in Chapter 2 “Risk factors and control” is different from the analysis of these CSR risks. In Chapter 2, risks relate to “net specific material risks.” They are assessed with an overview of their progression. They are specific to ENGIE's activities and could have a financial impact in the short or medium term in the context of investment decisions concerning ENGIE. They are classified as “net” considering their potential residual impact once the measures taken by the Group to reduce them have been taken into account.

The risks included in this Section are CSR-related, not necessarily specific to ENGIE's activities, and may have a medium- or long-term impact. These are gross risks not mitigated by ENGIE's management measures.

These different approaches explain the differences between the list of risks presented in Chapter 2 and those presented in this Section.

ENVIRONMENTAL RISKS

Challenge 2: Digital
Challenge 4: Security and resilience of installations
Challenge 8: Circular economy
Challenge 9: Preservation of biodiversity, water and the environment
Challenge 10: Low-carbon transformation
Challenge 11: Renewable electricity production
Challenge 12: Green gases
Challenge 13: Centralized and decentralized energy infrastructures
Challenge 20: Energy efficiency & sufficiency

	Associated CSR risks	Associated opportunities	Associated SDGs
A	*Process safety:* the risk of harm to the integrity of persons or property due to the Group's industrial activities.	Sales of services: digitization, robotization, security and monitoring of sensitive sites, help with adapting customer facilities to climate change, and help with the decarbonization of customer portfolios	9 Industry, innovation and infrastructure 13 Climate action
B	*Nuclear safety*: the risk of the release of radioactive material from the Group's nuclear plants following an accident.		
C	*Cyber attack on industrial systems*: the risk of an attack affecting the command systems or IT systems for the Group's industrial or services facilities.		
D	*Malicious damage to tangible and intangible assets*: risks related to malicious acts affecting the Group's industrial or tertiary sites and facilities, which make up its tangible assets, as well as those affecting information, which is part of the Group's intangible assets, whether conveyed on computerized or physical media or even verbally.		
E	*Contribution to climate change*	Sales of services: reducing the carbon footprint of industrial sites, environment management plans Program to restore flora and fauna Mobilization of stakeholders: customers, employees, regions and NGOs	3 Good health and well-being 13 Climate action 6 Clean water and sanitation 14 Life below water 15 Life on land
F	*Transition relating to climate change*		
G	*Loss of biodiversity*		
H	*Water stress*		
I	*Waste management*		
J	*Atmospheric pollution*		
K	*Pollution of the surrounding environment*		

3

SOCIETAL RISKS

Challenge 3: Sustainable growth
Challenge 15: Dialog with our customers
Challenge 17: Impact and development of communities and stakeholders
Challenge 18: Sustainable finance
Challenge 19: Sustainable supply chain

	Associated CSR risks	Associated opportunities	Associated SDGs
L	*Societal acceptance:* risk of opposition from the local population or associations during the presentation, installation or operation of certain equipments that may call into question the holding of various permits and authorizations, the obtaining or renewal of which with the competent regulatory authorities involves long and costly procedures.	Co-construction of offers with stakeholders Continuation of industrial activities Development of the access to energy offer in unserved regions Tackling fuel poverty with adapted offers Group's societal role beneficial to its internal and external reputation	3 Good health and well-being 11 Sustainable cities and communities 7 Affordable and clean energy 12 Responsible consumption and production 8 Decent work and economic growth 13 Climate action
M	*Management of major projects:* risks in the execution of major industrial projects including inadequate consideration of dialog with stakeholders, non-compliance with costs and construction deadlines, non-achievement of operating performance, disruption in the supply of raw materials, sensitive components and the shortage of energy needed for the projects which can be explained by geopolitical tensions.		
N	*Reputation:* risks impacting the Group's brand image due to its inability to establish and maintain the trust of stakeholders and to obtain the benefits associated with this, notably due to insufficiently controlled lobbying, its inability to maintain the values and social standards of the company, including with its suppliers or subcontractors, its inability to build and protect its brand image within its environment.		

SOCIAL RISKS

Challenge 1: Responsible leadership and governance
Challenge 5: Employees' skills and commitment
Challenge 14: Agility and innovation

	Associated CSR risks	Associated opportunities	Associated SDGs
O	*Skills:* risk of a shortage of qualified people, unavailability of resources that are flexible according to needs, the loss of key knowledge in the event of departure due to lack of succession plans or due to more attractive conditions in the same geographic area.	Adapting to changes in occupational sectors Appeal of the Group to young people aware of carbon neutrality Digitization improving work efficiency	8 DECENT WORK AND ECONOMIC GROWTH 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
P	*Employee commitment:* risk of a lack of engagement among employees in the context of the Group's transformation could result in social movements.		

Challenge 7: Diversity & inclusion in the workplace

	Associated CSR risks	Associated opportunities	Associated SDGs
Q	*Diversity:* risk of non-representativity of the Group's working population with respect to the society in which it operates.	Group's societal role beneficial to its internal and external reputation Inclusivity of the company Reflection of society Attractiveness of the Group	5 GENDER EQUALITY 10 REDUCED INEQUALITIES 8 DECENT WORK AND ECONOMIC GROWTH
R	*Inequality:* risk of discriminatory treatment of employees or job applicants.		

Challenge 6: Health and safety at work

	Associated CSR risks	Associated opportunities	Associated SDGs
S	*Health and safety* at work for employees, contractors and subcontractors.	Improvement of operational performance Occupational well-being Employee motivation	3 GOOD HEALTH AND WELL-BEING 8 DECENT WORK AND ECONOMIC GROWTH
T	*Safe travel*		

GOVERNANCE RISKS

Challenge 1: Responsible leadership and governance
Challenge 16: Business ethics & conformity

	Associated risks	Associated opportunities	Associated SDGs
U	*Corruption:* risk of criminal wrongdoing by which a person solicits or accepts a benefit with a view to carrying out an act within the scope of his or her duties and which could lead to an infringement of competition law.	Group setting an example as a good citizen Employee motivation	8 DECENT WORK AND ECONOMIC GROWTH 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
V	*Tax*: risk of non-compliance with tax regulations, reporting obligations and their development.		
W	*Personal data breaches*: risk of erroneous IT processing of personal data that may impact the rights and freedoms of persons concerned.		

Challenge 17: Impact and development of communities and stakeholders

	Associated risks	Associated opportunities	Associated SDGs
X	*Human rights violations*	Group's societal role beneficial to its internal and external reputation	3 GOOD HEALTH AND WELL-BEING 8 DECENT WORK AND ECONOMIC GROWTH

In accordance with the regulations, these risks are analyzed, on the following pages, by means of:

- a summary of the policies or action plans implemented to limit them;
- indicators established to monitor them, sometimes with targets set;
- and the results of these indicators over three years.

Furthermore, pursuant to the French Act No.2017-399 of March 27, 2017, ENGIE has drawn up a vigilance plan to monitor risks associated with human rights in the broadest sense, including aspects related to health and safety, responsible procurement and the environment. This vigilance plan covers all of ENGIE's activities and its controlled subsidiaries world-wide, as well as those of its main suppliers. The vigilance plan is described in Section 3.9 "Vigilance plan."

3.3.1 MAIN ENVIRONMENTAL RISKS

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Risk A: Process safety (see Section 2.2.5.2)				
ENGIE's health and safety policy incorporating process safety Process safety policies specific to the different activities conducted by the Group subsidiaries Action plans implemented by the subsidiaries that integrate feedback as part of a continuous improvement approach	Monitoring of incidents and accidents related to process safety at subsidiary level Assessment of the level of risk control achieved through dedicated internal control standards (IND 2 & 3)	No significant incident at industrial facilities	No significant incident at industrial facilities	No significant incident at industrial facilities
Risk B: Nuclear safety (see Section 2.2.7.1)				
Nuclear Safety and Radiation Protection Policy Independent supervision of nuclear safety 2016-2020 Global Nuclear Safety Plan Minimum requirements for systems of management of nuclear actors	Monitoring of significant incidents	No significant incident	No significant incident	No significant incident
Risk C: Cyber attack on industrial control systems (see Section 2.2.5.1)				
Revieux of the Group policy on Security of Industrial Control Systems Technical security standard assessment Qualitative assessment of the maturity level of the cybersecurity culture on the entities	Monitoring of the security rate of priority sites to be secured (critical and sensitive sites) Assessment of the level of risk control achieved through dedicated internal control standards (IND 4)	Maintaining the security of existing sites and securing new sites in accordance with objectives	Maintaining the security of existing sites and securing new sites in accordance with objectives	Maintaining the security of existing sites and securing new sites in accordance with objectives
Risk D: Malicious damage to assets (see Section 2.2.5)				
Group policy to protect individuals and tangible and intangible assets Prevention and protection measures implemented on the basis of the criticality of the geographic location Group Information Security Committee	Monitoring of threats to the Group, particularly from terrorists Monitoring of damage to assets	No significant damage to assets	No significant damage to assets	No significant damage to assets
Risk E: Contribution to climate change (see Section 2.2.2.1)				
The Group's environmental policy, which specifies: • the environmental challenges faced by the Group, including climate change; • the resources used by the Group to meet these challenges and improve its performance; • the governance elements that contribute to the implementation of the Group's environmental policy.	**2030 targets:**			
	• 43 Mt of GHG emissions (scopes 1 and 3) from energy production, in line with the SBT commitments	59.5	65.1	67.5
	• 52 Mt of GHG emissions from use of sold product, in line with the SBT commitments	61.3	65.6	61.5
	• 0 Mt of GHG emissions from our working practices (after offsetting)	0.3	0.3	0.5
	• 58% of power capacity from renewables, in accordance with SBT commitments	38%	34%	31%

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Risk F: Transition relating to climate change (see Section 2.2.2)				
The Group's environmental policy	**2030 target:** • 100% of activities, projects and sites (including those that are being decommissioned) with an environmental plan established in consultation with stakeholders	53%	37%	21%
Risk G: Loss of biodiversity				
The Group's biodiversity policy which aims to: • avoid the direct or indirect impacts of its activities and those of its value chain on biodiversity; • failing this to reduce them; • or even to offset them as a last resort.	**2030 target:** • 100% of industrial activities with ecological site management (zero phytosanitary products and respect of natural habitats)	34%	28%	0%
Risk H: Water stress				
The Group's water policy, which focuses in particular on the management of water used in energy generation and wastewater treatment processes	**2030 target:** • Water consumption rate of 0.1 m^3 per MWh of energy produced	0.300	0.342	0.278
Risk I: Waste management				
The Group's circular economy policy, which aims to ensure that each site or activity works on the recovery and / or recycling of its waste	**2030 operational objectives**: • 80% reduction in the quantity of non-hazardous waste disposed of vs 2017 (2,773,419t) • 95% reduction in the quantity of hazardous waste disposed of vs 2017 (386,783t)	-47% 1,459,706t -94% 23,506t	+3% 2,843,003t -92% 30,240t	+3% 2,857,579t -90% 38,139t
	% of non-hazardous waste recovered	80%	84%	76%
	% of hazardous waste recovered	21%	15%	30%
Risks J and K: Air pollution and pollution of the surrounding environment				
The Group's environmental policy which encourages the reduction of emissions into the air, water and soil	**2030 operational objectives**: • 75% reduction in NO_x emissions vs 2017 (92,209t) • 98% reduction in SO_2 emissions vs 2017 (159,623t) • 60% reduction in total particle emissions vs 2017 (7,353t)	-64% 33,517 t -95% 7,418t -54% 3,398t	-47% 48,831t -34% 105,984t -23% 5,693t	-47% 49,022t -25% 119,584t -14% 6,312t
	NO_x (t)	33,517	48,831	49,022
	SO_2 (t)	7,418	105,984	119,584
	Total particles (t)	3,398	5,693	6,312
	Mercury (kg)	49	194	305

3.3.2 MAIN SOCIETAL RISKS

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Risk L: Societal acceptance				
The Group's societal policy, which specifies: • the Group's societal challenges; • the resources it uses to meet these challenges; • the governance elements that contribute to implementation of the policy.	**2030 target:** • 100% of its activities, projects and sites (including those that are being decommissioned) with a societal plan established in consultation with stakeholders	46%	38%	21%
	Number of training sessions on the "stakeholder engagement" tool, which is a self-assessment framework based on standard AA1000 – Stakeholder management, produced by the Accountability NGO	1	14	6
	Replaced in 2022 by an e-learning module	104	NA	NA
Risk M: Management of major projects (see Section 2.2.5)				
Investment procedure for projects passing through the Group Investment Committee which provides for a risk analysis and a self-assessment matrix of 9 CSR criteria based on information from the EIA (Environmental Impact Assessment) and ESIA (Environmental Social Impact Assessment)	Risks analysis via matrix of 9 CSR criteria	No indicator	No indicator	No indicator
Risk N: Reputation				
Protection of the brand	NPS satisfaction rate of BtoC customers (Net promoter Score between -100 and + 100 inclusive) based on the difference between promoters (respondents giving a score of 9 or 10) and detractors (respondents giving a score of 0 to 6)			
	France (8,304,000 excluding regulated tariff contracts in 2022)	+32	+19	+19
	Belgium (3,793,000 contracts in 2022)	+1	+2	-1
	Netherlands (687,000 contracts in 2022)	+37	NC	NC
	Italy (913,000 contracts in 2022)	+37	+29	+19
	Romania (2,073,000 contracts in 2022)	+38	+49	+50
	Australia (689,000 contracts in 2022)	-2	+5	NC
	2030 target: • 45 Mt CO_2 avoided by our customers through ENGIE's offerings and services	28.2	26.5	21
Environmental policy	Number of environmental complaints and convictions	8 complaints and 1 conviction	13 complaints and 2 convictions	6 complaints and 2 convictions

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Ethics Charter Code of conduct for business relations Code of conduct for relations with suppliers	Ethical malfunctions monitored using the INFORM'ethics reporting tool	305 incidents, proven or non-proven	205 incidents, proven or non-proven	283 incidents, proven or non-proven
Group procurement Charter that sets out the obligations and commitments applicable to ENGIE in terms of its relations with suppliers	**2030 targets:** • 100% of preferred suppliers (excluding energy procurement) SBT certified or aligned	23%	20%	15%
	• Ratio of 100 on responsible procurement (excluding energy): CSR assessment and inclusive procurement	38	40	25
Promotion of access to energy for populations living far away from networks, including in Africa	**2030 operational target:** • 30 million recipients with access to affordable, reliable, and clean energy from 2018 (excluding the Rassembleurs d'Énergies fund) *NB: due to the Group's geographical refocusing, this target will be amended in 2024 to reflect the Group's ambition in terms of social, environmental and anti-poverty impact*	9.5 M	7 M	6 M
Vigilance Plan (see Section 3.9)				

3.3.3 MAIN SOCIAL RISKS

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Risk O: Skills (See Section 2.2.6.1)				
The Group's mobility and development policy, which is based around: • ENGIE Skills, which is aimed at developing skills early to prepare for the future; • ENGIE Mobility, which fosters internal mobility; • and is supported by ENGIE University.	**2030 target:** • 100% of employees trained during the year	84%	82%	70%
	Monitoring of number of hires (permanent and fixed-term)	16,974	15,522	29,481
	Monitoring of voluntary turnover rate (resignation)	6.5%	5.2%	5.4%
The Group's innovation policy, which is based on: • the ENGIE Fab entity to implement new businesses; • the ENGIE New Ventures investment fund to support start-ups. The Group's research & technology policy that relies on the ENGIE Research entity, which brings together several Labs and centers of expertise and engineering	R&D expenditure	€135 M	€138 M	€190 M

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Risk P: Commitment (See Section 2.2.6.1)				
The Leadership Way, which defines four key behaviors: caring – demanding – open – bold. These behaviors enable us to meet five objectives: Prepare the future – Cultivate and give responsibility – Act and challenge the status quo – Deliver results – Adopt inspiring behavior on a daily basis.	Employee engagement rate through the worldwide annual “ENGIE&ME” survey	86%	83%	83%
Privileged places for consultation between management and employee representatives: The European Works Council and the French Group Works Council	These bodies monitor and sign Group collective bargaining agreements	September 8, 2022, first meeting of the World Forum responsible for ensuring the implementation of the Global Agreement	Global agreement on fundamental rights and social responsibility signed in January 2022	No new agreement
Risk Q: Diversity (See Section 2.2.6.1)				
Group diversity policy	Percentage of female employees	26.2%	25.1%	21.4%
Diversity label	**2030 target:** • 40% to 60% female managers	29.9%	28.9%	24.1%
Employment of young people	**2030 target:** • 10% of the Group’s workforce in France are apprentices	7.7%	7.2%	7.1%
Risk R: Inequality (See Section 2.2.6.1)				
Professional equality policy	**2030 target:** • Equity ratio of women to men of 100			
	France	-	89	87
	Rest of world	-	82	80
	• Indicator replaced in 2022 by: Gender pay equity < 2% worldwide	1.73%	-	-
Risk S: Health and safety at work (See Section 2.2.6.2)				
Group health and safety policy that sets out the fundamental principles that have to be met for all the ENGIE entities, in order to respect the integrity of people and assets.	**2030 target:** • Total lost time injury frequency rate for employees and subcontractors on sites with controlled access ≤ 2.3	2.0 on a 2022 objective of 2.4 or less	2.5 on a 2021 objective of 2.8 or less	2.7 on a 2020 objective of 3.3 or less
It constitutes, for every person, a reference point to ensure that health and safety are incorporated within all the actions of the Group. 2021-2025 health and safety action plan, divided into three prevention axis: “no life at risk”, “no mind at risk” and “no asset at risk”. The Group’s health and safety transformation plan “ENGIE One Safety.” European agreement on the improvement of well-beeing at work	**2030 target:** • As of 2023, the prevention rate will be replaced by the fatality rate Monitoring of health and safety results by the Executive Committee, the EESDC and the Board of Directors	0.73 for a minimum value of 0.66	0.65 for a minimum value of 0.57	0.59 for a minimum value of 0.42

3

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 results (excluding Equans)	2021 results (excluding Equans)	2020 results
Annual communication campaign	Deployed throughout the health and safety functional line	Communication campaign on electrical risks	Communication focused on preventing Covid-19	Communication campaigns focused on Covid-19 and on maintaining vigilance in terms of health and safety
Risk T: Safe travel				
Safety rules for international trips Employee access to the ISOS international health and safety portal and to alerts during international trips Employee access to the site analyses and reports of the Group Control Risks on country risks Employee access to e-learning on personal security when traveling abroad (International SOS + Control Risks Group)	Reinforcement of event-detection mechanisms Reinforcement of pre-mission e-learning courses (according to the destination's risk level) TravelTracker system to monitor individuals traveling abroad Alert system for personnel who are internationally mobile	No significant event	No significant event	No significant event

3.3.4 MAIN GOVERNANCE RISKS

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 result (excluding Equans)	2021 result (excluding Equans)	2020 results
Risk U: Corruption				
Anti-corruption policy based on: • the Ethics Charter; • the Practical Guide to Ethics; • the integrity reference system; • the Ethics Compliance reference system; • specific third party assessments policies, business consultants, gifts, invitations, conflicts of interest, lobbying in particular and supplier relations; • ethics and CSR clause in the general terms of sales.	System for whistleblowing and reporting ethics incidents Control process Annual compliance procedure by means of a specific reporting system INCOME COR 4 internal control program Internal audits and external audits including the ISO 37001 certification audit (certification received in 2018, confirmed in 2019 and 2020 and renewed in 2021) Annual publication of the communication on the progress of UN Global Compact Principle 10	305 proven or unproven incidents reported in My Ethics Incident, including 20 cases of alleged corruption	205 proven or unproven incidents reported in My Ethics Incident, including 19 cases of alleged corruption	283 proven or unproven incidents reported in My Ethics Incident, including 20 cases of alleged corruption
	Alert system: ethics@engie.com	225 incidents including 60 concerning business ethics cases	146 incidents including 39 concerning business ethics cases	201 incidents including 20 concerning business ethics cases
	The Group is committed to training its senior managers, expanding its commitment for 2019 to Group managed roles (GMRs) and anti-corruption in 2025	100%	96% of GMRs (including Equans)	86% of GMR
	2030 target: 100% of employees most exposed to corruption risk trained	55%	49%	21%

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022 result (excluding Equans)	2021 result (excluding Equans)	2020 results
Risk V: Tax				
Tax policy that sets out the rules and principles for the payment of taxes in the countries in which the Group operates	• Tax reporting by country • Adherence to the principles of the United Nations BTeam initiative	See the ENGIE website: https://www.engie.com/en/finance/taxation	See the ENGIE website: https://www.engie.com/en/finance/taxation	See the ENGIE website: https://www.engie.com/en/finance/taxation
Risk W: Breaches of personal data				
Group personal data protection policy	• Assessments of compliance with European GPDR Regulation onsite or for the apps concerned • ISO 27001 certification procedures for certain entities • External audit by a cyber rating agency	NA	NA	NA
Risk X: Human rights violations				
• Human Rights referential and policy • Vigilance Plan • Ethics due diligence policy (suppliers, subcontractors, and commercial partners)	• Checklist on the risk of violating human rights (annual risk review, see Section 3.8.2) • Annual ethics compliance report (quantitative and qualitative indicators, see Section 3.8.6) • System for whistleblowing and reporting ethics incidents (see Section 3.8.4) • Monitoring of the Group Vigilance Plan (see Section 3.9.3)	305 proven or non-proven incidents declared in My Ethics Incident, including six allegations relating to human rights and environmental law (excluding allegations relating to sexual harassment and moral harassment)	205 proven or non-proven incidents in My Ethics Incident, including 18 allegations relating to human rights and environmental law (excluding allegations relating to sexual harassment and moral harassment)	283 incidents in My Ethics Incident (alleged or unsubstantiated), including six allegations relating to human rights and environmental law (excluding allegations relating to sexual harassment and moral harassment)

3.4 SOCIAL INFORMATION

Against a complex geopolitical and societal backdrop in 2022, ENGIE was able to resist in the face of numerous challenges, thanks notably to its industrial and integrated organization. ENGIE has been, more than ever, at the heart of the key subjects of our society, notably with an environmental crisis and an energy crisis in wake of Russia's invasion of Ukraine. The rare scale of the latter has raised questions relating to sovereignty, supply safety and access for all to energy.

In this context, the Group had to be capable of providing practical responses in relation to three strategic objectives: attracting and retaining all talents, while developing skills and leadership and building ENGIE's culture.

The internal ENGIE&ME survey showed an employee engagement rate of 86%, of the 73% of staff who responded. This demonstrates employee commitment to the Group strategy, as well as their understanding of the integrated organization model that was implemented in 2021. Moreover, the Group has a long history of employee share ownership and launched the Link 2022 plan in September 2022, to allow its employees based across 21 countries to acquire shares in the Group. More than one in three employees worldwide and 43% in France subscribed to the plan, representing a further demonstration of employees' engagement and adherence to the Group's road map.

The men and women of the Group represent its leading performance driver and it is on them that ENGIE's success is based. To support them, talent identification and management programs have been reinforced. To retain them, ENGIE relies on both its development policy and its career path policy. It offers employees various career paths within its main professions and guides them in their career development choices.

In terms of recruitment, ENGIE, as its peers, has to deal with a highly competitive job market, changing professions and constantly evolving candidate expectations. ENGIE has been able to attract almost 16,974 people across the world. ENGIE's purpose, which is focused on the transition to a carbon-neutral economy, is clearly an attractive factor.

Diversity, equity and inclusion are also priorities for the Group and represent key principles in the process of recruiting, retaining and integrating talent. In this respect, in 2022 ENGIE launched the new Diversity, Equity and Inclusion policy called "Be.U@ENGIE" for "Be yourself, Be united, Be unique".

To promote this new culture, accelerate the execution of ENGIE's strategy and strengthen employees' engagement, ENGIE has introduced a new leadership model entitled ENGIE Ways Of Leading (EWOL). Drawn up during a collective and collaborative process with the Group's employees, the EWOL include five leadership priorities: "**Safety & Integrity**, **ONE ENGIE**, **Accountability**, **Trust** and **Care**."

The purpose of the EWOL program is to guide the individual behavior of leaders, to embody ENGIE's culture and put the Group's common values into practice on a daily basis.

At last, the Group has confirmed its social commitments with:

- an equal pay objective, with a maximum gender pay gap of 2% to be achieved in all entities worldwide by 2030 at the latest;
- an ambition for gender equality and an objective of 40% to 60% of women in management positions by 2030;
- a professional integration objective with a target of 10% of students on work-study programs in 2030 in France;
- an objective of 100% of employees trained each year by 2030.

In a complex world, the management of stakeholders is critical and social dialog, a driver of competitive advantage for companies. At ENGIE, social dialog is an integral part of the means invested by the Group to ensure the execution of its strategy. ENGIE's purpose is focused on energy transition for all and goes hand in hand with the Group's strong social responsibility. Its objective is to achieve a level of social excellence which is in line with its environmental standards. And the Global Agreement signed in 2022 is a proof of this. This agreement ensures the deployment of the *ENGIE Care* program, a cornerstone for common social rights, across all entities.

In a year marked by spiraling inflation, the Group paid particular attention to the compensation of its employees, by regularly reviewing its wage policies and awarding bonuses aimed at maintaining procurement power. Moreover, in October the Group announced the payment of an exceptional bonus of €1,500 to each of its employees worldwide.

Following the disposal of EQUANS in October 2022, social data presented in this chapter does not include this entity (except for the health and safety results which are presented including and excluding EQUANS, see Section 3.4.7).

3.4.1 SOCIAL DATA

3.4.1.1 Workforce

Present in 31 countries, ENGIE had 96,454 employees at the end of December 2022. The decrease in the workforce by 75,020 employees compared with 2021 was mainly due to the disposal of EQUANS (-69,970) and ENDEL (-4,745) in 2022, as planned in the Group's strategic plan.

GRI 102-7 /405-1	France	Europe (excl. France)	South America	USA & Canada	Middle East, Asia & Africa	2022	2021	2020
Renewables	2,836	349	943	318	368	**4,814**	4,882	4,878
Networks	17,162	3,078	708	858		**21,806**	22,542	19,624
Energy Solutions	15,113	15,535	2,271	2,206	7,536	**42,661**	47,531	47,716
Supply	7,007	3,608	-	-	1,963	**12,578**	12,829	16,495
Thermal	172	1,156	858	65	1,319	**3,570**	4,262	2,819
Nuclear	-	2,057	-	-	-	**2,057**	2,135	2,190
Others	4,231	2,626	900	1,099	112	**8,968**	7,323	9,406
o/w GEMS	*1,501*	*1,147*	-	*458*	*108*	***3,214***		
Sub-total	**46,521**	**28,409**	**5,680**	**4,546**	**11,298**	**96,454**	**101,504**	**103,128**
Equans						-	69,970	69,575
TOTAL	**46,521**	**28,409**	**5,680**	**4,546**	**11,298**	**96,454**	**171,474**	**172,703**
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

GRI 102-7 / 405-1	2022 Renewa-bles	2022 Networks	2022 Energy Solutions	2022 Supply	2022 Thermal	2022 Nuclear	2022 Others	2022 o/w GEMS	2022 Group	2022 %	2021 excl. EQUANS	2021 Group	2020 Group
Managers	**2,500**	**5,625**	**10,855**	**2,612**	**1,085**	**483**	**6,176**	***2,215***	**29,336**	**30.4%**	**30,641**	**45,819**	**45,280**
Men	1807	3,808	8,257	1,555	957	393	3,800	*1,481*	20,577	70.1%	21,789	34,542	34,361
Women	693	1817	2,598	1,057	128	90	2,376	*734*	8,759	29.9%	8,852	11,277	10,919
Non-managers	**2,314**	**16,181**	**31,806**	**9,966**	**2,485**	**1,574**	**2,792**	***999***	**67,118**	**69.6%**	**70,863**	**125,655**	**127,423**
Men	1,763	12,042	25,741	6,418	2,249	1,371	1,071	*386*	50,655	75.5%	54,210	99,627	101,281
Women	551	4,139	6,065	3,548	236	203	1,721	*613*	16,463	24.5%	16,654	26,029	26,142
Total	**4,814**	**21,806**	**42,661**	**12,578**	**3,570**	**2,057**	**8,968**	***3,214***	**96,454**	**100%**	**101,504**	**171,474**	**172,703**
Men	3,570	15,850	33,998	7,973	3,206	1,764	4,871	*1,867*	71,232	73.9%	75,999	134,169	135,642
Women	1,244	5,956	8,663	4,605	364	293	4,097	*1,347*	25,222	26.1%	25,505	37,305	37,061
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

As of December 31, 2022, the workforce comprised 29,336 managers i.e. 30.4% of the total workforce, and 67,118 non managers, i.e. 69.6%. The proportion of managers increased slightly, by 0.2%, compared with 2021.

The proportion of women in the workforce represented 29.9% of managers (see Section 3.4.2.3), increasing by 1% compared to 2021.

3.4.1.2 Contract types and trends

At the end of December 2022, 88,241 employees were on permanent contracts, making up 91.5% of the workforce. 4,499 employees were on fixed- term contracts, i.e. 4.7% of the workforce.

Furthermore, with 3,714 young people on work-study contracts, i.e. 3.9% of the workforce, ENGIE has confirmed and has maintained its commitment to young people. Work-study programs combine practice and theory. These programs are also an important source of recruitment (see Section 3.4.3.4.5).

GRI 102-8	2022 Renewa-bles	2022 Networks	2022 Energy Solutions	2022 Supply	2022 Thermal	2022 Nuclear	2022 Others	2022 o/w GEMS	2022 Group	2021 excl. EQUANS	2021 Group	2020 Group
Permanent	91.5%	94.5%	90.3%	25.3%	8.0%	99.9%	93.8%	*94.6%*	91.5%	91.5%	90.0%	90.4%
Fixed-term	3.7%	0.6%	6.2%	2.8%	0.3%	0.1%	2.2%	*2.4%*	4.7%	4.8%	6.3%	6.1%
Work-study contract	4.8%	4.9%	3.5%	1.3%	0.0%	0.0%	4.0%	*3.0%*	3.9%	3.8%	3.6%	3.5%
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

3.4.1.3 Workforce by age bracket

The average age of employees on permanent contracts is 43.

GRI 405-1	2022 Renewa-bles	2022 Networks	2022 Energy Solutions	2022 Supply	2022 Thermal	2022 Nuclear	2022 Others	2022 o/w GEMS	2022 Group	2021 excl. EQUANS	2021 Group	2020 Group
< 25 yrs old	2.2%	2.5%	3.7%	4.1%	1.3%	1.0%	1.5%	*1.3%*	3.0%	2.8%	3.3%	3.4%
25-34 yrs old	24.9%	21.5%	24.5%	22.7%	19.9%	14.9%	20.3%	*22.9%*	22.8%	23.2%	22.5%	23.0%
35-44 yrs old	37.6%	31.5%	28.8%	33.4%	32.3%	34.5%	34.0%	*39.1%*	31.2%	31.1%	28.9%	28.8%
45-54 yrs old	24.8%	30.4%	25.0%	27.1%	29.1%	22.2%	29.7%	*27.0%*	27.0%	27.3%	26.8%	27.3%
> 55 yrs old	10.4%	14.1%	18.0%	12.7%	17.4%	27.4%	14.5%	*9.7%*	15.9%	15.7%	18.2%	17.5%
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

3.4.2 CULTURE AND COMMITMENT

3.4.2.1 Culture

ENGIE's culture is based on its "*raison d'être*" (see Section 1.1.1), which guides the Group's strategic priorities and each employee's motivation to contribute to the energy transition. This purpose is supported by its ability to act collectively and individually, regardless of activity or geographic location. ONE ENGIE is a reflection of collective work practices, and is integrated and applied at each level of the organization. These practices are also the conditions for an inclusive culture which allows anyone to be himself.

3.4.2.1.1 Actors of the energy transition

ENGIE is a pioneer in energy transition. At the heart of its strategy, its constant commitment is to develop a balanced, affordable, reliable and sustainable energy mix.

The Group's objective is to support its stakeholders in their decarbonization ambitions. Each ENGIE employee needs to be aware of the challenges they are helping to meet: to the climate emergency, social responsibility and an uncertain and volatile energy market.

At ENGIE, all employees are both ambassadors for the Group's strategy and actors of the energy transition. Together everyday, they work to achieve the Net Zero-Carbon objective by 2045 and to make ENGIE the champion of zero-carbon energy. This community of employees defends a new social model that brings together economic performance, human progress and respect for the environment. This community is open to society and territorial players. The development of this learning community is a source of individual fulfillment. Managerial practices and career paths are optimized to ensure the success of the energy transition project.

3.4.2.1.2 Acting together, as "ONE ENGIE."

To meet the challenges of the energy transition together and achieve its strategic objectives, the Group launched an in-depth organizational transformation in 2021, built around four Global Business Units and four regional hubs. Cross-divisional exchanges introduced by this reorganization is allowing us to build a ONE ENGIE culture shared by all employees.

This shared ONE ENGIE culture is based on coordinated working practices, the "ENGIE WOW" (Ways of Working): COLLABORATE, PRIORITIZE, COMMIT TO DELIVER, FOCUS ON BUSINESS, ENGAGE. These five principles must guide the behavior of each collective, in both their internal operation and their interactions with the rest of the organization.

The ENGIE WOW aims to:

- enable all employees to understand the meaning and practical consequences of the new organization;
- disseminate the reasons behind and understanding of the new structure and the matrix-based organization;
- strengthen the coordination of initiatives and activities between the various entities of the Group by pooling resources;
- translate generic principles into practical actions and behaviors to achieve the required performance.

These were introduced within each Group entity and translate into the solid commitment of teams in their daily work. The exemplary role of managers who represents the ENGIE WOW, promotes related behavior. ENGIE WOW thus fully play their unifying role. That is one of the fundamentals of the ENGIE Group's leadership model.

As of 2022, all Group's employees were invited to give their opinion on compliance with the behavior associated with the five ENGIE WOW principles, through the ENGIE&ME engagement survey. One year on from their implementation, tangible behaviors associated with these principles are visible within the organization.

3.4.2.2 Engagement

The Group's shared culture and individual action to achieve the energy transition form the basis for employee engagement. To allow them to take ownership of transition-related challenges and their impact on the business lines, develop their skills and provide the means to take action in their daily practices, ENGIE has created its Sustainability Academy.

3.4.2.2.1 Sustainability Academy

ENGIE created its Sustainability Academy in 2021 to facilitate the commitment of each employee, who is also actor of the energy transition. Employees act as internal ambassadors to the Group's strategy and its operational implementation. All of the Sustainability Academy's initiatives are created internally thanks to the expertise and efforts of employees.

The Sustainability Academy facilitates employee engagement through three drivers:

- **Being aware and taking ownership of the Group's strategy and its operational challenges**
  - An online training program covering the Group's strategy is complemented by round table sessions throughout the year. The aim is to understand the challenges of the Group's strategic transformation: energy saving measures, the development of biomethane, green finance, carbon offsetting;
  - Training programs covering the energy markets, carbon-free technologies and energy saving measures, supplement this first driver.
- **Understanding the contribution of each one's activity to the Group's strategic objectives**
  - Regardless of one's function, this involves being aware of his impact on the energy transition. Tangible questions must be included in each decision-making process: how to improve the management of stakeholders? how to use the Group's matrix to take the societal and environmental impact of my activity into account? are the framework agreements adapted to the Group's commitments?
  - A training program is dedicated to business developers and sales teams to improve their skills and meet our customers' expectations in an optimal manner.
- **Acting on a daily basis for the energy transition and being an ambassador through exemplary behavior**
  - The energy transition is everyone's responsibility on a daily basis. Everyone must understand the challenges and also the associated best practices, in terms of the use of IT tools and sobriety;
  - The Sustainability Academy is also a framework for sharing skills and experience. Each year, it brings together more than 4,000 employees across the different geographies. Training courses totaling 48 hours are dedicated to the sharing of knowledge, skills and experience on subjects relating to sustainability in the workplace. More than 100 events and exchange sessions are organized by employees.

3.4.2.2.2 The employees' commitment to the Group's strategy (ENGIE&ME)

The understanding and adherence of Group employees to its strategy is a driving force of the engagement measured in the annual ENGIE&ME survey. This engagement survey, which is carried out Group wide, showcases ONE ENGIE. In 2022, 73% of employees gave their opinion on the drivers of their engagement.

The increase in the sustainable engagement of Group employees (86% in 2022) is driven by a widespread sense of ownership of the Group's strategy, which reinforces their pride and makes them excellent ambassadors for the enterprise and its "raison d'être".

The results notably highlighted the fact that:

- 86% of employees recommend ENGIE as a great place to work;
- 80% of employees believe in the Group's ability to accelerate the transition to a carbon-neutral economy;

- 84% of employees are aware of their role within their entity to protect the environment;
- 91% of employees declare that they go above and beyond their own responsibilities to enable the enterprise achieve its goals.

Being actors ofthe energy transition and committed to the Group's strategy also means ensuring that all ENGIE stakeholders are involved in this transformation. In total, 81% of employees confirm their commitment and attachment to ENGIE as a socially responsible company.

Internally, this is reflected in:

- steady and constant social dialog;
- a common foundation for social protection guaranteed for all employees worldwide;
- attention paid to employee development;
- and their inclusion within the Group with respect for their diversity.

3.4.2.3 Diversity and Inclusion

3.4.2.3.1 Policy

At the Group level

In 2022, for the first time, ENGIE adopted a Global policy for Diversity, Equity and Inclusion (DEI). This policy has a dual objective of helping the Group progress in terms of the representation of the diversity of populations and in making all work environments inclusive. There is no place for either discrimination or harassment in any form.

This policy:

- is aimed at all employees;
- must adapt and be modified to local legal and cultural contexts;
- is designed to change Group culture;
- is scalable over time;
- and contributes to performance.

The priority subjects defined for 2022 and 2023 are:

- gender equality (notably with the Fifty-Fifty program);
- the question of LGBTQ+ (Lesbian, Gay, Bisexual, Transgender / Transsexual plus);
- origins (including nationalities, ethical origins, skin color, religion, social background, education and non-standard career paths);
- generations (the integration of young people and the employability of seniors);
- and the issue of disability.

The new "Be.U@ENGIE" policy allows each employee to feel free to be themselves ("Be.Unique") to fully contribute to the Group's collective ambition ("Be.United"). A road map will be rolled out across all regions as of 2023 and managed by a DEI World Committee.

In France

For many years, the Group has implemented a corporate social responsibility (CSR) policy that is proactive, ambitious and innovative. It aims to combat discrimination and promote equal opportunity and treatment.

This measure has been recognized by the award of the Diversity label for the first time in 2012, confirmed by regular audits and extended in 2022. The most recent audit was carried out in September 2020 and confirmed the Group's commitment to promoting diversity and equal opportunities. It praised the many initiatives taken by all the entities in France.

3.4.2.3.2 Gender diversity

ENGIE aims to become a benchmark for professional and pay equality. Two new Tier 1 non-financial targets were set and approved by the Board of Directors:

- pay gap between women and men less than 2% on equivalent positions at the Group level, by 2030;
- gender equality, with an objective of 40% to 60% of women in management positions by 2030.

For ENGIE, diversity, professional equality and inclusion are innovation and performance drivers. ENGIE has therefore launched and has been rolling out the Fifty-Fifty program since 2020. This program is based on a systematic approach to creating the conditions needed to achieve gender equality.

This program came in response to demand from the Society, ENGIE's customers, and its stakeholders. Its road map is based on six pillars: structuring and governance, diagnostics and certification, communication and awareness, organizational adaptation, employee training and development, and external resonance. For ENGIE, it means becoming a best-in-class in this area and attracting the best talents.

Since 2021, each entity has benefited from a "Fifty-Fifty toolbox," tailored to the professions and cultural environments of each region, mainly focused on:

- **The training and development of employees**
  - three "Diversity, Professional Equality and Inclusion" programs have been rolled out since May 2021: one online program for all employees and two on-site and remote programs, one for mentoring and the other one for the Group's managers and senior managers;
  - in 2022, the Group continued to roll out the *Wo+Men to Lead* personal development program, for male and female leaders;
  - a partnership with the Women Initiative Foundation has been focused since 2020 on training employees in inclusive leadership, in cooperation with major international universities.
- **Communication, team awareness raising and the sharing of best practices**
  - events are offered to all employees during the year: to mark International Women's Day, to raise awareness among managers and HRs regarding bias in recruitment;
  - A "Sexual Harassment and Sexist Action" guide was compiled in 2022 and shared with the Human Resources and Ethics teams in each of the Group's countries, led by the Executive Committee which sought to reaffirm the Zero Tolerance policy on this subject;
  - awareness raising workshops have been organized by the entities' Executive Committees since 2021. These workshops aim to raise awareness among managers, helping them build equality-driven action plans within their entity;
  - the Fifty-Fifty Awards, a competition open to all to award the teams that are most invested in gender diversity, has been organized annually within ENGIE since November 2021;
  - an online media platform containing plenty of resources (videos, testimonies, articles, best practices) was created on the Group's e-learning platform in November 2021;

- conferences and the sharing of best practices targeting "Diversity, Professional Equality and Inclusion." These are available throughout the year to ENGIE employees looking to launch new initiatives within their scope. This network called Change Drivers was founded in November 2019.
- The ChangeMakHers network, created in 2021, brings together leaders trained to challenge the status quo within the organization and showcase ENGIE's commitment outside the Group, through conferences, partnerships and round tables.

Diagnosis and EDGE certification

- in December 2022, 15 entities in nine countries obtained EDGE certification in Diversity and Inclusion; seven others are currently undergoing certification. This certification offers international recognition of gender equality and covers the corporate culture, recruitment, promotion, mentoring and training of its managers;
- in October 2022, 25 questions relating to "diversity, professional equality and inclusion" were included in the ENGIE&ME annual engagement survey;
- in May 2021, the findings of the audit of the processes used to assess talent, in order to make them more inclusive, were reported. Recommendations are regularly applied or updated.

At the end of December 2022, women made up 26.1% of the Group's workforce. The proportion of women in management was 29.9%. The proportion of women on the Operational Committee is 35.2% (19 women and 35 men). The proportion of women on the Group Executive Committee is 40% (four women and six men).

External resonance

To promote gender equality within its business lines, ENGIE is raising awareness among young female audiences through the "Elles Bougent" association. which promotes the role of women in technical sectors in France. Furthermore, as part of its partnership with *Le Laboratoire de l'Égalité*, ENGIE has been helping since September 2019 to develop an artificial intelligence pact. This ensures that new technologies underlying HR processes that incorporate Artificial Intelligence are not discriminatory in terms of gender.

Moreover, as part of its commitment to the apprenticeship foundation, *Fondation Innovations Pour les Apprentissages* (FIPA), ENGIE has undertaken to start a school class dedicated exclusively to young women, "les Ingénieuses," which aims to help them becoming Engineers. In September 2021, four young women from ENGIE joined this promotion. In September 2022, ENGIE continued its commitment with the start of a second promotion.

Finally, since 2022, ENGIE has been taking part in the *Rise & Lead* summit which brings together business leaders and entrepreneurs to share best practices and ideas to drive change toward diversity, equity and inclusion.

	2022									2021	2021	2020
GRI 405-1	**Renewa-bles**	**Networks**	**Energy Solutions**	**Supply**	**Thermal**	**Nuclear**	**Others**	*o/w GEMS*	**Group**	**excl. EQUANS**	**Group**	**Group**
Proportion of women in workforce	25.8%	27.3%	20.3%	36.6%	10.2%	14.2%	45.7%	*41.9%*	26.2%	25.1%	21.8%	21.4%
Proportion of women in management	27.7%	32.3%	23.9%	40.5%	11.8%	18.6%	38.5%	*33.1%*	29.9%	28.9%	24.6%	24.1%
% reporting	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	*100.0%*	100.0%	100.0%	100.0%	100.0%
Proportion of women among new hires	38.3%	35.6%	22.0%	30.2%	18.7%	10.3%	49.7%	*47.1%*	28.2%	24.6%	22.3%	21.8%
Proportion of women among new management hires	36.8%	37.2%	23.3%	41.7%	21.9%	0.0%	40.0%	*35.8%*	30.5%	27.2%	24.5%	27.0%
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

3.4.2.3.3 Professional and pay equity

As part of its CSR policy and to support its purpose, ENGIE had made the decision to extend the French obligation to calculate the professional and pay equity index to all of its companies abroad with more than 250 employees. As a reminder, this index is based on several criteria: the gender pay gap, the difference in the distribution of promotions and individual pay raises, the number of employees who received a pay rise on returning from maternity leave and the number of women among the ten highest-paid employees.

In 2022, in line with its ambition and for greater readability, the Group decided to focus, among the professional and pay equity index indicators, on the equal pay indicator. It measures the difference between the compensation of men and women. ENGIE has decided to set a maximum gap objective of 2% at the Group level for equivalent positions.

For 2022, the difference in compensation between women and men stood at 1.73%. In a high inflation context, ENGIE has been able to reduce this difference.

All the companies use a decision-making tool called EQUIDIV, developed by the Group HRD. The tool offers an automatic and standard calculation of the index based on individual data. EQUIDIV provides priority remedial actions to advance professional and pay equality between women and men.

On November 22, 2017, ENGIE has signed a European Agreement for an indefinite period on professional equality between women and men, the fight against discrimination and violence, and the prevention of sexual harassment. Sexist behavior was the subject of a specific article.

In 2022, the Human Resources Department, in cooperation with the Ethics, Compliance & Privacy Department, introduced a practical guide aimed at all ENGIE countries and entities. This guide aims to align definitions and help the latter draw up their own program to prevent and combat sexist behavior and sexual harassment. The awareness-raising campaign began with a webinar in October 2022, committing each entity to building an action plan for "Zero Tolerance."

ENGIE is committed to taking all necessary measures to prevent incidents of sexual harassment. Reporting tools have been put in place to enable any deviant behavior to be flagged. In early 2021, ENGIE took part in the *BVA/#StOpE* on Sexism scale for the first time.

In addition, on the basis of an international benchmark of legislation in force, the Group has defined a common international reference framework designed to eradicate sexual harassment. ENGIE launched a global information and awareness campaign on domestic violence on the occasion of the International Day for the Elimination of Violence against Women.

Moreover, ENGIE includes on the energy bills sent to its all eight million customers in France, the freephone number "SOS femmes battues" for female victims of domestic abuse. The public is therefore kept informed of measures to combat violence against women.

3.4.2.3.4 Inclusion and job-seeking support

ENGIE is highly committed to this subject and develops many innovative initiatives in partnership with its ecosystem to promote learning.

3.4.2.3.4.1 Social and professional inclusion of young people

As a founding member of the *Collectif des entreprises pour une économie plus inclusive* ("Group of companies for a more inclusive economy"), the Group has been, since 2018, taking action countrywide, alongside 35 large companies and public authorities, For example, an escape game was created to raise awareness of ENGIE's occupations among young people. The strength of the *Collectif* is the ability of companies to share their experience and allow everyone to benefit from shared know-how and a local network.

These actions promote the inclusion of young people, particularly those who have been distanced from employment or come from the most disadvantaged areas. In particular, ENGIE has undertaken to host 3,000 young people from priority neighborhoods for a period of three years, from the third grade until they start their working lives.

The Collectif launched an extensive program in September 2022 to encourage the development of mentoring among its members with the aim of reaching 1% of mentors among all employees of the 36 member companies by end-2023. In this regard, ENGIE has committed to developing its external mentoring, in addition to the existing internal scheme.

In 2022, ENGIE took part, alongside the companies within the Collectif, in the *Salon Jeunes d'Avenir* (Youth of the Future trade show) in the Ile-de-France region. This event was an opportunity for Technician Ambassadors to present the Group's professions and for several female site managers to share their experience with young women looking for work-study contracts and career advice. The Group also launched the *"prépa apprentissage"* initiative (prepare to learn), which welcomed ten young people who had dropped out of school and were distanced from employment. After taking part in the initiative, six joined ENGIE's Apprentice Training Center.

The Group is committed to the social and professional inclusion of people in severe difficulty or in a situation of exclusion.

Since 2020, ENGIE has chaired the French GAN (Global Apprenticeship Network), enabling to:

- encourage corporate initiatives;
- act on factors hindering the development of work-study programs;
- connect these initiatives with real career opportunities for young people;
- use professional training as a springboard for accessing the world of work.

The various institutional, associations and corporate partnerships also facilitate the employability of young interns and apprentices, both internally and externally. Close attention is paid during all stages of the recruitment process, for interns and apprentices in particular, to ensure a more inclusive recruitment process.

3.4.2.3.4.2 Employees with disabilities

ENGIE is fully committed to the area of disability, including at the highest levels of the Group. In France, it is mainly involved in recruitment, integration, support and job retention, awareness-raising, communication and collaboration with the sheltered sector.

Managers are invited to follow e-learning courses designed to raise their awareness of all aspects of disability in the company. A webinar on disability was hosted on October 6, 2022 by Jean-Sebastien Blanc, Executive Vice President in charge of Human Resources, with the aim of raising awareness among all Group employees.

In addition, in 2022 ENGIE designed a program specifically for the Group's young work-study students and interns. The aim is to make them aware of any personal disabilities that they may have, in order to assist them, if necessary, in obtaining recognition of their disability. This program also allows to raise their awareness in their future role as managers and will be fully rolled out in 2023.

Thanks to financial and human resources, €3 million per year on average and more than twenty disability advisors supported by local representatives, ENGIE has around 2,136 employees with disabilities in France. ENGIE's employment rate in France was 3.4% in 2022.

The collaboration with the protected and adapted work sector (ESAT and adapted companies) makes the inclusive vision of the Group's CSR commitments a reality. It aims to ensure the viability of indirect jobs, promote the local economy and encourage professional integration.

On October 3, 2022, Chief Executive Officer Catherine MacGregor signed a national agreement with the GESAT network, which represents 2,250 ESAT and adapted companies in France. The objective is to facilitate access for Group companies to suppliers employing people with disabilities.

As part of work on digital accessibility, ENGIE became involved in 2022 in an inter-company training program for digital accessibility coordinators. This training is reserved for people with disabilities.

3.4.2.3.4.3 LGBT+ (Lesbian, Gay, Bisexual, Transgender/Transsexual plus)

On December 6, 2017 ENGIE signed the *L'Autre Cercle's LGBT+* commitment charter. In October 2020, in France, ENGIE published the practical guide "LGBT+, understanding to act together" in order to raise awareness of the question of LGBT+ in the workplace. ENGIE participated in the 2020 edition of *L'Autre Cercle's 95 LGBT+ & Allié.e.s au Travail Role Models* in France. Two employees were designated in the LGBT+ Leaders and Allié.e.s Dirigeant.e.s Role Models category. In 2021, ENGIE stepped up its actions to boost diversity and combat discrimination, with:

- the launch of "Friends," the Group's network of LGBT+ and Straight Allies employees;
- the worldwide publication of a new guide, "Understand each other to better act together";
- the training of 150 Human Resources staff in France;
- the provision of a training / awareness-raising catalog for management committees, managers, employee representative bodies and all employees;
- the participation for the second time in the "Role Models" of *L'Autre Cercle*, with two candidates presented.

In 2022, ENGIE North America was awarded for the second year running by the Human Rights Campaign (score 95/100). Actions taken to improve equal treatment for LGBT+ employees in the United States were recognized.

In 2022, ENGIE took part in the following event:

International

- May 17 (IDAHOT 2022 - International Day Against Homophobia, Biphobia and Transphobia): an international webinar with testimonies from employees on their life journeys, and the testimony of BNP Paribas on the treatment of parenthood. A total of 200 participants were present under the patronage of Jean-Sébastien Blanc, Executive Vice President in charge of Human Resources.
- October 11 (National Coming Out Day): webinar organized by the Friends, Pride NorthAm and Pride Impact networks with testimonies from employees.

In France

- February 13: Second participation in the IFOP/*L'Autre Cercle* Barometer for voluntary entities (20,600 employees). The actions undertaken by the Group were recognized with an increase in the barometer compared with the previous year. However, the issue of the visibility of homosexuals remains unchanged, in particular for women.
- June 20: webinar on Allies with the partner *L'Autre Cercle* and the participation of Didier Holleaux, Executive Vice President of the Group.
- June 29: renewal of the signature of the *L'Autre Cercle*'s Commitment charter.
- September 15: interview with Catherine MacGregor in the *magazine Têtu*.
- October 11: election of Didier Holleaux as a Management Ally Role Model for the 2022 edition organized by *L'Autre Cercle*.

3.4.3 HUMAN RESOURCES ATTRACTION AND DEVELOPMENT POLICIES

3.4.3.1 Training and Development

The Group offers its employees opportunities to develop their skills through a range of training programs, career paths and personal development actions. It helps develop employability by adapting skills to changes in occupations and technologies. The ecological transition and technological accelerations due to digitization and artificial intelligence are transforming the professions of employees. They are also creating tensions in terms of qualified personnel in the Group's many businesses, whether traditional or newly emerging. To tackle this, ENGIE is implementing a social strategy to increase skills in three areas: advance skills management to prepare for the future; enhanced internal mobility to serve its four main businesses; and, lastly, professional training objectives for all employees. They are being implemented in order to favor the enrichment of tasks, the renewal of experiences, and the consideration of employee initiatives and empowerment. This strengthens their engagement and fosters their development and employability, serving the sustainability of the Group's activities. This strategy is part of the training and development policy in place since 2017.

3.4.3.1.1 ENGIE Skills, the forward-looking jobs and skills management program

To implement the appropriate development policies and actions, ENGIE has a strong skills-based approach. These skills are guided via a process of provisional management of jobs and skills called ENGIE Skills. In relation to industrial and financial forecasts, it provides a three-year mapping of the quantitative and qualitative skills that each Group entity must acquire. This vision is organized around the ENGIE Jobs reference system, which lists (through a continuous improvement approach) 300 reference professions, allowing:

- better knowledge of how resources are distributed between the businesses, functions, GBU, regional hubs, countries and entities;
- improvement of HR performance and skills management by the GBU, regional hubs, functions and entities.

These data are consolidated at the Group level. They enable the construction of a general overview of the evolution of occupations and skills. Employee support, development and mobility plans are associated with this.

In a context of strategic transformation and digitization of processes, the evolution of skills is reflected at three levels:

- technical skills to be strengthened to enable the Group to become the leader in the energy transition by emphasizing operational excellence and industrial know-how;
- digital skills to be developed in order to offer new services;
- organizational and managerial adaptations requiring strong support.

3.4.3.1.2 Training: 100% ambition

Developing skills and maintaining employability are crucial areas for the Group's competitiveness and performance and for its ability to roll out its strategy. Since February 2020, ENGIE has pursued its non-financial goal of training 100% of employees each year by 2030.

To achieve this goal, ENGIE offers a skills development approach which highlights key skills by population and the related key training needs. This strategy includes the implementation of a Learning governance and the creation of a Learning decision-making body. These bring together Training managers at the Group's Global Business Unit and regional level.

In this context, ENGIE identified three mandatory training courses in 2022, on Health and Safety, Ethics and Cybersecurity, to be carried out in e-learning format by all employees. At the end of 2022, ENGIE also offered varied training courses on key management and leadership skills for Group managers. Managers working in the field of renewable energies were the first to benefit from the introduction of these Management paths.

In addition to prioritizing key skills, ENGIE is committed to instilling a Learning culture and offering regular opportunities to learn, by promoting flexibility in learning approaches. Therefore, in addition to in-person training sessions, virtual classes and e-learning, the Group set up a Mobile Learning platform in 2021 which facilitates access for employees to training modules on Group Business and Culture fundamentals such as hydrogen and energy saving measures.

The Group has rolled out key training programs at the global level which require rapid scaling up. Use of local trainers is also a driver to be able to achieve the target of 100% of employees trained by 2030.

3.4.3.1.3 ENGIE University

For more than 15 years, ENGIE University has been supporting the professional and personal development of employees, in particular executives and managers. In addition to being a Qualiopi certified training center, ENGIE University is a place for strategic thinking regarding Group Learning and Development policies, as well as current and future Skills subjects.

Since 2021, ENGIE University has stepped up the implementation of programs enabling every employee to learn about the Group's new strategy. In 2022, in addition to the Sustainability Academy programs, ENGIE University created short e-learning training courses. These relate to the carbon footprint of IT equipment (Green IT program) and energy saving measures for employees, today's true "transition makers." The Sustainability Learning Days were organized over a continuous 48-hour period in fall 2022, which allowed all Group employees, regardless of their time zone, to take part in the event as either a trainer or trainee. In total, more than 1,300 individuals took part in 101 sessions on subjects relating to business transformation, the decarbonization of customers and internal transformation.

With hybrid modes of working continuing to be popular, ENGIE University decided to maintain on-site programs and digital versions (e-learning and virtual classes, U.learnGO mobile app). This allows as many employees as possible, throughout the world, to continue to receive training.

The University therefore organized a new edition of the Learning Festival in March 2022. This event, which was planned and delivered in 100% digital format, consisted of a week of training for all the Group's employees. The Learning Festival allowed for the development of key skills, a need that goes hand in hand with the crisis and which required a readjustment of know-how. The 2022 Learning Festival brought together more than 1,200 employees from 44 different countries, representing all the Group's entities during 120 different sessions (Learning Programs, Learning Activities, Social Events). A total of 42 external trainers and 44 internal stakeholders ran these sessions.

The U.Camp, ENGIE University's temporary traveling campus, which takes place over one week at a unique site in France or abroad, was able to be held again in 2022. Organized on-site, this event brings together employees from a range of entities and business lines for high-quality training courses and social events. It is a major contributor to ENGIE's culture and, at the same time, offers a learning experience to participants to reinforce their feeling of belonging, improve performance and accelerate the Group's transformation. In Paris, more than 1,000 employees of 26 nationalities took part in 40 sessions, social events and market place. In August, more than 500 employees from across Central and Latin America met in Rio de Janeiro.

As the transformation of the Group also entails the evolution of business lines, ENGIE University has been developing Academies for its four Global Business Units since 2022. These Academies, some of which were still under construction at the end of 2022, offer courses to improve the professionalization and operational excellence of employees, the establishment of a shared culture and the promotion of internal and external know-how within the entities.

As a result of the implementation of all these systems, ENGIE trained 83.8% of its employees in 2022.

Proportion of employees trained

	2022									2021	2021	2020
GRI 404-2	**Renewables**	**Networks**	**Energy Solutions**	**Supply**	**Thermal**	**Nuclear**	**Others**	*o/w GEMS*	**Group**	**excl. EQUANS**	**Group**	**Group**
Proportion of women trained	100.0%	73.2%	84.9%	88.9%	86.9%	99.5%	77.9%	*68.9%*	82.8%	80.3%	80.9%	69.2%
Proportion of men trained	100.0%	82.7%	81.8%	87.5%	94.3%	100.0%	73.4%	*62.4%*	84.1%	82.6%	82.1%	70.3%
Proportion of employees trained	**100.0%**	**80.1%**	**82.4%**	**88.0%**	**93.4%**	**100.0%**	**75.4%**	***65.1%***	**83.8%**	**82.0%**	**81.9%**	**70.1%**
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*98.7%*

Training hours

	2022									2021	2021	2020
GRI 404-1	**Renewables**	**Networks**	**Energy Solutions**	**Supply**	**Thermal**	**Nuclear**	**Others**	*o/w GEMS*	**Group**	**excl. EQUANS**	**Group**	**Group**
Total nb. of training hours	175,180	796,074	532,811	231,088	142,474	125,510	123,448	*29,947*	2,126,584	2,254,023	3,468,907	2,963,242
Average nb. of hours per person trained	**37**	**46**	**16**	**21**	**42**	**62**	**19**	***15***	**27**	**28**	**25**	**26**
% reporting	*100%*	*100%*	*96.8%*	*100%*	*100%*	*100%*	*100%*	*100%*	*98.6%*	*100%*	*100%*	*97.4%*

Breakdown of training hours by topic

	2022									2021	2021	2020
GRI 404-1	Renewa-bles	Networks	Energy Solutions	Supply	Thermal	Nuclear	Others	*o/w GEMS*	Group	excl. EQUANS	Group	Group
Business techniques	35.3%	37.9%	36.0%	44.3%	32.9%	65.4%	23.6%	*23.9%*	38.8%	41.7%	38.1%	35.9%
Quality, safety and environment	32.7%	14.5%	48.1%	26.2%	55.3%	26.6%	12.9%	*11.5%*	28.2%	30.8%	37.9%	33.7%
Languages	7.7%	0.3%	1.8%	2.6%	1.4%	0.0%	17.2%	*10.7%*	2.4%	2.3%	1.8%	3.0%
Management, personnel development	15.2%	42.0%	9.7%	15.4%	6.0%	0.0%	26.5%	*24.6%*	23.8%	17.8%	15.6%	13.1%
Others	9.1%	5.2%	4.3%	11.6%	4.5%	8.0%	19.9%	*29.3%*	6.9%	7.4%	6.6%	14.2%
% reporting	*100.0%*	*100.0%*	*96.8%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*98.6%*	*100%*	*100%*	*100%*

3.4.3.2 The talent policy

The development of Group Talents contributes to ENGIE's performance by developing its human capital. It aims to anticipate the Group's requirements in terms of skills and expertise. It is used to identify and prepare executive managers and the human and technical leaders of the future. To fulfill this mission, the Talent Department develops:

- a bottom-up approach to identify key positions within the Group, ensuring the implementation of succession plans and the identification of high-potential talent, from the entities to the Group's managing bodies; the 2022 "People & Position Review," carried out at the country level, then at a regional level, was then consolidated by business line and function. This approach allows the Group to take a cross-divisional view when identifying more than 2,000 of its key positions as well as more than 6,000 talents that have the potential to fill these positions;
- personalized career paths that meet the Group's needs, incorporate the aspirations of employees and draw on the diversity of the Group's business lines and geographic locations;
- development tools and specific programs delivered over the long term.

The Group's Talent policy is geared toward all employees and aims notably to strengthen the skills of three key populations for the Group, as well as the entities populations that are targeted more locally: leaders, technicians and experts. Its purpose is to anticipate requirements in terms of skills, secure key positions and improve the loyalty of employees. The health crisis has impacted ways of working, working relationships and drivers of motivation and engagement. In order to tackle it, ENGIE is drawing on the quality of the "talent experience" of employees, from the moment they are hired and during their careers. The policy of attracting future talents is based on a meaningful brand that reflects the Group's values. It is accompanied by ambitious goals in terms of apprenticeships and relationships with major academic partners. The promotion of technical professions by employee ambassadors is also a major asset for recruiting new technicians.

To retain them, ENGIE relies on both its development policy and its career path policy, which offer employees various career paths within its main business lines and guides them in their career development choices.

3.4.3.2.1 ENGIE Boost: the program for future leaders

ENGIE Boost is a system for identifying, developing and retaining high-potential talent at all levels of the organization in order to prepare them to occupy strategic roles at the Group. It comprises three programs:

- Rise! and Pulse! are managed at the Group level: over a 24-month period, they prepare leaders who are likely to rapidly take strategic responsibility within ENGIE;
- A third program, Up!, which is managed on a more local basis, focuses on High Potential talents which are likely to move into key positions within the Group.

Inclusion in the Rise! or Pulse! programs is managed by the Talent & Diversity Department. They ensure a consistent, pertinent approach by implementing People Reviews with the GBU and the support functions. In 2022, the Pulse! program brought together 129 Talents with the potential of moving to one of the Group's 275 strategic positions during their next career move (of which 37.2% women and 38% international employees). The *Rise*! program brought together 145 Talents with the potential of moving to one of the Group's 260 strategic positions in two or three career moves (of which 55.2% women and 35.9% international employees). Inclusion in the Up! programs is managed locally, through the People Reviews of the GBU, regional hubs, functions and entities. In total, 900 talents take part in the ENGIE Boost initiative's Up! programs. These programs are not intended to reward performance or to be used as a recognition tool. It is an opportunity offered to employees in order to develop their potential and to ensure that they are in the best position for future development toward a key role. It is also an opportunity to create an active and diverse community of leaders who are able to engage their teams in the service of the Group's strategy.

3.4.3.2.2 ENGIE Ways Of Leading (EWOL)

In 2022, ENGIE's leadership model was adapted to support the deployment of the Group's strategy. It was named "ENGIE Ways of Leading" which is complementary to "ENGIE Ways of Working" applied to all Group employees since 2021.

It focuses on five key commitments that clearly define the common expectations in terms of managerial behavior, to meet the Group's needs:

- **Safety & Integrity:** applying strict standards for the health and safety of employees, securing assets, ensuring ENGIE's (cyber)security, integrity and reputation. This also involves building a "Zero Tolerance" culture, to secure a license to operate.
- **ONE ENGIE:** implementing the ENGIE strategy by drawing on the ENGIE WOW, guided by value creation for ENGIE and its customers, while benefiting from the diversity of ENGIE employees.
- **Accountability:** clearly and precisely defining objectives and responsibilities toward teams and stakeholders, empowering our employees and teams by providing them with the means to succeed and organizing stimulating and honest discussions.

- **Trust:** doing what we say and saying what we do, managing and inspiring, through example, the teams, stakeholders and customers, communicating and acting in a transparent manner.
- **Care:** promoting a culture of shared interest, respect and caring within the teams, improving well-being at work and putting the development of skills and constructive feedback into practice.

The ENGIE Ways of Leading were rolled out to 275 of the Group's Global Leaders at end-2022 and will be introduced in 2023 to all Group managers. The career development and management programs will be adjusted accordingly.

3.4.3.2.3 ExpAND: the program for Experts

ENGIE has been developing the ExpAND program since 2020, which aims to identify, develop and recognize Group experts in a cross-divisional manner. This program complements specific programs dedicated to improving technical skills in key areas for the Group, directly managed by the GBU.

The ExpAND program develops communities of expertise and makes the "ExpANDers" ambassadors for ENGIE both inside and outside the Group. It is also a development program based on co-option. It allows experts to develop their "soft skills," such as leadership and communication. All expertise is aligned with the Group's strategy, whether technical, technological or functional. Three levels of experts have been established – Global, Key and Local – according to their impact scope and their exposure. By the end of the first three campaigns, 853 ExpANDers had been identified: 62 Global, 468 Key and 323 Local.

3.4.3.3 Group mobility

3.4.3.3.1 ENGIE Mobility

Mobility practices are strongly encouraged and promoted within ENGIE and a Group Mobility policy sets out the foundation of the seven major mobility principles within the Group since September 2019. The fluidity of resources and employees' ability to evolve are a measure of how their employability and sense of belonging to the Group is being maintained. In this way, mobility between the Global Business Units and entities is facilitated. They are a necessary condition for the Group's transformation and agility. 2,840 movements between and changes in positions took place in 2022. Committees meet to facilitate the matching of positions with internal profiles.

ENGIE Mobility is a system to support career mobility. Since its creation in 2017, ENGIE Mobility brings its expertise and service offering to the HR function notably through various tools dedicated to mobility. In 2022, ENGIE Mobility acted in support of Human Resources managers on various major transformation projects.

In France, a digital space called "Mymobility," dedicated to building career plans, is available to all employees. Events such as "50' Live Mobilité" are organized to promote the culture of mobility and sharing between Human Resources managers. Lastly, the "Regional Mobility Employment Committees" network is coordinated on a monthly basis. These committees, which are assigned to five regions / employment pools across the country (Ile-de-France; West; South West; Center East and South East; North East) work to promote local internal employment.

3.4.3.3.2 Skill'Lib

The development and acquisition of skills play a key role in the competitiveness and performance challenges of the company.

Beyond training, which remains the preferred lever for learning, ENGIE has set up an effective, innovative, win-win system for employees and managers: Skill'Lib. This is a skills-based marketplace that offers short-term missions to employees according to the skills that they have acquired or are developing. This system promotes learning through experience for employees. At the same time, it enables managers to quickly access relevant internal skills that meet their business needs. It perfectly meets the Group's strong need for reactivity and flexibility, in terms of both resources to carry out temporary missions as well as the development needs of the Group's Talents.

This system was recognized externally and rewarded in November 2021 with the winning of the HR Innovation Prize for the *Victoires des Leaders du Capital Humain* (Victories of Leaders of Human Capital) awards.

3.4.3.4 Hiring and employer brand

3.4.3.4.1 Employer brand

The development of an attractive employer brand that is consistent with the Group's locations and hiring needs is a major challenge.

In 2022, the employer brand thus enabled ENGIE to maintain its place in the rankings:

- ENGIE consolidated its fifth position among the "Top Companies" in LinkedIn's rating. ENGIE had around 800,000 LinkedIn followers at end-December 2022 (versus 675,000 in 2021). Traffic to ENGIE's website has continued to grow, with almost 500,000 views per month at the beginning of the year;
- ENGIE is the eighth most committed company in terms of CSR in France out of 61, according to the CSR study carried out by Universum in September-October 2022. The Group ranked second in terms of environmental commitments;
- in the end of the public health crisis at end-2021, ENGIE:
  - maintained its eleventh position as most popular in its core target audience among Baccalaureate Diploma +2/+3 level students,
  - ranked number eighteen as most popular company among students of engineering schools in France, and thus returning to its 2020 level of popularity. The brand's reputation has never been as high in engineering schools. Thus, 95% of engineers know ENGIE, of which 27% are interested in it as an employer.

3.4.3.4.2 Attractiveness of the Group and Employment of young people

The ENGIE Brand and Employer Brand continues to be rolled out in France and throughout the World with varying levels of reputation according to the country. The countries rely on Corporate deliverables and ecosystem to develop and grow the employer brand at the local level according to their resources and needs.

The attractiveness of the Group has improved with more than 800,000 job applications received in 2022, notably thanks to its visibility on social networks. All positions are published externally, thus generating a high level of traffic to the Careers website and the *engie.com* website.

The visibility and recruitment campaigns carried out either jointly by the Corporate team and the countries, or driven by local initiatives, help reinforce this attractiveness among all Talents.

At the regional level, the teams draw on the Ambassador Communities (Technicians, Alumni, Young Professional Network, Women), to attract, recruit and retain targeted populations.

In France, a focus has been placed on the Employment and Employability of Young people, notably through the Work-Study Program, ENGIE's Apprentice Training Center, the welcoming of Interns, including those in their final year of middle school.

Improving the onboarding and integration of Young Talent allows the Group to achieve three objectives:

- increasing female representation within the teams;
- recruitment in new professions and hard-to-fill positions;
- and, more generally, greater Diversity and Inclusion (Young people distanced from employment, the disabled, etc.).

In 2022, ENGIE won the Grand Prize for Youth Employment, awarded by the HUMPACT rating agency.

3.4.3.4.3 Academic relationships

In order to recruit the best young talents and to maintain its leadership position, ENGIE relies on its academic relationships. These make it possible to promote ENGIE to students in higher education (engineering schools, business schools and universities). As a real driver of attractiveness for the young people who represent ENGIE's future, academic relationships meet recruitment needs in terms of both business and leadership skills.

A strategy and associated policy were implemented in 2022 covering the values of diversity and inclusion as well as those of equality, notably for engineering professions referred to as technical.

In this regard, academic relationships brought together a community of ambassadors to promote the Group's image among students and to meet equality objectives by including the Fifty-Fifty program's "Change MakHers" community. Moreover, various tours organized (JobTeasers/Konbini) and participation in the Junior-enterprises Regional and National Conferences helped strengthen the employer brand.

Academic relationships ensure that they confirm its priorities in terms of diversity, inclusion and equal opportunities. To do so, partnerships with the ESSEC business school and Ponts et Chaussées were introduced with a godmother in the role of leader and the creation of a diversity fresco. Moreover, in the spirit of openness, the "ENGIE Academic Challenge" is an international event aimed at uniting international students and attracting foreign talents. It also aims to encourage them to adopt a carbon neutral approach.

ENGIE adopts a proactive attitude in order to meet strategic objectives and to get ahead of its needs by carrying out many actions (forums, trade shows, round tables, conferences, lectures). In 2022, no fewer than 31 actions were carried out within target schools, while ensuring diversification in the choice of elite and less elite schools. All of this, with a view to supporting inclusion.

The academic relationships are being redesigned in a more qualitative way, with associated returns on investment. Clear and relevant performance indicators (presence, attractiveness, influence and recruitment) ensure the effectiveness of these initiatives.

ENGIE enters into privileged relationships with numerous target schools: Centrale Supélec, IFPEN / IFP School, Mines ParisTech, Polytechnique, Arts et Métiers ParisTech, INSA Lyon, Mines Nancy, Centrale Lyon, Ecole des Ponts ParisTech, IDE Paris, CY Tech (ex EITSI), ESTP, CESI Ecoles d'Ingénieurs, Telecom Paris, IMT Atlantique, INP Grenoble, EFREI, HEC, ESSEC , ESCP, INSEAD, KEDGE, Audencia, NEOMA, Grenoble EM, EM LYON, SKEMA, EDHEC, MBS (Montpellier Business School), ESG (Paris / Bordeaux / Toulouse), Université Paris 1 Sorbonne, CY Cergy Paris Université, Université Paris Dauphine, Sciences Po, IAE, Université Paris Saclay, Ecole 42, EPITA, EPITECH, ENSIMAG. These partnerships give their students the opportunity to join the ENGIE adventure through work-study programs, internships and the hosting of PhD students and students researching specific areas.

ENGIE took part in the Alliance For Youth international summit at the Parliament in Brussels in September 2022, an event which facilitated exchanges on challenges relating to employment / employability and training. An opportunity for the Group to demonstrate through example, with the ApprentiSwap program (a scheme for Master 2 apprentices to share their work-study period within two companies over a two year period).

3.4.3.4.4 The Communau'Tech: Technician Ambassadors

ENGIE's Communau'Tech is a network of Technicians engaged in the field which strive to make their profession and the Technical sector shine with passion to attract new talent. This system promotes male and female technicians, builds their loyalty, and creates an attractive image of hard-to-fill positions.

The voluntary Technician Ambassadors take part in events for specific professions, jobs forums and trade fairs organized by the Group or technical experts to explain and promote technical professions. They contribute to Group debates and take part in reports and testimonials, webinars and experiments. Members of the Communau'Tech work with schools. They make young people aware of environmental and climate issues and the importance of occupations in the transition to carbon neutrality. Lastly, they help to recruit young people to the Academy of Energy Transition, ENGIE's Apprentice Training Center. They explain their occupations to generate interest in them.

The Communau'Tech now has 370 Technicians (250 in France and 120 in the European subsidiaries including Italy, Romania and Belgium) of which 29 are women.

The goal is to build a community of 500 Ambassadors and Technicians at the European level by the end of 2023.

The first international meeting of the Communau'Tech was organized in Paris on June 1, 2022 and brought together more than 300 Technician Ambassadors from France, Italy, Belgium and Romania. These Ambassadors were also accompanied by their managers, human resources representatives, students on work-study programs, members of the Group Executive Committee and sponsors of the Community. Together, the Group's employees celebrated this community of technicians, founded in 2018 and which since then has been constantly making the sector and the richness of its professions more attractive. The day's program included: an inspiring plenary session, interactive workshops, an exhibition presenting the Group's technical professions. Attendees enjoyed a variety of new experiences, which created rewarding exchanges, interactivity and a pride of belonging.

3.4.3.4.5 Apprenticeships

In an increasingly tight work market, ENGIE relies on young people and apprenticeships as a path of excellence toward its future professions and even greater inclusiveness in its recruitments.

In its Work-Study Program, ENGIE aims to achieve:

- a proportion of apprentices in the Group's workforce of 10% in France by the end of 2030;
- a level of transformation into permanent or fixed-term contracts in the technical or digital sectors in France of 50%.

This Group commitment and the significant efforts by employees targeting the heart of the societal needs of the region have been a success. The number of work-study program students has increased by more than 15% since 2019 and the Group had 3,714 young people on work-study contracts at end-2022.

In France, ENGIE has 3,331 students following work-study programs. The percentage of staff undertaking work-study programs compared to permanent and fixed-term contracts is 7.7%. ENGIE is the leading employer of work-study program students in the industrial sector, in terms of number and volume, and aims to reach a rate of 10% by end-2030.

To attract rising talent, visibility and recruitment campaings were carried out and inclusive recruitment efforts made. In the field, the Group was awarded with several Prizes (TOP COM Or) and Labels (Diversity, Young Engagement, Happy Trainees/ Alternants-ChooseMyCompany).

Support through training initiatives for tutors, which are key to the project's success (TUT'OR platform) as well as for the Community of work-study program students (Young Talent Community) contribute to professional development. ENGIE has therefore always worked closely with the major French business schools, Universities and Apprentice Training Centers.

Finally, the Group is committed to the employment of young people and each year organizes "*le mercato*" of graduates (dedicated Internet site, employment days) to encourage internal mobility and recruitment on permanent, fixed-term and Volunteer for International Experience contracts. At the same time, an external system ("Engagement Jeunes" platform) registers volunteers in a qualified pool of talent shared with the partners of the "*Collectif des entreprises pour une économie plus inclusive*" (Group of companies for a more inclusive economy).

In 2022, the work-study program ambition was refocused on the France scope. European and global momentum surrounding the employment of young people continued, notably through image and recruitment partnerships such as "Alliance For Youth" with Nestlé or with the "Global Apprenticeship Network France" chaired by ENGIE since 2020.

The Group's efforts in this field have been recognized by the 2022 award of the Grand Prize for Youth Employment and the GOLD Grand Prize for Employment awarded by the HUMPACT rating agency (Franfinance).

3.4.3.4.6 Apprentice Training Centers

In November 2020, ENGIE opened its own Apprentice Training Center in France: the "Academy of Energy Transition." This human-scale Academy will welcome more than 400 students by the end of 2024. Located in Ile-de-France and several French regions (Auvergne-Rhône-Alpes, Occitanie, Hauts-de-France, Nouvelle-Aquitaine and Pays-de-la-Loire), the Apprentice Training Center offers diploma courses ranging from the vocational Baccalaureate Diploma to Bachelor degrees for young people aged 16 to 29 and for adults looking for retrain. In close partnership with training bodies, that are recognized for their professionalism and know how, the aim of these courses is to meet the changing needs of the Group and to attract more young people, particularly women, to the Group's professions of the future.

In addition to the academic training courses on offer, the Academy also offers additional fully digital contextualized ENGIE modules to its work-study students. Thanks to virtual reality, the Academy works on developing educational projects relating to challenges facing the Group in terms of safety in the workplace.

The Group has also taken action to identify, train and promote tutors, who are key players in the successful integration of work-study students.

3.4.3.4.7 Hiring

The talent recruitment strategy is aligned with ENGIE's purpose and the transition to a carbon-neutral economy. It has to deal with a highly competitive job market, changing occupations and constantly evolving candidate expectations. This strategy stands out. It favors an approach that places the candidate at the center of the recruitment process in the service of the occupations and the business. The Talent Acquisition Policy, which was launched in 2020 based on five key principles, spearheads this strategy. ENGIE has thus developed its methods, strengthened the professionalization of its HR teams and cultivated its agility. The Group has developed strategic partnerships with LinkedIn, Indeed, Glassdoor and Pole Emploi en France. The HR sector thus identifies, supports and develops the skills and resources needed by the Group. It anticipates and responds to the challenges of today and tomorrow.

At end-2022, within the World scope, 16,974 recruitments were made compared with 15,522 in 2021. These recruitments were up by 9.4% compared with 2021 (+1,452 hires) and respond to challenges to acquire new skills and maintain existing technical know-how, in a Talents market that is under increasing pressure.

These recruitments help support the transformation committed by the Group and progress differently according to country, activity and socio-professional category. In France, 7,414 employees were hired, of which 4,012 on permanent contracts and 3,402 on fixed-term contracts. Internationally, there were 9,560 hires in 2022, of which 7,073 on permanent contracts and 2,487 on fixed-term contracts, with a marked increase in North America and South America.

70% of recruitments relate to positions in the technical, engineering and business development areas. The profile of these hires is shifting toward increased expertise, particularly in the digital positions. Senior technician and supervisors was the category most affected by this recruitment momentum with 1,074 hires over the period, representing an increase of 18% compared with 2021. The recruitment of managers was also up to 8.6% with 3,466 managers hired in 2022, of which 1,058 female managers representing 30.5% of this population. In total, 28.2% of recruitments were women, with 4,790 females hired in 2022.

The Group continued with efforts to strengthen its performance in the sector through a more inclusive and efficient recruitment process: launch of the "License to Recruit" professional development path, as part of the new program to standardize and digitize HR processes.

	2022									2021	2021	2020
GRI 401-1	Renewables	Networks	Energy Solutions	Supply	Thermal	Nuclear	Others	*o/w GEMS*	Group	excl. EQUANS	Group	Group
Permanent hires	**639**	**1,123**	**6,616**	**1,379**	**202**	**38**	**1,088**	***295***	**11,085**	**9,440**	**17,276**	**16,540**
Women	215	348	1,401	343	30	4	504	*126*	2,845	2,323	3,863	3,611
Men	424	776	5,215	1,036	172	34	584	*169*	8,241	7,118	13,414	12,929
Fixed-term hires*	**361**	**738**	**2,939**	**1,327**	**65**	**1**	**458**	***138***	**5,889**	**6,082**	**16,530**	**12,941**
Women	168	315	704	474	20	0	265	*78*	1,946	1,929	3,279	2,723
Men	193	423	2,235	853	45	1	193	*60*	3,943	4,153	13,251	10,218
TOTAL	**1,000**	**1,861**	**9,555**	**2,706**	**267**	**39**	**1,546**	***433***	**16,974**	**15,522**	**33,806**	**29,481**
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

* *Including work-study students.*

3.4.3.4.8 Retention

The Group registered a slight 6.5% increase in departures in 2022: 10,528 departures compared with 9,883 in 2021. The economic context created by the public health crisis and the energy crisis has amplified the shortage of skills and has led to an upward trend in resignations. This trend is more pronounced internationally, with a global resignation rate of 8.7%, notably in North America and South America. In France the resignation rate remained moderate at 4.2%.

Particular attention was also paid to the change in resignation rates of Talents holding key positions within the Group or who have the potential to fill these positions. The same trend was also noted for all employees. Specific action plans were identified, adapted to individual or more collective needs. These aim in particular to:

- improve the ability of managers to identify, develop and retain their employees;
- offer rapid solutions in response to changes in the market;
- when necessary, improve the Employee experience throughout all stages of their careers;
- and monitor changes in trends.

	2022									2021	2021	2020
GRI 401-1	**Renewables**	**Networks**	**Energy Solutions**	**Supply**	**Thermal**	**Nuclear**	**Others**	*o/w GEMS*	**Group**	**excl. EQUANS**	**Group**	**Group**
Departures	491	993	6,304	1,472	252	111	905	*308*	10,528	9,883	21,612	19,537
Retirements	40	464	431	142	41	76	115	*21*	1,309	1,325	2,180	2,248
Resignations	326	285	4,002	929	155	28	550	*201*	6,275	5,301	12,656	9,444
Dismissals	81	165	1,405	256	18	7	115	*50*	2,047	2,072	4,633	6,166
Contractual terminations	44	79	466	145	38	0	125	*36*	897	1,185	2,143	1,677
Resignations rate	**6.9%**	**1.3%**	**9.5%**	**7.4%**	**4.4%**	**1.3%**	**6.1%**	***6.3%***	**6.5%**	**5.2%**	**7.4%**	**5.4%**
Turnover rate*	**9.6%**	**2.4%**	**13.9%**	**10.5%**	**6.0%**	**1.7%**	**8.8%**	***9.0%***	**9.6%**	**8.4%**	**11.3%**	**10.0%**
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

* *Excluding retirements.*

3.4.3.4.9 Organization of work

In France, most of the Group's entities have signed an agreement to implement regular remote working, on the basis of two to three days a week. Before the lockdown in March 2020, fewer than 30% of ENGIE employees worked from home. The level is now 40% on average, bearing in mind that a large majority of employees have field-based activities that do not allow them to work from home. Some entities have also signed agreements on the right to disconnect. These agreements for working time and improvements to working conditions helped to boost employee engagement and to contribute to a better quality of life in the workplace.

	2022									2021	2021	2020
GRI 403-2	**Renewables**	**Networks**	**Energy Solutions**	**Supply**	**Thermal**	**Nuclear**	**Others**	*o/w GEMS*	**Group**	**excl. EQUANS**	**Group**	**Group**
Absenteeism rate	5.0%	8.0%	6.1%	6.8%	5.0%	6.2%	6.1%	*9.1%*	6.6%	5.4%	5.5%	6.0%
Absenteeism rate due to sickness	2.2%	3.5%	3.7%	5.1%	2.7%	5.3%	2.3%	*2.7%*	3.6%	3.2%	3.6%	3.8%
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	100%	*100%*

3.4.4 COMPENSATION, SOCIAL PROTECTION, EMPLOYEE SAVINGS PLANS, AND EMPLOYEE SHAREHOLDING

3.4.4.1 Principles of the compensation policy

Group policy is to offer everyone compensation that is personalized, fair and competitive on the market, which reflects the performance and level of responsibility of each person. The Group uses external information provided by specialized firms to establish its positioning in relation to the local reference market. It also ensures compliance with the minimum wages applicable in the different countries in which it operates. Particular attention is paid to equal pay, with the calculation of the index (see Section 3.4.2.3.3). The overall compensation structure consists of a base salary and, depending on the level of responsibility and the country, variable compensation schemes to reward collective and individual performance. Since 2022, variable compensation provisions for the Group's executive managers include CSR objective for 15% of the total (see Section 4.4.1.2). For 2022, in recognition of employees' commitment and contribution in a time of unprecedented crisis, and due to the inflationary context and the Group's favorable financial performance, an exceptional gross bonus of €1,500 was paid to all Group employees.

3.4.4.2 Social protection and pensions

ENGIE ensures that it adheres to the best practices of major international groups. The Group ensures the competitiveness of its entities' systems in relation to local practices in terms of social protection and pensions. In 2020, ENGIE rolled out the ENGIE Care social protection program worldwide. This program allows each employee to benefit from health coverage, guaranteeing reimbursement of at least 75% of costs in the event of hospitalization. It also protects the employees' family or loved ones in the event of their death by paying a benefit equal to at least 12 months' salary. The signing of the new global agreement on fundamental rights and CSR is meant to guarantee protection of every employee by 2024 in the event of disability, as well as continuation of salary in the event of parental leave. A minimum capital amount equivalent to 12 months' wages must therefore be paid to employees who are permanently and totally unable to work. Moreover, employees must have received full pay for fourteen weeks in the event of maternity leave and a minimum of four weeks for paternity leave. This parenting pillar strengthens the work/life balance and equal opportunities between women and men. More generally, ENGIE Care thus raises the level of social protection for its employees and helps contribute to employee retention and strengthens ENGIE's CSR policy.

Finally, ENGIE Care is accelerating the Group's performance in terms of social benefits (including retirement) by mapping them to its various entities. This facilitates the pooling, and therefore optimization, of its plans. The entities also have access to international insurance networks which provide optimized subscription options, with the potential to share local and global surpluses.

3.4.4.3 Group employee savings plans policy

3.4.4.3.1 Savings plans

In France, since the end of 2009, the Group's employees have had access to a Group Savings Plan (*Plan d'Épargne Groupe* – PEG). The plan includes employee shareholding funds as well as a large range of diversified savings options. The total is close to €2 billion in assets at the end of 2022. Provisions have also been introduced in certain countries outside of France. These allow employees to save under terms adapted to local laws.

3.4.4.3.2 Retirement savings plans

In France, since 2010, all employees may, at their own pace, build funds for retirement through contributions to the Collective Retirement Plan (*Plan d'Épargne pour la Retraite Collectif* – PERCO). In 2022, ENGIE finalized the transformation of its PERCO plan, within the framework of the Pacte law. A call for tenders was carried out with social partners to overhaul the plans. Outside France, plans exist in some countries that allow employees to supplement their pensions by making voluntary contributions on favorable terms.

3.4.4.3.3 Principles of non-financial management

As part of these plans, in France, ENGIE selects management companies whose investment policies take environmental, social and governance (ESG) criteria into account. As such, they are all signatories to the United Nations Principles for Responsible Investment. In addition, a specific ESG policy has been implemented for part of the range by the fund governance. The governance of these systems includes representatives of management and social partners.

3.4.4.3.4 Solidarity funds

In France, the ENGIE solidarity employee mutual Fund (FCPE) called "*Rassembleurs d'Énergies Flexible*" is one of the largest dedicated solidarity funds in the French market. This fund is classed as an impact fund and has supplemented the range of Groups Savings Plan and Retirement Savings Plan investment products since 2012. It enables employees to take part in a social initiative that is consistent with their occupations.

3.4.4.4 Profit-sharing and incentive plans

Due to the coexistence of separate legal companies, there is no common collective profit-sharing and incentive plan for the Group. Collective variable compensation systems are widely developed in the subsidiaries. In 2022, the overall volume of employee profit-sharing and incentive plans for French subsidiaries reached close to €150 million.

At the ENGIE SA level, an incentive agreement was signed with all the representative trade unions on June 30, 2021 for a period of three years. This agreement provides for the payment of an envelope of 7.5% of the principal compensation in the event that targets are exceeded (financial targets for 4.5% and non-financial for 3%). The agreement notably includes a non-financial criterion related to the reduction of the carbon footprint of employees.

The incentive amount paid out in 2022 for 2021 was €16,629,949. The agreement setting up the employee profit-sharing system for ENGIE SA was signed on June 26, 2009. The application of the statutory profit-sharing formula for 2021 resulted in non-payment to employees in 2022.

3.4.4.5 Employee shareholding

With an employee shareholding level of 3.9%, ENGIE has a long-standing dynamic and innovative shareholding policy.

In 2022, ENGIE organized an employee shareholding operation in 21 countries as part of the Link 2022 program. In an uncertain geopolitical and economic context, almost 25,600 employees demonstrated their strong commitment to the Group's project by subscribing to the different formulas offered. The subscribed volumes represents close to 16,400,000 shares, i.e. 0.66% of the share capital. To allow employees to participate in the Group's growth and share these results, ENGIE intends to repeat this type of operation in 2024, subject to approval by the Annual Shareholders' Meeting and the decision of the Board of Directors.

3.4.4.6 Performance Shares and long-term incentives

ENGIE grants Performance Shares, which are described in Section 4.4.6.

These shares, which have a vesting period of three years, are subject to internal and external performance conditions. This plan is not reserved for senior managers only and ENGIE has a particularly wide allotment policy. Around 5,500 employees worldwide benefit from the plan.

3.4.5 SOCIAL DIALOG

Quality social dialog is conducted with commitment at the appropriate level: global, European and local. It made it possible to implement the Group's reorganization projects in a constructive and responsible manner, with collective bargaining agreements where necessary to set out the conditions of this social dialog and support measures for the restructuring.

Within national, European and, since 2022, global representative bodies and through national, European and global collective bargaining agreements, ENGIE involves its social partners in the implementation of its Social Ambition, which has been opened and broadened to take into account environmental and social challenges.

3.4.5.1 Representative bodies

At Group level, social dialog is organized around three bodies that are privileged forums for consultation between management and employee representatives: the French Group Works Council, the European Works Council (EWC) and the World Forum.

3.4.5.1.1 The French Group Works Council

The French Group Works Council represents the 46,521 Group employees located in France and has 30 full members. The French Group Work Council is a body for information and discussion with representatives of institutions representing the employees of French companies. It meets twice a year.

3.4.5.1.2 The European Works Council (EWC)

The EWC is the body that represents 74,930 Group employees in Europe; it is composed of our around thirty members. The EWC aims to maintain and improve social dialog around the Group's policies and strategies; it is also a body that provides information and consultation on projects and cross- border subjects. The body holds two plenary meetings each year and is supported by a Secretariat which meets around ten times a year, working groups and expert reports.

3.4.5.1.3 The World Forum

The World Forum is a new conventional body for global social dialog composed of 18 members representing the Group's 96,454 employees across the world. It strives for a balanced representation between the countries and continents in which the Group operates. Its purpose is to ensure the effective implementation of the global agreement signed in January 2022. Its first meeting was held on September 8, 2022. This meeting was an opportunity to review the progress of the ENGIE Care program and the achievement of objectives set out in terms of professional equality, parity and training on the international scale.

3.4.5.2 Group collective bargaining agreements

Two Group France collective bargaining agreements were signed, one introducing a mechanism for promoting the skills developed by employee representatives during their terms of office, and the other one providing means for social dialog at the Group level.

These agreements underline the commitment of trade unions and companies to achieving quality social dialog.

The Group also signed a Group agreement introducing a mandatory company retirement savings plan (*Plan d'Epargne Retraite Obligatoire* - PERO) allowing employees to build an additional retirement pension on top of their statutory pension.

3.4.6 NOTE ON THE CALCULATION METHOD FOR SOCIAL INDICATORS

3.4.6.1 Scope of reporting

The indicators published in this report relate to fully consolidated companies, whose capital and management are under the control of ENGIE. The social indicators are fully consolidated, regardless of the percentage of the company's capital owned. The reporting scope is the same as the Group Finance Department. Data is submitted by the Global Business Units and regional hubs created as part of the new organization established in 2021. Following the disposal of EQUANS in October 2022, data relating to this scope of activity was excluded from the social indicators published in 2022. A reporting level is attached to each indicator, according to the employees.

3.4.6.2 Consolidation methods

The content of the report is based on indicators selected to reflect the main social and societal impacts of the Group's activities. The indicators are chosen in accordance with the Global Reporting Initiative (GRI) standards.

The indicators for this report are consolidated using defined procedures and criteria. Data on the organization's structure, employee turnover, working conditions and training were consolidated by aggregation.

3.4.6.3 Tool

The social indicators are coming from Group social reporting (GSR). These are set out in a shared Group database that may be viewed on request. The collection, processing and reporting of data entered by the local entities, subsidiaries controlled by the ENGIE Group, is carried out in the SyGMA consolidation tool, in accordance with the IFRS financial scope.

3.4.6.4 Control

The social data are successively consolidated and verified by each operational entity before verification at the Group HRD level. ENGIE's statutory auditors then verify the social information collected and issue a reasonable assurance report.

This work is carried out at the same time as the work of the independent third party responsible for verifying the non-financial performance statement published in ENGIE's management report.

3.4.6.5 Additional information on some indicators

3.4.6.5.1 Employment

Administrative employees are recognized under "senior technicians and supervisors." The Belgian entities in the energy sector do not declare "workers, employees and technicians" (Electrabel).

Contractually, unskilled or low-skilled workers have employee status. This might cause an underestimation of this category. The French concept of *cadres* (managers) (≥ 300 points on the Hay Guide Chart, the universal job classification and evaluation system) is sometimes difficult to understand in other countries. This can lead to a slight underestimation because some entities may take only their senior management into account.

3.4.6.5.2 Employee flows

Indicators in this Section have been calculated on a current scope basis, i.e. the fully consolidated reporting entities included in the scope of consolidation at 12/31/Y. The "lay-offs" indicator does not include contractual terminations.

3.4.6.5.3 Diversity and equal opportunity

The declared percentage of people with disabilities provides the best possible information on the inclusion of people with disabilities. The Group does not consider it relevant to provide a reporting percentage for this indicator, since some entities are unable to gather the relevant information due to local regulatory restrictions.

3.4.6.5.4 Training

When all data cannot be provided within the timelines, the most recent are provided as well as a forecast of the missing data at year-end.

The definition of the indicator was changed in 2020 to ensure both on-site and e-learning training courses. The format and duration of a training may vary but must include a description of educational content. The breakdown of training hours by topic does not include e-learning hours.

3.4.6.5.5 Organization of working time

The working hours of personnel within the Group companies are organized within the legal framework for working time, which changes from country to country.

Days of absence per person are calculated according to the Group convention of eight hours of work per day.

3.4.7 HEALTH AND SAFETY POLICY

3.4.7.1 Performance

The Group's performance in terms of health and safety is as follows:

- a total lost-time injury frequency rate for employees and subcontractors operating on site with controlled access of 2.0 excluding EQUANS (2.5 in 2021), which is below the maximum target for the year of 2.4 (2.3 including EQUANS for a target of 2.8; result of 2.9 in 2021);
- a severity rate of lost-time accidents for employees of 0.06 excluding EQUANS (0.08 including EQUANS);
- prevention rate of 0.73 excluding EQUANS (0.65 in 2021), which is above the minimum target for the year of 0.66 (0.65 including EQUANS for a minimum target of 0.62; result of 0.58 in 2021).

The number of fatalities following work-related injuries among Group employees, temporary workers and subcontractors, excluding EQUANS, was four in 2022, all of which were subcontractors. There were five fatalities due to injury in EQUANS entities, these activities were disposed of at the beginning of October 2022. In addition, two subcontractors died from natural causes onsite, excluding EQUANS, with no visible link to a professional activity. Requests to reclassify these deaths as non work-related deaths have been made.

The prevention of serious and fatal accidents led to the definition and implementation of an ENGIE health and safety transformation plan, *ENGIE One Safety*, which is presented in Section 3.4.7.2.3.

3.4.7.2 The health and safety management system

The Group's health and safety policy sets out the key principles for the management of health and safety. A reviewed version of this policy was published in 2022 as part of the introduction of a global framework agreement covering fundamental rights and ENGIE's social responsibility. The policy is available on the Group's website at the following address: www.engie.com/en/news/international-social-agreement.

The main changes compared to the previous version relate to the prevention of psychosocial risks and improving well-being at work. New provisions added to the policy relating to this axis of prevention included:

- raising awareness among managers regarding well-being at work, notably in terms of the organization of work and work-life balance;
- raising awareness among managers regarding the identification of psychosocial risks, such as stress at work and harassment;
- support for the "nine commitments for a better well-being at work";"
- support for the principle of the "right to disconnect" and the promotion of best practices relating to the use of digital tools (email, mobile phones, social networks, etc.).

In terms of health and safety indicators, the Group had introduced a new indicator in 2019: the prevention rate. The prevention rate had been defined as the number of HiPo (events and situations with high potential of severity, precursors to serious and fatal accidents) divided by the number of HiPo plus the number of lost-time injury accidents.

The objective which the Group had set when the prevention rate was introduced to encourage the identification and reporting of HiPo has been achieved, with the Group achieving this objective earlier than expected. It has therefore been decided that this indicator will no longer be monitored as of 2023, although the tracking and analysis of HiPo events will continue and even be reinforced.

A new indicator will be introduced as of 2023, the fatality rate as defined by the standard GRI-403 relating to the publication of performance indicators covering health and safety in the workplace.

3.4.7.2.1 Performance reporting

The Group's performance in terms of health and safety at work are monitored by:

- the Executive Committee;
- the Ethics, Environment and Sustainable Development Committee (EESDC);
- the Board of Directors.

In 2022, all in-depth analyses of fatal workplace accidents were presented to the Executive Committee in the presence of the operating manager involved and to the EESDC. Regular updates were also provided at meetings of the Board of Directors and the Operational Committee (OpCom).

The health and safety performance is shared with managers and the Group's health and safety functional line. They are distributed within the entities via managers and made available to all employees on the Group Intranet.

3.4.7.2.2 Evaluation of the Group's health and safety organization and culture

Following fatalities in 2021, dss+, a specialist external consultant, was charged with carrying out a full assessment of the health and safety culture and organization.

This assessment was carried out based on the following elements:

- an extensive survey of Group employees and subcontractors regarding their view of health and safety;
- interviews with Group's executive managers;
- an evaluation of the implementation of health and safety provisions in the field via various visits of Group sites and sites belonging to the Group's customers;
- an analysis of data and health and safety results.

The assessment carried out by the consultant identified the Group's strong points and resulted in the issue of a certain number of recommendations covering the areas for improvement identified.

3.4.7.2.3 ENGIE One Safety transformation plan

Following the analysis of its serious and fatal accident prevention system and recommendations made by the external consultant, the Group has drawn up, in partnership with its operating entities, a major health and safety transformation plan called ENGIE One Safety. The aim of this plan is to sustainably eradicate serious and fatal accidents affecting individuals who work for the Group - employees, subcontractors and temporary workers.

The plan covers seven areas:

- strengthening the health and safety culture of all people working for the Group;
- adapting health and safety governance and organization;
- reviewing the Group's health and safety rules;
- reorganizing onsite health and safety internal audits and support to entities;
- strengthening the Group's health and safety function with better support from human resources;
- improving the health and safety management of subcontractors as well as in construction and decommissioning projects;
- a communication and change management plan.

The main measures applied in 2022 with regard to the transformation plan were as follows:

- the Group adapted its health and safety governance, to include the monitoring of ENGIE One Safety by the Executive Committee. In particular, a new set of indicators was defined to monitor the prevention of serious and fatal accidents more closely;
- the Group tested a new training program for the operational managers at seven pilot sites which it intends to roll out as of 2023. This program is based on an innovative coaching approach and aims to improve the efficiency of managerial safety rituals, such as safety visits, to promote the appropriate safety behavior of employees and subcontractors with regard to risks, in particular to the most serious risks;
- the Group is committed to tightening its health and safety rules, those relating to subcontractors (Group Rule GR02), to the management of serious, potentially serious and fatal accidents (Group Rule GR03), to risk management (Group Rule GR04), to health and safety in projects (Group Rule GR09), to compliance with Life Saving Rules (Group Rule GR11) and to the promotion of a fair culture (Group Rule GR14);
- the Group has reviewed its health and safety internal audit system, which now focuses on the prevention of serious and fatal accidents, which will allow it to verify that the ENGIE One Safety plan is implemented locally, share best practices and help operating entities to improve the provisions already in place.

In addition to these various actions, the Group has launched a new communication campaign "Never compromise on safety" which features a reminder of the "Life Saving Rules".

3.4.7.2.4 Health and safety at work risks management

Group entities have continued the implementation of existing occupational accident prevention measures, in particular for the most serious accidents.

The prevention of serious and fatal accidents is based on the identification of risks and the implementation of measures aimed primarily at eliminating exposure to risks, or at implementing appropriate collective and individual protection measures, particularly by means of the safety rules imposed by the Group. Specifically, the Group has defined nine "Life Saving Rules," covering the major risks identified, which constitute the last barrier of prevention before a serious or fatal accident, if all other provisions have not worked.

The entities pursued a systematic approach to identifying, analyzing and handling situations and events with high potential of severity (HiPo). These HiPos are identified by the operational entities, which draw up an action plan for each of them to prevent their recurrence. The HiPos and their analysis are collected by the Group, which shares them with the entities through its health and safety functional line.

Moreover, operators are asked to stop the work if safety conditions are not met (the "Stop the work" approach). Operators must also implement "the Last Minute Risk Assessment," which consists of carrying out a new and final on-site review of risks to ensure that these are correctly under control before carrying out an operation.

Lessons were specifically shared after each serious accident analysis and specific preventive measures were then implemented.

Due to the number of fatalities within the Group in 2022, a new safety stand down was organized, as was the case in 2021. This was a dedicated opportunity for discussion, when all the Group's activities were suspended and the teams invited to reflect on what measures to take to strengthen safety at work within the Group

3.4.7.2.5 Improving well-being at work

For several years, the Group and its subsidiaries have been implementing dedicated measures to improve the well-being at work of their employees and the prevention of psychosocial risks ("No mind at risk" axis of prevention). The Group does this, in particular, by promoting physical activity and sport in local initiatives.

Since 2021, the Group has been implementing an initiative called "Nine commitments for improvement of well-being at work." Each Group employees is therefore invited to respect these nine commitments aimed at encouraging virtuous behavior for a better well-being at work.

These nine commitments were drawn up by a working group whose members are part of the Group's well-being at work network, including representatives of the entities and the health and safety and human resources functional lines, as well as physicians specializing in labor issues. These commitments define as follows:

- "I contribute to a climate of trust based on empathy and mutual respect ."
- "I am respectful and contribute to the improvement of my working environment ."
- " I share information and maintain a constructive dialogue."
- "I contribute to teamwork in all of its forms ."
- "I am attentive to myself and others."
- "I recognize the work of my colleagues and offer them praise."
- "I take interest in what is happening in my organization to give meaning to my work ."
- "I am committed to my career path."
- "I maintain my work-life balance and that of others."

In 2022, the Group supplemented the "No mind at risk" axis of prevention by integrating the well-being at work indicators drawn up based on the results of the Group's annual ENGIE&ME survey. These indicators mainly relate to caring and respect for work-life balance, recognition, the organization and content of work, professional achievement and development, the work environment and social relations. These indicators allow each work team to assess its level of compliance with each commitment. Guidelines were made available to managers to help collectively build a well-being at work improvement action plan which meet the specific needs of the team.

E-learning course: "Managing through well-being at work" was made available to managerial staff.

3.4.7.3 Strengthening the health and safety culture

Various tools were used to strengthen the health and safety culture among the Group's employees and subcontractors.

The health and safety functional line animation makes extensive use of digital tools, with a great deal of work going into dissemination of information to the various entities. This work is notably supported by the organization of thematic monthly webinars, presentations of the analysis of fatal accidents and the provision of various technical support.

A bi-weekly newsletter, "Prevention News," covering most of the exchanges with the GBU and entities, was sent out to the entire health and safety functional line. This document enables information on all accidents, significant hazardous situations and events with high potential of severity (HiPo) to be shared Group-wide.

3.4.7.4 Dialog with social partners

In 2022, dialog with employee representatives continued at all levels of the Group and particularly with global and European bodies. A permanent health and safety at work working group is active within the European Works Council (EWC). It reviewed the performance and actions taken in terms of health and safety and well-being at work.

Moreover, the ENGIE One Safety transformation plan was presented to the EWC working group as well as during the meeting of the World Forum, a body to facilitate discussions between the Group and employee representatives created as part of the global framework agreement covering fundamental rights and ENGIE's social responsibility.

3.4.7.5 Health and safety data

ADDITIONAL INFORMATION REGARDING THE HEALTH AND SAFETY INDICATORS

The analyses carried out in this Universal Registration Document concern the entities and activities in which ENGIE has operational management, regardless of the method of financial consolidation.

Results for 2022, 2021 and 2020 for employees in the table below are presented excluding EQUANS and other disposed entities.

Concerning the indicator relating to the number of new cases of occupational illness, we do not consider it relevant to provide a refund rate since some companies cannot collect this indicator due to local regulatory constraints.

	Number of deaths (employees excluding natural causes)			Lost-time injury frequency rate (employees			Severity rate [2] (French framework)			Severity rate [2] (ILO framework)			Number of new cases of occupational illness		
	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
Group [1]	0	2	0	2.3	2,8	2.5	0.15	0.08	0.09	0.06	0.05	0.06	12	22	5
France excluding Infrastructures	0	0	0	3.78	4.97	4.58	0.29	0.35	0.32	0.11	0.19	0.13	7	19	4
France infrastructures	0	0	0	2.45	3.1	2	0.23	0.16	0.07	0.07	0.12	0.07	4	0	0
Rest of Europe	0	0	0	3.37	1.19	3.64	0.13	0.04	0.16	0.09	0.04	0.16	1	3	0
North America	0	0	0	0.00	1.42	0.7	0.20	0.02	0.01	0.00	0.02	0.01	0	0	1
South America	0	0	0	0.79	1.28	0.26	0.04	0.03	0.03	0.02	0.01	0.03	0	0	0
Asia, Middle East, Africa	0	2	0	0.73	0.31	1.45	0.01	0.00	0.03	0.01	0.00	0.03	0	0	0
Others	0	0	0	0.63	0.68	0.71	0.01	0.04	0.02	0.01	0.02	0.02	0	0	0
% reporting	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	-	-	-

(1) The Group covers ENGIE's seven sectors.
(2) The evolution of severity rates does not include fatalities.

3.5 ENVIRONMENTAL INFORMATION

ENGIE faces the main environmental challenges: climate change, the quality and availability of natural resources (air, water, soil and energy) and the protection of biodiversity and ecosystems. Although its activities sometimes have an impact on ecosystems and natural resources, the Group seeks to measure and reduce this via the environmental management of its activities.

ENGIE's challenges and ambitions in this area are reflected in the Group's environmental policy (available on the following webpage: https://www.engie.com/en/group/social-responsibility/policies) and in the performance indicators deployed across all its activities. The challenges also include the risks identified in the environmental vigilance plan. A team in charge of analysis and coordination is specifically dedicated to environmental responsibility and reports to the Group CSR Department. It has environmental coordinators in each region or country who lead their own networks of coordinators, organize actions, supplement corporate expertise with their knowledge of operations, and implement environmental reporting.

The Corporate Social Responsibility Department produces an annual report which is sent to the Executive Committee and then presented to the Board of Directors' Ethics, Environment and Sustainable Development Committee. This report is supplemented by Regional hubs' own reports and letters of environmental compliance, as well as the results of environmental audits ordered by the Executive Committee.

3.5.1 LEGAL AND REGULATORY FRAMEWORK

The Group actively monitors regulatory developments (set out in Chapter 2 "Risk factors and controls"), stating its positions while they are being prepared and applying the new rules as soon as they are published. In particular, the Group has been calling for the harmonization of international regulations and greater integration between the various environmental and energy policies. In the run-up to COP21, the Group strongly pledged to support an ambitious international climate agreement to limit the global temperature rise to 2°C. It also pledged to support the more widespread application of regulations on carbon pricing, which would be a strong signal for investment in low-carbon technologies and an incentive to reduce greenhouse gas emissions. To this end, the Group plays an active role in the CPLC (Carbon Pricing Leadership Coalition).

3.5.2 ENVIRONMENTAL MANAGEMENT

At the end of 2022, the entities that had implemented an Environmental Management System (EMS) accounted for 75.6% of relevant revenues[1]. The need to obtain external EMS certification is assessed locally with regard to local economic conditions and benefits.

Percentage of relevant revenues covered

Indicator title	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
By an EMAS certification	8.86%	7.30%	3.72%
By an ISO 14001 (non-EMAS) certification	59.12%	55.76%	56.41%
By another external EMS certification	0.03%	0.78%	2.81%
TOTAL EXTERNAL CERTIFICATIONS	**68.01%**	**63.85%**	**62.93%**
By an internal certification (but not by a certified EMS)	7.59%	9.38%	11.92%
TOTAL INTERNAL AND EXTERNAL EMS	**75.6%**	**73.2%**	**74.9%**

(1) Revenues generated after excluding activities not considered pertinent in terms of environmental impact: services, trading, sales, activities, etc.

When the implementation of a certified or registered management system is not economically justified, entities are encouraged to define an internal management system ensuring concern for the environment in carrying out their activities. As a result, some Group entities have defined their own management system standard. When an internal or external EMS is implemented, employees take part in awareness and training sessions relating to the environmental issues they encounter at their sites so that they adopt the EMS methodology and make it their own.

3.5.3 PERFORMANCE CONTROL AND MEASUREMENT SYSTEMS, A PREREQUISITE FOR ENVIRONMENTAL RESPONSIBILITY

To monitor the implementation of its environmental policy, control environmental risks and encourage the communication of its environmental performance to stakeholders, ENGIE implements a specific reporting system that goes beyond the requirements of French law and which takes into account the Global Reporting Initiative (GRI) recommendations.

Environmental reporting is closely tied to operational performance reporting, thus becoming a management tool. The Group's Executive Committee transmits this goal of making environmental concerns an integral part of management responsibilities.

Methodological elements

Organization and scope

ENGIE conducts its environmental reporting using a dedicated tool that allows data to be reported following a defined methodology. This tool, called EARTH, is an environmental reporting IT solution used to manage the network of environmental correspondents and coordinators; to handle the management and documentation of the scope of environmental reporting; to manage data entry, monitoring and consolidation of indicators; to draft reports; and to provide the documentation necessary for producing and collecting data (reporting procedures and instructions).

EARTH is deployed in each regional Hub and thus covers the entire ENGIE organization.

The legal entities included in the reporting scope are those whose operations are relevant in terms of environmental impact and that are consolidated fully or proportionately under the rules of financial consolidation (IFRS). Legal entities whose sole business is energy trading, financial activity or engineering are therefore excluded from the scope, as are legal entities consolidated using the equity method. The entities included in the reporting report on the performance and impacts of the industrial facilities over which they have technical operational control, including facilities operated on behalf of third parties. In 2022, ENGIE nevertheless started to roll out its comprehensive survey of the entities consolidated by the equity method GBU Energy Solutions and the GBU Networks to acquire environmental-based information from a wider scope.

Thus, in accordance with the rules of financial consolidation, 100% of the impact data collected is consolidated when the entities are fully consolidated. For entities proportionately consolidated, the environmental impact data are consolidated in proportion to the Group's consolidation rate provided that it has 100% technical operational control or that, as a minimum, this is shared with other shareholders.

For disposals occurring during the year, the entities concerned complete the environmental questionnaire with the data available as of the last day of the month preceding the disposal. If it is not possible to collect all the environmental indicators, they are extrapolated on the basis of the main activity (for example, energy production for a power plant) and historical data. For acquisitions made during the year, it may happen that their environmental management system is not sufficiently mature to meet all the environmental indicators. In this case, the missing indicators are extrapolated on the basis of the main activity and indicators available in entities with a similar technical profile. A correction of these extrapolated values can be made a posteriori the following year, at the end of the first full fiscal year.

To calculate environmental management indicators such as the "share of relevant revenues covered by an environmental certification, an environmental crisis management plan, etc.," the relevant revenues is estimated for each legal entity. To obtain the relevant revenues, operations regarded as "not relevant in terms of environmental impact" (e.g. trading, finance and engineering) are stripped out of the consolidated revenues figure for each legal entity.

Procedures and guidelines are rolled out Group-wide via a network of duly mandated environmental contacts and coordinators. These procedures and guidelines at Group and regional or country level describe in detail the environmental data collection, control, consolidation, validation and transmission phases at the different levels of the organization, as well as the rules for defining the scope of consolidation. They include technical documents that provide methodological guidelines for the calculation of some specific indicators. Depending on its activities, each entity is assigned a profile that determines the indicators to answer. The list of the entities included in the scope of environmental reporting is approved by each region or country.

The definitions of the indicators used to measure the environmental performance of Group businesses have been revised based on comments made by the Statutory Auditors. They also take into account the comments by line managers represented in dedicated work groups. All the documentation is available from the Group upon request (CSR Department).

Until 2016, ENGIE would provide a "coverage rate" for each indicator published, corresponding to the response rate obtained from all the entities surveyed. Since 2017, thanks to the implementation of the new EARTH reporting tool, the coverage rate has been 100% for all indicators.

A certain number of methodological choices have been made to carry out the environmental reporting. These are described in the following five paragraphs.

General information

- The reliability of the scope of environmental reporting is a priority for ENGIE, which is evolving in an international context of business disposals and acquisitions. Before every reporting campaign, the financial scope for consolidation is compared against the information fed back by each regional Hub's environmental managers in order to check which industrial entities contributing to EARTH report to which financial entities. Moreover, reconciliations are carried out on several occasions using PERFORM, ENGIE's database which is dedicated to the operating performance of energy production facilities, to carry out an additional verification of the comprehensive nature of the scope.

- Significant environmental impacts resulting from subcontractors during services performed at one of the Group's facilities must be included in the Group's impacts except when a specific contractual clause provides that a subcontractor is liable for impacts generated at the site while providing the service. Data provided by subcontractors is not subject to systematic internal verification before being included in Group data and is the responsibility of the subcontractors alone. Regulations and legal obligations related to the environment may differ from one country to another, and certain data may thus be sometimes more difficult to gather.
- Since 2007, ENGIE has been a signatory to the CEO Water Mandate, thus demonstrating its commitment to the preservation of water resources. The water indicators are consistent with the GRI indicators and fall into four categories: withdrawal, discharge, consumption, reuse/recycling. Since 2015, the materiality of the water indicators published has been reviewed and the Statutory Auditors verify the inputs, outputs and consumption of fresh and non-fresh water as well as total consumption.

Non-GHG indicators

- NO_x, SO_x and fine particulate matters emissions are calculated locally on the basis of measurements. If discontinuous measurements are taken on a site, an average of the measurements over the last five years is taken where possible to avoid inconsistencies related to one-off measurements. For facilities burning natural gas that do not have automated measurement systems, a calculation method is provided for NO_x emissions and a default emission factor for SO_x (0.281 g/GJ LHV) and an other for fine particle emissions (0.9 g/GJ LHV) have been set up (factors recommended by the European Monitoring and Evaluation Programme - EMEP).
- As it is concerned about what becomes of the waste generated by its activities, the Group has indicators on the production and recovery of the waste generated by its activities. These are based on definitions of waste and recovery established by local regulations. To avoid erroneous data about stock, only the tonnages taken away and weighed on site are reported as disposed of. The tonnages that must be reported are wet or dry, depending on the way they are disposed of: if the waste disposed of was wet, the reported tonnages are wet and the converse for dry waste. As an exception, if the waste is permanently stored on site, the associated dry tonnages must also be reported as disposed of. In the latter case, the waste is never recovered. Waste generated by the construction or dismantling of plant and equipment, by the repowering or upgrading of facilities, and by soil rehabilitation, are not covered by the indicators for waste generated by activities.
- ENGIE operates hydraulic installations, some of which have water tanks. Given the difficulties in modeling the evaporation of each site, the evaporated water is not yet included in environmental reporting.
- Pumping storage stations are now recognized in the same way as batteries, as recommended by the European taxonomy. In this regard, electricity consumption corresponds to the difference between electricity supplied by the network and that returned to the network. The latter, as a result, is no longer accounted for under ENGIE's electricity production. This modification was applied with retroactive effect as from 2015 for the sake of consistency.
- For the sake of consistency, the factor for converting thermal power produced (GWhth) into electric power (GWhe) is set at 0.25 for incinerators and at 0.61 for all of the Group's procurement and energy production activities. This last factor was updated with retroactive effect as of 2015 for consistency purposes on the basis of EU Commission Delegated Regulation 2015/2402.
- The energy efficiency indicator covers fossil fuel and biofuel power plants. It also includes heat supplied by third parties as well as steel gases (see the note on heat and that on steel gases below).

GHG indicators: direct emissions (Scope 1)

- CO_2 emissions from the combustion of fossil fuels were calculated based on the most recent emission factors published by the IPCC (IPCC Guidelines for National GHG Inventories, Vol. 2 Energy – 2006). However, the emission factors for coal can vary greatly depending on the provenance. For this reason, each reporting entity consuming coal provides a locally calculated emissions factor. This also holds for alternative fuels for which it is not possible to use standard emission factors.
- The biomass and biogas consumed by ENGIE in its facilities generates energy that is counted as ENGIE production and, in accordance with conventions in this area, ENGIE counts CH_4 and N_2O emissions associated with their combustion when these fuels are used to produce energy but does not count CO_2 emissions.
- The Global Warming Potential (GWP) compares the warming capacity of the various greenhouse gases to CO_2. The GWP used to convert the Group's greenhouse gas (GHG) emissions to CO_2 equivalent are the latest GWP published by the IPCC (6th IPCC Assessment Report – 2022), considered on a 100-year scale. Therefore, the GWP of methane was decreased in 2022 from 36 to 29.8.
- Specific GHG emissions from energy generation in kg CO_2 eq./MWh are calculated for the regional hubs and GBU where this is a main activity: Generation Europe, North America, Latin America, Brazil, Asia Pacific, Middle East, South and Central Asia, and Turkey, Benelux, North, South and Eastern Europe, UK, France BtoB, France Networks, and France Renewable Energy.
- ENGIE carries out residual gas recovery services for its steel producing customer ArcelorMittal. This service allows ArcelorMittal to meet the majority of its electricity needs and thus reduce its GHG emissions by avoiding a high level of energy use by the network. When analyzing the GHG emissions relating to these services, ENGIE has noted that 100% of the emissions relate to the steel manufacturing process. At the end of this process, regulations require that steel producers burn residual gases, generally through flaring. ENGIE only intervenes in this process to extract energy that would otherwise have been lost to flaring, by taking over for ArcelorMittal in the burning of the residual gases, but without generating additional GHG emissions. This is why ArcelorMittal's reporting methodology includes direct emissions from the external plants to which the residual gases are delivered for recovery. This state of affairs is confirmed by Law No.2019-1147 of November 8, 2019 on climate and energy and the related decrees which set the greenhouse gas emissions ceiling for fossil-fueled power plants. Decree No. 2019-1467 of December 26, 2019 states that "Emissions from waste gases used in electricity production facilities are not recognized." Consequently, ENGIE now excludes these GHG emissions from its Scope 1

and the DK6 power plants in France and the Knippegroen and Rodenhuize power plants in Belgium no longer report emissions associated with steel gases. As these are residual gases and not fuel with a supply chain, ENGIE does not include emissions from an upstream fuel chain in its Scope 3. With the exception of GHG emissions related to the combustion of steel gases, all environmental indicators for these entities are included in the consolidated data, as well as their energy production.

GHG indicators: indirect emissions (Scopes 2 and 3)

- The nature of heating purchases accounted for under scope 2 changed in 2022. Heating from Energy Recovery Units (ERU) or non-ERU are therefore no longer included in the calculation of Scope 2 emissions. ENGIE is therefore in line with French practices in this area, as set out in the methodology of the Syndicat National du Chauffage Urbain (the French national district heating syndicate - SNCU) in response to the annual survey on Heating and Cooling Networks. This survey serves as national statistics for the Ministry of Energy Transition and the basis of calculation for CO_2 content and the EnRR rate of each network published in the energy performance diagnosis decree. Heating purchases taken into account only relate to heating produced excluding ERU. Based on MWh purchased, an average loss rate of 16.5% supplied by the SNCU is used to recognize MWh of heat lost during transmission and calculate scope 2. In 2022, heating purchased generated excluding ERU represented 8.11% of all heating acquired. In the absence of historical data to distinguish between ERU heating and non-ERU heating, the same percentage has been applied retrospectively since 2015 for the sake of consistency.
- Two methodological changes that occurred in 2022 had a significant impact on Scope 2 in particular, with retroactive effect from 2015. It concerned the exclusion of the heat recovered from ERUs and the change in the status of pumped storage stations from electricity production facilities to batteries. As a result of the restatement that followed, Scope 2 in 2021 dropped from 1,903,934 tCO_2eq to 552,962 tCO_2eq (-71%) while scope in 2020 dropped from 2,330,625 tCO_2eq to 613,714 tCO_2eq (- 73.7%). To measure the impact of these measures, the decrease compared with 2021 was the result of the change in pumped storage of roughly -37% and by the change in heat from the ERUs of 34%.
- In the “Use of sold products (fuels sold to end-consumers, off market)” indirect emissions category, the term “end-consumer” refers to customers who use the natural gas purchased themselves. Volumes sold to trading platforms, resellers, Local Distribution Companies or other intermediaries not owned by ENGIE are, therefore, excluded.
- In 2022, three sources of emissions were added to Scope 3 to make it even more exhaustive:
  - emissions from the upstream chain of electricity purchased for resale were calculated and represent 62.5% of the energy-related emissions category not included in the “direct GHG emissions” and “indirect energy-related GHG emissions” categories and 18.3% of the total Scope 3 in 2022. Emissions of the TWh sold are determined by first calculating the emissions from ENGIE’s production. The emission factors used for this include the complete LCA, including the construction of the installations, except for combustion installations for which the factors are applied to their actual fuel consumption. This method is more precise than the calculation based on the LCA for this type of installation. These production emissions are then deducted from ENGIE’s total sales in the countries concerned, calculated on the basis of European average factors including the complete LCA, including construction;
  - following the extension of the environmental data collection to the entities consolidated by the equity method of the GBU Energy Solutions and the GBU Networks, the “investments” category now includes direct emissions from all energy production but also from other activities such as gas networks;
  - sales of biomass and biomethane to end-users are now collected to complete the “use of sold products” category by calculating biogenic emissions. This last addition also completes the first category mentioned in this paragraph with emissions from the upstream chain of these two fuels.

3.5.4 GROUP ACTIONS

3.5.4.1 Climate change

Direct emissions

Information presented in this Section and in Section 2.2.2 “Climate change” reflects the financial risks associated with the effects of climate change and the measures taken by the company to mitigate them by implementing a low carbon strategy in all areas of its business as required by Article L.225-37 of the French Commercial Code.

By developing a low carbon[1] energy mix and through its energy efficiency activities, the Group has put energy transition and the fight against climate change at the heart of its strategic focus. Thus the carbon intensity of energy production in 2022 was 151.8 $gCO_2eq./kWh$, down 14.8% from 2022 and 65% from 2012. The Group’s absolute direct CO_2 eq. emissions, known as “Scope 1 emissions,” fell by more than 6.03 million tons in one year, from 35.86 tons to 29.83 million tons, a 16.8% reduction.

These results reflect the Group’s desire to follow an emissions trajectory compatible with the Paris Agreement’s objective of not exceeding +2°C by 2050, which corresponds to an 85% reduction in its direct emissions by 2050 compared to 2012, total disengagement from coal, and growth in green energy (renewable electricity and biogas).

In addition, the Group supports TCFD’s (Task Force on Climate-related Financial Disclosures) recommendations for greater transparency on the risks and opportunities related to the impacts of climate change, monitors issuer-investor work and, for the first year, will produce a TCFD report when it publishes its Climate Notebook. In the following year, this TCFD report will be amended to incorporate the results of the ongoing financial assessment work, as required by the TCFD. The Group publishes its Scope 1, 2 and 3 (main items) emissions and answers the CDP’s Climate Change questionnaire each year.

(1) The share of energy production from non-fossil sources has increased by 106.5% in eight years, from 28.6% in 2015 to 59% in 2022.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Total direct GHG emissions – Scope 1 ◻◻	t CO_2 eq.	29,832,102	35,860,798	38,606,036
of which emissions from energy production	t CO_2 eq.	27,917,242	33,697,812	36,394,644
of which CH_4 emissions	t CO_2 eq.	1,263,608	1,624,082	1,516,355
- share of Gas Distribution	t CO_2 eq.	947,586	1,197,204	1,123,286
- share of Gas Transmission	t CO_2 eq.	192,740	247,550	237,814
- share of Gas Storage	t CO_2 eq.	78,928	92,691	78,678
- share of LNG Terminals	t CO_2 eq.	44,354	86,637	76,577
Incl. other emissions (vehicles, fluorinated gases, etc.)	t CO_2 eq.	651,252	538,905	695,037
Carbon intensity from energy production ◻◻	kg CO_2 eq./MWheq.	151.8	178.2	208.1

◻◻ *Verified by the Statutory Auditors with "reasonable" assurance for 2022 (see Section 3.11).*

Adaptation through anticipation of the negative impacts of climate change is key to making ENGIE's infrastructure and activities more resistant to natural hazards (more extreme events such as floods and droughts, etc. and other more progressive phenomena such as rising sea levels, rising temperatures, etc.). The risks generated by climate change are varied and include physical risks, risks of disruption to value chains, reputational risks and regulatory risks.

ENGIE is implementing practical measures to guard against this set of risks, including, for example, the construction of a perimeter wall to tackle the risk of exceptionally heavy flooding at the Tihange site in Belgium, a vegetation project to prevent soil erosion in the event of storms in Mexico (Mina Solar solar park), the digging of ditches and a reservoir to deal with the risk of flooding at the Capel Grange solar park (United Kingdom).

The Group has also established methods to help its various sites to draw up adaptation action plans. The use of tools, such as Aqueduct software for managing and analyzing water risks and areas of water stress, helps the Group to identify local-scale risks and enables it to identify adaptation strategies tailored to the problems and features of each site.

Adapting to climate brings multiple beneficial effects for ENGIE: anticipating risks enables it to manage its assets better, cut costs and expand its market to new products and services.

Indirect emissions

The Group's approach to GHG emissions accounting and reporting is based on the GHG Protocol Corporate Standards (for companies) and the ISO 14064 standard (supplemented by ISO 14069). These standards constitute an internationally recognized reference framework.

ENGIE has analyzed the various categories of emissions in order to identify and quantify the most pertinent categories. The following categories have been identified and quantified to date.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Indirect emissions related to energy("Scope 2") ◻◻	t CO_2 eq.	751,862	538.222	613.714
of which indirect emissions related to power consumption	t CO_2 eq.	743,376	529.273	598.797
of which indirect emissions related to the consumption of steam, heating or cooling	t CO_2 eq.	8.486	8.948	14.917
Other indirect GHG emissions ("Scope 3")	t CO_2 eq.	143,705,796	122,487,530	124,240,115
Upstream fuel chain (Energy-related emissions not included in the "direct GHG emissions" and "indirect energy-related GHG emissions" categories)	t CO_2 eq.	41,978,623	17,765,961	19,343,594
of which emissions for electricity purchased for resale (added in 2022)	t CO_2 eq.	26,250,871	-	-
Investments (GHG emissions from power plants consolidated under the equity method)	t CO_2 eq.	32,136,497	31,465,816	31,150,692
of which emissions from energy production	t CO_2 eq.	31,626,021	31,465,816	31,150,692
of which emissions from other activities (added in 2022)	t CO_2 eq.	510,476	-	-
Use of sold products (fuels sold to end-consumers, off market)	t CO_2 eq.	61,304,676	65,561,753	61,496,829
of which sales of natural gas and LNG	t CO_2 eq.	61,279,484	65,561,753	61,496,829
of which sales of biomass and biomethane (added in 2022)	t CO_2 eq.	25,192	-	-
Purchased products and services	t CO_2 eq.	5,466,061	5,486,727	8,976,422
Capital equipment	t CO_2 eq.	2,820,358	2,206,878	3,273,440

◻◻ *Verified by the Statutory Auditors with "reasonable" assurance for 2022 (see Section 3.11).*

3.5.4.2 Renewable energy

The strengthening of the Group's capacity in renewable energy has continued, for both electricity and heat production and, in the case of biogas, for transportation. In 2022, the renewable energy capacities of facilities controlled by ENGIE, excluding equity-accounted companies and unconsolidated operations, represented 22.07 GW equivalent of installed energy (GWeeq).

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Renewable – Net installed power (electric and thermal) □□	MWeeq.	22,077	20,374	17,676
Renewable – Electricity and Heat produced □□	GWheeq.	70,267	63,470	56,610
Energy produced – share of large hydropower	Percentage	59.7%	60.6%	62.7%
Energy produced – share of small hydropower	Percentage	1.2%	1.3%	1.7%
Energy produced – share of wind	Percentage	23.1%	22.7%	17.7%
Energy produced – share of geothermal	Percentage	0.4%	0.4%	0.3%
Energy produced – share of solar	Percentage	7.0%	4.8%	5.0%
Energy produced – share of biomass and biogas	Percentage	8.6%	10.2%	12.6%
Renewable and Non-Renewable – Electricity and Heat produced	GWheeq.	183,871	189,066	174,912
Renewable share of total electricity and heat produced	Percentage	38.2%	33.6%	32.4%

□□ *Verified by the Statutory Auditors with "reasonable" assurance for 2022 (see Section 3.11).*

3.5.4.3 Energy efficiency

For electricity production facilities, energy performance is directly connected to the site's efficiency which influences its profitability. Measures taken to improve the generation fleet, and which are compliant with environmental regulations and the constraints of the electricity market, have helped optimize its energy efficiency and, hence, consumption of raw materials. For example, the replacement of older turbines or boilers with recent models has an immediate positive impact on a facility's energy efficiency.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Energy production of controlled facilities (Scope 1)	GWheeq.	183,871	189,066	174,912
Energy production of equity-accounted facilities (Scope 3)	GWheeq.	92,222	88.544	93,230
Primary energy consumption – total (excluding own consumption) □□	GWh LHV	278,433	313,840	284,606
Share of coal/lignite	Percentage	4.79%	10.18%	10.12%
Share of natural gas	Percentage	41.35%	36.32%	46.19%
Share of fuel oil (heavy and light)	Percentage	0.83%	0.73%	0.71%
Share of uranium	Percentage	44.68%	45.36%	33.59%
Share of biomass and biogas	Percentage	4.77%	4.23%	5.68%
Share of other fuels	Percentage	3.43%	3.05%	3.37%
Share of fuel in transport	Percentage	0.14%	0.13%	0.33%
Electricity and thermal power consumption (excluding own consumption) □□	GWheeq.	6,715	7,430	7,437
Energy efficiency of fossil fuel plants (including biomass/biogas) □□	Percentage	49.6%	47.7%	48.0%

□□ *Verified by the Statutory Auditors with "reasonable" assurance for 2022 (see Section 3.11).*

3.5.4.4 Nuclear energy

Maintaining a very high level of safety at the seven nuclear reactors operated by ENGIE is a key priority for the Group. ENGIE also attaches great importance to limiting the environmental impact of these facilities (e.g. waste, emissions). Each plant publishes an annual environmental on the Electrabel website.

Waste from nuclear power plants, particularly radioactive waste, is monitored by Electrabel, but also by the national body for radioactive waste and enriched fissile materials (ONDRAF) and its subsidiary Belgoprocess, which is responsible for the management of radioactive waste from nuclear power plants. The detailed information to be published about volumes of fuel or of high-level radioactive waste is specified by the Belgian Royal Decree of October 17, 2011 titled "Royal Decree regarding the physical protection of nuclear materials and nuclear installations."

Provisions for the downstream portion of the nuclear fuel cycle (operations relating to fuel after its use in a nuclear reactor) and for the costs of decommissioning nuclear power plants after they are shut down, are shown in Section 1.6.5.2.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Radioactive gas emissions				
Rare gases	TBq	32.19	36.12	47.35
Iodines	GBq	0.03	0.03	0.04
Aerosols	GBq	0.28	0.27	0.25
Radioactive nuclear waste (low and medium level)	m^3	182	186	225
Radioactive liquid wastes				
Beta and Gamma emitters	GBq	14.95	11.46	16.50
Tritium	GBq	101.80	83.49	86.50

The risk factors relating to nuclear power are presented in Section 2.2.7 “Risks related to nuclear activities”.

3.5.4.5 Water

As a committed player in water management, ENGIE is taking part in the current debate over corporate risk disclosure and water stewardship, alongside organizations such as the CEO Water Mandate of the UN Global Compact and the OECD. These initiatives have led to a homogenization of the definition and implementation of water stewardship. The Group has set itself the target of reducing water consumption for energy produced by 2030 and is continuing to implement action plans for sites facing high or extreme water stress. In 2022, ENGIE was awarded a B rating by the CDP Water Disclosure program.

Each year, as part of the optimization of its energy production, ENGIE assesses the risk of water stress for the Group’s industrial sites using the Baseline Water Stress Index and the Aqueduct tool (World Resource Institute) which maps different water-related risks. In 2022, 33 sites were located in areas with extremely high water stress, i.e. 4% of sites (excluding solar and wind), for which action plans have been finalized and are being implemented. The impact of water stress is relative, however, as it depends on the site’s activity and fresh water needs. Only six out of the 33 sites have substantial freshwater requirements (more than 100,000 m^3/year). For the others, the challenge is rather how to indirectly help to preserve water resources, for example by proposing the reuse of the water by other entities in the drainage basin. All of the Group’s initiatives have resulted in a 77.3% reduction in freshwater withdrawals from all its activities since 2012.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Fresh water				
Total withdrawal	Mm^3	1,658	2,402	2,088
Total discharge	Mm^3	1,603	2,336	2,039
Non-fresh water				
Total withdrawal	Mm^3	5,215	5,249	5,195
Total discharge	Mm^3	5,191	5,218	5,167
Total consumption (Withdrawals - Discharges)	Mm^3	80	96	77

3.5.4.6 Waste

ENGIE took the recommendations of an internal audit on waste management and incorporated them into its environmental policy released in 2017. Its chief aim was to reduce the quantities of waste it produces and to increase its rate of waste recovery. The Group has set operational production reduction objectives for hazardous waste (-95% vs 2017) and non-hazardous waste (-80% vs 2017).

These reduction efforts are supplemented by the monitoring of recovery rates of more than 79.8% for non-hazardous waste and of 21% for hazardous waste in 2022. The Group's industrial sites actively seek local waste recovery solutions, even though some of these channels remain dependent on market opportunities governed by the laws of supply and demand.

Food waste and associated waste only relate to group catering for employees. In this area, ENGIE selects subcontractors that include missing space measures against food waste in their specifications.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Total quantity of non-hazardous waste and by-products discharged (including sludge)	t	1,459,706	2,843,003	2,857,579
• Fly ash, refioms (residues from the purification of incineration fumes from household waste)	t	660,169	1,668,246	1,583,111
• Ash, bottom ash	t	513,615	702,305	804,701
• Desulfurization by-products	t	53,170	69,841	66,332
• Sludge	t	13,484	16,237	25,221
• Driftwood	t	10,783	11,508	12,970
Total quantity of non-hazardous waste and by-products recovered (including sludge)	t	1,164,816	2,405,454	2,464,614
Total quantity of hazardous waste and by products discharged (including sludge and excluding radioactive waste) ☐☐	t	23,506	30,240	38,139
Total quantity of hazardous waste and by products recovered (including sludge and excluding radioactive waste) ☐☐	t	4,926	4,933	11,511

☐☐ *Verified by the Statutory Auditors with "reasonable" assurance for 2022 (see Section 3.11).*

3.5.4.7 Atmospheric pollutants

ENGIE uses a wide range of techniques to further reduce its emissions: reduction at the source using a tailored energy mix; optimization of combustion and treatment of fumes; filters or water injection to reduce all particles (of all sizes); installation of low-NO_x burners or use of urea injection (secondary treatment) to control nitrogen oxides; and choosing fuels with very low sulfur content to reduce sulfur dioxide emissions.

The Group has set operational objectives to reduce NOx (-75% vs 2017), SO_2 (-98% vs 2017) and total particle emissions (-60% vs 2017) by 2030.

Indicator title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
NO_x emissions	t	33,517	48,831	49,022
Incl. energy production	t	33,216	48,586	48,752
SO_2 emissions	t	7,418	105,984	119,584
Incl. energy production	t	7,400	105,962	119,568
Fine particle emissions	t	3,398	5,693	6,312
Incl. energy production	t	3,391	5,688	6,305
Mercury emissions	kg	49.47	194.21	304.73
Incl. energy production	kg	49.33	194.09	285.25

3.5.4.8 Management of biodiversity

Biodiversity is a natural heritage that is essential to human health and well-being, but also to economic activities. ENGIE, through its industrial activities, has a direct potential impact on biodiversity (ecological continuity, avifauna, ischiofauna, etc.), and an indirect impact via the supply chain. The Group is also dependent on biodiversity, notably through its use of biomass resources and water and climate regulation provided by biodiversity.

According to international experts at IPBES[1], biodiversity is threatened, in order of severity, by: changes in land use, the overexploitation of resources, climate change, pollution and invasive exotic species. Fragmentation and disturbance of habitats caused by the territorial of our sites and soil sealing are the main impact of the main impact of ENGIE's activities on biodiversity.

Since 2010, the Group has integrated biodiversity into its strategy and activities. It now has a dedicated policy and key commitments through the "act4nature international" initiative and "Entreprises Engagées pour la Nature." Full details of these commitments and their progress are available on ENGIE's website at the following address: www.engie.com/en/group/social-responsibility/csr-goals/biodiversity.

Examples of objectives and actions carried out by the Group include the restoration of natural habitat (hedges, grassy strips, wetlands), the reduction of the impact of wind turbines on wildlife, the installation of fish ladders at dams, ensuring that gas-grid easements contribute to ecological continuity, and applying differentiated landscaping to green spaces.

The Group develops its projects in line with the "Avoid, reduce and offset" approach.

All of the Group's sites are analyzed each year with regard their proximity to various protected areas (IUCN, Ramsar, UNESCO natural and mixed, KBA, MAB). Each site located less than 15 km from a protected areas works on implementing action plans developed in consultation with the relevant stakeholders.

The Group has also made a strong commitment to manages the sites in a manner that respects nature, by discontinuing the use of. phytosanitary products and contributing to the restoration of ecological continuity.

Objective title	Unit	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans	2030 target
Development of action plans for industrial sites located in or near a biodiversity hotspot	%	60	41	21	100
Introduction of ecological management of the Group's industrial sites, including nature-friendly maintenance of green spaces and zero phytosanitary products	%	34	28	ND	100

In pursuit of its commitment to biodiversity, the Group relies on the skills and expertise of its two partners: the French committee of the IUCN (International Union for Conservation of Nature) and France Nature Environnement Since 2009, the French IUCN committee has been providing ENGIE with its expertise to further integrate biodiversity into its strategy, and since 2008, FNE has been helping to establish contacts with local experts and to raise awareness of issues such as the application of the "avoid, reduce and offset" approach in France. These partnerships are developed on a three-year basis.

3.5.4.9 Managing risk and environmental complaints

The management of environmental risks has two components: risk prevention and crisis management.

Indicator title	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
% of relevant revenues covered by an environmental risk prevention plan	96.0%	93.8%	81.9%
% of relevant revenues covered by an environmental crisis management plan	95.3%	93.2%	87.5%

The Group handles any environmental complaints. A summary is given below:

Indicator title	ENGIE 2022 excl. Equans	ENGIE 2021 excl. Equans	ENGIE 2020 including Equans
Environment-related complaints	8	11	6
Environment-related convictions	1	2	2
Amount of compensation (*in € thousands*)	9	697	14
Environmental expenditure (*in € thousands*)	902,683	528,705	553,019

Complaints received by ENGIE subsidiaries were as follows:

- in Belgium, wind farm managers received two complaints for noise pollution, one relating to disturbances associated with the strobe effect of the turbines and one for falls of ice concretions. Another complaint was received for noise pollution concerning the Zedelgem turbojet plant;
- in Romania, there was a complaint relating to disturbances associated with the strobe effect;
- in the United States, the Whitehorn Solar LLC solar park received a complaint from residents because the grass around the site was not cut. The problem was resolved;

(1) *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.*

- in Brazil, after residents near four gas pipelines complained about the height of vegetation on the easements, the grass was cut.

Assessments have been, or are being, carried out for all these complaints and talks with stakeholders are underway.

A fine was also paid by the Energia Mayakan site in Brazil following a check on the diameter of a water evacuation pipe which did not correspond to the one authorized by the operating permit. Work was carried out to bring the water discharge into compliance.

In 2022, environmental expenses (investments and current operating expenses related to environmental preservation) amounted to around €903 million.

3.5.4.10 Noise pollution

Any industrial activity is a source of noise pollution. In order to reduce these impacts, Group entities conduct regular soundproofing work (acoustic cladding, noise barriers, containment, etc.). For more recent projects, reducing this potential form of noise pollution is directly integrated into the design.

For its renewable energy projects, particularly onshore wind and solar power, ENGIE conducts impact studies and offers support measures to prevent, reduce or offset any noise or visual impact. Examples of such actions include defining and implementing turbine restrictions (stoppage or reduced power at key times and / or under certain wind conditions), conducting specific actions with builders to reduce the sound power of machines, seeking better harmonization with the landscape during the design and, after construction, initiating planting and vegetation schemes on sites or for neighbors if there is an obvious visual impact. By way of illustration, in France, ENGIE has partnered with the “Respect” project launched as part of the offshore wind project in the city of Tréport and on the islands of Yeu and Noirmoutier. The aim is to improve understanding of the biological impact related to the noise footprint of projects and reduce this by developing appropriate technology. The results were integrated into the impact studies and made it possible to obtain prefectural authorization in October 2018.

3.5.4.11 Land use

Protection of soil and groundwater is an integral part of the Group’s environmental policy. The environmental consequences of soil pollution can be significant, as can the costs of subsequent remedial measures. It is therefore important to prevent this risk and to hedge it with financial provisions. These amounted to €1.332 billion in 2022 and concerned site rehabilitation, decommissioning of non-nuclear facilities and scheduled product elimination. In this area, ENGIE complies with the regulations in each of the countries in which the Group operates.

For example, a soil pollution survey was carried out at several power plant sites in Belgium. Risks were assessed in conjunction with the appropriate environmental authorities and a remediation program was implemented.

ENGIE owns a number of former gasworks. These sites may be affected by oil, heavy metals and other volatile substances that can adversely affect health. As a result, they must be repaired before reuse. In 1996, a ten-year plan was agreed via a memorandum between Gaz de France and the French government to rehabilitate these sites, which have been compatible with their use from a health perspective since 2007. When these former sites are sold, ENGIE is committed to ensuring that the buyer’s project is compatible with the environmental and industrial liabilities of the site and that the risk to the environment and residents is effectively managed. At all its sites, the Group monitors the soil and groundwater, in accordance with its operating permits, in order to prevent pollution.

Moreover, in order to more firmly anchor its presence in the regions, ENGIE has established a structured system of dialog with its stakeholders, pursuant to the main international standards (AA1000, ISO 26000, the Global Compact principles, and OECD guidelines). This system is based on regular meetings with NGOs and non-profit associations, and on the development of long-term partnerships in connection with ENGIE’s activities. The dialog is defined at Group level and then rolled out to each regional hub according to specific local requirements in terms of issues, activities and regulations. As part of these new 2030 CSR objectives, ENGIE aims to cover 100% of its industrial activities in 2020 with a structured stakeholder dialog and consultation mechanism.

Gas pipelines account for the largest amount of land use by ENGIE. As the gas lines are buried, they do not break up natural habitats, but may nevertheless generate land-use conflicts. GRTgaz has therefore established amicable easement agreements in France with all the owners of the land crossed, following consultation periods (the signing rate for amicable agreements is regularly >90% for projects). These agreements define land usage restrictions for the owners (prohibition on building in pipeline locations and planting vegetation higher than 2.70 m) in exchange for compensation. More specific work is carried out with the agricultural industry to preserve land use for farmers as part of their professional activity.

For the development of new wind and photovoltaic renewable energy production sites, the choice of the site is paramount. The arable nature of the land is an essential element taken into account very early in the project to avoid any subsequent conflict. In France, calls for tenders for photovoltaic power plants are made under the aegis of the French Energy Regulatory Commission. Proposing a site on arable land causes valuable points to be lost in tenders and this is another reason for selecting other types of land. For wind farms, development on arable land is possible provided that an assessment is carried out before and after the project by an independent agricultural expert. This allows for fair compensation to be paid to owners or farmers for the use of these lands.

3.6 SOCIETAL INFORMATION

The responsible growth model devised by ENGIE is based on structured dialog tailored to all the stakeholders in the Group's business activities.

3.6.1 DIALOG WITH STAKEHOLDERS AND PARTNERSHIPS

ENGIE maintains an ongoing and proactive dialog with all stakeholders around its industrial activities. Based on existing approaches, the Group supports its operating entities in deepening and structuring their practices, from the implementation of dialog strategies to their operational deployment in the project teams.

The goal is to optimize performance and increase value creation by giving precedence to the expectations and needs of the territories and deepening the ownership of the Group's activities by its beneficiaries.

This assistance allows industrial activities to map stakeholders and align with the new objective of creating plans for discussion in all the Group's business activities by 2030.

The support is based on a Group methodology which is adapted to the strategic, technical and geographical specificities of the operational activities. It is based on international standards such as ISO 26000, AA1000, IFC (International Finance Corporation, World Bank) and the Equator Principles.

On the one hand, it consists of raising awareness and training employees in the structuring of dialog with stakeholders in connection with the Group's training entity, ENGIE University. On the other hand, the methodology consists of technical support for the implementation of dialog action plans adapted to the challenges and expectations of the territories.

In 2022, structuring dialog with stakeholders was integrated in ENGIE University's training programs through e-learning which is open to all Group employees.

In 2022, the different dialog spaces hosted discussions about a fair transition, as part of the Stakeholders Committee meeting held by the Group on this topic during the second half of the year, and as part of the recourse space, about various issues that operating people encounter in their territories.

This culture of listening and dialog is extended through societal and environmental partnerships with, in particular, France Nature Environnement, the French committee of the IUCN and the ONE (Ocean Nature and Environment) Foundation.

At the international level, ENGIE is a member of the United Nations Global Compact in the Global Compact Advanced category.

3.6.2 COMBATING POVERTY AND THE CORPORATE FOUNDATION

3.6.2.1 Fuel poverty of individual customers

ENGIE has contributed to the *Fonds Solidarité Logement* (French solidarity housing fund) since 2007 and in the amount of €6 million per year since 2010. In 2022, ENGIE was therefore a signatory of 110 active agreements with the FSL, of which 16 with metropolises. Due to the current economic context which is weighing heavily on vulnerable families, ENGIE decided, as an exceptional measure, to double its contribution to the *Fonds Solidarité Logement* in 2022, i.e. to €12 million. By doing so, ENGIE has once again demonstrated its commitment to the fight against poverty and to struggling families, as this aid will benefit a great number of people - regardless of whether they are ENGIE customers.

In 2022, around 65,000 families received support as a result of this fund which is managed by departments and / or metropolitan areas. The aid granted averaged €250, representing an increase compared with 2021.

Moreover, in the wake of energy price increases, ENGIE is more committed than ever to supporting its customers, notably those in the greatest need. For this reason ENGIE, in addition to measures already implemented, decided to provide an additional €100 in aid to its 880,000 customers who benefited from the French state's energy voucher. This exceptional aid from ENGIE was paid in November without any action required on their behalf.

ENGIE relies on its Solidarity and External Relations Correspondents, who are committed to promoting ENGIE's Solidarity policy to local elected officials, social workers, social mediation partners and consumer associations. This proximity is fundamental and necessary for the implementation of personalized support for the most vulnerable customers. ENGIE has created a network of mediation partners with over 120 customer assistance centers throughout the country as of the end of 2022.

In addition, ENGIE has developed tools dedicated to social players for the latter to be able to respond appropriately and immediately to the needs of vulnerable ENGIE customers. The ENGIE Solidarity portal (available on the website servicessociaux.engie.fr), created in April 2018 and specifically designed for social workers to support our vulnerable customers, therefore saw an increase in its use for the third year in a row: 280,000 interactions between departmental and regional social services and ENGIE solidarity teams compared with 265,000 in 2021 (+6% following a 20% increase in 2021).

Finally, a dedicated phone line for social workers is open Monday to Friday from 9:00 a.m. until 5:00 p.m. to provide them with answers as quickly as possible.

In 2022, the Group continued its initiatives to raise awareness of domestic gas appliance safety and saving energy. These initiatives include the CIVIGAZ scheme, a civic service mission created and operated with the Fondation Agir Contre l'Exclusion (Act Against Exclusion Foundation). Since 2015, this scheme has helped raise awareness among more than 70,000 people regarding gas safety and energy management. Visits carried out by civic service volunteers also helped address more than 50,000 potentially dangerous situations.

In 2022, GRDF also maintained its partnerships with the *Observatoire National de la Précarité Énergétique* (ONPE), the *Fédération Nationale Soliha*, the *Association Nationale des Compagnons Bâtisseurs*, and the *association Stop à l'Exclusion Énergétique* to capitalize on the CIVIGAZ experience which unites coalitions of territorial players around the issues of security and poverty. In addition to measures introduced under these partnerships, GRDF formed two new partnerships at the end of the year with *Croix Rouge Insertion* and the CLER (Network for the energy transition - formerly known as the Liaison committee for renewable energies).

Finally and at the same time, GRDF stepped up its daily actions directly with its customers and partner authorities: raising awareness among technicians and customer services advisors regarding fuel poverty in cooperation with GRDF's social workers, greater sensitivity surrounding disconnection for unpaid bills, supporting local authorities in the identification of fuel poverty, and launch of several local trials in partnership with social and energy players were all actions taken in 2022 to support its customers.

3.6.2.2 The environmental and social fund "ENGIE Rassembleurs d'Énergies"

The Group supports social enterprise and disadvantaged populations through the social and environmental fund, *ENGIE Rassembleurs d'Énergies*. ENGIE invests in social enterprises promoting shared and sustainable growth for all based on clean, affordable energy and on innovative, sustainable business models.

The fund is utilized for six different themes targeting financial performance and social and environmental impact: sustainable decentralized energy solutions; clean, secure cooking solutions, biogas; energy efficiency and energy saving; the circular economy; and sustainable and inclusive mobility.

At December 31, 2022 the portfolio companies had provided access to clean, sustainable energy to 7.5 million beneficiaries worldwide. The companies also generated more than 32,000 direct and indirect jobs, more than 60% of which were held by women. In total, 21,100 Group employees invested part of their savings in the *ENGIE Rassembleurs d'Énergie*s solidarity mutual fund (FCPE), thus giving meaning to their savings with a direct connection to their occupation.

The 22 active companies in the portfolio operate on four continents (Europe, Africa, Asia and Latin America) and in around 20 countries. These companies cover 11 sustainable development goals through a wide range of technologies that respond to the issue of inclusive growth, in particular through access to sustainable energy and the reduction of fuel poverty. Through them, Rassembleurs d'Énergies provides solutions for at-risk populations. In 2022, the fund continued to be rolled out in France with Enerpro in biogas and in own consumption with Enogrid. At year end 2022 *ENGIE Rassembleurs d'Énergies* had committed a total of €38.3 million.

3.6.2.3 The ENGIE Foundation

Created in 1992, the purpose of the ENGIE Foundation is to give a chance to those who do not have one - isolated or vulnerable populations - to demonstrate ENGIE's societal commitment in the field of mutual aid, to bring the Group's value and purpose to life.

Its efforts cover three main priorities:

- child welfare – education;
- access for all to energy - the protection of biodiversity - the fight against climate change;
- fight against poverty and unemployment, as well as emergency aid.

ENGIE Foundation's initiatives are part of its 2020-2025 mandate, with an annual endowment of €7.8 million.

To respond to major challenges, the ENGIE Foundation relies on the commitment of its employees, and in particular ENGIE's internal NGOs (Energy assistance), with three priorities:

- impact (acting with impact);
- proximity (being at the heart of the regions);
- responsibility (contributing to societal challenges, giving "*l'énergie des possibles*" (energy of all possibilities), to help projects happen in areas such as children and young people, community and the environment).

Taking care of life and of our planet has been ENGIE Foundation's mantra for almost 30 years. With 51% of projects in 2022 dedicated to access to renewable and sustainable energy and biodiversity, ENGIE Foundation is committed to the environment on an ongoing basis. Its aim is to take part in projects that are ambitious and an impact, and contribute to the collective effort of the 2030 Agenda via the achievement of Sustainable Development Goals (SDGs). In terms of biodiversity and the climate, the ENGIE Foundation supported, in particular, Biodiversity Atlases and the protection of posidonia with the French Biodiversity Office, the exploration of the Gulf of Lion with the Museum, the raising of awareness of biodiversity in the community with the league or the protection of birds, and the protection of the environment in Brazil.

In 2022, the ENGIE Foundation supported more than 140 projects worldwide with more than 4000 beneficiaries. Details regarding the ENGIE Foundation are presented on the website: fondation-engie.com.

3.6.3 JUST TRANSITION

The plan to transition toward Net Zero Carbon by 2045 presented by ENGIE in 2021 is based on a "well below 2°C" trajectory. In line with the Paris Agreement, the plan was designed for its customers and for the Group to lay the foundations for long-term sustainable growth. The Group's objectives for an affordable, reliable and sustainable energy transition resonate with the challenges facing society, climatic challenges, energy market challenges and those of its stakeholders.

In 2022, the context of the Russian-Ukrainian conflict and energy price volatility on the European continent, underpinned by the climate emergency, demonstrates the relevance of ENGIE's strategy to offer a balanced, resilient and affordable energy mix. This plan aims, in particular, to:

- ensure that customers, and low-income customers, have access to affordable and sustainable energy thanks to innovative offers;
- commit to local projects with the communities;
- guarantee quality social dialog at all levels, offer social protection to all employees worldwide, guarantee their employability though training and retraining and through providing support during restructuring;
- establishing stringent standards in terms of labor law, human rights and sustainability throughout the supply chain, promoting inclusive procurement and engaging with suppliers in their decommissioning processes.

This plan implements the principles of fair transition for the benefit of consumers, communities, workers and suppliers.

As to consumers, efforts consist of steps to promote affordable energy.

ENGIE offers free, or nearly free, ways for consumers to track their energy usage, to receive personalized advice, and to manage their usage and their comfort on a target budget or by remote readings.

ENGIE encourages its customers by rewarding them for saving energy. One such initiative is My Program to Act, which compensates them for green actions in the form of "kilo-acts." These kilo-acts can then be re-invested by customers in CSR actions.

As to communities, efforts relate to creating local, sustainable value, developing new industrial value chains having a positive fallout on the territories and adding to their resilience, to a robust process of consulting with stakeholders and entering partnerships.

The Aumaillerie biogas plant, commissioned in 2020, is a typical regional project developed by ENGIE BIOZ. Based in Fougères in Brittany, this plant treats a mix of livestock effluents and crop residues in partnership with farmers and local businesses, with a production capacity of 20 Gwh/year, or the equivalent of the yearly consumption of 2,000 households. It provides nearly 20% of the gas locally consumed. Three people keep the site running. In total, 150 people participated in financing the project, raising €500,000. The funding objective was reached in only a few weeks, a sign of the attractiveness of the project.

For the past decade, ENGIE Brazil has been developing social initiatives in favor of the well-being of local populations living near its sites. The purpose of the arts and sustainability centers is to promote local customs and traditions, social and digital inclusion, etc. They are managed by the communities themselves near ENGIE's production sites and facilitate the social, cultural and environmental development of small local authorities in several regions in Brazil. Six centers are currently in operation and three are under construction. For the Group, these provide a positive contribution to territorial development, while respecting local communities.

For employees, the Group is also rolling out protection measures, with the launch of a global "ENGIE Care" program of social coverage, covering four key areas worldwide. This program, which was created with international trade unions, aims to provide every employee, anywhere in the world, with social protection in four key areas: hospitalization, death benefits, disability (permanent and total) and parental leave (for mothers and fathers).

In terms of training, ENGIE University offers the Sustainability Academy. One of the purposes of this academy is to highlight the expertise and commitment of the Group's employees in taking sustainability into account in their business occupations. Another purpose is to share this expertise with the entire company and its ecosystem. The Sustainability Academy offers several levels of training, from acculturation to expertise, and is based on a variety of formats.

The apprenticeship training center dedicated to energy transition and climate-related occupations provides training to more than 200 young parents through work-study programs. This provides access to the Group's future occupations and accelerates its strategy toward Net Zero Carbon.

Finally, ENGIE encourages its "preferred" suppliers to commit to a trajectory of decarbonization aligned with or certified by SBTi.

To ensure the success of this just transition plan, ENGIE relies on its approach of transparency and co-construction with civil society. In 2022, the plan was, in this context, submitted for the opinion of a Committee of stakeholders (associations, responsible investors, economists, institutional investors and activists). The Group has given itself one year to present indicators that are in line with its ambitions to the Committee.

3.7 PROCUREMENT, SUBCONTRACTING AND SUPPLIERS

With expenditure of €16 billion excluding energy purchases per year, the Procurement function has a leading role in the Group's value chain and aims to:

- to contribute to the Group's operational performance by putting forward a panel of competitive and differentiated suppliers to the operational teams;
- to uphold the Group's commitments to its suppliers;
- to contribute to the Group's CSR approach and carbon neutrality;
- to develop key talent and expertise within the Procurement function and promote Procurement within the Group's career paths.

In order to achieve this ambition, the Procurement function relies on a management system structured around:

- a **Procurement Charter** which defines ENGIE's commitment and expectations with regard its suppliers in terms of human rights, health, safety and ethics. These principles apply to the entire supply chain. The Procurement Charter was revised in 2021 and focuses on the consideration of greenhouse gas emissions as a supplier selection criteria;
- a **Procurement Governance** which sets out the 14 rules defining the principles for the management of external expenditure and the operating rules for Procurement. In particular, it aims to reinforce the separation of tasks between buyers and purchasing advisers, while encouraging their cooperation when selecting the best offerings. Since 2022, the requirement for a third-party assessment and the completion of Due Diligence is mandatory for the main suppliers.

The requirements of these two documents, as well as the Group's more general requirements, are set out in the operational processes. These processes cover the management of procurement categories and supplier panels as well as the stages of purchasing and procurement. They include the ethical requirements of: the Ethics Charter, the Corporate Social Responsibility Policy Global Care, the Code of Conduct for Relations with Suppliers, and the Due Diligence Policy for Direct Suppliers and Subcontractors. In 2022, the Group decided to develop and manage purchasing in the adapted work sector, which led to the signing of an Inclusive Procurement France Policy.

The Procurement function is helping the Group to achieve its 2030 goals through a sustainable procurement process driven by actions with suppliers in all business segments. These goals constitute a milestone and are part of the Group's ambition to become carbon neutral by 2045.

In 2020, the Group Procurement Department set two CSR goals, which were rolled out throughout its management system.

Objective title	Criterion	2025 objective	2030 objective
1. Decarbonization of the main suppliers	250 Top Preferred Suppliers aligned with or certified SBT	25%	100%
2. Developing responsible procurement	CSR assessment of suppliers measured by the percentage of preferred suppliers and major suppliers with an ECOVADIS rating higher than "managed CSR risk"	70%	100%
	Promotion of inclusive Procurement measured by the share of inclusive procurement aligned with the GT3 recommendations. A working group made up of French companies (BnpParibas, Accor, Crédit Agricole, Danone, etc.)	60%	100%

To achieve these objectives and manage its supply chain risks, the Procurement function has been developing the management of its 62 procurement categories and is responsible for the management of its main suppliers. The implementation of these processes is carried out by its network of Group Category Managers and Category Lead Buyers within each Group procurement entity.

Knowledge of markets and suppliers make it possible to analyze risks and opportunities by category of purchases. To do so, the Category Managers use a risk matrix drawn up in partnership with ECOVADIS. This matrix, which combines the CSR risk of each category with the country risk, makes its possible to define, where necessary, risk management plans and specific supplier qualification criteria. The CSR commitment of suppliers is assessed across four dimensions: ethics, human rights, environment and sustainable procurement. These plans may include document audits or on-site audits.

Risk management may lead to the introduction of specific contractual clauses and the integration of addition requirements in terms of the traceability of the subcontracting chain (solar panel and wind turbine categories).

The management of procurement categories and supplier panels is therefore a key driver to:

- measure the performance delivered by suppliers through regular Business Reviews;
- define improvement plans where necessary;
- initiate a "carbon-based dialog" using the Carbon Maturity Index;
- favor purchases made with suppliers from the inclusive sector (EA-ESAT (French adapted companies-French organizations for the social and professional integration of disabled persons), QPV (urban policy neighborhoods), SIAE (economic reinsertion structures)).

The actions of the Procurement Department focus primarily on the Group's preferred suppliers (618), followed by the major suppliers of each Group GBU (945), which represents around 38% of total expenditure.

All procurement processes are verified through the internal control and audit processes in order to ensure the continuous improvement of the approach.

Finally, the achievement of these ambitious goals is supported by a progressive program of ongoing training within the Procurement function and at the heart of the Group's entities. In 2022, the training plan focused on:

- the implementation of a due diligence policy for suppliers and subcontractors within the entities;
- ethics and supplier relations;
- three mandatory online training modules for the entire procurement function: "Fraud and Corruption, zero tolerance", "Our Group, our Ethics" and "Competition Law";
- four videos: "Prevention of corruption", "Gifts and invitations… What to do", "Prevention of conflicts of interest" and "ENGIE whistleblowing system".

3.8 ETHICS AND COMPLIANCE

The Group's senior executives drive and oversee the Group's ethics and compliance policy and ensure that it is properly applied. A message of "zero tolerance" with respect to all ethical shortcomings and any particularly forms of fraud and corruption is regularly communicated by the Chief Executive Officer. All managers at all levels of the Group convey the same message.

ENGIE's principles of action are based on international standards. All the Group's measures to prevent and combat corruption comply with these. The same is true for the Group's strategy on human rights and its personal data protection program.

The Group has made voluntary anti-corruption commitments. ENGIE adheres to the United Nations Global Compact, the tenth principle of which relates to combating corruption. ENGIE also adheres to the French chapter of the Transparency International NGO.

3.8.1 ETHICS AND COMPLIANCE GOVERNANCE

Ethics and compliance within the Group are overseen by the Board of Directors via its Ethics, Environment and Sustainable Development Committee (EESDC).

The Compliance Committee assesses the handling of ethical incidents and monitors the process for updating the Group's ethics and compliance framework. At Group level, it brings together the Corporate Secretariat, the Director of Human Resources and the directors of the following Corporate Departments: Legal, Ethics, Compliance & Privacy, Internal Audit and Internal Control.

The Ethics, Compliance & Privacy Department (ECPD) is attached to the Legal, Ethics and Compliance Department, itself under the authority of the Group Corporate Secretariat. The ECPD oversees the incorporation of ethics into the Group's strategy, management and practices. It proposes ethics and compliance policies and procedures for the Group. It supports their implementation at all levels of the Group. It coordinates the implementation of the Group's vigilance plan (see Section 3.9) and deals with whistleblower reports arising under the Group procedure which it manages. The ECPD coordinates the network of Ethics & Compliance Officers and ethics correspondents (in 2022, including EQUANS until October 4: more than 240 people) and Data Privacy Managers (in 2022, including EQUANS until October 4: more than 130 people) across the entire Group. The majority combined this role with other functions (legal, HR, internal control, etc.).

The Ethics & Compliance Officers and Data Privacy Managers mainly ensure that the Group's Ethics & Compliance and Data Privacy framework are implemented at the level of their entities. Their activities are within the scope of responsibility of the Chief Executive Officer or manager of the entities for which they act.

Since 2018, the ECPD has been the competent department for all matters requiring the establishment of a compliance procedure, and most importantly, a procedure to prevent and combat fraud and corruption. It is also charged with personal data protection, with export controls and embargoes and with interest representation.

3.8.2 RISK ASSESSMENT

The assessment of ethical risks is included in the Group's risk analysis process (Enterprise Risk Management or ERM) (see Section 2.1.1). Five ethical risks have been identified: corruption; human rights violation; non-compliance with competition law and / or embargoes, fraud; and lack of ethics management. The Group's risk analysis approach also includes data privacy risk. It covers in particular the risk of personal data breaches and the risk of non-compliance with the General Data Protection Regulation (GDPR).

The process for assessing corruption risks, human rights violation risks and data privacy risks uses a common analysis methodology for all the Group GBU. In particular, the Group has developed a self-diagnostic scorecard on corruption risk and a checklist regarding human rights violations risk. It has also issued guidelines on the assessment of the risk of personal data breaches.

3.8.3 REFERENCE TEXTS

ENGIE's ethics and compliance policy aims to develop an ethics culture and practice based on:

3.8.3.1 The ENGIE Code of Ethics: the Ethics Charter and the Practical Guide to Ethics

The Ethics Charter establishes the general framework for the professional conduct of every employee. It specifies ENGIE's four fundamental ethical principles. It also describes the Group's ethics and compliance organization.

The Practical Guide to Ethics determines the day-to-day application of ethics. It includes the Group's decision to refrain from any financing of political activities.

These two documents constitute our Code of Ethics and apply to all Group employees. They are shared with external stakeholders.

Work to overhaul the Ethics Charter was carried out in 2021 and 2022. The new Ethics Charter will be deployed Group wide in 2023.

3.8.3.2 The Integrity reference system

The "Integrity" reference system is a collection of policies and procedures for preventing fraud, corruption and influence peddling. All of the ethical assessment procedures were reviewed in 2018 and 2019 and extended in 2021 to cover recruitment activities. Thus, the stakeholders of investment projects, beneficiaries of corporate sponsorship and patronage, suppliers, business consultants and new people recruited in positions that are the most exposed to the risk of corruption are the subject of enhanced preventive action.

In 2020, the Group overhauled its gifts and invitations policy. It also rolled out a new register of business consultants. Lastly, the Group has created a new gifts and invitations register that was rolled out in 2021. These registers are fully digitized, shared by all the Group's entities and designed as management and monitoring tools.

3.8.3.3 The Human Rights reference system and policy

The "Human Rights" reference system and policy comprise ENGIE's commitments to respect internationally recognized human rights. The system specifies the operational processes for analyzing and managing risks. It thus enables the Group to be vigilant about the impact of its activities on the human rights of all individuals. The reference system and policy are the cornerstones of the human rights component of the Group's vigilance plan (see also Section 3.9).

3.8.3.4 The Ethics Compliance reference system

The "Ethics Compliance" reference system sets out how the Group implements its ethics and compliance system and measures compliance. It also includes the Group's procedures for complying with rules on embargoes, export controls, and competition law.

Since 2017, the Group has had a specific compliance system in place to monitor interest representation actions. In accordance with the law of December 9, 2016, this system enables Group entities to comply with their obligation to report to the French High Authority for the Transparency of Public Life (Haute Autorité pour la Transparence de la Vie Publique or HATVP). Its scope of application was extended in 2022 to cover local public decision makers.

Since 2017, furthermore, the Group's reference system has also aimed to ensure compliance in terms of personal data protection, in accordance with the requirements of European Regulation 2016/679 on personal data protection. Against this backdrop, in 2019 the Group introduced a specific policy and procedures. These were updated in 2022 to improve governance. The new policy was published on ENGIE's website at the following address: https://www.engie.com/en/group/ethic-and-compliance/data-protection-and-privacy

Lastly, guidelines for identifying early warning signs in ethical matters were rolled out in the Group in 2019.

3.8.3.5 Codes of conduct

Codes of conduct are used to apply ENGIE's ethics commitments to business practices and operations. These codes of conduct include the "Code of conduct in supplier relations," and the "Code of conduct on lobbying." These documents are available on ENGIE's website at the following address: https://www.engie.com/en/group/ethics-and-compliance.

3.8.4 WHISTLEBLOWING AND REPORTING OF ETHICS INCIDENTS

The Group policy covering whistleblowers, including the legal requirements of the Sapin 2 law and those of the law on the duty of vigilance, was defined in 2017. This policy complies with Law No. 2022-401 dated March 21, 2022 ("Waserman" law) which transposes into French law European Directive No. 2019/1937 on the protection of whistleblowers. The procedure for collecting alerts via the email address ethics@engie.com and a dedicated telephone number, was set up at the Group level in July 2018. Both channels are outsourced to an external service provider, which is responsible for receiving the alerts. Since January 2019, these channels are available to all of the Group's staff worldwide. Alerts may be received in several languages and the service is available 24/7.

The system is described on the Group's website via the following link: https://www.engie.com/en/ethics-and-compliance/whistleblowing-system. It is an addition to the Group's other reporting routes, which can be accessed by any employee and any person outside the Group.

Alerts and managerial reports of ethical failures are monitored via the My Ethics Incident digital tool for collecting ethical incidents, which has been rolled out to all the Group's entities. These alerts and reports cover seven areas: accounting and financial integrity, conflicts of interest, social responsibility and human rights, business ethics, confidential information, the protection of intangible assets, and personal data (for the reporting and processing of data breaches). In 2022, 254 alerts were input as part of the Group's whistleblowing procedure (187 in 2021, 201 in 2020, 183 in 2019) and 346 managerial reports of ethical incidents were made to the ECPD (277 in 2021, 283 in 2020, 282 in 2019 and 218 in 2018). The Group provides more detailed information on the relevant areas of ethics and the sanctions applied on ENGIE's website at the following address: https://www.engie.com/en/group/ethics-and-compliance/policies-and-procedures/ethical-compliance-referential.

3.8.5 TRAINING

The Group has implemented a mandatory ethics and compliance training plan for all of its employees. The training plan is tailored to the roles and activities of the employees concerned. It is supported by a guide for mapping the populations most exposed to corruption risk. In 2020, the Group rolled out a new digital tool to monitor the progress at all levels of the digital training provided to Group employees (videos and e-learning).

All Group employees are required to complete a training path comprising training videos on subjects involving significant ethical issues: gifts, invitations, corruption, whistleblowing and conflicts of interest. The employees who are most exposed to corruption risk, are required to complete a training path specifically for them. This training path is based on the Group's e-learning modules which provide in-depth knowledge of the Group's ethical issues, particularly in relation to fraud, corruption and competition law. In addition thereto, the managers ("GMRs") also have to take part in the seminar on the prevention of fraud and corruption (100% of GMRs took part in 2022). Members of the ethics and compliance line are also required to take the same training.

Face-to-face training courses on competition law increased in 2021 and 2022. Training courses on the prevention of fraud and corruption risk for individuals in charge of institutional relations in France and training for personal data protection continued in 2021 and 2022. The same was true for training on human rights (see Section 3.9.1.1).

Given their particular exposure to the risk of corruption, buyers must following additional courses including in-person training run jointly by the procurement Department and the ECPD ("Ethics and supplier relations" and "Due diligence for procurement") (see Section 3.7). Finally, in 2022 a new training course was introduced for the Group's HR function relating to *due diligence* in recruitment to prevent the risk of corruption.

3.8.6 CONTROLS AND CERTIFICATIONS

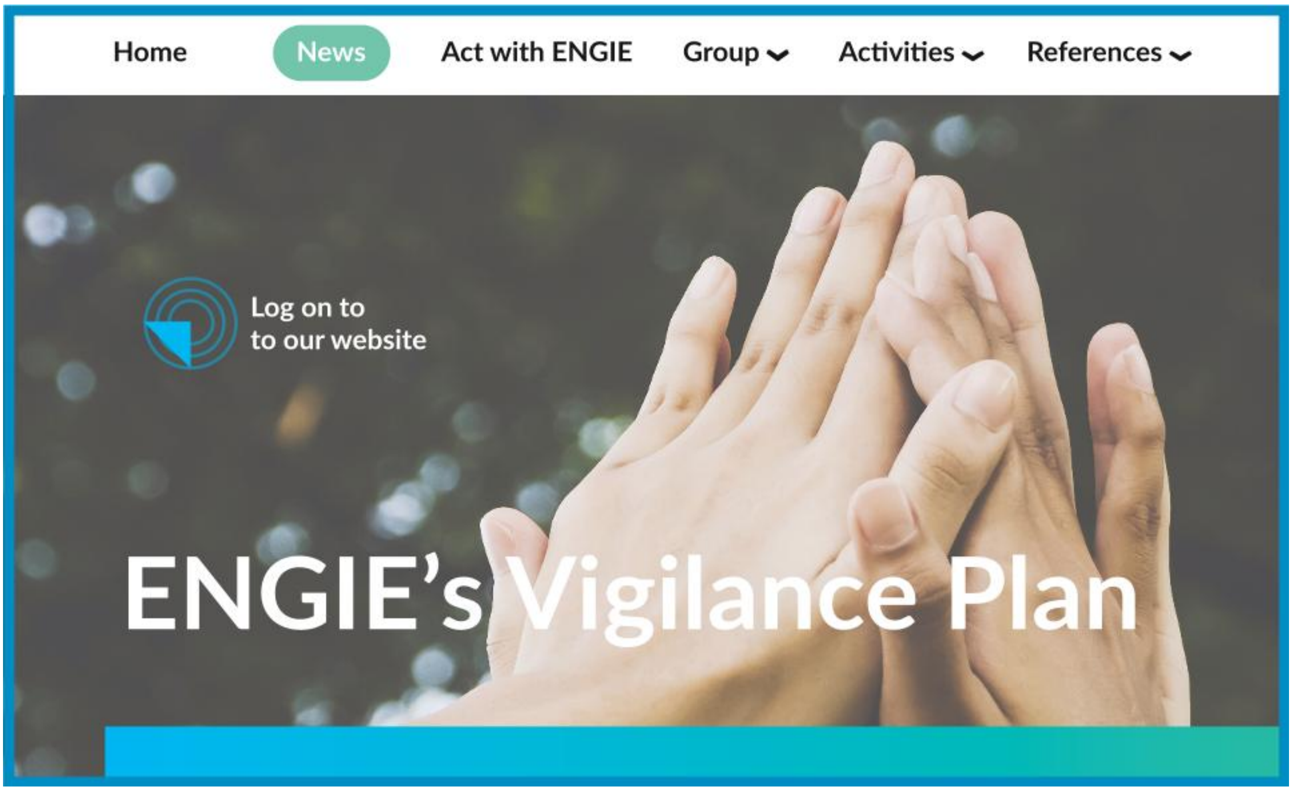
The monitoring of the implementation of the ethics and compliance policy is based on an annual compliance procedure. In this context, the Ethics & Compliance Officers produce an ethics compliance report on the work and progress accomplished by their entity in this area. This report is submitted to the relevant supervising entity. It is accompanied by a compliance letter from the manager certifying their commitment to the application of the ethics and compliance program within the organization for which they are responsible. At the start of the year, a bilateral assessment of the activities and risks of each organizational entity attached to a GBU is carried out by the Legal, Ethics and Compliance Director. The consolidated annual report resulting from this process is submitted to the Executive Committee and to the EESDC.

This compliance procedure is part of a broader control procedure. This is based in particular on the annual internal control campaigns which assess the level of implementation of ethics, embargo and personal data policies. It is also based on policy controls that are built into the internal audit campaigns.

The Group is also engaged in external audits of its ethics and compliance framework. It obtained anti-corruption certification from Mazars and ADIT in 2015. In 2018, ENGIE obtained ISO 37001 (anti-corruption management systems) certification from ETHIC'Intelligence (now "Speeki Europe"), an accredited certification body. This certification was renewed in 2019 and 2020 following supervisory audits. In 2021, ENGIE launched its second ISO 37001 certification audit campaign with the support of EuroCompliance, an accredited certification body. The Group obtained its second ISO 37001 in 2021 which was also renewed in 2022. All of these audits were carried out at Group level and in several operating entities that are representative of the Group's activities.

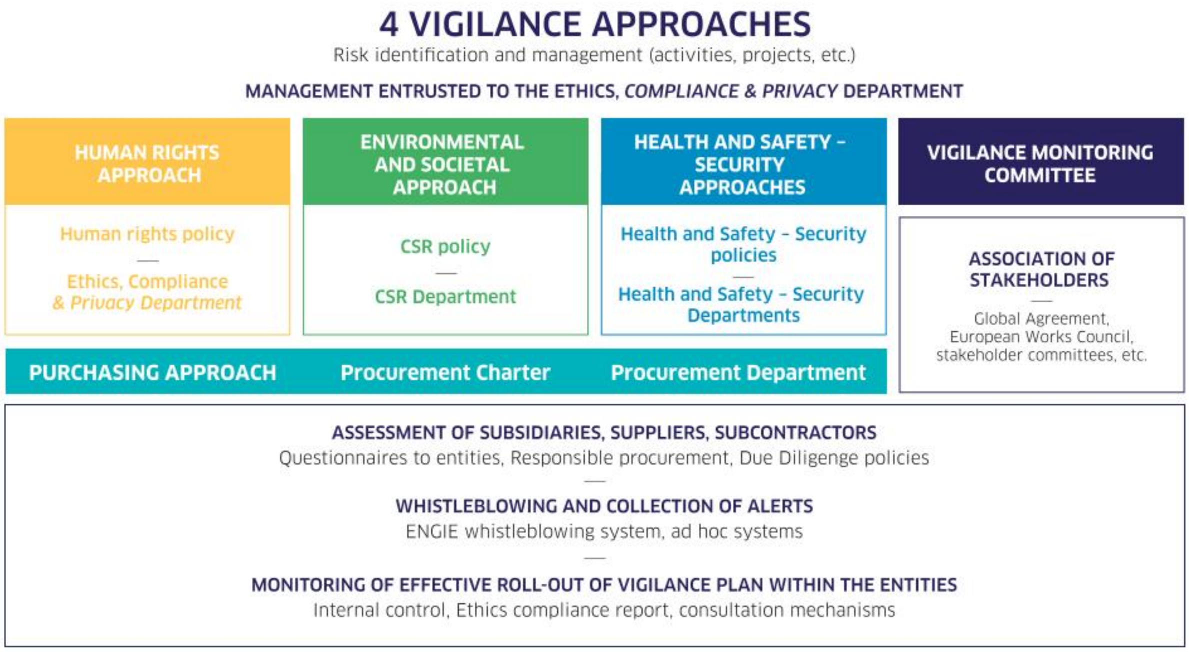
3.9 VIGILANCE PLAN

In accordance with Law 2017-399 of March 27, 2017, this section summarizes the broad strokes of the Group's vigilance plan. A developed version of the vigilance plan, its progress report, as well as details of the policies and actions are available on the ENGIE's website:



The plan covers all the measures established by ENGIE SA to prevent risks related to its activities and those of its controlled companies. It covers serious violations relating to human rights and fundamental freedoms, the health and safety of individuals and the environment. The Group's adherence to international standards is the minimum basis for commitments that the Group intends to apply wherever it operates.

These measures and the common whistleblowing system have already been in use for several years. Completely integrated to the ethics organization, the vigilance plan benefits from steering, governance and dedicated monitoring (see Section 3.9.5).



3.9.1 IDENTIFICATION AND MANAGEMENT OF THE RISKS OF SERIOUS HARM TO INDIVIDUALS AND THE ENVIRONMENT

The Group exercises vigilance through policies that cover all issues and procedures relating to the identification and assessment of risks. Goals and follow-up and assessment processes are put in place on the basis of these procedures.

3.9.1.1 Prevent and manage the risks related to human rights

ENGIE's Ethics, Compliance & Privacy Department, attached to the Legal, Ethics and Compliance Department, itself under the authority of the Corporate Secretariat, is directly responsible for the legal rights component of the vigilance plan. It relies on its network of Ethics and Compliance Officers and ethics correspondents located across the world and on other departments concerned by human rights aspects (see Section 3.8.1).

The major risks of negative impacts on the human rights of any individual due to the Group's activities are related to the fundamental rights of workers. More generally, challenges relating to human rights for the Group are as follows:

EMPLOYEES' FUNDAMENTAL RIGHTS	RIGHTS OF LOCAL COMMUNITIES	SUBCONTRACTORS / SUPPLIERS / PARTNERS
• Health and safety conditions • Freedom of association • Non-discrimination • Fight against forced labor • Working hours • Housing conditions of workers • Private life	• Health of surrounding populations • Living conditions of surrounding populations (food, water, housing, culture, access to resources, etc.) and the right to a healthy environment • Rehousing of populations • Fight against the suppression of the Group's opponents	• Work and health and safety conditions of subcontractors • Energy supply • Traceability and supply of materials used for the Group's products and services • Best practices of commercial partners in projects

SAFETY CONDITIONS FOR EMPLOYEES AND SITES

- Best practices of private or public security forces in the performance of their security mission, and notably practices relating to the use of force
- Security conditions of employees in at-risk countries

Details regarding risks are available on ENGIE's website at the following address: www.engie.com/en/group/ethics-and-compliance/policies-and-procedures/human-rights-referential.

The Group's human rights policy, adopted in 2014 and constantly evolving, specifies the Group's commitments and provides for regular processes to identify and manage risks. In particular, every year, the entities must assess their activities with regard to their impact on human rights, via a dedicated self-diagnostic scorecard (see Section 3.8.2). They must also assess any new business activity via a dedicated scorecard designed to identify the risk factors specific to the planned activity.

Risks are assessed by country, the presence of subcontracting, business, characteristics relating to workers, the presence of populations where risk is heightened if they are vulnerable, the products/services used, use of armed security forces, and the type of sales relations. The assessment of third parties (suppliers, subcontractors, partners, contractors, etc.) explicitly including human rights (see Section 3.9.3) as well as the whistleblowing system (see Section 3.9.4), is also used to identify risks.

The entities in two major regions, South America (SOUTHAM) and Asia - Middle East - Africa (AMEA), along with Global Energy Management & Sales (GEMS) and Tractebel, saw a change in risk levels relating to human rights, either because of their country of activity or the sector in which they do business (gross risk). At the operational level, the specific risks identified are the subject of specific action plans described on the aforementioned website.

In 2022, the Group continued its enhanced vigilance actions, which were introduced in 2020, to identify and manage the practical risks of forced labor practices in the Group's Chinese supply chains (see Section 2.2.5.3).

The Group began to roll out an action plan in one of its entities in 2022, targeting ENGIE's customer relation centers located abroad, aimed at assessing the actual working conditions of workers and this, in consultation with them.

A face-to-face training course on the Group's human rights approach was developed in 2019 and particularly targets operational collaborators and managers directly concerned by this topic. In 2022, individuals in positions particularly exposed to human rights risks were identified and a specifically dedicated training plan was launched. An e-learning module on human rights for all employees has been also in use for several years now.

The monitoring of the application of these processes is incorporated into the ethics compliance report (quantitative indicators) and into the internal control system (see Section 3.8.6).

2022 results	1,523 employees trained in person on human rights, around 55% of whom were operational functions, and half of these from at-risk entities, and 13,050 employees trained by e-learning (decrease in this figure compared with 2021 due to the disposal of EQUANS).
Internal control (Section 2.3)	82.4% of the Group's entities assessed the roll-out of the vigilance plan at their level as effective (1). 96.2% of the entities that assessed the roll-out of the human rights policy considered it to be effective(1).
Ethics compliance report	95%: Coverage of the annual human rights risk sheet. 100%: Number of due diligence procedures (with human rights risk) on partners in the context of the Group's investment committees

(1) Maximum level 4 according to the internal control standards.

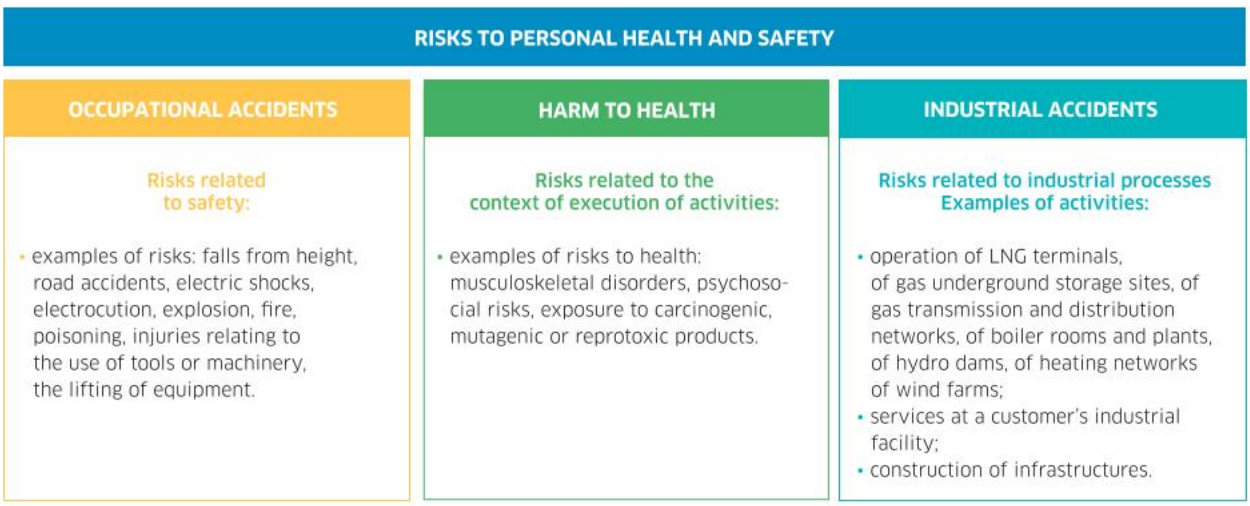
In 2022, ENGIE signed a new global agreement relating to fundamental social rights and social responsibility. The agreement also includes a monitoring of commitments:

Group commitments	Monitoring (2022 figures)
ENGIE Care program (minimum level of social protection for all employees worldwide)	66.5% of entities: fully paid maternity leave (14 weeks) 27.7% of entities: fully paid paternity leave (4 weeks) 94.6% of employees: 12 months' gross salary paid in the event of death 97.2% of employees: health care plan with 75% of hospital costs covered 79.2% of employees: 12 months' gross salary paid in the event of permanent disability
Gender diversity: 50% of female managers	30%: percentage of female managers
Equal pay between men and women	1.73%: pay difference between men and women

3.9.1.2 Prevent and manage risks related to health and safety in the workplace

The mapping of risks relating to health and safety includes both risks of harm to the health and safety of people working for the Group (employees, temporary workers, subcontractors, interns) and risks relating to industrial facilities that are owned by the Group or maintained and / or operated by the Group for customers, which could generate risks for people working for the Group or for neighbors of these industrial facilities. These different risks correspond to three axis of prevention, No Life at Risk (safety at work), No Mind at Risk (well-being at work) and No Asset at Risk (process safety).

MAPPING OF HEALTH AND SAFETY AND PROCESS SAFETY RISKS



Due to the number of fatal accidents in 2021, the Group decided to improve its health and safety at work rules and practices by assessing its health and safety management system and analyzing deviations from best practices implemented by the most efficient industrial players in this field.

To do so, the Group engaged the services of an external consultant to carry out this assessment of its health and safety organization and culture.

The assessment carried out by the external consultant identified the Group's strong points and resulted in the issue of a certain number of recommendations aimed at permanently eradicating serious and fatal accidents.

Based on these recommendations, the analysis carried out internally and feedback from operating entities, the Group defined a major health and safety transformation plan called "ENGIE One Safety," which will be gradually rolled out by 2024.

The main measures of ENGIE One Safety applied in 2022 were the following:

- improving the Group health and safety rules drawing on best practices from an external benchmark; these rules cover the health and safety of subcontractors, the identification and processing of events with high potential of severity (HiPo), the management of risks, compliance with the Life-Saving Rules, and promotion of a fair culture (recognition and sanctions);
- the design and testing of a new method of training-coaching managers so that managerial safety rituals (for example, managerial safety visits, subcontractor visits) have the expected outcome on the safety behavior of the teams on the ground, including that of our subcontractors;
- revising the Group's health and safety indicators so that they focus more on anticipating risks and the implementation of efficient preventive actions in the field; new indicators focused on prevention were thus defined (leading indicators)[1], in addition to the traditional indicators which focus on accident reporting (lagging indicators);
- implementation of a group of health and safety experts, managed centrally, aimed at carrying out internal audits for the Group and supporting the entities on specific subjects;
- deployment of a new communication plan aimed at raising awareness among Group employees and subcontractors of the intangible nature of the Life-Saving Rules.

The main actions implemented in terms of process safety (No Asset at Risk prevention axis) are described in Section 2.2.5.2 "Risk of industrial accident."

The other measures intended to ensure the health and safety of individuals working for the Group are presented in Section 2.2.6.2 "Health and safety at work" and in Section 3.4.7 "Health and safety policy." Details of the measures are provided on the Group's website: https://www.engie.com/engagements/global-care.

3.9.1.3 Prevent and manage risks related to personal security

The Group's Security and Economic Intelligence Department is notably responsible for ensuring that people are protected. It brings together and leads a network of security managers who define and coordinate the implementation of the ENGIE's Group Security policy.

The "protection of individuals against malicious acts" section of ENGIE's Group Security policy is governed by Law 2017-399 on the duty of vigilance of parent companies and contractors dated March 27, 2017. This duty of protection applies to all employees, regardless of their status, and notably those who are internationally mobile.

Malicious threats and acts targeting individuals form an integral part of the security risks included in the company's risk catalog (ERM/Enterprise Risk Management). Security incidents are recorded in a Group incident reporting tool (MySecurityIncident), brought to the attention of the security team and are systematically dealt with.

The security network pays particular attention to the respect for human rights in security activities and implements measures aimed at preventing any risk of disproportionate use of force. For this reason, contracts with care-taking and private security firms always include the Group's ethics and sustainable development clause which appears in the general procurement conditions. Moreover, these firms are always subject to checks (due diligence) before they are used.

Security managers are advised by the Security department, which regularly reminds them of their obligations in this area. Finally, security players, working closely with the data privacy teams, ensure that GDPR rules and local laws relating to recordings and the conservation of video protection data are also strictly adhered to.

3.9.1.4 Prevent and manage environmental and societal risks

From an environmental perspective, the major risk for the Group is climate risk, followed by biodiversity, water and pollution risks. These global and local environmental risks are identified annually at both Group and local level in order to establish a list of "at risk" sites. From a societal point of view, the risks analyzed are the impact of activities on local communities and their social consequences.

ENVIRONMENTAL RISKS

- Climate change and GHG
- Biodiversity and the rehabilitation of ecosystems
- Water
- Pollution
- Adaptation

SOCIETAL RISKS

- Relations with local communities
- Training, employee retraining
- Right to operate in a territory
- Affordable business offers

The Group's CSR Policy guides the vigilance process with regard to environmental and social matters (see Section 3.1.1). Environmental and societal risks are analyzed periodically at every level of the company. This policy is deployed in each Global Business Unit (GBU), subsidiary, and site. Its implementation is monitored through goals and action plans that are reviewed every year. This review process enables us to make sure our obligations, with respect to environmental and societal vigilance, are properly satisfied.

The environmental policy fully incorporates this risk analysis. The control of its CO_2 emissions is a major issue for the Group: ENGIE committed, in May 2021, to the "Net Zero-Carbon" by 2045 objective for all of its direct and indirect emissions. This objective should be achieved by following a "well below 2°C" trajectory, with intermediate milestones.

(1) *Examples: HiPo rate and rate of serious and fatal accidents for which an analysis of root causes are carried out within the time frame.*

To date, the Group has taken visible measures, notably with a view to deploying its plan to exit coal by 2027 at the latest, to reduce the carbon intensity of its electricity production, to reduce emissions relating to the use of products sold, drastically by 2045, to align future investments with its carbon ambition, to allocate carbon budgets to each GBU and to assess management teams based on the achievement of "Net Zero-Carbon" objectives.

ENGIE's climate trajectory is set out in the 2023 Climate Notebook (www.engie.com/en/group/social-responsibility/csr-publications).

The environmental policy also aims to institute action plans at various levels to avoid, reduce, and if necessary, offset the environmental impacts of the Group's activities.

The societal policy is focused on stakeholder engagement. Its implementation includes a toolbox, training programs and a center of expertise.

E-learning modules covering the climate, biodiversity, stakeholder engagement and the CSR matrix in investment decisions have been developed since 2021 with the Sustainability Academy and target, more specifically, operational employees and managers who are directly concerned by this subject.

Results from e-learning participation in 2022:

e-learning courses proposed	Number of participants since the launch
Net zero-carbon ambition (2021)	5,883
Business change maker (2021)	1,188
CO_2 killer (2021)	1,324
People of the world (2021)	1,075
Introduction to biodiversity (November 2021)	2,275
Stakeholder engagement (March 2022)	302
CSR matrix (April 2022)	328
Digital Responsibility (June 2022)	2,722
TOTAL	**15,097**

In addition, since 2021, the Group has taken nine CSR criteria into account for its major investment projects, assessed using risk and opportunity analyses. These criteria mainly relate to: reducing GHG emissions, adaptation to climate change, biodiversity, water, pollution, the circular economy, ethics, health and safety, collaboration with stakeholders and sustainable procurement. These criteria are described in detail on the ENGIE website at https://www.engie.com/en/analysts/governance/duty-of-vigilance-environmental-societal-risks.

3.9.1.5 Prevent and manage risks related to energy supply

The main challenges for ENGIE relating to energy supply (biomass, gas, LNG, etc.) are as follows:

CHALLENGES IN THE ENERGY SUPPLY CHAIN (PRODUCTION, TRANSMISSION, ETC.)

HUMAN RIGHTS

- Forced labor, child labor (e.g.: equipment production, mining)
- Rights of local communities and indigenous populations (e.g. land rights, right to free and informed consent, right to resources, right to health)
- Health and safety of workers and local communities (e.g. the impact of production operations, protective equipment, chemical products used, risk of explosion, emissions)

ENVIRONMENTAL

- Climate change (e.g. CO_2 / methane emissions, carbon footprint, deforestation, use of fossil fuels)
- Water scarcity and quality (e.g. the use of drinking water, water requirements, the overuse of water, use of chemical products)
- Air, water and soil pollution (e.g. chemical products, heavy metals, residues, waste management)
- Biodiversity (e.g. risk to ecosystems, risk to flora and fauna, to ecological corridors, deforestation, the use of agricultural land)

ENGIE has identified risks relating to the Group's energy supply as a specific issue of vigilance for the Group. The entities responsible for these purchases manage these risks directly, in accordance with the Group's reporting rules and governance, and identify the risks specific to each of their activities by energy source, and at the country and energy supplier level.

With regard to large energy supplies, ENGIE has drawn up a CSR approach (described on ENGIE's website: https://www.engie.com/en/analysts/governance/duty-of-vigilance-environmental-societal-risks) to meet these challenges, with specific action plans per energy source. ENGIE has also improved its governance structure to ensure that the duty of vigilance is included in decision-making processes and has systematized the supply chain risk assessment approach, based on the 3P approach (People, Planet and Profit).

More generally, entities implement the following prevention and risk management measures:

- entities adopt, where necessary, mitigation measures and contractual clauses adapted to the identified risks (e.g. specific performance clauses for the carbon footprint and methane emissions) in their contracts with suppliers;
- they include the Group's ethics and CSR clause in their contracts, which also allows them to terminate a contract in the event of a breach of these obligations by the third party;
- they apply the human rights policy, ethical due diligence policies, environmental and societal policies, as well as ENGIE's other policies;
- they ensure the certification of certain suppliers and energy sources (e.g. biomass) as well as the presence of guarantees of origin;
- they carry out onsite audits at certain suppliers;
- they take part in bilateral and sector CSR working groups;
- they enter into gas procurement agreements that are compatible with the Group's carbon trajectory;
- in relation to the issue of US shale gas, and the consideration of its environmental impacts, ENGIE carries out extensive due diligence and chooses, among US producers, those who are able to offer the best guarantees in terms of emissions traceability and the environmental monitoring of their activity;
- ENGIE continues its strategy to withdraw from the coal business (in Europe by 2025 and worldwide by 2027).

3.9.1.6 Prevent and manage risks related to non-energy purchases

Six procurement categories are currently considered high risk in terms of human rights, health and safety and / or their environmental impact. These procurement categories are listed below:

PROCUREMENT CATEGORIES	SEVERE RISKS IDENTIFIED	ACTION PLANS
· Solar panels · Batteries	Human / environmental rights Environmental / human rights	Contractual provisions reinforced to ensure the traceability of equipment and new suppliers located in lower risk countries *(see Section 2.2.5.3)*
· Wind power	Human / environmental rights	Contractual provisions reinforced to ensure the traceability of equipment *(see Section 2.2.5.3)*
· Electrical equipment	Human Rights	Social audits and sourcing of new suppliers
· Workwear	Human Rights	Social audits and diversification (Brazil for example)
· IT equipment (PCs, printers, etc.)	Human Rights	Diversification of the panel of suppliers thanks to relocation to the United States and Europe
· Turnkey EPC contracts	Health and safety / human rights	Reinforcement of health and safety rules and exclusion of suppliers who do not respect these rules

Since 2020, particular attention has been paid to purchases that may be linked to forced labor in China. The principal measures taken to identify and manage these risks are presented in Section 2.2.5.3.

The identification of these six categories and risk management are ensured by the implementation of ENGIE's Procurement vigilance process through:

- the implementation of the Group's Procurement management system;
- the management category as defined in the Group's procurement organization.

The Procurement management system is structured around two guidance documents: a Procurement Charter and Procurement Governance which set out:

- ENGIE's commitments and requirements vis-à-vis its suppliers in terms of ethical relations, a selection on ethical, health and safety, and environmental criteria;
- 14 rules, including due diligence obligations for key suppliers for the Group and entities, the implementation of the Code of Conduct for supplier relations, and an analysis of ethical risks that must be carried out within each entity, etc.

These principles and rules are set out in the operational procurement processes which include the following key stages:

- the CSR assessment of new preferred (Group level) and major (entity level) suppliers by our partner EcoVadis;
- the analysis of risks and opportunities based on a risk matrix developed in partnership with EcoVadis. This matrix establishes a CSR risk for each of the 62 procurement categories across four dimensions: ethics, human rights, environment and sustainable procurement. The CSR risk is either compounded or improved by the level of country risk;

- the implementation of associated management plans taking into account the eligibility criteria of suppliers. These plans may include, for example, audits, specific contractual provisions to limit the risk, an ethics clause, etc. A risk reduction plan is automatically implemented for suppliers with an EcoVadis score below 45/100;
- the measurement of the performance delivered by the suppliers and related improvement plans.

The proper implementation of these processes is verified via the INCOME internal control program (see Section 2.3). With 28 different controls, the INCOME PRO reference system covers all procurement processes.

Moreover, the Group Procurement Department works in partnership with the Audit Department to ensure the monitoring of corrective action plans recommended by the latter.

Lastly, the Procurement management system is facilitated by a continuous training plan for the entire Procurement sector. Face-to-face and videoconferencing sessions are supplemented by the delivery of online modules via Ulearn, the Group's training Intranet. In 2022, around 300 purchasers took part in the "Ethics and supplier relations" and "Due Diligence" training courses through face-to-face sessions and videoconferencing. Three Ulearn training modules were mandatory for the entire procurement function: Fraud and Corruption, Zero Tolerance; Our Group, Our Ethics; and Competition Law. In December 2022, the Group Procurement Department also took part in the "Climate fresco" training course which raises awareness among employees regarding climate issues and possible actions.

3.9.2 SITUATION RELATED TO RUSSIA AND UKRAINE

ENGIE has no industrial activity in Russia and no investment projects are underway on Russian territory. ENGIE closed its representative office in Moscow in 2022. One employee was based in Ukraine and left the country at the beginning of the Russian invasion, in February 2022. Moreover, ENGIE has no activities in Crimea, the Donbass or the Louhansk Oblast.

3.9.3 THIRD-PARTY ASSESSMENT

In 2022, 100% of the partners in the Group's investment projects were subject to due diligence, including a systematic study of "vigilance" topics by the ethics line.

Directly or indirectly, 100% of the Ethics & Compliance Officers have access to a specialist due diligence tool. Due diligence is carried out on third parties (suppliers, subcontractors, partners, contractors, etc.) in line with due diligence policies, as described on ENGIE's website: https://www.engie.com/en/ethics-and-compliance/vigilance-plan/third-parties. In 2022, the Group's Ethics & Compliance Officers and ethics correspondents declared more than 17,000 level one due diligence searches performed using the due diligence tools.

In addition, the Group's new preferred and major suppliers are automatically assessed by the procurement line via due diligence carried out by the Category Managers and Chief Procurement Officers before contracting takes place. Since 2019 this rule has been gradually extended to cover a panel of 1,563 recurring suppliers, representing 38% of expenditure excluding energy. In 2022, the procurement line launched an ethics assessment by EcoVadis of around 400 preferred and major suppliers. The objective monitored by the procurement line is to assess around an additional 250 to 300 preferred and major suppliers each year.

3.9.4 WHISTLEBLOWING AND COLLECTION OF ALERTS

The whistleblowing system has been open to all employees, permanent or temporary, and to all external stakeholders, since January 2019. An external service provider forwards the anonymous report to ENGIE for processing (see Section 3.8.4). In 2022, 254 alerts were received via the system, 78 of which concern risk categories related to the duty of vigilance. They can be summarized as follows:

Allegations of harassment*	Allegations relating to health and safety	Allegations relating to working practices	Allegations of discrimination	Questions related to the environment and the rights of communities
39	10	21	7	1

* *There were 35 allegations of harassment and two allegations of sexual harassment. Nine allegations of sexual harassment were also identified within the management system.*

As for all of our alerts, alerts relating to allegations of discrimination and harassment are processed systematically and immediately. When allegations are proven to be true, disciplinary measures are systematically taken and action plans deployed.

3.9.5 STEERING, GOVERNANCE AND FOLLOW-UP OF THE DEPLOYMENT OF THE PLAN

3.9.5.1 Steering and follow-up at the highest corporate level

The Group has set up monitoring and global coordination at the highest level to meet the law's objectives in an effective way. The plan was approved by the Executive Committee, which entrusted its management to the Ethics, Compliance & Privacy Department (ECPD), under the responsibility of the Legal, Ethics and Compliance Department, itself attached to the Corporate Secretariat. A report on the effective implementation of the plan is presented annually to the EESDC of the Board of Directors.

A specific committee is responsible for the operational implementation of the plan. Its aim is to ensure that the plan is distributed and that information can be fed back easily. The members are:

			Departments				
ECPD	CSR	Procurement Department	Health and Safety Department	Security Department	HR Department	Internal control	Risk
			Regions / operational members				
SOUTHAM	NORTHAM	FRANCE	EUROPE	AMEA	GEMS	TRACTEBEL	

In addition, each entity must ensure that the vigilance plan has been effectively rolled out within its scope. The monitoring of these actions by the entities is included in the annual compliance report (see Section 3.8.6).

3.9.5.2 Stakeholder relations

The plan and the progress made in its implementation are presented and regularly discussed with the employee representative bodies. It has been implemented via the existing committees at the Group level, as well as at the European Works Council. The plan is also presented to the EESDC for the Board of Directors. The entities were also asked to present the vigilance plan to their employee representative organizations. This approach was implemented when the first vigilance plan was adopted.

Since 2020, an internal control process, notably aimed at ensuring that all stakeholders are aware of the requirements set out in the law and the vigilance plan, has been in place.

The new global agreement is a resource to facilitate the deployment of the vigilance approach. It was negotiated and signed in 2022 with all of the Group's social partners at a global level. Under this agreement, ENGIE's duty of vigilance is subject to strengthened social dialog: group discussion sessions were organized with international the trade union federations in 2022. These discussions resulted in the adoption of the mechanism described on the website. A body to monitor this agreement meets once a year. These exchanges also make it possible to monitor the vigilance approach in consultation with social partners. For further information: https://www.engie.com/en/ethics-and-compliance/vigilance-plan/stakeholders.

In order to prevent and manage the human rights, environmental and societal impact of its activities as best as possible, ENGIE has adopted a specific "commitment to stakeholders" policy, as part of the Group's CSR policy. This policy is available on ENGIE's website: https://www.engie.com/en/group/social-responsibility/policies.

Finally, the Group is committed to building a meaningful dialog which each of its stakeholders. In 2021, ENGIE set up a Dialog Committee with its stakeholders as well as a recourse space to support sensitive projects. This Committee met on October 21, 2022 to discuss the subject of a fair transition (see Section 3.6.3).

3.9.6 DUTY OF VIGILANCE CORRELATION TABLE

Risk categories covered by the vigilance plan	Location in the URD	Page
Risks related to human rights	Section 3.8.1 "Ethics and compliance governance"	131
Risks related to the health and safety of individuals	Section 3.4.7 "Health and safety policy"	115
Risks related to the security of individuals	Section 3.9.1.3. "Prevent and manage risks related to personal security"	137
Environmental and societal risks	Section 3.1.1 "CSR policy and governance"	66
Risks related to non-energy procurement	Section 3.7 "procurement, outsourcing and suppliers"	130
The four risks above	Section 2.2 "Risk factors"	45

Details of the categories above are provided on the Group's website: https://www.engie.com/en/group/ethics-and-compliance/policies-and-procedures.

3.10 REPORT OF ONE OF THE STATUTORY AUDITORS, APPOINTED AS INDEPENDENT THIRD PARTY, ON THE VERIFICATION OF THE CONSOLIDATED NON-FINANCIAL PERFORMANCE STATEMENT

Year ended December 31, 2022

This is a free English translation of the report by one of the Statutory Auditors issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders' Meeting,

In our capacity as Statutory Auditor of ENGIE SA (hereinafter the "Company"), appointed as independent third party ("third party") and accredited by the French Accreditation Committee (Cofrac), under number 3-1886 rév. 0 (Cofrac Inspection Accreditation, scope available at www.cofrac.fr), we have conducted procedures to express a limited assurance conclusion on the historical information (observed or extrapolated) in the consolidated non-financial performance statement, prepared in accordance with the Company's procedures (hereinafter the "Guidelines"), for the year ended December 31, 2022 (hereinafter the "Information" and the "Statement", respectively), presented in the Group management report pursuant to the legal and regulatory provisions of Articles L. 225-102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (*code de commerce*).

Conclusion

Based on our procedures as described in the section "Nature and scope of procedures" and the evidence we have obtained, no material misstatements have come to our attention that cause us to believe that the non-financial performance statement does not comply with the applicable regulatory provisions and that the Information, taken as a whole, is not fairly presented in accordance with the Guidelines.

Comments

Without qualifying the conclusion expressed above and in accordance with Article A. 225-3 of the French Commercial Code, we make the following comments:

As indicated in the environmental methodology note in section 3.5.3 of this report, two methodological changes concerning the calculation of Scope 2 GHG have been made in order to align ENGIE's practices with national and European regulations. The impact of those two methodological evolutions (exclusion of purchases of heat from energy recovery units and requalification of pumped-storage stations of energy production units into batteries) on the emissions for 2021 and 2020, which have been reprocessed, is presented in the same section.

Preparation of the non-financial performance statement

The absence of a generally accepted and commonly used reference framework or established practices on which to base the assessment and measurement of the Information enables the use of different but acceptable measurement techniques that may impact comparability between entities and over time.

Accordingly, the Information must be read and interpreted with reference to the Guidelines, summarised in the Statement and available on the Company's website or on request from its headquarters.

Limits inherent in the preparation of the information relating to the Statement

The Information may be subject to uncertainty inherent to the state of scientific and economic knowledge and the quality of external data used. Some information is sensitive to the choice of methodology and the assumptions or estimates used for its preparation and presented in the Statement.

Responsibility of the Company

Management is responsible for:

- selecting or determining the appropriate criteria for the preparation of the Information;
- preparing a Statement pursuant to legal and regulatory provisions, including a presentation of the business model, a description of the main non-financial risks, a presentation of the policies implemented with respect to these risks as well as the outcomes of these policies, including key performance indicators and the information set-out in Article 8 of Regulation (EU) 2020/852 (Green taxonomy);
- implementing such internal control as it determines is necessary to enable the preparation of Information that is free from material misstatement, whether due to fraud or error.

The Statement has been prepared by applying the Company's Guidelines as referred to above.

Responsibility of the Statutory Auditor appointed as independent third party

Based on our work, our responsibility is to express a limited assurance conclusion on:

- the compliance of the Statement with the requirements of Article R. 225-105 of the French Commercial Code;
- the fairness of the information provided pursuant to part 3 of sections I and II of Article R. 225-105 of the French Commercial Code, i.e. the outcomes of policies, including key performance indicators, and measures relating to the main risks, hereinafter the "Information."

As it is our responsibility to issue an independent conclusion on the information prepared by management, we are not authorised to participate in the preparation of the Information, as this could compromise our independence.

It is not our responsibility to provide a conclusion on:

- the Company's compliance with other applicable legal and regulatory provisions (particularly with regard to the information set-out in Article 8 of Regulation (EU) 2020/852 (Green taxonomy), the duty of vigilance and the fight against corruption and tax evasion);
- the compliance of products and services with the applicable regulations.

Applicable regulatory provisions and professional guidance

We performed the work described below in accordance with our audit verification programme in application of Articles A. 225-1 *et seq.* of the French Commercial Code, the professional guidance issued by the French Institute of Statutory Auditors (*Compagnie Nationale des Commissaires aux Comptes*) relating to this engagement and with the international standard ISAE 3000 (revised - Assurance engagements other than audits or reviews of historical financial information).

Independence and quality control

Our independence is defined by Article L. 822-11-3 of the French Commercial Code and French Code of Ethics for Statutory Auditors (*Code de déontologie*). In addition, we have implemented a system of quality control including documented policies and procedures aimed at ensuring compliance with applicable legal and regulatory requirements, ethical requirements and the professional guidance issued by the French Institute of Statutory Auditors (*Compagnie Nationale des Commissaires aux Comptes*) relating to this engagement.

Means and resources

Our work engaged the skills of 11 people between October 2022 and February 2023 and took a total of 21 weeks.

To assist us in conducting our work, we referred to our corporate social responsibility and sustainable development experts. We conducted around a dozen interviews with people responsible for preparing the Statement.

This work involved the use of information and communication technologies allowing the work and interviews to be carried out remotely, without hindering the good execution of the verification process.

Nature and scope of procedures

We planned and performed our work taking account of the risk of material misstatement of the Information.

We consider that the procedures conducted in exercising our professional judgement enable us to express a limited assurance conclusion:

- We familiarized ourselves with the activities of all companies in the consolidation scope and the description of the principal risks.
- We assessed the suitability of the Guidelines with respect to their relevance, completeness, reliability, neutrality and clarity, taking into account, where appropriate, best practices within the sector.
- We verified that the Statement covers each category of information stipulated in section III of Article L. 225-102-1 governing social and environmental affairs, respect for human rights and the fight against corruption and tax evasion.
- We verified that the Statement provides the information required under Article R.225-105 II of the French Commercial Code where relevant with respect to the principal risks, and includes, where applicable, an explanation for the absence of the information required under Article L.225-102-1 III, paragraph 2 of the French Commercial Code.
- We verified that the Statement presents the business model and a description of the principal risks associated with the activities of all the consolidated entities, including where relevant and proportionate, the risks associated with their business relationships, their products or services, as well as their policies, measures and the outcomes thereof, including key performance indicators associated to the principal risks.
- We referred to documentary sources and conducted interviews to:
  - assess the process used to identify and confirm the principal risks as well as the consistency of the outcomes, including the key performance indicators used, with respect to the principal risks and the policies presented, and
  - corroborate the qualitative information (measures and outcomes) that we considered to be the most important[(1)]; for certain risks or information (societal, environmental), our work was carried out on the consolidating entity, while for other risks, our work was carried out on the consolidating entity and on a selection of entities.
- We verified that the Statement covers the consolidated scope, i.e. all companies within the consolidation scope in accordance with Article L. 233-16, with the limits specified in the Statement.

3

(1) *Implementation of decarbonization, CSR evaluation and inclusive purchasing objectives for suppliers within the purchasing management system, Implementation of a specific training course for staff most exposed to the risk of corruption.*

- We obtained an understanding of internal control and risk management procedures implemented by the Company and assessed the data collection process aimed at ensuring the completeness and fairness of the Information.
- For the key performance indicators and other quantitative outcomes[1] that we considered to be the most important, we implemented:
  - analytical procedures that consisted in verifying the correct consolidation of collected data as well as the consistency of changes thereto,
  - substantive tests, on a sample basis and using other selection methods, that consisted in verifying the proper application of definitions and procedures and reconciling data with supporting documents. These procedures were conducted for a selection of contributing entities[2] and covered between 8% and 78% of the consolidated data selected for these tests.
- We assessed the overall consistency of the Statement in relation to our knowledge of all companies within the consolidation scope.

The procedures conducted in a limited assurance review are substantially less in scope than those required to issue a reasonable assurance opinion in accordance with the professional guidelines of the French National Institute of Statutory Auditors (*Compagnie Nationale des Commissaires aux Comptes*); a higher level of assurance would have required us to carry out more extensive procedures.

Paris-La Défense, March 7 2023
One of the Statutory Auditors,
Deloitte & Associés

Patrick E. SUISSA
Partner, Audit

Erwan HARSCOET
Partner, Sustainability Services

(1) **Social, health and safety information:** *Total workforce, Total workforce - Breakdown by SPC, Total workforce – Breakdown by type of contract, Female workforce, Proportion of women in workforce, Proportion of women in management, Proportion of workforce trained, Proportion of trainees in the workforce, Proportion of disabled employees, Number of permanent hires, Number of fixed-term hires, Hiring rate, Permanent hiring rate, Number of lay-offs, Turnover, Voluntary turnover, Proportion of workforce trained, Total number of training hours, Number of training hours per person trained, Number of fatal accidents (employees), Frequency rate, Severity rate (French framework), Severity rate (ILO framework), Gender Equity Index, Prevention Rate.*

Environmental information: *Energy efficiency of fossil fuel plants (including biomass/biogas), Primary energy consumption – total (excluding own consumption), Electricity and thermal energy consumption (excluding own consumption), Renewable – Net installed power (electric and thermal), Renewable – Electricity and heat produced, Total quantity of hazardous waste and by-products discharged (including sludge and excluding radioactive waste), Total quantity of hazardous waste and by-products recovered (including sludge and excluding radioactive waste), Total quantity of non-hazardous waste and by-products discharged (including sludge), Total quantity of non-hazardous waste & by products recovered (including sludge), Total direct GHG emissions - scope 1 and 2, Carbon intensity of energy production,* NO_x *emissions,* SO_2 *emissions, Fine particle emissions, Fresh water – Total withdrawal, Fresh water - Total discharge, Non-fresh water - Total withdrawal, Non-fresh water - Total discharge, Total Consumption (fresh water and non-fresh water), GHG from energy production, GHG from use of sales, Renewable capacities rate, Decarbonation of suppliers, GHG from work practices.*

(2) **Social, health and safety information:**
Social information:
Audits performed at intermediary consolidation level: South America
Audits performed at entity level: GRDF, GRTgaz, Cofely Espana, ENGIE Solutions Company

Health & Safety information:
Audits performed at intermediary consolidation level: Infrastructures
Audits performed at entity level: Buildings and Local Infrastructures (BIL), ENGIE Deutschland, Large Infrastructures and Mobilities (GIM)

Environmental information: *Brazil: Salto Osório, Umburanas, Ferrari, Campo Largo; Thermal Europe: Leini, Amercoeur, Knippegroen, Cycofos, Coo, Eems ; GRDF : GDRF ; Storengy : Chémery site, Germigny sous Coulomb site, Gournay-sur-Aronde site ; Nuclear : Doel, Tihange.*

3.11 STATUTORY AUDITORS' REASONABLE ASSURANCE REPORT ON SELECTED SOCIAL, ENVIRONMENTAL AND GOVERNANCE INFORMATION

Year ended 31 December 2022

This is a translation into English of the statutory auditors' report on the financial statements of the Company issued in French and it is provided solely for the convenience of English-speaking users.

This statutory auditors' report includes information required by European regulations and French law, such as information about the appointment of the statutory auditors or verification of the management report and other documents provided to the shareholders.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Executive Director of Engie,

Pursuant to your request and in our capacity as Statutory Auditors of Engie (hereinafter the "Company"), we hereby report to you on selected social and environmental indicators for the year ended 31 December 2022, identified by the symbol ◻◻ in sections 3.4 and 3.5 of the Universal Registration Document (hereinafter the "Information" [(1)]), prepared in accordance with the procedures of the Company, a summary of which is included in "Methodological Elements" and "Methodological Note on the Calculation of Social Indicators", available upon request for the Universal Registration Document made to the registered office of the Company from the Group's Social and Environmental Responsibility, Health and Safety and Human Resources Departments (hereinafter the "Reporting Criteria").

Conclusion

In our opinion, on the basis of the procedures we have performed as described in "Nature and scope of work" and the elements we have gathered, the Information has been established, in all significant aspects, in accordance with the Reporting Criteria used by the Company.

Observations

Without calling into question the conclusion expressed hereabove, we hereby make the following observation concerning two methodological changes that must be highlighted:

As stated in the "Methodological Elements" section in part 3.5.3 of the Universal Registration Document, two methodological changes concerning the calculation of Scope 2 of greenhouse gas emissions were made in order to bring the practices of the ENGIE Group into line with national and European provisions. The effect of these two methodological changes [the exclusion of purchases of heat recovered from Energy Valorization Unit (EVU) and the recharacterization of pumped storage stations into battery energy production units] on emissions for financial years 2020 and 2021, which have been restated, are presented in the same section.

Information preparation

The absence of a generally accepted and commonly used reference framework of established practices on which to base to the assessment and measurement of the Information enables the use of different, but acceptable, measurement techniques that may impact comparability between entities and over time.

Accordingly, the Information must be read and interpreted with reference to the Reporting Criteria, a summary of which is included in the "Methodological Elements" and "Methodological Note on the Calculation of Social Indicators" sections of the Universal Registration Document, available upon request at the Company's headquarters from the Group Environmental and Social Responsibility Department, the Group Health and Safety Department and the Group Human Resources Department.

Limits inherent in the preparation of the Information

As stated in the management report, the Information may be subject to uncertainty inherent to the state of scientific or economic knowledge and the quality of the external data used. Some Information is sensitive to the choice of methodologies, assumptions and/or estimates used for its preparation and presented in Section 3 of the Group's management report.

Responsibility of the Company

The Company's executive management is responsible for:

- selecting or establishing the appropriate criteria to prepare the environmental and social information, taking into account the applicable laws and regulations relating to the communication of environmental and social information;
- preparing information on the subject in accordance with the Reporting Criteria, including the design, implementation and maintenance of the internal systems, processes and controls on the relevant information to evaluate or measure the environmental and social information, which are free from significant inaccuracies, whether due to fraud or error, in relation to the criteria for the presentation of the reports.

Responsibility of the Statutory Auditors

Our responsibility to express a reasonable assurance, based on our procedures, of the Information having been prepared, in all material respects, in accordance with the Reporting Criteria. The conclusions expressed here cover only this Information and not all of the Information set forth in Sections 3.4 and 3.5 of the Universal Registration Document.

As it is our responsibility to issue an independent conclusion on the Information prepared by the executive management, we are not authorized to participate in the preparation of the Information, as this could compromise our independence.

Professional standards applied

The work described below was performed in accordance with the professional guidance issued by the French Institute of Statutory Auditors (*Compagnie Nationale des Commissaires aux Comptes)* and with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ('ISAE 3000, revised') published by the International Auditing and Assurance Standards Board (IAASB).

(1) **Social and social security related information:** *Year-end workforce; Total number of managers; Total STS, Total WET; Proportion of women in workforce; Number of women in management; Staff with permanent contracts; Staff with fixed-term contracts; Proportion of staff who have received training (including e-learning); Total hours worked; Number of work accidents resulting in at least one day off.*

Environmental information: *Primary energy consumption – Total (excluding own consumption); Electricity and thermal energy consumption (excluding own consumption); Energy efficiency of fossil fuel plants (including biomass/biogas); Renewables – net installed power (electric and thermal); Renewables – Electricity and heat produced; Total greenhouse gas emissions (Scopes 1 and 2); Carbon intensity of energy production; Total quantity of hazardous waste and by-products discharged (excluding radioactive waste); Total volume of hazardous waste and by-products recovered (excluding radioactive waste); Recovery rate for hazardous waste.*

Independence and quality control

Our independence is defined by regulatory texts, the French Code of Ethics for Statutory Auditors (*Code de Déontologie*) and the provisions of article L. 822-11-3 of the French Commercial Code (*Code de commerce*). In addition, we have implemented a system of quality control including documented policies and procedures aimed at ensuring compliance with ethical requirements, French professional standards and applicable legal and regulatory requirements.

Human resources

Our work mobilized the skills of 11 people from the Deloitte teams and fifteen people from the EY teams respectively and was carried out between September 2022 and March 2023.

Nature and scope of procedures

Reasonable assurance involves the performance of procedures intended to obtain an understanding of the bases for the Information. The nature, timing and extent of the procedures selected depend on our professional judgment, in particular our assessment of the risks of the Information containing material misstatements, whether due to fraud or error. In assessing these risks, we have also taken into account the internal controls relevant to the Company preparing the Information. We have also:

- Assessed the appropriateness of the Reporting Criteria with respect to its relevance, completeness, reliability, neutrality and clarity, by taking into consideration, when relevant, the sector's best practices;
- Verified the set-up of a process to collect, compile, process and check the completeness and consistency of the Information;
- Consulted the documentary sources and interviewed the relevant staff from the Group Environmental and Social Responsibility Department, the Group Health and Safety Department and the Group Human Resources Department in order to analyze the deployment and application of the Reporting Criteria;
- Undertook analytical review procedures on the Information and verified the calculations and the consolidation of the Information by means of sampling;
- Tested the Information for a representative sample of entities we selected[1] based on their activity, their contribution to the consolidation Information, their location and a risk analysis;
- Conducted interviews to verify the proper application of the procedures, and conducted substantive tests, using sampling techniques, to verify the calculations performed and reconcile data with supporting evidence. The selected sample represents between 16% and 65% of the Key Performance Indicators and results selected for these tests.

We consider that the sampling techniques and sample sizes we have used in exercising our professional judgment enable us to express a reasonable assurance conclusion. Due to the use of sampling techniques and the other limits inherent to the operation of any information and internal control system, the risk that a material anomaly may not be identified in the Information cannot be totally eliminated.

We believe that these procedures allow us to express a reasonable assurance that the Information has been prepared, in all material respects, in accordance with the Criteria.

Paris-La Défense 7 March 2023
The Statutory Auditors
French original signed by

DELOITTE & ASSOCIÉS		**ERNST & YOUNG et Autres**	
Nadia Laadouli Partner	Patrick E. Suissa Partner	Charles-Emmanuel Chosson Partner	Guillaume Rouger Partner

(1) **Environmental information:** *procedures performed at EO level: France B2B*
Procedures performed at entity level: South America excluding Brazil (CT Chilca Uno, Central Termica Red Dragon, Mejillones CCGT, Mejillones Conventional, Central Termoelectrica Andina SA), Brazil (Salto Osório, Umbaranas, Ferrari, Campo Largo), AMEA (UCH Power (Private) Limited (full conso), UCH-II Power (Private) Limited), Thermique Europe (Leini, Amercoeur, Knippegroen, Cycofos, Coo, Eems), Europe – excluding Thermal & Supply (Engie Servizi Consolidation), France Renouvelables (CNR, SHEM), EO France BIL (OUEST-Sud – Installations ENGIE Cofely – BIL, OUEST-Sud – Installations ENGIE Cofely – GIM), France GIM (Fraicheur de Paris, ENORIS), GRDF (GRDF), Storengy (sites at Chémery, Germigny-sous-Coulombs, Gournay-sur-Aronde), Nuclear (Doel, Tihange).

Social information:
Audits performed at entity level: GRDF, Engie ES SA – Cofely Services Etablissement, GRTgaz, DISTRIGAZ SUD RETELE, CNR, Cofely Espana, ENGIE Solutions Company.
Audits performed at GBU/Regional Hub level: Romania, Germany and Italy (Europe), South America.

Health and safety information:
Audits performed at entity level: Bâtiments et Infrastructures Locales (BIL), ENGIE Solutions GCC, ENGIE Deutschland, Grandes Infrastructures et Mobilités (GIM), DISTRIGAZ SUD RETELE.
Audits performed at GBU/Regional Hub level: Infrastructures, Supply.

4

GOVERNANCE

The information presented in this chapter forms the report of the Board of Directors on corporate governance, prepared in accordance with the provisions of the final paragraph of Article L.225-37 and Articles L. 22-10-8 et seq. of the French Commercial Code. The sections of the report relevant to the activities of the respective Board committees were presented to them and approved by the Board at its meeting of February 20, 2023.

This Report includes the information below regarding the composition of the Board of Directors, the conditions under which it prepared its work, and any limits imposed by the Board of Directors on the powers of the Chief Executive Officer. It also covers ENGIE's policy on diversity of expertise within the Board. This report sets out, in Section 4.4 "Compensation and benefits of members of the administrative and management bodies," the applicable provisions, principles and rules established to determine the compensation and benefits of any kind awarded to corporate officers. The changes to the composition of the Board of Directors proposed at the Shareholders' Meeting of April 26, 2023 are set out in Section 4.2.2.

4.1 GOVERNING BODIES

SEPARATION OF THE ROLE OF CHAIRMAN AND CHIEF EXECUTIVE OFFICER

In 2016, the Board of Directors, in line with the recommendations of the Appointments, Compensation and Governance Committee, opted for a separate governance structure. In 2018, the Board of Directors confirmed its choice to separate the roles of Chairman of the Board of Directors and Chief Executive Officer, to allow the Group to best meet the challenges facing it. The Chief Executive Officer's mission was to continue to drive the transformation plan in a rapidly changing sector, a challenge which was not deemed compatible with a term of office as Chairman of the Board of Directors, which requires a high level of availability to ensure an efficient, collaborative and independent functioning of the Board of Directors. In 2022, this choice was confirmed. The Directors noted a harmonious division of roles between the Chairman of the Board and the Chief Executive Officer. The Chairman is responsible for organizing and leading the work of the Board of Directors and manages relations and dialog with shareholders. The Chief Executive Officer focuses on the Group's operational management, following its strategic and transformation road map defined in May 2021 and notably ensures compliance with commitments made by the Group in terms of the energy transition.

4.1.1 COMPOSITION OF THE BOARD OF DIRECTORS

Pursuant to the provisions of Articles L.225-17, L.22-10-5 and L.22-10-6 of the French Commercial Code, ENGIE's Board of Directors must be composed of at least three Directors. Article 13 of the Company's by-laws sets the maximum number of Directors and provides that three Directors representing employees and one Director representing employee shareholders be appointed.

The Directors serve a four-year term. The terms of office of Directors expire at the close of the General Shareholders' Meeting convened in the year during which the term expires to approve the financial statements for the previous year.

The Shareholders' Meeting of April 21, 2022, elected Marie-Claire Daveu as a Director and re-elected Jean-Pierre Clamadieu and Ross McInnes as Directors.

On the date of this report, the Company is administered by a Board of Directors composed of 15 members, including:

- eight Directors elected by the Shareholders' Meeting pursuant to the provisions of the French Commercial Code relating to public limited companies;
- two Directors elected by the Shareholders' Meeting on the recommendation of the French State pursuant to Article 6 of Ordinance No. 2014-948 of August 20, 2014, in view of the French State's interest in ENGIE's share capital;
- one Director representing the French State, appointed by decree under Article 4 of Ordinance 2014-948 of August 20, 2014;
- three Directors elected representing employees, pursuant to Articles L.22-10-6 et seq. of the French Commercial Code;
- one Director representing employee shareholders, pursuant to Article L.22-10-5 of the French Commercial Code, elected by the Shareholders' Meeting.

The Board of Directors has seven independent Directors, including the Chairman of the Board of Directors (see Sections 4.1.1.1 "Profiles, experience and expertise of Directors in office," and 4.1.1.5 "Independence of Directors in office"). This means that the percentage of Independent Directors is 64%, it being specified that, pursuant to the Afep-Medef Code, Directors representing employees and employee shareholders are not counted to establish the percentage of Independent Directors.

When one or more Directors' seats become vacant, and after ascertaining the size of the Board of Directors, the Appointments, Compensation and Governance Committee (hereinafter, the ACGC) defines, with the support of the Chairman of the Board of Directors, the profile sought in light notably of the adequate nature of the Board's composition for the Group's activities, challenges and strategic plans as reflected in the diversity policy for members of the Board of Directors (see Section 4.1.1.7).

PROCESS FOR THE RECRUITMENT OF A DIRECTOR

The ACGC Chair, with the support of the Chair of the Board of Directors, supervises the search and selection process of new independent directors, where necessary with the assistance of one or more recruitment firms. Candidates are long listed and then short listed.

Interviews of candidates are held at the end of the process with a view to submitting a recommendation to the Board. During these interviews, the ACGC ensures in particular the independence, availability and motivation of the prospective candidate and his / her adherence to the Group's values.

The replacement of Directors appointed by the General Shareholders' Meeting, whose positions have become vacant during the term of office, due to death or resignation, is subject to the laws and regulations in force. Note that these measures may not be applied in the event of the vacancy, for any reason, of the seat of a Director elected by the employees or of the seat of the Director representing the employee shareholders.

Photograph taken during the Board of Directors meeting held on December 8, 2022.

From left to right: Christophe Agogué, Magali Viot, Yoan Kosnar, Jacinthe Delage, Patrice Durand, Françoise Malrieu, Lord Peter Ricketts of Shortlands, Marie-José Nadeau, Jean-Pierre Clamadieu (Chairman) Catherine MacGregor (Chief Executive Officer), Ross McInnes, Marie-Claire Daveu, Fabrice Brégier, Stéphanie Besnier, Mari-Noëlle Jégo-Laveissière, Hamid Aït-Ghezala, and Alice Vieillefosse (Substitute Government Commissioner).

Gildas Gouvazé
SEC representative appointed on January 13, 2023

Laurent Michel
Government Commissioner

As of the date of this report, the key features of the Board of Directors composition are the following:

(1) Pursuant to the applicable rules of the French Commercial Code and the Afep-Medef Code, in assessing the ratio of women to men and the percentage of independent Directors on Boards of Directors, the law stipulates that Directors representing employees or employee shareholders are not counted.

Changes of the Board of Directors and committees' membership structure during the 2022 fiscal year

	Departure	Appointment	Renewal
Board of Directors	Alain Beullier (04/21/2022) Philippe Lepage (04/21/2022)	Marie-Claire Daveu (04/21/2022) Yoan Kosnar (04/21/2022) Magali Viot (04/21/2022)	Jean-Pierre Clamadieu (04/21/2022) Ross McInnes (04/21/2022) Christophe Agogué (4/21/2022)
Audit Committee	-	-	Ross McInnes (04/21/2022) Christophe Agogué (4/21/2022)
SITC(1)	Philippe Lepage (04/21/2022)	Yoan Kosnar (04/21/2022)	Jean-Pierre Clamadieu (04/21/2022) Ross McInnes (04/21/2022)
ACGC(2)	Alain Beullier (04/21/2022)	Marie-José Nadeau (04/21/2022) Jacinthe Delage (04/21/2022)	-
EESDC(3)	Jacinthe Delage (04/21/2022)	Marie-Claire Daveu (04/21/2022) Magali Viot (04/21/2022)	Ross McInnes (04/21/2022)

(1) Strategy, Investment and Technology Committee.
(2) Appointments, Compensation and Governance Committee.
(3) Ethics, Environment and Sustainable Development Committee.

Stéphanie Besnier will be replaced as the Director representing the French State. At the date of this report, the identity of the person who will succeed her is not known.

Mari-Noëlle Jego-Laveissière did not seek for her term of office as Director to be renewed and will be replaced by a new member proposed by the State, subject to the vote of the Shareholders' Meeting.

4.1.1.1 Experience and expertise of the Directors in office

Pursuant to the provisions of Article L.225-17 of the French Commercial Code, which established the principle of balanced gender representation on Boards of Directors, at the date of this report, ENGIE's Board of Directors includes eight female Directors from a total of 15.

In assessing the ratio of women to men on Boards of Directors, the law stipulates that Directors representing employees and employee shareholders are not taken into account

As the Board of Directors of ENGIE includes three male Directors representing employees and one female Director representing employee shareholders, the assessment is based on 11 Directors, six of whom are women (a ratio of 55%).

ENGIE also seeks to increase the diversity and international experience of its Board of Directors. Four nationalities are represented by the 15 Directors (Australian, British, Canadian and French). For further information, please refer to Section 4.1.1.7 Diversity policy for members of the Board of Directors.

ON-BOARDING AND TRAINING PROGRAM FOR NEW MEMBERS OF THE BOARD OF DIRECTORS

Each Director may receive any training necessary for the proper performance of his or her role as Director - and, where applicable, as Committee member - provided or approved by the company in accordance with Article 1.10 of the Internal Regulations of ENGIE's Board of Directors and with Article 14 of the Afep-Medef Corporate Governance Code for listed companies.

The ACGC adopted, during its November 30, 2022 meeting, an on-boarding and training program for any new members of the Board in principle within six months of taking office, to allow them to rapidly acquire a good knowledge of the company's structure and activities. This program consists of a meeting with members of the Executive Committee, and information sessions with management representatives regarding the Group's business lines and cross-divisional subjects - including CSR, and includes visits of sites chosen by the company which are representative of the Group's activity.

TRAINING FOR DIRECTORS REPRESENTING THE EMPLOYEES

At its meeting on July 28, 2022, the Board of Directors adopted an on-boarding program for newly appointed Directors representing employees. This program was established in application of legal provisions, Article 14 of the Afep-Medef Code and Article 1.10 of the Internal Regulations of ENGIE's Board of Directors. This program aims to acquire or perfect the necessary knowledge and technical expertise to fulfill their role, and mainly cover the role and operation of the Board of Directors, the rights and obligations of Directors and their responsibilities as well the Company's structure and activities. The Director representing the employee shareholders may also benefit from this program.

Summary presentation of the Board of Directors

First and last name, gender [1] and age		Nationality	Number of ENGIE shares held [2]	Number of offices in other listed companies (excl. ENGIE)	Independent Director	Date of initial appointment	Expiration of term	Seniority on the Board [3]	Participation in Board committees
Jean-Pierre Clamadieu M, 64			50,000	2	●	05/18/2018	2026	4	Chairman of the SITC ACGC [4]
Catherine MacGregor F, 50			55,000	0	x	05/20/2021	2025	1	ACGC [4] SITC [4] EESDC [4]
Fabrice Brégier M, 61			500	1	●	05/03/2016	2024	6	ACGC
Marie-Claire Daveu F, 50			500	1	●	04/21/2022	2026	0	EESDC
Françoise Malrieu F, 77			3,000	0	●	05/02/2011	2023	11	Chair of the ACGC, Audit Committee, EESDC
Ross McInnes M, 68			2,700	2	●	05/18/2018	2026	4	Chairman of the EESDC SITC Audit Committee
Marie-José Nadeau F, 69			3,300	0	●	04/28/2015	2023	7	Chairman of the Audit Committee ACGC SITC
Lord Peter Ricketts of Shortlands M, 70			750	1	●	05/03/2016 [5]	2024	6	ACGC
Stéphanie Besnier [6] F, 45			0	2	x	05/19/2021	2023	1	Audit Committee SITC ACGC
Patrice Durand M, 69			2,500	0	x	12/14/2016	2023	6	SITC
Mari-Noëlle Jégo-Laveissière [7] F, 54			500	1	x	04/28/2015	2023	7	EESDC
Christophe Agogué M, 61			125	0	NA	05/18/2018	2026	4	Audit Committee
Yoan Kosnar M, 47			70	0	NA	04/21/2022	2026	0	SITC
Magali Viot F, 50			0	0	NA	04/21/2022	2026	0	EESDC
Jacinthe Delage F, 46			1 025	0	NA	05/20/2021	2025	1	ACGC

(1) *Female (F), Male (M).*
(2) *Directors co-opted or elected by the Shareholders' Meeting on the recommendation of the French State, the Director representing the French State and the Directors representing employees or employee shareholders are exempt from ownership of shares of the Company (see Section 4.1.2.1 "Organization and Chairmanship").*
(3) *In years elapsed.*
(4) *Attends this committee, or these committees, without being a member.*
(5) *With effect from August 1, 2016.*
(6) *Stéphanie Besnier will be replaced as the Director representing the French State. At the date of this report, the identity of the person who will succeed her is not known.*
(7) *Mari-Noëlle Jego-Laveissière did not seek for her term of office as Director to be renewed and will be replaced by a new member proposed by the State, subject to the vote of the Shareholders' Meeting.*

Directors elected by the Shareholders' Meeting (8)

JEAN-PIERRE CLAMADIEU

Chairman of the Board of Directors

- **Chairman of the Strategy, Investment and Technology Committee**
- **Attends without being a member the meetings of the Appointments, Compensation and Governance Committee**

Age: 64
Nationality: French
First appointment: 05/18/2018
Expiration of term: 2026
Shares held: 50,000 shares
Business address:
ENGIE – 1, place Samuel de Champlain – 92400 Courbevoie

Jean-Pierre Clamadieu is a graduate of the École Nationale Supérieure des Mines de Paris and an engineer of the Corps des Mines. He began his career within the French administration, particularly working for the Ministry of Industry and as technical advisor to the Minister of Labor. In 1993, he joined the Rhône-Poulenc group where he held several management positions. In 2003, he was appointed Chief Executive Officer of the Rhodia group, and then Chairman-CEO in 2008. In September 2011, following the merger of the Rhodia and Solvay groups, Jean-Pierre Clamadieu was named Vice Chairman of the Solvay Executive Committee. From May 2012 to the end of February 2019, Jean-Pierre Clamadieu served as Chairman of the Executive Committee and CEO of Solvay. On May 18, 2018, he was appointed Director and Chairman of the Board of ENGIE: his term of office was renewed on April 21, 2022. On October 8, 2020, he was also appointed Chairman of the ENGIE Foundation Board of Directors.

Principal activities outside the Company

Director of companies

Current offices held

Offices and positions in companies outside the Group

- Lead Independent Director of AXA [(1)] - Chairman of the Compensation, Governance and Sustainable Development Committee
- Director of Airbus [(1)] - member of the Appointments, Compensation and Governance Committee, and Chairman of the Ethics, Compliance and Sustainable Development Committee
- Chairman of the Board of Directors of the National Opera of Paris
- Director of France Industrie
- Member of the European Round Table for Industry
- Member of the Steering Committee of the Montaigne Institute
- Chairman of the Chamber of Commerce of Brazil in France
- Chairman of the C Génial Foundation
- Member of the Council for French-Emirati Affairs

Offices that have expired in the last five years

- Director and CEO of Solvay (Belgium) [(1)]
- Director of Faurecia [(1)]
- Director of the International Council of Chemical Associations (ICCA)
- Chairman of the Council of France-Brazil business leaders of Medef International
- Vice-Chairman of the Executive Committee of the World Business Council for Sustainable Development (Switzerland)

Areas of expertise

- Office of Chair or Director of a large company
- General Management
- Industrial sector

(1) Listed company.

CATHERINE MACGREGOR

Director
Chief Executive Officer

- **Attends without being a member the meetings of the Appointments, Compensation and Governance Committee,**
- **Attends without being a member of the Strategy, Investment and Technology Committee,**
- **Attends without being a member of the Ethics, Environment and Sustainable Development Committee.**

Age: 50
Nationality: French
First appointment: 05/20/2021
Expiration of term: 2025
Shares held: 55,000 shares
Business address:
ENGIE – 1, place Samuel de Champlain – 92400 Courbevoie

Catherine MacGregor joined the ENGIE group on January 1, 2021, as Chief Executive Officer, having spent her entire career in the energy sector. Catherine MacGregor is a graduate of the Ecole Centrale de Paris (CentraleSupélec). Before joining the ENGIE Group in January 2021, she held several management positions in the energy sector. Between 2019 and 2020 she was a member of the Executive Committee of TechnipFMC and managed the entity responsible for engineering activities: Technip Energies. She notably prepared its initial public offering. Prior to this, Catherine MacGregor worked at Schlumberger for 23 years, where she held a wide range of positions (Chairman of the drilling group, Chairman in charge of Europe & Africa, Vice-President of Human Resources, etc.) in various geographic areas (the Democratic Republic of the Congo, the United States, the United Kingdom, Malaysia, etc.). On October 8, 2020, she was also appointed as a Director of the ENGIE Foundation.

Principal activities outside the Company

None

Current offices held

Offices and positions in companies outside the Group

- Advisory member of the Board of Directors of Toulouse School of Economics
- Director of AFEP
- Member of the Executive Committee of the World Business Council for Sustainable Development (Switzerland)
- Director and member the *Association Française des Entreprises pour l'Environnement* (EpE)

Offices that have expired in the last five years

- Director of the École Centrale Supélec

Areas of expertise

- General Management
- Industrial sector
- Energy sector

FABRICE BRÉGIER

Director

● **Member of the Appointments, Compensation and Governance Committee**

Age: 61
Nationality: French
First appointment: 05/03/2016
Expiration of term: 2024
Shares held: 500 shares
Business address:
ENGIE – 1, place Samuel de Champlain – 92400 Courbevoie

A graduate of the École Polytechnique, Chief Engineer at the Corps des Mines, Fabrice Brégier began his career at the DRIRE Alsace (Ministry of Industry and Trade), before being appointed Sub-Director of Economic, International and Financial Affairs with the Ministry of Agriculture (Directorate-General for Food) in 1989. After serving as an Advisor to several French Ministers, Mr. Brégier joined Matra Défense in 1993, where he was successively Chairman of Franco-German joint ventures and Director of Stand-Off activities at Matra BAe Dynamics. In 1998, he became CEO of Matra BAe Dynamics. In 2001, he was appointed CEO of MBDA, the leading European missile systems company. Early in 2003, Fabrice Brégier joined Eurocopter, becoming Chairman and CEO in April. In 2005, he was appointed Director of EADS' Eurocopter Division and member of the EADS Executive Committee, then in 2006 was appointed Chief Operating Officer of Airbus and a member of the EADS Executive Committee. From 2012 to 2018, Fabrice Brégier served as Chairman and CEO of Airbus. In September 2018, he became Chairman of Palantir Technologies France, a leading company in the field of Big Data.

Principal activities outside the Company

Chairman of Palantir Technologies France

Current offices held

Offices and positions in companies outside the Group

- Chairman of Palantir Technologies France
- Director of KK Wind Solutions (Denmark)
- Director and Chair of the Appointments Committee of SCOR [1]

Offices that have expired in the last five years

- Chief Operating Officer Airbus [1] and Chairman of Airbus Commercial Aircraft

Areas of expertise

- General Management
- Digital, innovation, new technologies
- Industrial sector

(1) Listed company.

MARIE-CLAIRE DAVEU

Director

● **Member of the Ethics, Environment and Sustainable Development Committee**

Age: 50
Nationality: French
First appointment: 04/21/2022
Expiration of term: 2026
Shares held: 500 shares
Business address:
ENGIE – 1, place Samuel de Champlain – 92400 Courbevoie

A graduate of the École nationale du génie rural, des eaux et des forêts (ENGREF, part of IPEF). She also holds a DESS (Diplôme d'études supérieures spécialisées - French diploma of higher specialized studies) in public management from Université Paris Dauphine. Marie-Claire Daveu began her career in 1997 at the Departmental Directorate of Agriculture and Forestry in the Manche department in France. In 2001, she joined the Ministry for Planning and the Environment. In 2002, she was appointed Technical advisor for ecology and sustainable development in the Office of Prime Minister Jean-Pierre Raffarin, then Chief of Staff to Serge Lepeltier, Minister of Ecology and Sustainable Development in 2004. In 2005, she became Director of Sustainable Development at the Sanofi-Aventis Group. In 2007, she was appointed Chief of Staff to Nathalie Kosciusko-Morizet, first at the Secretary of State for Ecology, then at the Secretary of State for Planning, Public Policy and the Development of the Digital Economy and then at the Ministry of Ecology, Sustainable Development, Transport and Housing. In 2012, she joined the Kering Group, where she is currently Director of Sustainable Development and International Institutional Relations as well as a member of the Group's Executive Committee.

Principal activities outside the Company

Director of Sustainable Development and International Institutional Relations

Current offices held

Offices and positions in companies outside the Group

- Director of Crédit Agricole (1) - Member of the Risk Committee and the Strategy and Corporate Social Responsibility Committee
- Member of the Supervisory Board of the Compagnie du Ponant

Offices that have expired in the last five years

- Director of SPAC Transition (1)
- Non-executive independent Director of SAFT (1)
- Director and Chairman of the CSR Committee of Albioma (1)

Areas of expertise

- Office of Chair or Director of a large company
- CSR: Climate and Health and Safety
- Energy sector

(1) Listed company.

FRANÇOISE MALRIEU

Director

- **Chair of the Appointments, Compensation and Governance Committee**
- **Member of the Audit Committee**
- **Member of the Ethics, Environment and Sustainable Development Committee**

Age: 77
Nationality: French
First appointment: 05/02/2011
Expiration of term: 2023
Shares held: 3,000 shares
Business address:
19, avenue Léopold-II – Paris 16e

Françoise Malrieu is an expert in finance and governance. A graduate of the HEC School of Management, she launched her career in 1969 in the financial analysis department of BNP, later becoming director of the department. She joined Lazard Frères in 1987, where she led the merger-acquisitions department. As a Manager, then Managing Partner, she participated in a number of operations, particularly the privatization programs. In 2001, she joined Deutsche Bank as Managing Director responsible for the corporate finance activity. She ended her career in banking in 2010. After several years putting her expertise and knowledge of businesses to use in the service of governance, she now actively participates in the study and development of industry best practices. As a member of the executive boards of several associations, she helps businesses and associations work together to implement projects that have a social impact.

Principal activities outside the Company

Director of companies

Current offices held

Offices and positions in companies outside the Group

- Director of Groupe La Poste - Chairman of the Strategy and Investment Committee
- Director of Lazard Frères Banque
- Director - Vice-President of the French Red Cross
- Member of Association Aurore

Offices that have expired in the last five years

- None

Areas of expertise

- Finance
- Office of Chair or Director of a large company
- CSR: Climate and Health and Safety

4

ROSS MCINNES

Director

- **Chairman of the Ethics, Environment and Sustainable Development Committee**
- **Member of the Strategy, Investment and Technology Committee**
- **Member of the Audit Committee**

Age: 68
Nationality: French and Australian
First appointment: 05/18/2018
Expiration of term: 2026
Shares held: 2,700 shares
Business address:
SAFRAN – 2, boulevard du Général Martial-Valin – Paris 15e

A graduate of the University of Oxford, Ross McInnes began his career in 1977 with Kleinwort Benson in London and then in Rio de Janeiro. In 1980, he joined Continental Bank (which became Bank of America) where he successively held several positions in corporate finance operations, first in Chicago and then in Paris. In 1989, Ross McInnes joined Eridania Beghin-Say, where he was appointed Chief Financial Officer in 1991, and a member of the Board of Directors in 1999. The following year, Ross McInnes joined Thomson-CSF (now Thales) as Senior Vice President and Chief Financial Officer and worked on the transformation of the Group until 2005. He then joined the PPR Group (now Kering) as Senior Vice President for Finance and Strategy, then became a member of the Supervisory Board of Générale de Santé in 2006. He temporarily chaired the Management Board of Générale de Santé from March until June 2007. He also holds the positions of Vice-Chairman of Macquarie Capital Europe, specializing primarily in infrastructure investments. In March 2009, Mr. McInnes joined Safran and became Executive Vice President, Economic and Financial Affairs in June of that year. He served as a member of the Safran Management Board from July 2009 to April 2011, then as Deputy Chief Executive Officer until April 2015. On April 23, 2015, he became Chairman of the Safran Board of Directors. Since February of 2015, Ross McInnes has also served as Special Representative for economic relations with Australia, appointed by the Minister for Europe and Foreign Affairs in the context of French economic diplomacy. From November 2016 to November 2019, he was a member of the High Committee on Corporate Governance. In February 2017, he joined SICOM, the general partner of VIVESCIA Industries, as a “qualified person.” In October 2017, the French Prime Minister appointed Mr. McInnes Co-Chairman of the “Public Action 2022” Committee to propose actions to reform public policies. The Committee has since achieved its goals. Since January 2018, Ross McInnes has been a Trustee and Director of the IFRS Foundation. He is a Director of Lectra since April 2022.

Principal activities outside the Company

Chairman of the Board of Directors of Safran (1)

Current offices held

Offices and positions in companies outside the Group

- Chairman of the Board of Directors of Safran (1)
- Director of Lectra (1) since April 2022 - Member of the Audit Committee, the Strategic Committee and the Appointments Committee
- Trustee and Director of the IFRS Foundation

Offices that have expired in the last five years

- Director of Lectra until April 2020 (1),
- Director of Eutelsat Communications (1)

Areas of expertise

- Office of Chair or Director of a large company
- Finance
- Industrial sector

(1) Listed company.

MARIE-JOSÉ NADEAU

Director

- Chair of the Audit Committee
- Member of the Strategy, Investment and Technology Committee
- Member of the Appointments, Compensation and Governance Committee

Age: 69
Nationality: Canadian
First appointment: 04/28/2015
Expiration of term: 2023
Shares held: 3,300 shares
Business address:
300, avenue des Sommets, App. 1102 Verdun (Québec) – H3E 2B7 (Canada)

Marie-José Nadeau is an expert on the energy sector. She is an honorary Chair of the international organization World Energy Council, which she chaired from 2013-2016, after being Director for 15 years. Moreover, Marie José Nadeau has more than 20 years' experience as a top executive and has served as a member of Audit Committees for 10 years. A trained attorney who holds a Master's degree in public law from the University of Ottawa, she assumed strategic functions in the Canadian and Quebec governments before serving as Secretary General and Executive Vice President for Corporate Affairs at Hydro-Québec (Canada). She is Director of Trans Mountain Corporation, a Canadian company that operates and is developing an important network of pipelines in Western Canada and the United States and Director of the Electric Power Research Institute (United States), an international R&D organization specialized in innovative technologies related to the power and environment sectors. In 2009, she was awarded the title of Advocatus Emeritus by the Quebec Bar for her contribution to the legal profession. In 2016, she was received as a member of the Order of Canada in recognition for her commitment to education and the environment.
On December 15, 2022, Marie-José Nadeau was appointed Vice-President of the Board of Directors of Via HFR - Via TGF, a state-owned company of the Government of Canada responsible for the development of a high-frequency train system over a 1000-km distance between the cities of Toronto and Québec.

Principal activities outside the Company

Director of companies

Current offices held

Offices and positions in companies outside the Group

- Director of Trans Mountain Corporation (Canada)
- Director of the Electric Power Research Institute (United States)
- Director - Vice-President of Via HFR - Via TGF (Canada)

Offices that have expired in the last five years

- Chair of the World Energy Council (United Kingdom)
- Secretary General and Executive Vice President, Corporate Affairs at Hydro-Québec (Canada)
- Director of the Montreal Symphony Orchestra and Churchill Falls and Labrador Corporation Limited (Canada)
- Chair of the Advisory Council of the Electric Power Research Institute (United States)
- Director of Metro Inc. (1) (Canada) - Chairman of Governance and Appointments and member of the Compensation Committee

Areas of expertise

- Energy sector
- Office of Chair or Director of a large company
- Executive Board

(1) Listed company.

4

LORD PETER RICKETTS OF SHORTLANDS

Director

● **Member of the Appointments, Compensation and Governance Committee**

Age: 70
Nationality: British
First appointment: 05/03/2016
Expiration of term: 2024
Shares held: 750 shares
Business address:
ENGIE – 1, place Samuel de Champlain – 92400 Courbevoie

A graduate of Oxford University, with a Master of Arts in English Literature from Pembroke College, Honorary DLC from the University of Kent and Honorary LLD from the University of Bath, Lord Peter Ricketts of Shortland began his career in 1974 at the Foreign and Commonwealth Office (FCO). In 1975, he was assigned as a Political Attaché in Singapore, and then served as the UK's Permanent Representative to NATO in Brussels, before joining the FCO. At the FCO, he served as the Assistant Private Secretary to former Foreign Secretary Sir Geoffrey Howe in 1983, First Secretary at the British Embassy in Washington (United States) in 1985, Division Chief in Hong Kong in 1990, Advisor for European and Economic Affairs at the British Embassy in France in 1995, and Deputy Director of Policy in 1997. In 2000 he was appointed Chairman of the Joint Intelligence Committee, then in 2001 he was named Policy Director of the FCO. From 2003 to 2006 he was Permanent Representative of the United Kingdom to NATO. In 2006, he became Secretary General of the FCO, and in 2010 he was named National Security Advisor of the United Kingdom. Finally, from 2012 to January 2016, he was the United Kingdom's Ambassador to France and Monaco. In October 2016, he was appointed to the House of Lords.

Principal activities outside the Company

Chairman of the Franco-British Council
Member of the House of Lords, London (United Kingdom)
Vice-Chair, Royal United Services Institute, London (United Kingdom)
Member, Royal Academy

Current offices held

Offices and positions in companies outside the Group

Director of Getlink [(1)] since April 2022 - member of the Compensation Committee

Offices that have expired in the last five years

- Strategic Consultant, Lockheed Martin (UK)

Areas of expertise

- Geostrategic challenges
- Public sector
- Social dialog/human resources

(1) Listed company.

Director representing the French State, appointed by decree (1)

Director from the public sector

STEPHANIE BESNIER

Director representing the French State, appointed by decree

- **Member of the Audit Committee**
- **Member of the Strategy, Investment and Technology Committee**
- **Member of the Appointments, Compensation and Governance Committee**

Age: 45
Nationality: French
First appointment: 05/19/2021
Expiration of term: 2023
Shares held: 0 share
Business address:
Agence des Participations de l'État
139, rue de Bercy 75572 – Paris Cedex 12

Stéphanie Besnier holds a postgraduate degree (DEA) in Economic Policy and Analysis, is a former student of the Ecole Polytechnique (1997) and a graduate of the Ecole Nationale des Ponts et Chaussées. She started her professional career in 2001 as an analyst at BNP Paribas London, then in 2003 at the Treasury Department (Ministry of Economy and Finance). In 2004, she was in charge of railway companies at the Agence des Participations de l'Etat. In 2007, she joined the investment holding company Wendel as business manager, then investment director (2010), director (2014) and senior director (2016). In 2018, she was appointed Associate Director, co-head of the investment activity in Europe and in charge of venture and late stage investments.
Since May 1, 2021, she has been Deputy Chief Executive of the Agence des participations de l'Etat.

Principal activities outside the Company
Deputy Chief Executive of the APE

Current offices held

Offices and positions in companies outside the Group

- Director of Orange (1) as a representative of the French State
- Director of AF/KLM (1) as a representative of the French State

Offices that have expired in the last five years

- Director of Bureau Veritas (1)
- Director of Safran (1) as a representative of the French State
- Director of IHS Towers

Areas of expertise

- Office of Chair or Director of a large company
- Public sector
- Finance

(1) Listed company.

Stéphanie Besnier will be replaced as the Director representing the French State. At the date of this report, the identity of the person who will succeed her is not known.

Directors appointed by the Shareholders' Meeting on the recommendation of the French State (2)

PATRICE DURAND

Director appointed by the Shareholders' Meeting on the recommendation of the French State

- **Member of the Strategy, Investment and Technology Committee**

Age: 69
Nationality: French
First appointment: 12/14/2016
Expiration of term: 2023
Shares held: 2,500 shares
Business address:
22, avenue Théophile Gautier – Paris 16e

A graduate of the Ecole Polytechnique and of the Ecole Nationale d'Administration, Patrice Durand began his career in 1978 as Sub-Prefect, Director of the office of the Prefect of Eure-et-Loir and then the Haute-Normandie region in 1979. From 1981 to 1994, he served successively as head of mission in the Directorate-General of Administration at the Ministry of the Interior, Deputy Secretary-General and Secretary-General of the Paris Club; Head of the Office of Energy, Transport, and Mines and Secretary of the Economic and Social Development Fund, Head of Capital Goods and Other Investments and Deputy Director of Treasury Management. In 1994, he became Executive Vice President, then in 1995, Deputy CEO in charge of economic and financial affairs at Air France. From 1999 onwards, he was a member of the Executive Committee, in charge, among other things, of the finances of the Central Risk Management, General Inspection, Legal Affairs, Asset Management, IT and Processing departments, before becoming Deputy CEO of the Crédit Lyonnais Group in 2002. In 2003, he was also named Director of Operations and Logistics and a member of the Executive Committee of Crédit Agricole SA. In 2005, he joined Thales as Deputy CEO in charge of finance and administration. From 2012 to 2015, he was Deputy CEO in charge of finance and operations at the Ingenico Group. Since 2016, he has served as a Director of French and foreign companies.

Principal activities outside the Company

Director of companies

Current offices held

Offices and positions in companies outside the Group

None

Offices that have expired in the last five years

- Member of the Supervisory Board of Global Collect Services BV and GCS Holding BV (Netherlands)
- Director of Ingenico Holdings Asia (Hong Kong) and Fujian Landi Commercial Equipment Co. Ltd (China)

Areas of expertise

- Finance
- Industrial sector
- Services sector

MARI-NOËLLE JÉGO-LAVEISSIÈRE

Director appointed by the Shareholders' Meeting on the recommendation of the French State

● **Member of the Ethics, Environment and Sustainable Development Committee**

Age: 54
Nationality: French
First appointment: 04/28/2015
Expiration of term: 2023
Shares held: 500 shares
Business address:
ORANGE - 111, quai du Président Roosevelt - 92130 Issy-les-Moulineaux

A graduate of the École Normale Supérieure in Paris, Mari-Noëlle Jégo-Laveissière is also an engineer of the Corps des Mines. She began her career in 1996 in the Distribution Network Department of France Télécom's Paris Regional Department. She then held other management positions within the group known as Orange since July 1, 2013, particularly in Marketing, Research and Development, and International Networks and Businesses. Mari-Noëlle Jégo-Laveissière, Executive Director of Innovation, Marketing and Technology and member of the Executive Committee of the Orange Group since March 2014, was appointed Deputy CEO of the Orange Group, Chief Technology and Innovation Officer on May 2, 2018. Since September 1, 2020, she is Deputy CEO of Orange in charge of Europe (outside France).

Principal activities outside the Company

Deputy CEO of Orange in charge of Europe (outside France)

Current offices held

Offices and positions in companies outside the Group

- Deputy CEO of the Orange Group (1), in charge of Europe (outside France)
- Director of Valéo (1) - member of the Audit and Risk Committee
- Director of Orange Romania (Romania), Orange Poland (Poland), Orange Belgium (Belgium), Orange Spain (Spain), Orange Bank
- Director of the Orange Foundation since September 26, 2022

Offices that have expired in the last five years

- Director of NoWCP
- Director of Soft@Home,
- Director of Viaccess

Areas of expertise

- Digital, innovation, new technologies
- Services sector
- CSR: Climate

(1) Listed company.

Mari-Noëlle Jego-Laveissière did not seek for her term of office as Director to be renewed and will be replaced by a new member proposed by the State, subject to the vote of the Shareholders' Meeting.

Directors elected to represent employees (3)

CHRISTOPHE AGOGUÉ

Director elected by employees, sponsored by the CFE-CGC Federation

- **Member of the Audit Committee**

Age: 61
Nationality: French
First appointment: 05/18/2018
Expiration of term: 2026
Shares held: 125 shares
Business address:
GRDF – 6, rue Condorcet – Paris 9e

Christophe Agogué is an HEC graduate with a specialization in finance. In 1986, he joined EDF where he was responsible for negotiations with COGEMA on the reprocessing of used fuel. After a period in the management office, he was responsible for managing and then served on the Management Board of the subsidiary Nersa, in charge of the Superphénix reactor. In 2001, he moved to Gaz de France where he led the real estate department and participated in the operations to buy back the transmission network from the French State, and in the first studies on the regulation of infrastructure activities. Having joined GRDF at its inception, he works on the construction of several transmission tariffs. He has held union positions on behalf of CFE-Énergies since 2009. He has been the union representative to the Central Works Committee of GRDF and to the ENGIE France Group Committee and the secretary for his local Works Committee. Since 2018, he provides financial support to GRDF's Regulation and Economy Department.

Principal activities outside the Company

Since 2022, member of the Strategic Committee on New Energy Systems for CFE-CGC
Author of essays, novels and plays

Current offices held

Offices and positions in Group companies

- Director of ENGIE Rassembleurs d'Energies

Offices and positions in companies outside the Group

None

Offices that have expired in the last five years

None

Areas of expertise

- Finance
- Social dialog/human resources
- Energy sector

YOAN KOSNAR

Director elected by employees, sponsored by the Chemical Energy Federation – CFDT trade union

- **Member of the Strategy, Investment and Technology Committee**

Age: 47
Nationality: French
First appointment: 04/21/2022
Expiration of term: 2026
Shares held: 70 shares
Business address:
ENGIE ENERGIE SERVICES
1, place Samuel de Champlain – 92400 Courbevoie

With a BTS (French higher technical certificate) in Water Management and Control, with a wastewater option, Yoan Kosnar began his career in maintenance and quality control at a mutualist healthcare establishment. He then joined the Group in 2007 as Site Manager at ENGIE Energies Services S.A. (Cofely) and since 2017, while maintaining his operational activity, supports the national CFDT coordinator with social dialog for the ENGIE Group. Yoan Kosnar was appointed employee representative in 2011, then trade union representative.

Principal activities outside the Company

None

Current offices held

Offices and positions in Group companies

Within the Engie Energies Services SA scope

- Member of the SEC representing the West and Treasurer of the SEC
- Local Representative
- Member of Central SEC [1]
- Trade Union Representative for the institution
- Gender-based harassment referent since 2019

At the Group level

- Member of European Works Council

Offices and positions in companies outside the Group

None

Offices that have expired in the last five years

None

Areas of expertise

- Social dialog/human resources
- Energy sector
- Digital, innovation, new technologies

4

MAGALI VIOT

Director elected by employees, sponsored by the National Federation of Mines and Energy – CGT trade union

- **Member of the Ethics, Environment and Sustainable Development Committee**

Age: 50
Nationality: French
First appointment: 04/21/2022
Expiration of term: 2026
Shares held: 0 share
Professional address:
ELENGY – Zone portuaire, BP 35 – Montoir-de-Bretagne (44550)

Magali Viot is an employee at Elengy, seconded for employee representation mandates since the beginning of 2014. Following her Baccalaureate Diploma, she joined the Group in 1996 as a customer advisor in the Electricity and Gas Services Department (EGSD). In 2009, Magali Viot successfully completed professional retraining through a work-study contract and obtained a Certificate of Professional Qualification (CQP) in industrial maintenance which enabled her to become a High-voltage Maintenance Technician. In 2012, she joined the maintenance planning and management division at the Montoir-de-Bretagne terminal before dedicating herself full time to her employee representation mandates in 2014.

Principal activities outside the Company

None

Current offices held

Offices and positions in Group companies

- Director representing employees of Elengy

Offices and positions in companies outside the Group

None

Offices that have expired in the last five years

None

Areas of expertise

- CSR: Health and safety
- Energy sector
- Social dialog/human resources

Director appointed by the Shareholders' Meeting to represent employee shareholders (1)

JACINTHE DELAGE

Director appointed by the Shareholders' Meeting to represent employee shareholders, on the recommendation of the Link France mutual fund (FCPE), and sponsored by the Group's Association of Employee and Former Employee Shareholders (AG2S)

- **Member of the Appointments, Compensation and Governance Committee**

Age: 46
Nationality: French
First appointment: 05/20/2021
Expiration of term: 2025
Shares held: 1,025 shares
Business address:
ENGIE – 1, place Samuel de Champlain – 92400 Courbevoie

Jacinthe Delage has several post-graduate legal degrees in economic and environmental law and holds an administrator's certificate from ESSEC. After working in companies such as Novergie and Neuf Cegetel as an attorney, she joined ENGIE Cofely in April 2007 as a business development attorney in the South-West region. She then held various successive legal positions within the Group between February 2009 and January 2016 in the Compagnie Parisienne de Chauffage Urbain (CPCU), the Corporate Competition and Regulation department and the Corporate Secretariat of the France BtoB BU. In November 2018, she became Head of the Legal Department of ENGIE Réseaux, which specializes in heating and cooling networks in France and since January 2021, Head of the Network Energy Division within ENGIE Solutions' Legal and Ethics Department.

In 2021, she became the representative of AG2S list unitholders on the Supervisory Board of the Link France mutual fund (FCPE).

Principal activities outside the Company

None

Current offices held

Offices and positions in Group companies

- Member of the Management Committee of SAS GéoMarne
- Member of the Management Committee of the Ile de France and Nord regions for ENGIE Solutions' Main Networks and Mobility entity

Other offices and positions outside the Group

- Director of the AG2S association

Offices that have expired in the last five years

None

Areas of expertise

- Energy sector
- Public sector
- Regulatory environment

4.1.1.2 Government Commissioner

In accordance with Article L.111-70 of the French Energy Code, the Minister of Energy appoints a Government Commissioner to the Company who attends meetings of the Board of Directors and the committees in an advisory capacity and may present his / her observations to any Shareholders' Meeting.

Laurent Michel, appointed by ministerial order dated November 13, 2014, holds this position. By ministerial order of the Minister for Ecological Transition dated July 15, 2021, Alice Vieillefosse was appointed Substitute Government Commissioner.

4.1.1.3 Representative of the Social and Economic Committee

Pursuant to Articles L.2312-72 et seq. of the French Labor Code, one full member of the Social and Economic Committee, appointed by the latter, attends all meetings of the Board of Directors in an advisory capacity. Hamid Aït Ghezala held this position until January 13, 2023. Gildas Gouvazé has held this position since this date.

4.1.1.4 Absence of conflict of interest or conviction, service agreement and family ties

The Chairman draws the attention of the Board to any conflicts of interest that he has identified, or of which he has been made aware, relating, if applicable, to the Chief Executive Officer or the members of the Board of Directors. He reviews any potential conflicts of interest and agreements disclosed pursuant to Article 1.12 of the Internal Regulations of the Board of Directors.

In addition to the provisions of the French Commercial Code which govern related-party agreements, the Directors' Charter (see Section 4.1.2.1 "Chairmanship and Organization") stipulates that each Director must make every effort to avoid any conflict that may exist between his / her moral and material interests and those of the Company, must inform the Board of any conflict of interest in which he / she may be directly or indirectly involved and, where he / she cannot avoid the conflict of interest, must abstain from discussions and voting on any decision concerning such matters.

To ENGIE's knowledge, there are no potential conflicts of interest between the Directors' duties with regard to ENGIE and their private interests and / or other duties.

There are no family ties among the Directors.

To ENGIE's knowledge, during the past five years, none of the Directors or executives of ENGIE has been convicted of fraud, served as manager in a bankruptcy, receivership, liquidation or administration situation, been subject to legal proceedings brought and / or official public sanction issued by a statutory or regulatory authority, or been prevented by a court from serving as a member of the management body or supervisory board of an issuer, nor from participating in the management or oversight of the business of an issuer.

Furthermore, no loans or guarantees have been granted to, or on behalf of, members of the Company's board or management.

4.1.1.5 Independence of Directors in office

Article 1.1.2 of the Internal Regulations requires the Board to review the independence of each of its members, based on criteria determined by the Board. This review must be conducted annually, prior to the Shareholders' Meeting held to approve the financial statements for the previous fiscal year. The process for assessing the independence of each Director was performed by the ACGC at its meeting of January 23, 2023, and then by the Board of Directors at its meeting of February 20, 2023.

Both bodies reviewed the status of each Director on a case-by-case basis with respect to the criteria of Afep-Medef Code to which the Company refers.

It is specified that the following Directors, who were appointed as a result of legal or statutory obligations, cannot be deemed independent:

- Stéphanie Besnier, Director representing the French State, appointed, by Article 4 of Ordinance 2014-948 of August 20, 2014, as well as Patrice Durand and Mari-Noëlle Jégo-Laveissière, Directors appointed by the Shareholders' Meeting on the recommendation of the State, pursuant to Article 6 of Ordinance 2014-948 of August 20, 2014;
- Magali Viot, Yoan Kosnar and Christophe Agogué, Directors representing employees pursuant to Articles L.22-10-6 et seq. of the French Commercial Code; Jacinthe Delage, Director representing employee shareholders, pursuant to Article L.22-10-5 of the same code.

Seven Directors are considered independent (see also Section 4.1.1.1 "Profiles, experience and expertise of the Directors in office"). This means that the percentage of Independent Directors is 64%, it being specified that, pursuant to the Afep-Medef Code, the Directors representing employees and employee shareholders are not counted in the calculation of the percentage of Independent Directors.

Independence of the Directors under the independence criteria set forth in Section 10 of the Afep-Medef Code

	Independent (I) Not independent (NI)	Corporate employee during the previous 5 years	Cross-directorships	Significant business relations	Family ties	Statutory Auditor	Term of office longer than 12 years	Status of non-executive corporate officer	Status of major shareholder
Jean-Pierre Clamadieu	I								
Catherine MacGregor	NI	✗							
Fabrice Brégier	I								
Marie-Claire Daveu	I								
Françoise Malrieu	I								
Ross McInnes	I								
Marie-José Nadeau	I								
Lord Peter Ricketts of Shortlands	I								
Stéphanie Besnier	NI								✗
Patrice Durand	NI								✗
Mari-Noëlle Jégo-Laveissière	NI								✗
Christophe Agogué	NI/NA (1)	✗							
Yoan Kosnar	NI/NA (1)	✗							
Magali Viot	NI/NA (1)	✗							
Jacinthe Delage	NI/NA (1)	✗							

✗ = Independence criterion not met.

(1) Pursuant to the Afep-Medef Code, the number of Directors representing employees or employee shareholders is not taken into account in calculating the percentage of Independent Directors.

Criterion 1: Corporate employee during the previous five years

The director must not be or have been during the previous five years:

- *an employee or executive corporate officer of the Company;*
- *an employee, executive corporate officer or Director of a company consolidated by the Company;*
- *an employee, executive corporate officer or Director of the parent company of the Company or of a company consolidated by said parent company.*

Criterion 2: Cross-directorships

The director must not be an executive corporate officer of a company in which the Company directly or indirectly holds a directorships, or in which an employee designated as such or an executive corporate officer of the Company (current or within the last five years) holds a directorships.

Criterion 3: Significant business relations

The director may not be a customer, supplier, commercial banker, investment banker, consultant:

- *of the Company or its Group;*
- *or for whom the Company or its Group represents a significant share of the business.*

The assessment of the significant nature (or not) of the relationship with the Company or its Group is debated by the Board, and the quantitative and qualitative criteria that led to this assessment (continuity, economic dependence, exclusivity, etc.) are explained in the annual report.

Criterion 4: Family ties

The director has no close family ties with a corporate officer.

Criterion 5: Statutory Auditor

The Director has not been the Statutory Auditor of the Company during the previous five years.

Criterion 6: Term of office longer than twelve years

The Director has not served for more than twelve years. The status of independent Director is lost on the twelve-year anniversary date.

Criterion 7: Status of non-executive corporate officer

A non-executive corporate officer may not be considered independent if he or she receives variable compensation in cash or securities or any compensation related to the performance of the Company or the Group.

Criterion 8: Status of major shareholder

Directors representing major shareholders of the Company or its parent company may be considered independent when such shareholders do not exercise control over the Company. However, if a director exceeds a threshold of 10% of the capital or voting rights, the Board, based on a report by the Appointments Committee, systematically reviews the independent status of the director(s) concerned, taking into account the structure of the Company's capital and whether or not potential conflicts of interest exist.

4

4.1.1.6 Multiple Directorships

The number of offices held by the Directors in listed companies outside the Group, including foreign companies, was assessed by the Board of Directors at its meeting on February 20, 2023, in accordance with the recommendations of Article 20 of the Afep-Medef Code, which stipulates that: "An executive corporate officer may not hold more than two other directorships in listed companies outside his / her group, including foreign companies. A Director may not hold more than four directorships in listed companies outside the group, including foreign companies."

	Number of offices held in external listed companies(1)	Compliance with the Afep-Medef Code
Jean-Pierre Clamadieu	2	●
Catherine MacGregor	0	●
Fabrice Brégier	1	●
Marie-Claire Daveu	1	●
Françoise Malrieu	0	●
Ross McInnes	2	●
Marie-José Nadeau	0	●
Lord Peter Ricketts of Shortlands	1	●
Stéphanie Besnier	2	●
Patrice Durand	0	●
Mari-Noëlle Jégo-Laveissière	1	●
Christophe Agogué	0	●
Yoan Kosnar	0	●
Magali Viot	0	●
Jacinthe Delage	0	●

(1) According to the criteria of the Afep-Medef Code.

4.1.1.7 Diversity policy for members of the Board of Directors

The Board of Directors works to promote diversity on the Board in terms of the professional qualifications and experience, gender, nationality and age of its members.

With regard to the professional qualifications and experience of the Directors, the objective of the Board is to ensure that its composition is adequate for ENGIE's activities, challenges and strategic plans, thereby contributing to the quality of the decisions made.

Following discussions with investors in 2019, the Board of Directors decided, on the recommendation of the ACGC, to change the way in which information about Directors is provided to the market, taking a more individual approach centered exclusively on the key areas of expertise of each Director.

Information on three key areas of expertise is provided for each Director, based on his or her professional qualifications and experience. These are set out in the table below and under each of their biographies.

With respect to the proportion of women and men, the legal requirement for 40% of Board members to be women and 40% to be men has been met. The proportion of women on the Board as of February 20, 2023 is 55%(1).

Four nationalities are represented by the 15 Directors (Australian, British, Canadian and French).

Finally, in terms of age, the Board has only one Director aged over 70. The applicable legal requirement, in the absence of a specific provision in the bylaws, is therefore satisfied i.e. Directors over the age of 70 must not make up more than one third of the Directors in office.

(1) Pursuant to the applicable rules of the French Commercial Code and the Afep-Medef Code, in assessing the ratio of women to men and the percentage of independent Directors on Boards of Directors, the law stipulates that Directors representing employees or employee shareholders are not counted.

Individual key areas of expertise of Directors

List of areas of expertise	General Management	Office of Chair or Director of a large company	CSR	Finance	Digital, Innovation, New technologies	Social dialog Human Resources	Energy sector	Services sector	Industrial sector	Public sector	Geostrategic issues	Regulatory environment
Jean-Pierre Clamadieu	●	●							●			
Catherine MacGregor	●						●		●			
Fabrice Brégier	●				●				●			
Marie-Claire Daveu		●	●				●					
Françoise Malrieu		●	●	●								
Ross McInnes		●		●					●			
Marie-José Nadeau	●	●					●					
Lord Peter Ricketts of Shortlands						●				●	●	
Stéphanie Besnier		●		●						●		
Patrice Durand				●				●	●			
Mari-Noëlle Jégo-Laveissière			●		●			●				
Christophe Agogué				●		●	●					
Yoan Kosnar					●	●	●					
Magali Viot			●			●	●					●
Jacinthe Delage							●			●		●

4.1.2 FUNCTIONING OF THE BOARD OF DIRECTORS AND ITS COMMITTEES

4.1.2.1 Organization and Chairmanship

The operating procedures of the Board of Directors are defined in Article 14 of the bylaws. Its organizational procedures are set out in Article 1 of the Board of Directors' Internal Regulations, which specify the ways and means by which the Board can operate efficiently on behalf of the Company and its shareholders, as well as the responsibilities incumbent on each Director.

The Board of Directors meets as often as the Company's interests require and, in accordance with its Internal Regulations, at least six times a year, including at least once each quarter. Board of Directors' meetings may be held via any means of videoconference or telecommunication that allows Directors to be identified and ensures their effective participation.

Board of Directors' meetings are also attended by the Government's Commissioner and the representative of the Social and Economic Committee, who have an advisory role. They are also attended by the General Secretary and the Secretary to the Board of Directors, as well as the Statutory Auditors for meetings of the Board of Directors which approve the financial statements.

Once a year, the Board of Directors carries out a self-assessment under the guidance of the ACGC; at least every two years, this assessment is carried out externally.

Also once a year, without the presence of the CEO and those Directors who have an employment contract with a Group company, the Chairman convenes a meeting of directors to assess the CEO's performance. The Chairman informs the members of the Board about the convocation of this meeting. The Chairman may invite Employee Directors to take part in all or part of this meeting.

The Secretary of the Board of Directors provides administrative services to the Board and records the minutes of the meetings.

Under Article 13.6 of the bylaws, all Directors must own at least fifty (50) shares in the Company, unless an exemption has been granted under the applicable laws or regulations. On the recommendations of the ACGC, this bylaw obligation was strengthened in the Internal Regulations by an obligation for each Director to hold a minimum of 500 shares. This obligation must be met no later than twelve (12) months after joining the Board of Directors. This requirement does not, however, apply to Directors ratified or elected by the Shareholders' Meeting on the recommendation of the French State, the Director representing the French State, the Directors representing the employees or the Director representing employee shareholders (the number of shares personally owned by the Directors is provided in Section 4.1.1.1.).

The appendices to the Internal Regulations include the Directors' Charter and the Code of Conduct, which set out the rights and duties of each Director.

The Directors' Charter includes the rules relating to Directors' terms of office, compliance with the company's interests, the laws and bylaws, independence criteria, duty of expression, conflicts of interest, professionalism, involvement and effectiveness.

Directors undertake to devote the necessary time and attention to their duties. They must stay informed of the activities and the specifics of ENGIE, its issues and values, including by talking with principal officers. They must assiduously and diligently attend Board meetings.

The individual attendance rates of the Directors for meetings of the Board and its committees are set out in Section 4.1.2.6 “Attendance by Directors at meetings of the Board of Directors and its committees in 2022” below.

The Code of Conduct sets out the rules governing trading in the Company’s securities and the offense of insider trading applicable to corporate officers and all employees. It expresses the Company’s desire to ensure prudent management of its securities, and to comply and ensure others’ compliance with current regulations governing securities transactions carried out by corporate officers and employees.

In addition to these documents, the Regulations for Employee Directors, approved by the Board of Directors at its meeting of December 9, 2009, lay down conditions under which Directors representing employees are to exercise their duties.

The Chairman of the Board of Directors:

- organizes and directs the work of the Board, and reports on this to the Shareholders’ Meeting;
- chairs the Board’s meetings, oversees deliberations, ensures compliance with the Internal Regulations, and may suspend the session at any time;
- upholds the quality of dialog and ensures that the Board’s decisions are made on a collective basis;
- makes sure that the Board spends enough time on discussions and allots time to each of the items on the agenda in proportion to the importance that each issue represents for the Company. The Directors ensure, collectively, that the time allotted to each of them to express their views is evenly balanced;
- pays particular attention to ensuring that the issues raised on the agenda receive an appropriate response;
- ensures that the Board and its committees function properly, assisting them and submitting questions to them for opinions;
- ensures that the principles of good governance are applied (particularly that Directors have the information they need to carry out their duties, sufficiently in advance and in a clear and appropriate form);
- ensures that the Shareholders’ Meetings that he / she chairs are properly organized;
- answers shareholders’ questions and, more generally, ensures that good relations are maintained with shareholders. If necessary, he / she provides assistance in responding to the requests of shareholders not represented on the Board, and makes him or herself available to meet with them and listen to their comments and suggestions (see also Section 4.2 “Dialog with shareholders”).

In consultation with the Chief Executive Officer, the Chairman of the Board is also responsible for:

- organizing the strategic work of the Board and monitoring the preparation and implementation of succession plans for the members of the Group Executive Committee;
- representing the Group at a high level with national and international bodies in the interest of the Group.

The Chairman also:

- devotes his / her best efforts to promoting the Group’s values and image in all circumstances;
- keeps the members of the Board informed, as necessary, between two meetings;
- is the only person authorized to speak and act on the Board’s behalf;
- draws the attention of the Board to any conflicts of interest that he / she has identified, or of which he / she has been made aware, concerning, where applicable, the Chief Executive Officer or the members of the Board of Directors. He/she reviews any potential conflicts of interest and agreements disclosed pursuant to Article 1.12 of the Internal Regulations of the Board of Directors;
- participates in the organization of the periodic self-assessment of the Board conducted by the ACGC, as well as discussions on governance issues relating to the Board’s operating procedures.

The Board may assign information or consultation missions to the Chairman on specific subjects within the Board’s purview.

The Chairman works in coordination with the CEO, who has responsibility for Group administration and operational management.

As well as exercising the powers conferred on him/her by law, he / she may be consulted by the Chief Executive Officer on any matter relating to the conduct of the business.

The Chairman is kept regularly informed by the CEO about significant events in the life of the Group, particularly with regard to strategy, organization, investment and disinvestment. At the CEO’s invitation, the Chairman may attend internal meetings with the Company’s managers and teams to provide his / her point of view on strategic issues.

If he or she is unable to serve, the Chairman is replaced, pursuant to Article 1.3.1 of the Internal Regulations, by a Vice-Chairman or, if that is not possible, by the Chief Executive Officer if the CEO is a Director or, if not, by another Director chosen by the Board at the beginning of the meeting.

Since 2016, a digital platform is available to Directors for them to carry out their role. The platform is accessible via an app on a tablet provided to all members of the Board of Directors by the Company. It notably allows documents related to meeting of the Board of Directors and its committees to be shared securely.

4.1.2.2 Tasks of the Board of Directors

The Board of Directors, on a collective basis, determines the Company's business strategy and oversees its implementation.

Subject to the applicable laws and regulations and the Company bylaws, it determines the supervisory framework of General Management. It also exercises the following powers:

Governance	• choosing the Executive Management system.
Appointments and Compensation	• appointing executive corporate officers and sets their compensation; • reviewing, at least once a year, the professional and salary equality policy.
Strategy	• ensuring that shareholders and investors receive relevant, balanced and educational information about the Company's strategy and development model, the handling of significant non-financial issues and the Company's long-term prospects; • reviewing, at least once a year, the Group's industrial strategy and financial strategy
Finance	• dealing with all matters concerning the smooth running of the Company and, through its decisions, managing the Company's business; • performing any checks and verifications it considers appropriate; • reviewing, at least once a year, the budget.
CSR	• working to promote long-term value creation by the company by taking into consideration the social and environmental challenges of its activities as well as its purpose; • reviewing, at least once a year, market trends, the competitive context and principal challenges, including in the area of the Group's social and environmental responsibility.

The Chief Executive Officer is vested with the broadest powers to act in all circumstances on behalf of the Company and represents the Company in its relations with third parties. However, certain significant operations are subject to prior authorization by the Board of Directors, such as the following operations:

- acquiring or divesting any of the Company's direct or indirect interests in any company formed, or to be formed, taking an interest in the formation of any company, joint venture, consortium or body or subscribing to any issue of shares, share equivalents or bonds in which the Company's or the Group's financial exposure exceeds €250 million for the transaction in question;
- becoming involved in asset contribution or exchange transaction, with or without a cash balance, relative to goods, securities, stocks or bonds for an amount exceeding €250 million;
- entering into supply, works or service contracts (with the exceptions of contracts related to long-term energy purchase transactions), including successive amendments thereto, if any, for an amount exceeding €400 million;
- resolving disputes by way of agreement, settlement or arbitration decision for an amount exceeding €200 million;
- entering into long-term energy procurement plans on behalf of the Group that involves quantities, per transaction, in excess of:
  - 30 billion kWh of gas per year, including the terms of transmission,
  - 20 billion kWh of electricity per year, including the terms of transmission;
- entering into significant transactions beyond the scope of the Company's stated strategy;
- real estate acquisition or disposal transactions for an amount exceeding €200 million;
- entering into the following transactions for an amount exceeding €1.5 billion:
  - granting or contracting any loans, borrowings, credit or cash advances by the Company, or authorizing any Group subsidiary or financing medium for this purpose,
  - acquiring or assigning any receivables, by any method,
  - entering into significant agreements with the French State relating to the objectives and terms and conditions of implementation of public service assignments entrusted to the Company or its subsidiaries, within the limits set by law.

Each year, the Board of Directors authorizes the Chief Executive Officer to issue guarantees, other securities and bonds for amounts determined by the Board of Directors.

4.1.2.3 Work of the Board of Directors

11	15	100%
MEETINGS	DIRECTORS	PARTICIPATION

The Board of Directors of ENGIE met 11 times in 2022, with an attendance rate of 100%. The average individual attendance rate at meetings of the Board of Directors and the committees for 2022 is indicated, for each director, in Section 4.1.2.6 "Attendance by Directors at meetings of the Board of Directors and its committees in 2022."

The agenda of Board meetings is established by the Chairman in consultation with the Chief Executive Officer. The objective is to prioritize discussions for issues which, under the Group's governance principles and pursuant to the texts in force, such as the Internal Regulations, involve a decision.

Each meeting begins with an item devoted to health and safety, during which the changes in results since the previous meeting is examined, as well as a detailed analysis of the causes of fatal accidents, if any, and the progress made with the health and safety improvement plan. The Group's position is reviewed at each meeting.

STRATEGIC PLANNING SEMINAR

The Board held its annual strategic planning seminar during July 2022. During this seminar, members of the Board provided an updated on the implementation of the strategy described in the May 2021 road map, discussed the consequences of the current energy context and various subjects of strategic importance for the Group.

Main activities in 2022

Group strategic planning and monitoring of its operations	• operational implementation of new strategic guidelines; • continuation of geographical refocusing; • continuation of repositioning of ENGIE for long-term and sustainable growth by focusing on Renewables and Energy Services which support its customers' decarbonization; • preparation and follow-up for the Board's annual strategic planning seminar (see box); • the gas supply strategy; • continued discussions on the nuclear situation in Belgium.
Investments and sales of assets	• review of a series of investment and divestment projects requiring a decision by the Board.
Finance, audit and risks	• approval of the separate and consolidated financial statements, proposed allocation of earnings and their draft press releases; • dividend policy and guidance; • approval of the provisional management documents; • approval of the budget and medium-term business plan; • renewal of the annual authorizations granted to the Chief Executive Officer to issue bond loans and to issue guarantees and other securities; • refinancing of the syndicated credit line maturing in 2023; • 2022 risk review, in particular cybersecurity priority risk; • focus on energy procurement / resale activity.
Governance, appointments and compensation	• lessons to be learned from the dialog between the Chairman and the shareholders, investors and proxy advisors, particularly in the context of governance roadshows; • preparation for the Ordinary and Extraordinary Shareholders' Meeting and responses to written questions from shareholders; • diversity, expertise and independence policy for Directors in office; • elections of Directors representing employees; • appointments to the Board of Directors and to the Board committees; • assessment of the functioning of the Board; • employee share ownership policy; • compensation for corporate officers; • performance share plans; • compensation policy and succession plan for senior management.

Corporate Social Responsibility	• regular monitoring of CSR objectives through to 2030: net zero emissions and climate strategy, exit from coal and customer decarbonization; • examination of the adequacy of investment projects seen in SITC vis-a-vis each of the Group's CSR criteria, thus taking into account social, ethical and climatic challenges; • professional and salary equality policy; • update of all CSR policies: societal policy, fair transition policy, environmental policy and commitment to stakeholders policy; • declaration on modern slavery provided under UK regulations; • monitoring of Say on Climate resolution; • "climate change" priority risk; • annual health and safety report.

EXECUTIVE SESSIONS

Meetings of Directors with no executive functions take place regularly after Board meetings. These executive sessions discuss various issues beyond simple assessment of executive corporate officers' performance. The Audit Committee and the ACGC are systematically preceded, or followed, by a meeting of their members, without management present. Members of the EESDC meet once a year, without management present.

INFORMATION MEETINGS

In 2022, Directors benefited from three theme-based information sessions. The first covered energy transition scenarios. The second focused on CSR and non-financial reporting. The final session paid close attention to subjects relating to the *supply chain* and allowed ENGIE's scientific committee to provide feedback on its work. In addition to the on-boarding training program provided to all new Directors, the Company regularly holds individual training sessions at the request of the Directors. In 2023, there are plans to hold further information meetings for Directors. During the first quarter of 2023, an information meeting should be held covering the global energy landscape and possible changes in the European energy markets. A second should be held during the second quarter covering nuclear power.

4.1.2.4 Committees

Four standing committees assist the Board of Directors:

- the Audit Committee;
- the Strategy, Investment and Technology Committee (SITC);
- the Appointments, Compensation and Governance Committee (ACGC) ; and
- the Ethics, Environment and Sustainable Development Committee (EESDC).

Each committee is chaired by an Independent Director.

These committees are tasked with studying matters of concern to the Group that the Board or the Chairman has submitted for their opinion. They are also charged with preparing the Board's work and decisions on such matters and projects and reporting their conclusions to the Board in the form of reports, proposals, opinions, information or recommendations.

The committees perform their duties under the responsibility of the Board of Directors. No committee may, on its own initiative, address issues that fall outside the scope of its mission. The committees have no decision-making power.

On the Chairman's recommendation, and having heard the opinion of the ACGC, the Board of Directors appoints the members and Chairman of each committee, based on the skills, experience, diversity of profiles and availability of each Director (see Section 4.1.1.1 "Profiles, experience and expertise of the Directors in office" and the table "Changes in composition of the Board of Directors and Committees in 2022" under Section 4.1.1).

In order to carry out their work, the committees may interview members of Company and Group divisions and / or commission technical studies on matters within their competence at the Company's expense, provided that they have informed the Chairman of the Board about this, and that they report on it to the Board. If the committees use the services of external consultants, they must ensure that the advice concerned is objective.

The practice of holding executive sessions, i.e. part of the committee's meeting taking place without the presence of management, is either systematic or occasional, depending on the committee concerned (see box above).

The Corporate Secretariat provides secretarial services to the Board committees.

On December 31, 2022 :

AUDIT COMMITTEE

Chairman: Marie-José Nadeau

3 women | 2 men | 5 meetings +3 joint with the SITC

96% Attendance — 75% Independent (1)

APPOINTMENTS, COMPENSATION AND GOVERNANCE COMMITTEE

Chairman: Françoise Malrieu

4 women | 2 men | 7 meetings

100% Attendance — 80% Independent (1)

BOARD OF DIRECTORS

Chairman: Jean-Pierre Clamadieu

8 women | 7 men | 11 meetings

100% Attendance — 64% Independent (1)

ETHICS, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT COMMITTEE

Chairman: Ross McInnes

4 women | 1 man | 4 meetings

100% Attendance — 75% Independent (1)

STRATEGY, INVESTMENT AND TECHNOLOGY COMMITTEE

Chairman: Jean-Pierre Clamadieu

2 women | 4 men | 6 meetings +3 joint with the Audit Committee

100% Attendance — 60% Independent (1)

(1) Pursuant to the Afep-Medef Code, Directors representing employees and employee shareholders are not taken into account when determining the proportion of Independent Directors within the Board and its committees.

4.1.2.4.1 The Audit Committee

5	3	5	96%
MEETINGS	JOINT MEETINGS WITH THE SITC	DIRECTORS	PARTICIPATION

The Audit Committee has five members: Marie-José Nadeau(1) (Chairman), Christophe Agogué, Stéphanie Besnier, Françoise Malrieu (1) and Ross McInnes (1).

The Audit Committee met eight times in 2022 (of which three joint meetings with the SITC), with an average attendance rate of 96%. One Director missed one meeting.

The Executive Vice-President in charge of Finance, Corporate Social Responsibility and Procurement and the Vice-President in charge of Group Audit attended all the meetings of the Audit Committee. The Statutory Auditors attended all of these meetings, with the exception of the joint meetings with the SITC.

Each meeting of the Committee was followed by an executive session.

Main missions and activities in 2022

The Committee reports regularly to the Board on the performance of its duties. It also reports on the results of the audit assignment, how it contributed to the completeness of the financial information and the role it played in this process. It immediately notifies the Board of any problems encountered.

The period between the examination of the accounts by the Audit Committee and the closing of the accounts by the Board of Directors is at least 48 hours.

(1) Independent Director.

Subject	Missions	Activities
Financial statements	• to monitor the process of preparing financial information and, if necessary, to make recommendations to ensure its integrity; • to examine in advance, and provide an opinion on, the draft annual and interim financial statements; • to interview, whenever it deems this to be necessary, the Statutory Auditors, General Management, Finance Department, Internal Audit and any other management member; • to examine important financial press releases before they are released.	• the review of the consolidated and separate financial statements as at December 31, 2021 and June 30, 2022, the financial information for the first and third quarters of 2022 and the corresponding press releases following the hearings of the Vice-President of Group Financial Control and the Group Accounting Director; • the annual and interim assumptions and forecasts and the provisional management documents; • 2022 financial trajectory and guidance; • the operating fees of the Chairman and the Board of Directors; • the draft Universal Registration Document 2021 (apart from sections covered by other committees) and the draft financial resolutions submitted to the Shareholders' Meeting; • the definition of the amount of the guarantees package; • tax reform projects; • related-party and current agreements; • investor relations, including feedback from governance roadshows; • the monitoring of the Link 2022 employee shareholding plan.
Risk management	• to monitor the efficiency of the Group's risk management systems and procedures, with regard to procedures for preparing and processing accounting and financial data; • to regularly obtain updates on the Group's financial position, cash position and significant commitments and risks.	• the annual risk review (in the presence of the Group Finance, Risk and Insurance Director); • the review of market risks and the cybersecurity priority risk; • focus on the energy procurement / resale activity; • the analysis of risks with regard the Ukrainian crisis.
Internal control	• to monitor the efficiency internal control systems and procedures; • to examine, with the internal audit managers, the plans and actions taken in the area of internal audit, the conclusions of these planned measures and actions and the subsequent recommendations and follow-up.	• the 2021 review of the Group's internal control and targets for 2022; • the quarterly activity reports from the internal audit, the follow-up of audit recommendations and the 2022 and 2023 annual audit plans (in the presence of the Vice-President, Group Audit).
External control and Statutory Auditors	• to select, appoint and re-appoint the Statutory Auditors; • to monitor the performance by the Statutory Auditors of their assignments; • to ensure that the Statutory Auditors comply with the conditions of independence; • to monitor the provision by the Statutory Auditors of services other than the auditing of the financial statements and the application of the rules for the capping of the related fees; • to examine, each year, the Statutory Auditors' audit fees and their scheduled work.	• prior approval of any work assigned to the Statutory Auditors that falls outside their audit assignment and the monitoring of these assignments; the report on the 2021 fees of the Statutory Auditors and their 2022 work program after hearing the Statutory Auditors.

4.1.2.4.2 The Strategy, Investment and Technology Committee

6	3	6	100%
MEETINGS	JOINT MEETINGS WITH THE AUDIT COMMITTEE	DIRECTORS	PARTICIPATION

The Strategy, Investment and Technology Committee has six members: Jean-Pierre Clamadieu(1) (Chairman), Stéphanie Besnier, Patrice Durand, Yoan Kosnar (since April 21, 2022), Ross McInnes(1) and Marie-José Nadeau(1).

The Chief Executive Officer attends meetings of the SITC.

The SITC met nine times in 2022 (of which three joint meetings with the Audit Committee), with an attendance rate of 100%.

Main missions and activities in 2022

Subject	Missions	Activities
Strategy review	• to provide an opinion on the Company's main strategic aims, particularly with regard to strategy; • to examine all external and internal growth projects, disposals, strategic agreements, alliances or partnerships, that are submitted to the Board; • to examine strategic decisions relating to technological developments, as well as questions concerning the construction and upgrading of industrial facilities and annual and multi-year supply, works or services contracts, procurement policy and significant real estate projects.	• a series of investment and disposal projects; • the staging posts of projects in progress; • the medium-term business plan in terms of strategy; • the preparation and follow-up for the Board's annual strategic seminar; • the monitoring of industry trends and highlights; • the Gas supply strategy; • an update on the nuclear situation in Belgium.
Joint meetings of the Audit Committee and the SITC		• the analysis of risks with regard the Ukrainian crisis; • the GET (Global Enterprise Transformation) project aimed at aligning and standardizing support function processes and related Information Systems; • budget and medium-term business plan.

(1) Independent Director.

4.1.2.4.3 The Appointments, Compensation and Governance Committee

7	6	100%
MEETINGS	DIRECTORS	PARTICIPATION

The Appointments, Compensation and Governance Committee has six members: Françoise Malrieu[(1)] (Chairman), Fabrice Brégier[(1)], Stéphanie Besnier, Jacinthe Delage (since April 21, 2022), Marie-José Nadeau[(1)] (since April 21, 2022) and Lord Peter Ricketts of Shortlands[(1)].

The Chairman and the Chief Executive Officer attend meetings of the ACGC, unless the meetings address matters that concern them.

Each meeting of the Committee results in an executive session.

The ACGC met seven times in 2022, with an attendance rate of 100%.

Main missions and activities in 2022

Subject	Missions	Activities
Appointments and Governance	• all nominations for a seat on the Board that must be submitted to the Shareholders' Meeting for approval, as well as for the position of committee member of Chairman; • directing the process for the annual assessment of the Board's work; • assessing, with the Chairman, the proper operation of governing bodies; • the succession of the Company's Chairman and Chief Executive Officer; • the consultative review of the succession plan for the Company's executives and information on General Management projects relating to the appointment of members of the Executive Committee and on their compensation policy; • the review of all nominations of the Chairman and the Chief Executive Officer for any corporate office in a listed company outside the Group.	• monitoring the policy on diversity within the Board, the composition of the Board and its committees, independence and expertise of Directors; • assessment of the functioning of the Board and its committees; • succession plans; • the talents management; • monitoring the promotion of ONE ENGIE culture; • recommendations issued by investors and proxy advisors during governance roadshows led by the Chairman of the Board of Directors; • the Link 2022 employee shareholding plan; • the monitoring of the increase in the number of women in management bodies; • the training of Employee Directors; • the Directors' integration program; • draft resolutions within its remit submitted to the 2022 Shareholders' Meeting; • the governance Chapter of the draft Universal Registration Document 2021.
Compensation	• the compensation, pension and welfare plans, benefits in kind and various pecuniary rights awarded to the Chairman and to the Chief Executive Officer, as well as to any members of the Board that hold employment contracts with the Company.	• compensation for corporate officers; • the success rate of performance share plans; • the allocation of Performance Shares to the Chief Executive Officer for 2022; • performance share plans for 2022; • information regarding compensation of members of the Executive Committee and the compensation policy for senior management; • information regarding the new pension system (Article 82 of the French Tax Code) for senior management; • information regarding wage negotiations in France; • equity ratios; • draft resolutions within its remit submitted to the 2022 Shareholders' Meeting; • the Compensation section of the draft Universal Registration Document 2021.

(1) Independent Director.

4.1.2.4.4 The Ethics, Environment and Sustainable Development Committee

4 MEETINGS	5 DIRECTORS	100% PARTICIPATION

The Ethics, Environment and Sustainable Development Committee has five members: Ross McInnes[(1)] (Chairman), Marie-Claire Daveu[(1)] (since April 21, 2022), Mari-Noëlle Jégo-Laveissière, Françoise Malrieu[(1)] and Magali Viot (since April 21, 2022).

The Chief Executive Officer attends meetings of the EESDC.

The Committee members meet once a year without management to discuss the functioning of the Committee and the matters that they would like it to address.

The Committee met four times in 2022, with an attendance rate of 100%.

Main missions and activities in 2022

Subject	Missions	Activities
Ethics and compliance	• to ensure that the Group has the right level of commitment with regard to ethics, non-financial compliance, and corporate, social and environmental responsibility; • to examine the Group's policies, guidelines and charters in these areas; • to ensure, where applicable, the establishment of a system to prevent and detect corruption and influence peddling;	• the annual report on Ethics and compliance; • the declaration on modern slavery (UK regulations).
Environmental and social responsibility	• to examine the risks and opportunities related to climate change and more generally to monitor the Group's approach to non-financial issues and the long-term outlook, including by setting non-financial objectives.	• the Group's CSR performance and a report by one of the Statutory Auditors on this performance; • the new CSR objectives: for 2030 and their deployment, and changes in certain indicators; • Science-Based Targets (SBTi) certification; • The medium-term CO_2 business plan; • the draft resolution known as Say on Climate; • the "climate change" priority risk and the implementation of the recommendations of the Task force on Climate-related Financial Disclosure (TCFD); • the update of all CSR policies; • the draft integrated report; • the non-financial statement (Chapter 3 of the draft 2021 Universal Registration Document).
Employer's social responsibility	• to examine human resources policies and learn about the monitoring of the corresponding risks.	• the annual health and safety report and outlook; • the review of every fatal accident and 2022-2024 health and safety action plans; • the "HR risks associated with transformation issues" priority risk; • the results of the annual ENGIE&ME employee engagement survey; • conclusions regarding professional and salary equality.

(1) *Independent Director.*

4.1.2.5 Assessment of the fonctioning of the Board of Directors

The assessment of the functioning of the Board of Directors and its committees in 2022 was led by the ACGC, with the assistance of an external consultant.

The questionnaire used, which was verified by the ACGC, included both close-ended questions, which allowed for statistical monitoring of the responses received, and open-ended questions, which allowed Directors to clarify their answers and make comments and proposals for changes.

Questions focused on the operational functioning of the Board and its committees, the development and implementation of strategy, the Board's approach to climate issues and its priorities for 2023.

The work carried out under the aegis of the Chairman of the ACGC was reported to that committee on January 23, 2023 and to the Board of Directors on February 20, 2023.

The evaluation of the Board shows a positive perception of its functioning. The efficiency and responsiveness of the decision-making process and the transparency of the management are particularly highlighted.

The thematic information sessions are appreciated. The strategy seminar is considered very useful and well organized. The confidential nature of this work was respected.

The Board wishes to continue to improve the efficiency of ENGIE's governance. Greater focus should be placed on climate issues and biodiversity, the onboarding of new members should be systematized, the thematic information sessions should be renewed and a reflection should be carried out so that the meetings of the committees and the Board are concentrated on a shorter period.

The Board of Directors and the Committees duly noted the recommendations from this assessment work and will take necessary action.

The attendance rate of Directors at Board and Committee meetings in 2022 has been published in Section 4.1.2.6 below.

4.1.2.6 Attendance by Directors at meetings of the Board of Directors and its committees in 2022

	Board of Directors	Audit Committee	SITC	ACGC	EESDC
Jean-Pierre Clamadieu	100%		100%		
Catherine MacGregor	100%				
Stéphanie Besnier	100%	80%	100%	100%	
Fabrice Brégier	100%			100%	
Marie-Claire Daveu(1)	100%				100%
Françoise Malrieu	100%	100%		100%	100%
Ross McInnes	100%	100%	100%		100%
Marie-José Nadeau	100%	100%	100%	100%(1)	
Lord Peter Ricketts of Shortlands	100%			100%	
Patrice Durand	100%		100%		
Mari-Noëlle Jégo-Laveissière	100%				100%
Christophe Agogué	100%	100%			100%
Alain Beullier(2)	100%			100%	
Philippe Lepage(2)	100%		100%		
Yoan Kosnar(1)	100%		100%		
Magali Viot(1)	100%				100%
Jacinthe Delage	100%			100%(1)	100%(2)
OVERALL ATTENDANCE RATE	**100%**	**96%**	**100%**	**100%**	**100%**

(1) Since April 21, 2022
(2) Until April 21, 2022.

4.2 DIALOG WITH SHAREHOLDERS

4.2.1 DIALOG OF THE CHAIRMAN

The Chairman of ENGIE regularly exchanges with individual shareholders through various in-person and virtual events and meetings:

- prior to the Shareholders' Meeting of April 21, 2022 invited the ENGIE Shareholders' Advisory Committee, the representatives of employee shareholders and the main associations and federations of individual shareholders to an exchange session;
- during the Shareholders' Meeting on April 21, 2022, the Chairman opened a Q&A session with shareholders present in the room and those following the event online.

The Chairman takes care to establish a close relationship with individual shareholders: for example he took part in a round table discussion on the management of the energy crisis during the Investir Day trade show held in November 2022 in Paris and took part in a webinar dedicated to Belgian shareholders. The Chairman supports ENGIE's participation in various local meetings/trade shows dedicated to individual shareholders: in Bordeaux, Lyon, Paris and Brussels in 2022.

The Chairman's speeches during these events can be seen on the ENGIE Shareholders Club website: https://clubactionnaires.engie.com/fr/

During 2022, the Chairman also spoke with the main institutional investors and voting advisory agencies, particularly in the context of the governance roadshows that took place in February and March 2022.

This dialog will continue in 2023.

4.2.2 SHAREHOLDERS' MEETING OF APRIL 26, 2023 – COMPOSITION OF THE BOARD OF DIRECTORS

At its meeting of February 20, 2023, the Board of Directors decided to convene the Ordinary and Extraordinary Shareholders' Meeting to be held on April 26, 2023 at the Cité des Sciences et de l'Industrie - 30 avenue Corentin Cariou - Paris 19th.

We would like shareholders to note that both postal and electronic means may be used to vote at the Shareholders' Meeting and to send written questions to the Board, under the conditions set out by the regulations.

The documents for the Shareholders' meeting will be available on the Company website (https://www.engie.com/en/general-meeting-april-2023).

Shareholders are invited to visit this page of the website regularly. It will specify the arrangements for participating.

The terms of office of Françoise Malrieu, Marie-José Nadeau, Mari-Noëlle Jégo-Laveissière and Patrice Durand will expire at the end of this Shareholders' Meeting.

At its meeting of February 20, 2023, the Board of Directors proposed the renewal of the term of office of Marie-José Nadeau for a period of four years.

For the terms of office of Directors proposed as representatives of the French State, in accordance with Article 6 of Ordinance 2014-948 dated August 20, 2014 concerning the governance and equity transactions on companies with a public shareholder, the State proposed that the term of Patrice Durand be renewed, which was approved by the Board of Directors on February 20, 2023. Mari-Noëlle Jego-Laveissière did not seek for her term of office as Director to be renewed, and will be replaced by a new member proposed by the State.

Stéphanie Besnier will be replaced as the Director representing the French State. At the date of this report, the identity of the person who will succeed her is not known. It is reminded that this appointment, pursuant to Ordonnance 2014-948 of August 20, 2014, takes the form of a ministerial decree. It is not subject to a vote of the Shareholders' Meeting.

At the end of the Shareholders' Meeting of April 26, 2023, and subject to approval of these resolutions, the Board of Directors would be consist of 14 members.

4.3 GENERAL MANAGEMENT

Since January 1, 2021 the Company's Chief Executive Officer is Catherine MacGregor. Her term of office as Chief Executive Officer will expire at the same time as her Directorship, i.e. at the end of the Shareholders' meeting held in 2025 to approve the financial statements for the fiscal year ending on December 31, 2024.

The Chief Executive Officer is vested with the broadest powers to act in all circumstances on behalf of the Company, exercises her functions within the limits of the corporate purpose and subject to the powers expressly vested to Shareholders' General Meetings and the Board of Directors by laws and regulation. Limits imposed by the Board of Directors on the powers of the Chief Executive Officer are set out in the Internal Regulations (see Section 4.1.2.1 "Organization and Chairmanship").

The implementation of ENGIE's strategy and its operational monitoring is carried out by two executive bodies - the Executive Committee and the Operational Management Committee.

The Executive Committee, which is in charge of Group management, comprises the Executive Vice Presidents under the management of the Chief Executive Officer. It formulates strategic decisions according to the guidelines defined by the Board of Directors. It develops ENGIE's long-term outlook and ensures that the short-term objectives are achieved. It makes all major decisions particularly concerning investment, reviews performance, and monitors the pace of the Group transformation.

At the date of this Universal registration document, the Executive Committee has the following 10 members:

- **Catherine MacGregor**, Chief Executive Officer;
- **Paulo Almirante**, Executive Vice President in charge of Renewables activities, also in charge of Global Energy Management and Nuclear Generation activities;
- **Sébastien Arbola**, Executive Vice President in charge of FlexGen & Retail activities, also responsible for Hydrogen activities;
- **Jean-Sébastien Blanc**, Executive Vice President in charge of Human Resources and Corporate;
- **Frank Demaille**, Executive Vice President in charge of Transformation and Geographies;
- **Biljana Kaitovic,** Executive Vice President in charge of Digital and Information Systems;
- **Frank Lacroix**, Executive Vice President in charge of Energy Solutions;
- **Cécile Prévieu**, Executive Vice President in charge of Networks activities;
- **Pierre-François Riolacci,** Executive Vice President in charge of Finance, Corporate Social Responsibility and Procurement;
- **Claire Waysand**, Executive Vice President in charge of the Corporate Secretariat, Strategy, Research & Innovation, Communication.

The Operational Management Committee, known as OPCOM, is in charge of operational activities, and is composed of the Executive Vice Presidents, the Chief Executive Officers of the entities, the directors of the Global Business Units, the regions and main countries and the managers of the main functional departments.

It is chaired by the Chief Executive Officer. The OPCOM implements ENGIE's strategic decisions; it is also in charge of taking the Group's transformation closer to the geographic areas.

In accordance with Article L.22-10-10 para. 2 of the French Commercial Code, the report on corporate governance includes "information on how the company seeks balanced representation of women and men within the committee set up, where appropriate, by the General Management for the purposes of regularly assisting it in carrying out its general functions, and information on the results in terms of diversity in the 10% of positions with higher responsibility. If the company does not apply such a policy, the report shall contain an explanation of the reasons for this."

As the "committee set up, where appropriate, by the General Management for the purposes of regularly assisting it in carrying out its general functions" corresponds to the Executive Committee.

With respect to 10% of positions with higher responsibility, if the scope described by the French Commercial Code is that of the Company, i.e. ENGIE SA, in terms of the organization of the Group, its integrated structure, and its positioning in around 30 countries for a total of around 100,000 employees, it seems more appropriate to consider the Group as a whole with regard to the spirit of the law. ENGIE considers that the relevant scope to use for the 10% of positions with higher responsibility is that of the OPCOM.

The Executive Committee consists of 10 members, including four women (40%), and four nationalities. On the recommendation of the General Management, the Board of Directors set a target of at least 40% of women and at least 40% of men on the Executive Committee by 2025.

On January 1, 2023, the OPCOM was composed of 54 members, including 19 women (35.2%). It comprises 14 nationalities. The Group's new organization resulted in 22 members of the OPCOM being appointed in 2022, including 11 women.

For several years, the Group's appointments policy has strengthened gender diversity. The Group seeks to develop mixed talent pools, comprising executive managers with strong potential, thus helping to increase female representation in the two bodies mentioned above, namely the Executive Committee and OPCOM. Therefore, for key positions in the Group, the final appointment decision is made on the basis of a list of candidates that includes men and women. Most appointments are made from this talent pool, comprising around 530 people, 37% of whom are women.

These actions aim to change career paths and talent development, opening them up to various profiles, so as to eventually form governing bodies that fully embody the Group's diversity policy.

4.4 COMPENSATION AND BENEFITS PAID TO MEMBERS OF THE ADMINISTRATION AND MANAGEMENT BODIES

4.4.1 COMPENSATION OF CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Compensation of Chairman and Chief Executive Officer is determined by the Board of Directors based on the recommendations of the ACGC. It is subject to a presentation and binding votes at the Annual Shareholders' Meeting in accordance with Articles L.22-10-8, L.22-10-9, and L.22-10-34 of the French Commercial Code.

The compensation policy is reviewed annually by the ACGC and is based in particular on specific studies.

In its recommendations to the Board of Directors, the ACGC seeks to propose a compensation policy that is in line with corporate responsibility and the practices of comparable major international groups for similar positions, based on a benchmark established by a specialized external firm that includes companies listed on the CAC 40 and the Eurostoxx 50.

Pursuant to Article 10.6 of the Afep-Medef Code, the Chairman of the Board of Directors, as an independent director, does not receive variable compensation linked to the Company's performance.

Compensation of the other executive corporate officers generally includes:

- a fixed component, which remains unchanged throughout the term of office, unless the Board of Directors, on the recommendation of the ACGC, decides otherwise;
- a variable component, balanced relative to total compensation, the purpose of which is to reflect the executive's personal contribution to the Group's development and results; and
- a long-term incentive component, subject to performance conditions.

Stringent performance criteria are set both for the variable component and for long-term incentive plans, maintaining a link between the Group's performance and the compensation of its directors in the short, medium and long term and contributing to the Company's strategy and sustainability.

The compensation policies applicable to the Chairman of the Board and the Chief Executive Officer as of 2023 are described in Section 4.4.3.

4.4.1.1 Fixed compensation

Fixed compensation in 2022

Jean-Pierre Clamadieu, Chairman of the Board of Directors, received compensation of €450,000 as well as benefits in kind of €1,826 since July 2022.

The fixed annual compensation of Catherine MacGregor, Chief Executive Officer, was set at €1,000,000, plus an annual benefit in kind of €6,192.

Fixed compensation in 2023

Please refer to Section 4.4.3.

4.4.1.2 Variable compensation

Variable compensation in 2021

Jean-Pierre Clamadieu, Chairman of the Board of Directors, receives no variable compensation in respect of his office.

Regarding Catherine MacGregor, Chief Executive Officer, the structure of her target annual variable compensation paid in 2022 for 2021 remains unchanged and stands at €1,000,000, corresponding to 100% of her fixed compensation, and is capped at €1,400,000, i.e. 140% of fixed compensation. Her variable compensation breaks down into two components: a financial component (65%) and a non-financial component (35%).

For the financial component, the criteria used are net recurring income, Group share (25%), COI (25%), free cash flow (excluding GEMS) (25%) and economic net debt (25%). The financial targets for 2021 were based on the Group's provisional budget as prepared by the Board of Directors on February 25, 2021.

The non-financial component includes:

- the simplification and strengthening of the organization: implementation of the organization, Executive Committee, commitment (30%);
- efficiency in implementing strategy: EQUANS, GBU growth strategy, performance management (40%);
- occupational accidents frequency rate (10%);
- CO_2 emissions related to power generation (10%);
- outperformance of the sector average as published by each of the following five rating agencies: SAM, Sustainalytics, Vigeo-Eiris, MSCI and CDP Climat are included (10%).

At its meeting of February 14, 2022, the Board of Directors, on the recommendation of the ACGC:

- noted that the success rate of the financial criteria was 129% (broken down as follows: Net recurring income Group share, per share: 140%; COI: 140%; Free cash flow: 123%; Economic net debt: 112%);
- set the success rate of non-financial criteria at 121% (broken down as follows: 110%, strategy: 130%; occupational accidents frequency rate: 140% - however, see the bonus reduction specified below; CO_2 emissions related to power generation: 117%; out performance in terms of CSR ratings: 100%).

Based on the respective weightings of financial and non-financial criteria, the overall success rate was determined to be 126%, or €1,259,000.

Given the severity of the accidents in 2021 and on the proposal of the Chief Executive Officer, the Board decided that a 15% reduction in the target bonus, or €150,000, will be applied to the bonus payable in 2022 for 2021 which will be reduced from €1,259,000 to €1,109,000.

The variable component for 2021 was thus €1,109,000.

Variable compensation in 2022

Jean-Pierre Clamadieu, Chairman of the Board of Directors, receives no variable compensation in respect of his office.

Regarding Catherine MacGregor, Chief Executive Officer, the structure of her target annual variable compensation paid in 2023 for 2022 remains unchanged and stands at €1,000,000, corresponding to 100% of her fixed compensation, and is capped at €1,400,000, i.e. 140% of fixed compensation. Her variable compensation breaks down into two components: a financial component (65%) and a non-financial component (35%).

For the financial component, the criteria used are net recurring income, Group share (25%), EBIT (25%), free cash flow - including GEMS - (25%) and economic net debt (25%). The financial targets for 2022 were based on the Group's provisional budget as prepared by the Board of Directors on February 14, 2022.

The non-financial component includes:

- organization and commitment: finalization of the organization, employee commitment and definition of a leadership model (35%);
- efficiency in implementing strategy: GBU expansion plan, performance plan (35%);
- safety performance (7.5%);
- CO_2 emissions related to power generation (7.5%);
- proportion of female managers hired (7.5%);
- improvement of the Group's ESG rating (7.5%).

At its meeting of February 20, 2023, the Board of Directors, on the recommendation of the ACGC:

- noted that the success rate of the financial criteria was 112% (broken down as follows: NRIgs: 140%; EBIT: 140%; Free cash flow: 113.3%; Economic net debt: 54.5%);
- set the success rate of non-financial criteria at 116.5% (broken down as follows: organization and commitment: 130%, strategy: 130%; safety performance: 100%; CO_2 emissions related to power generation; 140%; percentage of female managers hired: 0%; improvement of the Group's ESG rating: 100%).

The assessment conducted by the Board of Directors of outperformance (130%) on the non-financial criteria relating to the organization, commitment and strategy is the result of the following findings:

- the energy crisis has highlighted the challenges of supply security and energy accessibility. While mobilizing to overcome these challenges, the management team has continued to deploy the strategic road map established by the Board of Directors;
- some of the significant achievements noted by the Board are the definition of a growth plan by the Global Business Units, the refocusing on key countries, the acceleration of investments in renewable energy sources, the progress made in exiting coal, and the advances made with regard to the future of nuclear activities in Belgium;
- the implementation of a more industrial and integrated Group organization and the application of a more structured managerial approach have strengthened employee engagement and performance, aiding more efficient operational management.

Based on the respective weightings of financial and non-financial criteria, the overall success rate was determined to be 113.6%, or a variable component of €1,136,000.

Variable compensation in 2023

Please refer to Section 4.4.3.

4.4.1.3 Long-term incentive compensation (Performance Units and Performance Shares)

The ACGC, following the recommendations of the Afep-Medef Code, which seeks to promote the long-term engagement of corporate leaders, recommended to the Board of Directors that the executive corporate officers compensation include a long-term incentive component, provided that this is reasonable and subject to strict performance conditions, and is comparable to that of other beneficiaries.

Until 2021, long-term incentive plans took the form of Performance Units (PUs). Since 2022, PU have been replaced by Performance Shares (PS).

The Board of Directors decided on February 14, 2021 that this component may not, when initially awarded, represent more than 50% of the CEO's overall compensation (fixed and variable compensation, Performance Shares).

The allocation as of 2022 of PS to the Chief Executive Officer in substitution for the PU from which she previously benefited, helped complete the alignment of the Chief Executive Officer's long-term incentive with that of members of the Executive Committee, executive managers and other employees who receive Performance Shares. The volume of the allocation is unchanged (120,000 PS in substitution for 120,000 PU).

Performance Units for fiscal year 2021

Jean-Pierre Clamadieu, Chairman of the Board of Directors, was not awarded any PUs for 2021, in accordance with the compensation policy, which stipulates that the compensation of the Chairman of the Board will not include any annual or multi-year variable compensation or long-term incentive plans.

On the recommendation of the ACGC, the Board of Directors, at its meeting on February 25, 2021, awarded Catherine MacGregor, Chief Executive Officer, 120,000 PU for 2021. The PU awarded for 2021 were valued at €7.34 per unit.

Performance Shares for fiscal year 2022

Jean-Pierre Clamadieu, Chairman of the Board of Directors, was not awarded any PS for 2022, in accordance with the compensation policy, which stipulates that the compensation of the Chairman of the Board will not include any annual or multi-year variable compensation or long-term incentive plans.

On the recommendation of the ACGC, the Board of Directors decided on April 21, 2022, in accordance with the delegation granted by the Ordinary and Extraordinary Shareholders' Meeting on April 21, 2022, in its 27th resolution, to grant 120,000 PS to the Chief Executive Officer, to replace the PU from which she previously benefited. The PS granted for 2022 were valued at €8.79 per share at the grant date, for a total amount of €1,054,800.

As with all aspects of her compensation, the awarding of Performance Shares for fiscal year 2023 will be contingent on the approval of the Shareholders' Meeting that will take place in 2023.

Performance Shares for fiscal year 2023

On the recommendation of the ACGC, the Board of Directors, at its meeting on February 20, 2023, kept the PS allocation policy unchanged for Catherine MacGregor, Chief Executive Officer. In accordance with this policy set out in Section 4.4.3.2, the number of Performance Shares that would be awarded to Catherine MacGregor, Chief Executive Officer, is 120,000.

As with all aspects of her compensation, the awarding of Performance Shares for fiscal year 2023 will be contingent on the approval of the Shareholders' Meeting that will take place in 2024.

4.4.1.4 Pension plans

Jean-Pierre Clamadieu is not covered by any supplementary pension plan in respect of his duties as Chairman of the Board of Directors.

Catherine MacGregor, the Chief Executive Officer continues to benefit from a supplementary pension plan, under which the Company does not guarantee the amount of the pension but pays an annual employer contribution, half of which comprises contributions paid to a third-party organization under an optional defined contribution pension plan (Article 82 of the French Tax Code) and half is a cash sum, given the immediate taxation on commencement of this mechanism. The employer contribution corresponds to 25% of the sum of the fixed compensation and the actual variable compensation accrued for the given year. It will also depend on the Company's performance, since the calculation base includes the variable portion linked to the Group's results. The Chief Executive Officer also benefits from the mandatory pension plan (Article 83 of the French Tax Code) applicable to all senior Group managers.

4.4.1.5 Employment contract, special retirement plans, severance pay and non-compete clause

Table 11 - AMF Position-recommendation - DOC-2021-02 (Appendix 2)

	Employment contract	Supplementary pension plan	Compensation or benefits due or likely to be due on termination or change of function	Compensation due under a non-compete clause
Jean-Pierre Clamadieu *Chairman*	no	no	no	no
Catherine MacGregor *Chief Executive Officer*	no	see 4.4.1.4	see below	see below

In the event of departure from the Group, the Chief Executive Officer will be bound by a non-compete commitment for a period of one year from the end of his or her term of office and will receive one year's compensation payable in twelve monthly installments. The Board of Directors may waive the application of this clause at the time of the officer's departure.

In the event of forced departure not resulting from serious misconduct on the part of the corporate officer, and regardless of the form of such departure, the Chief Executive Officer shall receive an indemnity of two years' compensation, which shall be payable only if the performance conditions attached to the annual variable component of the compensation for the two years preceding the year of departure have been met by at least 90% on average.

In addition, all provisions of the Afep-Medef Code are applicable to the non-compete commitment and severance payments, in particular with regard to those two payments combined, which may not exceed two years of compensation. "Year of compensation" within the meaning of the non-compete commitment and severance payments referred to above means the last annual fixed compensation plus the annual variable compensation paid calculated on the basis of the average annual variable compensation paid for the two years preceding the year of departure.

4.4.1.6 Summary of compensation of Chairman and Chief Executive Officer

In euros	2022 Amounts granted for 2022	2022 Amount paid in 2022	2021 Amounts granted for 2021	2021 Amount paid in 2021
Jean-Pierre Clamadieu *Chairman*				
Fixed compensation	450,000	450,000	450,000	450,000
Variable compensation	0	0	0	0
Employer contribution to retirement plan	0	0	0	0
Extraordinary compensation	0	0	0	0
Directors' fees	0	0	0	0
Benefits in kind	1,826[1]	1,826[1]	0	0
TOTAL	**451,826**	**451,826**	**450,000**	**450,000**

In euros	2022 Amount granted for 2022	2022 Amount paid in 2022	2021 Amounts granted for 2021	2021 Amount paid in 2021
Catherine MacGregor *Chief Executive Officer*				
Fixed compensation	1,000,000	1,000,000	1,000,000	1,000,000
Variable compensation	1,136,000	1,109,000	1,109,000	0
Employer contribution to retirement plan	534,000	527,250	527,250	0
Extraordinary compensation	0	0	0	0
Directors' fees	0	0	0	0
Benefits in kind	6,192	6,192	4,060	4,060
TOTAL	**2,676,192**	**2,642,442**	**2,640,310**	**1,004,060**

4.4.1.7 Overview of compensation of Chairman and Chief Executive Officer

In euros	2022	2021
Jean-Pierre Clamadieu *Chairman*		
Compensation granted for the fiscal year (detailed in the preceding table)	451,826	450,000
Valuation of options granted for the fiscal year	0	0
Valuation of Performance Shares granted for the fiscal year	0	0
Valuation of Performance Units granted for the fiscal year	0	0
TOTAL	**451,826**	**450,000**

In euros	2022	2021
Catherine MacGregor *Chief Executive Officer*		
Compensation granted for the fiscal year (detailed in the preceding table)	2,676,192	2,640,310
Valuation of options granted for the fiscal year	0	0
Valuation of Performance Shares granted for the fiscal year	1,054,800	0
Valuation of Performance Units granted for the fiscal year	0	880,800
TOTAL	**3,730,992**	**3,521,110**

(1) Company car since July 2022

The valuation of Performance Units (PUs), based on a model provided by an external specialist firm, is based on an approach used for all of its customer companies to obtain comparable valuations. It uses parameters and assumptions that are consistent with the principles of IFRS, but takes into account all possible performance conditions (external and internal), not just "market" performance conditions as in IFRS 2. This valuation also takes into account the share price, the annual expected dividend yield, historical share price volatility, the risk-free interest rate, a three-year maturity, a three-year vesting period and an exercise period of three years. The valuation used was €11.15 for the 2014 award, €9.69 for the 2015 award, €7.73 for the 2016 award, €6.09 for the 2017 award, €6.58 for the 2018 award, €7.84 for the 2019 award and €7.34 for the 2021 award.

This valuation is theoretical, to the extent that the final vesting of PUs (several years after the grant date) depends on the achievement of strict and demanding performance conditions.

The Performance Shares granted for 2022 were valued at €8.79 per share according to IFRS 2 standard, making a total of €111,054,800.

4.4.1.8 Compensation components paid in 2022 or awarded for the same year to Chairman and Chief Executive Officer of the Company, subject to shareholder approval

In accordance with Article L. 22-10-34 II of the French Commercial Code, the Shareholders' Meeting of April 26, 2023 will vote on the fixed, variable and extraordinary components of the total compensation and benefits of any kind paid in, or awarded for, 2022 to Jean-Pierre Clamadieu, Chairman of the Board, and Catherine MacGregor, Chief Executive Officer.

The variable or extraordinary compensation components awarded for 2022 can only be paid after approval by the Shareholders' Meeting.

4.4.1.8.1 Compensation components paid in, or awarded for, 2022 to Jean-Pierre Clamadieu, Chairman of the Board

Compensation components	Amounts paid in 2022	Amounts granted for 2022	Details
Fixed compensation	€450,000	€450,000	Jean-Pierre Clamadieu's fixed annual compensation amounts to €450,000.
Annual variable compensation	None	None	Jean-Pierre Clamadieu receives no annual variable compensation.
Employer contribution to retirement plan	None	None	Jean-Pierre Clamadieu receives no employer pension contribution.
Multi-annual variable compensation	None	None	Jean-Pierre Clamadieu receives no multi-annual variable compensation.
Directors' fees	None	None	Jean-Pierre Clamadieu receives no directors' fees.
Extraordinary compensation	None	None	Jean-Pierre Clamadieu receives no extraordinary compensation.
Allocation of stock options, Performance Shares and any other long-term compensation	None	None	Jean-Pierre Clamadieu is not allocated stock options, Performance Shares or any other long-term compensation.
Compensation associated with the commencement or termination of duties	None	None	Jean-Pierre Clamadieu receives no compensation associated with the commencement or termination of duties.
Supplementary pension plan	None	None	Jean-Pierre Clamadieu is not a beneficiary of any supplementary pension plan.
Benefits of any kind	€1,826	€1,826	Jean-Pierre Clamadieu has had a company car since July 2022

4.4.1.8.2 Compensation components paid in, or awarded for, 2022 to Catherine MacGregor, Chief Executive Officer

Compensation components	Amounts paid in 2022	Amounts granted for 2022	Details
Fixed compensation	€1,000,000	€1,000,000	Catherine MacGregor's fixed compensation was set at €1,000,000
Annual variable compensation	€1,109,000	€1,136,000	The target annual variable compensation to be paid in 2023 for 2022 amounts to 100% of the fixed compensation (€1,000,000) for a 100% target achievement rate, with a maximum of 140% of the fixed compensation (€1,400,000) in the event that targets are exceeded. It breaks down into two components: a financial component (65%) and a non-financial component (35%). For the financial component, the criteria used are NRIgs (25%), EBIT (25%), free cash flow -including GEM - (25%) and economic net debt (25%). The financial targets for 2022 were based on the Group's provisional budget as prepared by the Board of Directors on February 14, 2022. The non-financial component includes: • organization and commitment: finalization of the implementation of the organization, employee commitment and definition of a leadership model (35%); • efficiency in implementing strategy: GBU expansion plan, performance plan (35%); • safety performance (7.5%); • CO_2 emissions related to power generation (7.5%); • the percentage of female managers hired (7.5%); • improvement of the Group's ESG rating (7.5%). At its meeting of February 20, 2023, the Board of Directors, on the recommendation of the ACGC: • noted that the success rate of the financial criteria was 112% (broken down as follows: NRIgs per share: 140%; EBIT: 140%; Free cash flow: 113.3%; Economic net debt: 54.5%); • set the success rate of non-financial criteria at 116.5% (broken down as follows: organization and commitment: 130%, strategy: 130%; safety performance: 100%; CO_2 emissions related to power generation; 140%; percentage of female managers hired: 0%; improvement in the Group's ESG rating: 100%). The assessment conducted by the Board of Directors of outperformance (130%) on the non-financial criteria relating to the organization, commitment and strategy is the result of the following findings: • the energy crisis has highlighted the challenges of supply security and energy accessibility. While mobilizing to overcome these challenges, the management team has continued to deploy the strategic road map established by the Board of Directors; • some of the significant achievements noted by the Board are the definition of a growth plan by the Global Business Units, the refocusing on key countries, the acceleration of investments in renewable energy sources, the progress made in exiting coal, and the advances made with regard to the future of nuclear activities in Belgium; • the implementation of a more industrial and integrated Group organization and the application of a more structured managerial approach have strengthened employee engagement and performance, aiding more efficient operational management. Based on the respective weightings of financial and non-financial criteria, the overall success rate was determined to be 113.6%, or €1,136,000. This variable compensation for 2022 will only be paid to Catherine MacGregor if approved by the shareholders at the Shareholders' Meeting of April 26, 2023.

Compensation components	Amounts paid in 2022	Amounts granted for 2022	Details
Multi-annual variable compensation	None	None	Catherine MacGregor did not receive any multi-annual variable compensation.
Directors' fees	None	None	Catherine MacGregor did not receive any compensation for her office as a Director.
Extraordinary compensation	None	None	Catherine MacGregor did not receive any extraordinary compensation.
Awarding of stock options, Performance Shares and any other long-term compensation	Valuation: €880,800	Valuation: €1,054,800	Catherine MacGregor was awarded 120,000 Performance Shares for 2022 (see note on this theoretical valuation in Section 4.4.1.7 of the 2022 Universal Registration Document).
Compensation associated with the commencem ent or termination of duties	None	None	In the event of departure from the Group, the former Chief Executive Officer will be bound by a non-compete commitment for a period of one year from the end of his or her term of office and will receive one year's compensation payable in twelve monthly installments. The Board of Directors may waive the application of this clause at the time of the officer's departure. In the event of forced departure not resulting from serious misconduct on the part of the corporate officer, and regardless of the form of such departure, the Chief Executive Officer shall receive an indemnity of two years' compensation, which shall be payable only if the performance conditions attached to the annual variable component of the compensation for the two years preceding the year of departure have been met by at least 90% on average. In addition, all provisions of the Afep-Medef Code are applicable to the non-compete commitment and severance payments, in particular with regard to those two payments combined, which may not exceed two years of compensation. "Year of compensation" within the meaning of the non-compete commitment and severance payments referred to above means the last annual fixed compensation plus the annual variable compensation paid calculated on the basis of the average annual variable compensation paid for the two years preceding the year of departure.
Supplementary pension plans	€527,250	€534,000	Lastly, the Chief Executive Officer continues to benefit from a supplementary pension plan, under which the Company does not guarantee the amount of the pension but pays an annual employer contribution, half of which comprises contributions paid to a third-party organization under an optional defined contribution pension plan (Article 82) and half is a cash sum, given the immediate taxation on commencement of this mechanism. The employer contribution corresponds to 25% of the sum of the fixed compensation and the actual variable compensation accrued for the given year. It will also depend on the Company's performance, since the calculation base includes the variable portion linked to the Group's results. The employer contribution for 2022 amounts to €534,000 and will be paid in 2023 subject to a favorable vote from the shareholders at the Shareholders' Meeting on April 26, 2023. The Chief Executive Officer also benefits from the mandatory pension plan (Article 83) applicable to all senior Group managers. The contribution (Article 83) for 2022 is €26,327
Benefits of any kind	€6,192	€6,192	Catherine MacGregor benefited from the use of a company car.

4.4.1.9 Comparison tables of the level of compensation of corporate officers in relation to the compensation of employees – Annual changes in performances

The equity ratios were calculated taking into account the new guidelines published by the AFEP in February 2021. Calculations are made by existing functions in 2022: Chairman and Chief Executive Officer.

Calculation of the numerator: the compensation considered for each corporate officer includes the fixed compensation paid in N, the variable compensation paid in N for N-1, various bonuses and benefits in kind, excluding severance payments, and Performance Shares and Performance Units granted in N at IFRS valuation, excluding items relating to company pensions.

Calculation of the denominator: the parent company ENGIE S.A. is neither representative of the Group's workforce nor of its activity. The denominator is therefore the average compensation in France of employees on permanent and fixed-term contracts, excluding work-study students. Before 2021, two entities that were sold were not included: LNG and E&P. In 2022, a significant change in scope is to be noted, as EQUANS is not included in the data presented for 2022.

The average compensation has been calculated from the aggregated data of the Group Social Reporting; as the Group is made up of several companies with different pay systems, the median compensation cannot be calculated in the absence of individual compensation data.

For the Group, the relevant equity ratio is the one that compares the total compensation of the Chairman and the one of the Chief Executive Officer with the average compensation of all employees in France.

Compensation multiples for the office of Chairman

Table of ratios relating to I.6 and 7 of Article L.22-10-9 of the French Commercial Code(1)

In euros	2018	2019	2020	2021	2022(2)
Compensation for the **Office of Chairman:** Jean-Pierre Clamadieu from 05/18/2018 - Previously Gérard Mestrallet was Chairman	350,000	433,064	450,000	450,000	451,826
Change from the previous year		24%	4%	0%	0.4%
Information on the scope of consolidation of the listed company – not representative in terms of activity and the number of employees					
Average employee compensation	73,875	73,845	76,791	77,142	80,849
Change from the previous year	2%	0%	4%	0%	5%
Median employee compensation	66,175	66,487	72,571	66,967	67,673
Ratio to average employee compensation	-	-	-	-	-
Change from the previous year	-	-	-	-	-
Ratio to median employee compensation	-	-	-	-	-
Change from the previous year	-	-	-	-	-
Additional information about the expanded scope of consolidation (France)(2)					
Average employee compensation	46,307	46,476	46,870	48,278	57,997
Change from the previous year	2%	0%	1%	3%	18%
Median employee compensation			Not available		
Ratio to average employee compensation	7.6	9.3	9.6	9.3	7.9
Change from the previous year		23%	3%	-3%	-15%
Ratio to median employee compensation			Not calculable		
Change from the previous year	-	-	-	-	-
Company performance					
COI organic growth	5%	14%	-16%	47%	43%
Change from the previous year	0%	180%	-214%	194%	-9%
ROCE	6.50%	6.10%	5.45%	8.90%	12.60%
Change from the previous year	3%	-6%	-11%	63%	42%
Net recurring income, Group share (excluding EQUANS) (in billion euros)	2.38	2.46	1.70	3.20	5.22
Change from the previous year	-6%	3%	-31%	85%	65%

(1) In reference to the Afep guidelines updated in February 2021.
(2) The 2022 data on the company's compensation and performance do not include EQUANS.

Compensation multiples for the office of the Chief Executive Officer

Table of ratios relating to I.6 and 7 of Article L.22-10-9 of the French Commercial Code(1)

FY N-1	**2018**	**2019**	**2020**	**2021**	**2022(2)**
Compensation for the **Office of Chief Executive Officer:** Isabelle Kocher from May 3, 2016 to February 24, 2020, then C. Waysand in the interim period from February 24, 2020 to December 31, 2020, then Catherine MacGregor from January 1, 2021	2,550,142	2,588,572	1,287,669	2,608,350	3,169,992
Change from the previous year	10%	2%	-50%	103%	22%
Information on the scope of consolidation of the listed company – not representative in terms of activity and the number of employees					
Average employee compensation	73,875	73,845	76,791	77,142	80,849
Change from the previous year	2%	0%	4%	0%	5%
Median employee compensation	66,175	66,487	72,571	66,967	67,673
Ratio to average employee compensation	-	-	-	-	-
Change from the previous year	-	-	-	-	-
Ratio to median employee compensation	-	-	-	-	-
Change from the previous year	-	-	-	-	-
Additional information about the expanded scope of consolidation (France)					
Average employee compensation	46,307	46,476	46,870	48,278	56,997
Change from the previous year	2%	0%	1%	3%	18%
Median employee compensation	Not available				
Ratio to average employee compensation	55.1	55.7	27.5	54.0	55.6
Change from the previous year	8%	1%	-51%	97%	3%
Ratio to median employee compensation	Not calculable				
Change from the previous year	-	-	-	-	-
Company performance					
COI organic growth	5%	14%	-16%	47%	43%
Change from the previous year	0%	180%	-214%	194%	-9%
ROCE	6.50%	6.10%	5.45%	8.90%	12.60%
Change from the previous year	3%	-6%	-11%	63%	42%
Net recurring income, Group share (excluding E&P and LNG) (in billion euros)	2.38	2.46	1.70	3.20	5.22
Change from the previous year	-6%	3%	-31%	85%	65%

(1) In reference to the Afep guidelines updated in February 2021.
(2) The 2022 data on the company's compensation and performance do not include EQUANS.

4.4.2 COMPENSATION OF CORPORATE OFFICERS

The compensation for corporate officers below will be submitted for shareholder approval at the Annual Shareholders' Meeting of April 26, 2023, in accordance with Article L.22-10-9 of the French Commercial Code.

As a reminder, on the recommendation of the Board of Directors, the Shareholders' Meeting sets the total annual amount of Directors' compensation to be distributed by the Board among its members.

On the recommendation of the Appointments and Compensation Committee, the Board of Directors, at its meeting of December 11, 2013, amended the rules for distributing the annual amount of directors' fees, set by the Shareholders' Meeting of July 16, 2008 at €1.4 million (unchanged since 2008) in line with an individual distribution system, combining a fixed portion with a predominant variable portion based on the attendance of Directors at Board and Committee meetings, in accordance with the Article 22.1 of the Afep-Medef Code.

The rules of distribution applied are presented below. They are unchanged in 2022 compared to 2021. They were last amended on July 29, 2019. It should be noted that Chairman and Chief Executive Officer do not receive compensation for their participation on the Board of Directors.

Director		Fixed fee	€15,000 per year
		Variable fee, dependent on attendance	€55,000(1), if 100% attendance
Audit Committee	Chairman	Fixed fee	€15,000 per year
		Variable fee, dependent on attendance	€44,000(1), if 100% attendance
	Committee member	Fixed fee	€5,000 per year
		Variable fee, dependent on attendance	€22,000(1), if 100% attendance
SITC	Chairman (2)	Fixed fee	€10,000 per year
		Variable fee, dependent on attendance	€27,500(1), if 100% attendance
	Committee member	Fixed fee	€5,000 per year
		Variable fee, dependent on attendance	€16,500(1), if 100% attendance
EESDC	Chairman	Fixed fee	€10,000 per year
		Variable fee, dependent on attendance	€22,000(1), if 100% attendance
	Committee member	Fixed fee	€5,000 per year
		Variable fee, dependent on attendance	€16,500(1), if 100% attendance
ACGC	Chairman	Fixed fee	€10,000 per year
		Variable fee, dependent on attendance	€22,000(1), if 100% attendance
	Committee member	Fixed fee	€5,000 per year
		Variable fee, dependent on attendance	€16,500(1), if 100% attendance

(1) Variable portion increased by 25% for European non-residents and 50% for non-European non-residents, in the event of physical attendance at meetings.

(2) Jean-Pierre Clamadieu, Chairman of the SITC, does not receive any compensation for his participation in the work of the Board and this Committee.

4.4.2.1 Compensation of Directors appointed by the Shareholders' Meeting

The corporate officers who are not executives received the compensation shown in the table below for fiscal year 2022. Unless otherwise indicated, no other compensation was paid to these officers by the Company or by its subsidiaries for the said fiscal year.

In euros	Fiscal year 2022[(1)]	Fiscal year 2021[(1)]
Fabrice Brégier	91,500[(2)]	91,500[(2)]
Marie-Claire Daveu[(3)]	65,125[(2)]	-
Patrice Durand[(4)]	77,775[(2)(5)]	77,775[(2)(5)]
Mari-Noëlle Jégo-Laveissière[(4)]	77,775[(2)(5)]	75,812[(2)(5)]
Françoise Malrieu	150,500[(2)]	150,500[(2)]
Ross McInnes	150,500[(2)]	150,500[(2)]
Marie-José Nadeau	205,216[(6)]	177,087[(6)]
Lord Peter Ricketts of Shortlands	102,893[(6)]	96,048[(6)]
TOTAL	**921,284**	**819,222**

(1) *Directors' compensation due for a given fiscal year are paid during the fiscal year concerned.*
(2) *Before deduction of withholding tax relating to tax and social contributions.*
(3) *Appointed during the April 21, 2022 Shareholders' Meeting - compensated on a prorata temporis basis.*
(4) *Director appointed from the private sector by the Shareholders' Meeting on the proposal of the French State.*
(5) *Appointment proposed by the French state, as such, these directors only receive 85% of the compensation. The remaining 15% is paid to the State.*
(6) *Before deduction of withholding tax levied on Directors' fees paid to Directors residing outside France.*

4.4.2.2 Compensation of the Director representing the French State and the Directors elected by the Shareholders' Meeting on the proposal of the French State

The Director representing the French State, in her role as civil servant, Stéphanie Besnier, did not personally receive any compensation from the Company or from companies controlled by the Company for her term of office in 2022, in accordance with Article 5 of Ordinance N° 2014-948 of August 20, 2014 concerning the governance and equity transactions of companies with a public shareholder.

The Directors from the private sector appointed by the Shareholders' Meeting on the proposal of the French State, namely Mari-Noëlle Jégo-Laveissière and Patrice Durand, received 85% of the directors' fees corresponding to their office, pursuant to the ministerial Order of December 28, 2014, as amended by the ministerial order of January 5, 2018, taken in application of Article 6 of Ordinance No. 2014-948 of August 20, 2014 concerning governance and equity operation of companies with a public shareholder (see the table above).

In respect of the foregoing, the balance of the Directors' compensation corresponding to these offices, i.e. an amount of €163,050, was paid directly to the Public Treasury in compliance with regulations.

4.4.2.3 Compensation of directors representing the employees and employee shareholders

Directors representing employees and employee shareholders on the ENGIE Board of Directors received no compensation (directors' fees or other) from the Company or from companies controlled by the Company in consideration of their service as directors.

These Directors are Christophe Agogué, Alain Beullier[(1)], Jacinthe Delage, Yoan Kosnar[(2)], Philippe Lepage[(1)] and Magali Viot[(2)].

4.4.3 COMPENSATION POLICY FOR CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The compensation policy for Chairman and Chief Executive Officer is determined by the Board of Directors based on the recommendations of the ACGC. It will be subject to a presentation and binding vote at the Annual Shareholders' Meeting of April 26, 2023 in accordance with Article L.22-10-8 of the French Commercial Code.

The compensation policy is reviewed annually by the ACGC and is based in particular on specific studies.

Pursuant to Article 3.3.1 of the Board's Internal regulations, executive corporate officers do not take part in meetings of the ACGC on matters relating to them.

In its recommendations to the Board of Directors, the ACGC seeks to propose a compensation policy that is in line with corporate responsibility and the practices of comparable major international groups for similar positions, based on a benchmark established by a specialized external firm that includes companies listed on the CAC40 and the Eurostoxx 50.

Pursuant to Article 10.6 of the Afep-Medef Code, the Chairman of the Board of Directors, as an independent director, does not receive variable compensation linked to the Company's performance.

Compensation of the other executive corporate officers generally includes:

- a fixed component, which remains unchanged throughout the term of office, unless the Board of Directors, on the recommendation of the ACGC, decides otherwise;

(1) *Director until April 21, 2022.*
(2) *Director since April 21, 2022.*

4

- a variable component, balanced relative to total compensation, the purpose of which is to reflect the executive's personal contribution to the Group's development and results; and
- a long-term incentive component, subject to performance conditions.

Stringent performance criteria are set both for the variable component and for long-term incentive plans, maintaining a link between the Group's performance and the compensation of its directors in the short, medium and long term and contributing to the Company's strategy and sustainability.

If the approval rate for the compensation policy is less than 80% at the last Shareholders' Meeting, the ACGC looks at the direction of the vote of the shareholders that opposed the approval of this policy and the possible follow-up to be given to their vote.

4.4.3.1 Compensation policy for the Chairman of the Board for 2023

The compensation of the Chairman of the Board of Directors for 2023 remains unchanged from 2022. It includes annual fixed compensation. It does not include any annual or multi-year variable compensation or long-term incentive plans.

The fixed annual compensation is €450,000.

In accordance with current policy, executive corporate officers do not receive directors' fees for their participation in the work of the Board and its committees.

The Chairman of the Board receives social security coverage and health care coverage.

He has a company vehicle.

4.4.3.2 Compensation of the Chief Executive Officer for 2023

The Chief Executive Officer's compensation includes a fixed component, a variable annual component and a long-term incentive component.

The fixed component is €1,000,000. It was determined according to the role, experience and reference market of the Chief Executive Officer, particularly in relation to the fixed compensation of executive corporate officers of groups similar to ENGIE in terms of size and scope, and, more generally, on the basis of the above benchmark. It does not change for the duration of the term of office, which is four years, unless the Board of Directors, on the recommendation of the ACGC, votes otherwise, in particular with regard to the market context, or any changes in ENGIE's profile or Group employee compensation.

The annual variable component is designed to reflect the executive's personal contribution to the Group's development and results. It is balanced in relation to the fixed component and determined as a percentage of fixed compensation.

The target annual variable component amounts to 100% of the fixed compensation (€1,000,000) for a 100% target achievement rate, with a maximum of 140% of the fixed compensation (€1,400,000) in the event that targets are exceeded.

It is calculated annually, according to the Chief Executive Officer's performance, using financial criteria to compensate economic performance (65%), and non-financial criteria (35%), where at least one criterion reflects the Group's CSR objectives, in accordance with the purpose ("Raison d'être") of ENGIE as stated in the bylaws.

For the financial component, the criteria used are net recurring income, Group share (25%), EBIT (25%), free cash flow - including GEMS - (25%) and economic net debt (25%). The financial targets for 2023 were based on the Group's provisional budget as prepared by the Board of Directors on February 20, 2023.

The non-financial component is based on the progress of the work carried out on the Group's strategic objectives (35%), the Group's priorities for 2023 (35%) and quantifiable CSR criteria (30%).

The work carried out on the Group's strategic objectives must focus, in particular, on the future of the nuclear activities in Belgium, on building a more comprehensive medium-term road map toward carbon neutrality in 2045, and on communication that ensures better understanding of the Group's activities.

Operational priorities for 2023 cover the deployment of the One Safety health and safety plan, the acceleration of growth in the energy transition, the development of talent and the positioning of supply chains as a strategic lever.

The CSR criteria include the continued improvement in safety performance compared with 2022, assessed with the aid of a series of indicators (frequency rate, severity rate, number of fatal accidents, etc.), the reduction of CO_2 emissions related to power generation in line with the trajectory set for the purposes of hitting the 2030 target, 35% female managers hired. These three criteria account for 30% of the non-financial component and each one is given an equal weighting.

The other non-financial criteria concern the Group's strategy and priorities in 2023. They account for 70% of this component. Insofar as they may contain strategically sensitive information, they will be made public in 2024.

The Chief Executive Officer's long-term incentive component takes the form of Performance Shares subject to the same performance conditions as those attached to the performance share plans for some employees. These performance conditions are all specified and quantifiable. They include at least one non-financial performance condition that reflects the Group's CSR objectives, in accordance with the Company's purpose as stated in the bylaws. This long-term incentive component is designed to encourage executives to make a long-term commitment as well as to increase their loyalty and align their interests with the Company's corporate interests and the interests of shareholders. This particular component may not account for more than 50% of the executive's total compensation at the initial award.

In accordance with Article 26.3.3 of the Afep-Medef Code, the Chief Executive Officer formally undertakes not to use hedging mechanisms for these Performance Shares. It should be noted that the Chief Executive Officer's target is to create a portfolio of ENGIE shares equivalent to two years' fixed compensation, i.e. €2,000,000. Until this target is met, two-thirds of the Performance Shares vested to the Chief Executive Officer will be non-transferable. On December 31, 2022, the Chief Executive Officer held 55,000 ENGIE shares acquired in a personal capacity.

The financial performance conditions relate to growth in net recurring income, Group share over two years compared with a benchmark panel, hereinafter referred to as the "Panel" (constituting 25% of the total performance conditions), to changes in total shareholder return (TSR) (stock market performance, reinvested dividend) over three years compared with this same Panel (constituting 25%), and to the return on capital employed (ROCE) in the Medium-Term Business Plan (MTBP) approved by the Board of Directors on a pro forma basis (constituting 30%).

The Panel selected for the relative assessment of the growth of the NRIgs and TSR is composed of EDP, ENEL, Iberdrola, Naturgy, Snam and RWE, with each of these companies receiving an identical weighting.

For the assessment of the performance condition related to the growth of the NRIgs, the growth will be calculated as the ratio of the NRIgs for the 12 months preceding June 30 of the plan's year of maturity to the NRIgs for the 12 months preceding June 30 of the first year in which performance was measured. To assess the performance condition relating to the

TSR over three years, in order to spread any effects of volatility (gain or loss), the TSR (stock market performance, reinvested dividend) will be calculated by taking the averages of the three-year TSRs for ENGIE and for the Panel companies over a period of two months, ending at least one month before the scheduled delivery date of the Performance Shares.

Thus, the Performance Shares are subject to exclusively quantifiable non-financial performance conditions (together constituting 20% of the total performance conditions), selected for consistency with the Company's statutory purpose, i.e. its objectives to reduce greenhouse gas emissions from power generation (10%), increase the proportion of renewable capacities (5%) and increase the proportion of women in management (5%). The target objectives will be in line with the trajectory established to achieve the target objectives by 2030.

The TSR (stock market performance, reinvested dividend) success rate will be zero for a result below 100% of the target. For a result equal to 100% of the target, the success rate will be equal to 50%. For a result equal to or greater than 120% of the target, the success rate will be equal to 120%. For a result greater than 100% and less than or equal to 120% of the target, the success rate will be progressive and linear between 50% and 120%. It is specified that a result of 100% of the target corresponds to the average of the companies of the Panel.

The success rate for NRIgs growth will be zero for a result below 75% of the target. For a result equal to 100% of the target, the success rate will be equal to 80%. For a result equal to or greater than 120% of the target, the success rate will be equal to 120%. The progression between these points is linear. It is specified that a result of 100% of the target corresponds to the average of the companies of the Panel.

The ROCE success rate will be zero for a result below 75% of the target. For a result equal to 100% of the target, the success rate will be equal to 100%. For a result equal to or greater than 120% of the target, the success rate will be equal to 120%. The progression between these points is linear.

With regard to non-financial performance conditions, if the result is equal to the target, the success rate will be 100%. The Board will stringently define limits corresponding to a success rate of 0% and a maximum rate of 120%, according to medium-term targets and the specific nature of each of these indicators.

The determination of the above performance criteria derives from the Board of Directors' commitment to the variable nature of the long-term incentive component which rewards financial and non-financial performance in the medium and long term. They are therefore not meant to be reviewed. However, in the event of exceptional circumstances (such as a change in accounting standards, a significant change in scope, the completion of a transformative transaction, a substantial change in market conditions or an unforeseen change in the competitive environment), the Board of Directors may, on an exceptional basis, adjust upward or downward the results of one or more of the performance criteria associated with the long-term incentive component to ensure that the results of applying these criteria reflect the Group's performance. This adjustment would be made by the Board of Directors on the proposal of the ACGC, after the Board of Directors was assured that the adjustment can reasonably restore the balance or objective initially sought, adjusted for all or part of the impact of the event on the period under review and that the interests of the Company and its shareholders are aligned with the interests of the executive corporate officer. The Board would then justify, in detail, the adjustments made, which will be communicated.

The total success rate for the Performance Shares will be capped at 100%.

The payment of the variable and extraordinary compensation components and the award of Performance Shares for 2022 will be contingent on the approval of shareholders at the 2023 Ordinary Shareholders' Meeting.

Lastly, the Chief Executive Officer will continue to benefit from a supplementary pension plan, under which the Company does not guarantee the amount of the pension but pays an annual employer contribution, half of which comprises contributions paid to a third-party organization under an optional defined contribution pension plan (Article 82) and half is a cash sum, given the immediate taxation on commencement of this mechanism. The employer contribution will correspond to 25% of the sum of the fixed compensation and the actual variable compensation accrued for the given year. It will also depend on the Company's performance, since the calculation base includes the variable portion linked to the Group's results. The Chief Executive Officer will also benefit from the mandatory pension plan (Article 83 of the French Tax Code) applicable to all senior Group managers.

The Chief Executive Officer will also benefit from health care and social security schemes equivalent to the collective schemes for ENGIE's executive officers in France.

The Chief Executive Officer, if also a director, does not receive any directors' fees for sitting on the Board of Directors.

In the event of departure from the Group, the former Chief Executive Officer will be bound by a non-compete commitment for a period of one year from the end of his or her term of office and will receive one year's compensation payable in twelve monthly installments. The Board of Directors may waive the application of this clause at the time of the officer's departure.

In the event of forced departure not resulting from serious misconduct on the part of the corporate officer, and regardless of the form of such departure, the Chief Executive Officer shall receive an indemnity of two years' compensation, which shall be payable only if the performance conditions attached to the annual variable component of the compensation for the two years preceding the year of departure have been met by at least 90% on average.

In addition, all provisions of the Afep-Medef Code are applicable to the non-compete commitment and severance payments, in particular with regard to those two payments combined, which may not exceed two years of compensation. "Year of compensation" within the meaning of the non-compete commitment and severance payments referred to above means the last annual fixed compensation plus the annual variable compensation paid calculated on the basis of the average annual variable compensation paid for the two years preceding the year of departure.

Lastly, the Chief Executive Officer benefits from the use of a company vehicle.

4.4.4 COMPENSATION POLICY FOR THE DIRECTORS FOR 2023

On the proposal of the ACGC, on February 20, 2023, the Board of Directors decided to change the individual compensation system for Directors, both for the fixed and variable components, based on a benchmark using the Eurostoxx50 panel. This benchmark shows a discrepancy in the compensation of ENGIE's directors.

This modification also takes into account the reflection carried out by the Board of Directors on its diversity policy with a view to integrating more international profiles. It also takes into account the greater personal investment required to serve as a Director, the skills required and the number of meetings attended.

Consequently, it is proposed to increase the fixed and variable components of directors' compensation by 10%. The compensation proposed amounts are shown below. It is specified that the total budget of €1.4 million set in 2008 remains unchanged. This aspect of the compensation policy.

will be submitted to the Shareholders' Meeting of April 26, 2023, pursuant to Article L.22-10-8, II of the French Commercial Code.

It should be noted that the Chairman and the Chief Executive Officer do not receive compensation for their participation on the Board of Directors.

Director		Fixed fee	€16,500 per year
		Variable fee, dependent on attendance	€60,500(1), if 100% attendance
Audit Committee	Chairman	Fixed fee	€16,500 per year
		Variable fee, dependent on attendance	€48,400(1), if 100% attendance
	Committee member	Fixed fee	€5,500 per year
		Variable fee, dependent on attendance	€24,200(1), if 100% attendance
SITC	Chairman(2)	Fixed fee	€11,000 per year
		Variable fee, dependent on attendance	€30,250(1), if 100% attendance
	Committee member	Fixed fee	€5,500 per year
		Variable fee, dependent on attendance	€18,150(1), if 100% attendance
EESDC	Chairman	Fixed fee	€11,000 per year
		Variable fee, dependent on attendance	€24,200(1), if 100% attendance
	Committee member	Fixed fee	€5,500 per year
		Variable fee, dependent on attendance	€18,150(1), if 100% attendance
ACGC	Chairman	Fixed fee	€11,000 per year
		Variable fee, dependent on attendance	€24,200(1), if 100% attendance
	Committee member	Fixed fee	€5,500 per year
		Variable fee, dependent on attendance	€18,150(1), if 100% attendance

(1) *Variable portion increased by 25% for European non-residents and 50% for non-European non-residents, in the event of physical attendance at meetings.*
(2) *Jean-Pierre Clamadieu, Chairman of the SITC, does not receive any compensation for his participation in the work of the Board and this Committee.*

4.4.5 COMPENSATION OF EXECUTIVES WHO ARE NOT CORPORATE OFFICERS (MEMBERS OF THE EXECUTIVE COMMITTEE)

Compensation of executives who are not corporate officers (members of the Executive Committee) is composed of a fixed portion and a variable portion.

Changes in the fixed portion of compensation are linked to changes in specific situations, expansion or significant change in responsibilities and to repositioning made necessary in view of internal equity or a clear discrepancy vis-à-vis the external market.

The main purpose of the variable portion is to reward the contributions of executives to the Group's results.

The amounts below include the variable portions paid in 2022 for 2021 and paid in 2021 for 2020.

Sixty-five percent of the variable component paid in 2022 for fiscal year 2021 was calculated based on economic criteria (NRIgs, EBIT, free cash flow, economic net debt) and 35% on qualitative criteria.

Summary table of gross compensations, including benefits in kind, for executives who are not corporate officers (Executive Committee members)[1]

In euros	2022	2021
Fixed	4,795,548	5,171,898
Variable	5,362,002	4,476,708
Total	10,157,550	9,648,606
Total of members	11	16

(1) Compensations include: fixed + annual variable compensation for the year

Pension provisions

Pursuant to the European Directive of April 16, 2014, Order N° 2019-697 relating to supplementary occupational retirement plans, published on July 4, 2019, terminated the existing L137-11 plans (referred to as "Article 39") and prohibited the acquisition of new rights and the entry of any new members as from that date.

Following the closure of the plan and the crystallization of random entitlements in 2019, in 2020 the Group converted the random entitlements of beneficiaries, including members of the Executive Committee, into a defined-contribution plan called "Article 82."

4.4.6 INFORMATION ON THE AWARD OF BONUS SHARES OR PERFORMANCE SHARES[1]

4.4.6.1 Availability of Performance Shares

The current Articles L.225-197-1 and L. 22-10-59 of the Commercial Code place restrictions on the free availability of Performance Shares granted to executive corporate officers under share plans.

In accordance with these provisions, a system was established specifying the obligation to hold as registered shares a certain percentage (set by the Board of Directors) of vested Performance Shares. The objective is that after a certain point, the executive corporate officers and, more generally, Executive Committee members would hold a portfolio of ENGIE shares corresponding to a fraction of their compensation.

At its meeting of March 1, 2017, the Board of Directors decided, on the recommendation of the Appointments, Compensation and Governance Committee, to update the existing system as follows:

- fixed target: build a share portfolio equivalent to two years' fixed compensation for the Chief Executive Officer, and to one and a half years for other members of the Executive Committee. This objective is set in terms of the number of shares for each person concerned, and is calculated based on the fixed annual compensation prevailing at January 1 of the year in question and on the average share price over the previous year;
- until the target is met: continue to hold 2/3 of the vested Performance Shares and, for the Chief Executive Officer, with regard to Performance Unit plans, reinvest in ENGIE shares 2/3 of the income from the exercise of the PUs net of tax and social security withholding.

4.4.6.2 Bonus share or Performance Share plans implemented for fiscal year 2022

Authorization of the Shareholders' Meeting of April 21, 2022

The 27th resolution of the ENGIE Ordinary and Extraordinary Shareholders' Meeting of April 21, 2022 authorized the Board of Directors to award bonus shares to employees and / or corporate officers of companies belonging to the Group (including the executive corporate officers of the Company) up to the limit of 0.75% of the share capital on the date of the decision to allocate shares, with an annual cap of 0.25% of said share capital. It should also be noted that the Shareholders' Meeting was not asked to grant an authorization for stock options.

Performance Share plans for 2022 (Board meetings of April 21, 2022, December 8, 2022 and February 20, 2023)

Under the authorization granted by the Shareholders' Meeting of April 21, 2022, the Board of Directors decided to implement Performance Share plans for:

- the Chief Executive Officer, on April 21, 2022 (see Section 4.4.7.3);
- certain employees of ENGIE and its subsidiaries, on **December 8, 2022** (conditons of the plan are described below);
- certain employees in the Trading business, in accordance with the ministerial order of November 3, 2009, with European Directives CRDIII and CRDIV regarding the compensation of financial market professionals, and with the ministerial order of December 13, 2010, on **February 20, 2023** (conditons of the plan are described below).

The Board of Directors decided to maintain a significant number of beneficiaries. Those plans aim to recognize employees who play a great part in implementing the strategic road map, to retain the loyalty and increase the commitment of our talent and to offer competitive compensation to executives. The plan is based on existing shares with no dilutive effect for shareholders.

(1) Please note that there are no more ENGIE stock options as of November 9, 2017.

The main features of the plan dated **December 8, 2022**, which involves 4,739,350 shares for 5,349 people (EQUANS being out of scope), are as follows:

Vesting period	From 12/08/2022 to 03/14/2026 (2027 for senior executives outside France)
Continuous service condition *(Current employment contract with a Group company at these dates, except in cases of retirement, death, disability or exceptional decision)*	On 03/14/2026 (2027 for senior executives outside France)
Vesting date	03/15/2026 (2027 for senior executives outside France)
Holding period *(mandatory, except in the case of death or disability)*	No holding period except for senior executives in France for whom the holding period runs from 03/15/2026 to 03/14/2027 (no holding if vesting occurs in 2027)
Transferable from	On or after 03/15/2026, and for senior executives, on or after 03/15/2027

Performance conditions	With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a quadruple condition applies for all beneficiaries:
	a) 25% is based on NRIgs, calculated as the ratio between the Group's growth and Panel's average growth [(1)], and
	b) 30% is based on ROCE for 2025 compared to the budgeted target ROCE,
	c) 25% is based on the TSR (stock market performance, dividend reinvested) of ENGIE shares over three years compared to a Panel[(1)] over a period of two months, ending at least one month before March 15, 2026,
	d) 20% is based on non-financial performance conditions:
	• greenhouse gas emissions from energy production (10%);
	• increasing the share of renewable capacities (5%);
	• increasing the percentage of women in management (5%).
	For the assessment of the performance conditions, the slopes are as follows:
	• for a result below 100%, the success rate will be equal to 0% for the TSR;
	• for a result below 75%, the success rate will be equal to 0% for the NRIgs, the ROCE and the non-financial conditions;
	• for a result equal to 100%, the success rate will be equal to:
	  • 50% for the condition relating to TSR,
	  • 80% for the condition relating to NRIgs,
	  • 100% for the conditions relating to ROCE and non-financial conditions;
	• for a result equal to or greater than 120%, the success rate will be equal to 120%.
	The progression between these points is linear.
	The arithmetic mean of the three success rates in a), b), c) and d) above represents the percentage of shares that will vest. The total success rate will be capped at 100%.
	This condition applies to all Performance Shares awarded to the Group's executives and beyond the first tranche of 500 shares awarded to all other beneficiaries.

(1) The "Panel" means the panel of companies composed of EDP, ENEL, Iberdrola, Naturgy, Snam and RWE (with each of these companies receiving an identical weighting).

The main features of the Traders plan dated **February 20, 2023**, which involves 593,305 shares for 83 people are as follows:

Vesting period	02/20/2023 to 03/14/2025 for around half the shares 02/20/2023 to 03/14/2026 for the remaining shares
Continuous service condition *(Current employment contract with a Group company at these dates, except in cases of retirement, death, disability or exceptional decision)*	03/14/2025 for around half the shares 03/14/2026 for the remaining shares
Vesting date	03/15/2025 for around half the shares 03/15/2026 for the remaining shares
Holding period	No holding period
Transferable from	From 03/15/2025 for around half the shares From 03/15/2026 for the remaining shares
Performance conditions	Based on the Trading business's profit before tax for fiscal year 2024 for around half the shares Based on the Trading business's profit before tax for fiscal year 2025 for the remaining shares

In 2023, the Board of Directors and the ACGC will initiate a study on the performance conditions of the long-term incentive plans (performance shares) with the goal of submitting a new resolution to the 2024 Shareholders' Meeting. This analysis aims to define how all the performance criteria will be evaluated over the plan's three-year term, in line with standard industry practices.

4.4.7 PERFORMANCE SHARES GRANTED TO AND AVAILABLE FOR SALE BY EACH CORPORATE OFFICER – SUMMARY OF CURRENT PLANS

4.4.7.1 ENGIE Performance Shares granted to each ENGIE corporate officer by ENGIE and all other companies of the ENGIE Group in 2022

Table 6 - AMF Position-Recommendation - DOC-2021-02 (Appendix 2)

Performance Shares granted during the fiscal year to each corporate officer by the issuer by any company of the Group						
	No. and date of the plan	Number of granted shares during the fiscal year	Valuation of shares according to the method used for the consolidated financial statements (in euros)	Vesting date	Availability date	Performance conditions
Catherine MacGregor	04/21/2022	120,000	8.79	03/14/2025	03/15/2026	All these shares are subject to performance criteria (see Section 4.4.6.2)

4.4.7.2 ENGIE Performance Shares that became available for sale by each corporate officer of ENGIE in fiscal year 2022

None

4

4.4.7.3 Summary of current ENGIE Performance Share plans

	2017	2018		2019	
For year:	2017 Plan	2018 Plan	2018 Traders' Plan	2019 Plan	2019 Traders' Plan
Date of authorization from the General Shareholders' Meeting	05/12/2017	05/18/2018	05/18/2018	05/18/2018	05/18/2018
Date of Board decision	12/13/2017	12/11/2018	02/27/2019	12/17/2019	02/26/2020
Share price in euros(1)	11.64	9.36	11.41	11.59	13.61
Start of vesting period(2)	12/13/2017	12/11/2018	02/27/2019	12/17/2019	02/26/2020
End of vesting period	03/14/2021(3)	03/14/2022(7)	03/14/2021(11) 03/14/2022(11)	03/14/2023(13)	03/14/2022(11) 03/14/2023(11)
Start of holding period	none(4)	none(8)	none	none(14)	none
End of holding period	none(5)	none(9)	none	none(15)	none
Related conditions	(6)	(10)	(12)	(16)	(17)
Shares vested as at 12/31/2021	74,970	4,650,190	68,398	4,935,240	256,728
Shares vested from 01/01/2022 to 12/31/2022	63,665	3,185,775	67,949	900	126,897
Shares canceled from 01/01/2022 to 12/31/2022	11,305	1,393,745	449	242,250	2,986
Balance of shares as at 12/31/2022	-	70,670	-	4,692,090	126,845

(1) Weighted average price (according to the method used for the consolidated financial statements).

(2) Early vesting possible in the event of death or permanent disability. Condition of continuous service at the vesting date.

(3) 03/14/2022 for senior executives outside France and Belgium.

(4) 03/15/2021 for senior executives in France and Belgium.

(5) 03/15/2022 for senior executives in France and Belgium.

(6) With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a triple condition applies for all beneficiaries: one-third based on net recurring income, Group share, for fiscal years 2019 and 2020, one-third based on ROCE for fiscal years 2019 and 2020, and one-third based on the TSR (stock market performance, dividend reinvested) of ENGIE stock compared with the TSR (stock market performance, dividend reinvested) of a panel composed of EDF, E.ON, Uniper, Innogy, Enel, Naturgy (ex-Gas Natural), Iberdrola and RWE, with each of the companies receiving an identical weighting, it being specified that E.ON and Uniper, on the one hand, and RWE and Innogy, on the other, are counted as one company (for 50% each) for the purpose of weighting. This condition applies to all shares awarded to the Group's senior executives and does not affect the first tranche of 150 shares awarded to the other beneficiaries.

(7) 03/14/2023 for senior executives outside France and Belgium .

(8) 03/14/2023 for senior executives outside France and Belgium.

(9) 03/15/2022 for senior executives in France and Belgium

(10) With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a triple condition applies for all beneficiaries: one-third based on net recurring income, Group share, for fiscal years 2020 and 2021, one-third based on ROCE for fiscal years 2020 and 2021, and one-third based on the TSR (stock market performance, dividend reinvested) of ENGIE compared with the TSR (stock market performance, dividend reinvested) of a panel composed of EDF, E.ON, Uniper, Innogy, Enel, Naturgy (ex-Gas Natural), Iberdrola and RWE, with each of the companies receiving an identical weighting, it being specified that E.ON and Uniper, on the one hand, and RWE and Innogy, on the other, are counted as one company (for 50% each) for the purpose of weighting. This condition applies to all shares awarded to the Group's executives and does not affect the first tranche of 150 shares awarded to the other beneficiaries.

(11) For 50% of shares.

(12) 50% based on 2020 ENGIE Global Markets profit before tax and 50% based on 2021 ENGIE Global Markets profit before tax.

(13) 03/14/2024 for senior executives outside France and Belgium.

(14) 03/15/2023 for senior executives in France and Belgium.

(15) 03/15/2024 for senior executives in France and Belgium.

(16) With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a triple condition applies for all beneficiaries: one-third based on net recurring income, Group share, for fiscal years 2021 and 2022, one-third based on ROCE for fiscal years 2021 and 2022, and one-third based on the TSR (stock market performance, dividend reinvested) of ENGIE compared with the TSR (stock market performance, dividend reinvested) of a panel composed of EDF, E.ON, Uniper, Innogy, Enel, Naturgy (ex-Gas Natural), Iberdrola and RWE, with each of the companies receiving an identical weighting, it being specified that E.ON and Uniper, on the one hand, and RWE and Innogy, on the other, are counted as one company (for 50% each) for the purpose of weighting.. This condition applies to all shares awarded to the Group's executives and does not affect the first tranche of 150 shares awarded to the other beneficiaries.

(17) 50% based on 2021 ENGIE Global Markets profit before tax and 50% based on 2022 ENGIE Global Markets profit before tax.

	2020		2021		2022		
For year:	**2020 Plan**	**2020 Traders' Plan**	**2021 Plan**	**2021 Traders' Plan**	**CEO 2022 Plan**	**2022 Plan**	**2022 Traders' Plan**
Date of authorization from the General Shareholders' Meeting	05/18/2018	05/18/2018	05/20/2021	05/20/2021	04/21/2022	04/21/2022	04/21/2022
Date of Board decision	12/17/2020	02/25/2021	12/16/2021	02/14/2022	04/21/2022	12/08/2022	02/20/2023
Share price *(in euros)*[1]	9.93	10.9	9.28	12.13	8.79	10.24	10.89
Start of vesting period[2]	12/17/2020	02/25/2021	12/16/2021	02/14/2022	04/21/2022	12/08/2022	02/20/2023
End of vesting period	03/14/2024[3]	03/14/2023[7] 03/14/2024[7]	03/14/2025[9]	03/14/2024[7] 03/14/2025[7]	03/14/2025	03/14/2026[14]	03/14/2025[3] 03/14/2026[3]
Start of holding period	none[4]	none	none[10]	none	03/15/2025	none[15]	none[15]
End of holding period	none[5]	none	none[11]	none	03/15/2026	none[16]	none
Related conditions	[6]	[8]	[12]	[13]	[12]	[17]	[18]
Shares vested as at 12/31/2021	4,905,835	300,052	5,029,075	none	none	none	none
Shares vested from 01/01/2022 to 12/31/2022	475	none	500	none	none	none	none
Shares canceled from 01/01/2022 to 12/31/2022	239,585	187	187,370	3,300	none	none	none
Balance of shares as at 12/31/2022	4,905,835	300,052	5,029,075	none	120,000	4,739,350	none

(1) *Weighted average price (according to the method used for the consolidated financial statements).*
(2) *Early vesting possible in the event of death or permanent disability. Condition of continuous service at the vesting date.*
(3) *03/15/2025 for senior executives outside France.*
(4) *03/15/2024 for senior executives in France.*
(5) *03/15/2025 for senior executives in France.*
(6) *With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a triple condition applies for all beneficiaries: one-third based on net recurring income, Group share, for fiscal years 2022 and 2023, one-third based on ROCE for fiscal years 2022 and 2023, and one-third based on the TSR (stock market performance, dividend reinvested) of ENGIE compared with the TSR (stock market performance, dividend reinvested) of the panel composed of EDF, E.ON, Uniper, Innogy, Enel, Naturgy (ex-Gas Natural), Iberdrola and RWE, with each of the companies receiving an identical weighting. This condition applies to all shares awarded to the Group's executives and does not affect the first tranche of 150 shares awarded to the other beneficiaries.*
(7) *For 50% of shares.*
(8) *50% based on 2022 ENGIE Global Markets profit before tax and 50% based on 2023 ENGIE Global Markets profit before tax.*
(9) *03/15/2026 for senior executives outside France.*
(10) *03/15/2025 for senior executives in France.*
(11) *03/15/2026 for senior executives in France.*
(12) *With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a quadruple condition applies for all beneficiaries: 30% ROCE 2024 compared with target ROCE, 25% performance of TSR compared with the Panel, 25% growth in ENGIE's net recurring income Group share compared with the Panel, 20% non-financial conditions relating to CSR (greenhouse gas emissions from power generation (10%)), increase in renewable energy capacity (5%) and increase in the proportion of women in management (5%). This condition applies to all shares awarded to the Group's executives and does not affect the first tranche of 150 shares awarded to the other beneficiaries.*
(13) *50% based on 2023 ENGIE Global Markets profit before tax and 50% based on 2024 ENGIE Global Markets profit before tax.*
(14) *15/03/2027 for senior executives outside France.*
(15) *15/03/2026 for senior executives in France.*
(16) *15/03/2027 for senior executives in France.*
(17) *With the exception of beneficiaries awarded Performance Shares in the context of innovation programs and similar, a quadruple condition applies for all beneficiaries: 30% ROCE 2025 compared with target ROCE, 25% performance of TSR compared with the Panel, 25% growth in ENGIE's net recurring income Group share compared with the Panel, 20% non-financial conditions relating to CSR (greenhouse gas emissions from power generation (10%)), increase in renewable energy capacity (5%) and increase in the proportion of women in management (5%). This condition applies to all shares awarded to the Group's executives and does not affect the first tranche of 500 shares awarded to the other beneficiaries.*
(18) *50% based on 2024 ENGIE Global Markets profit before tax and 50% based on 2025 ENGIE Global Markets profit before tax.*

4.4.7.4 Summary of Bonus and Performance Shares held by executive corporate officers at December 31, 2022

None

4.4.8 PERFORMANCE SHARES GRANTED DURING FISCAL YEAR 2022 BY ENGIE AND BY ALL COMPANIES INCLUDED IN THE ENGIE PERFORMANCE SHARE SCOPE TO THE TEN NON-CORPORATE OFFICER EMPLOYEES OF THE ISSUER AND ITS COMPANIES WHO RECEIVED THE GREATEST NUMBER OF PERFORMANCE SHARES

Total number of shares awarded	Share price[1] *(in euros)*	Issuer	Plan
530,000	10.24	ENGIE	12/08/2022

(1) Weighted average price (according to the method used for the consolidated financial statements).

4.4.9 SUMMARY OF TRANSACTIONS DISCLOSED BY EXECUTIVE MANAGEMENT AND CORPORATE OFFICERS IN FISCAL 2022

	Date of transaction	Type of transaction	Financial instrument	Quantity	Unit price (in euros)	Transaction price(in euros)
Pierre-François Riolacci	03/10/2022	Acquisition	Equity investments	15,000	11.1584	167,376
	12/22/2022	Subscriptions	FCPE units[4]	4,795.6274	10.5200[5]	50,450[5]
Cécile Prévieu	03/15/2022	Acquisition	Equity investments	10,001 [2]	[3]	[3]
	12/22/2022	Subscription	FCPE units[4]	1,943.9164	10.5200[5]	20,450[5]
Paulo Almirante	03/15/2022	Acquisition	Equity investments	35,700[1]	[3]	[3]
	03/15/2022	Acquisition	Equity investments	40,002[2]	[3]	[3]
Yves Le Gélard	03/15/2022	Acquisition	Equity investments	33,335[2]	[3]	[3]
Catherine MacGregor	08/02/2022	Acquisition	Equity investments	25,000	12.6049	315,122.50
Jean-Sébastien Blanc	12/22/2022	Subscription	FCPE units[4]	4,795.6274	10.5200[5]	50,450[5]
Frank Demaille	12/22/2022	Subscription	FCPE units[4]	1,943.9164	10.5200[5]	20,450[5]
Claire Waysand	12/22/2022	Subscription	FCPE units[4]	4,795.6274	10.5200[5]	50,450[5]
Biljana Kaitovic	12/22/2022	Subscription	FCPE units[4]	4,795.6274	10.5200[5]	50,450[5]
Sébastien Arbola	12/22/2022	Subscription	FCPE units[4]	1,848.8594	10.5200[5]	19,450[5]

(1) Vesting of Performance Shares allocated for 2017.
(2) Vesting of Performance Shares allocated for 2018.
(3) As soon as the Performance Shares are vested, their gross value is correlated to the price of the ENGIE share. It should be noted that, as of March 15, 2022, the ENGIE share price was €11.33.
(4) Acquisition of shares as part of the "Link 2022" employee shareholding plan
(5) FCPE units invested in ENGIE shares The undiscounted reference price of ENGIE shares stood at €13.14. For investment formulas with a five-year lock-in period, the price after a 20% discount was €10.52 per share. The investment amount mentioned includes, where applicable, the contribution paid by the company

4.5 ADDITIONAL INFORMATION CONCERNING CORPORATE GOVERNANCE

To prevent conflicts of interest within French public limited companies, the French Commercial Code provides for an authorization and control procedure for agreements between the Company and its corporate officers or its key shareholders.

Likewise for agreements entered into with other companies with which it has corporate officers in common.

This authorization and control procedure for related-party agreements is organized in five phases:

- information supplied to the Board of Directors;
- prior authorization of the signing, amendment, renewal or cancellation of a related-party agreement by the Board of Directors;
- information supplied to the Statutory Auditors on related-party agreements authorized over the fiscal year and on those that are already authorized and are ongoing;
- special report of the Statutory Auditors;
- consultation of the Ordinary Shareholders' Meeting. After reviewing the Statutory Auditors' special report, the Shareholders' Meeting decides whether or not to approve the agreements.

Without officially being subject to this procedure, agreements that have already been authorized and which are ongoing, are reviewed by the Board on an annual basis.

Their existence and consequences are noted in the report presented by the Statutory Auditors to the Shareholders' Meeting.

4.5.1 AGREEMENTS RELATING TO CURRENT OPERATIONS CONCLUDED UNDER NORMAL CONDITIONS

In accordance with the legislative provisions and on the recommendation of the Audit Committee, the Board of Directors adopted a procedure on December 17, 2019 to assess whether the agreements relating to current operations, concluded under normal conditions by the company, actually fulfill these conditions (https://www.engie.com/en/by-laws-ENGIE).

A committee within ENGIE's Corporate Secretariat informed about all draft agreements likely to be classified as a regulated or current agreement is tasked with analyzing the characteristics of this agreement and both submitting it to the authorization and control procedure provided for in the related-party agreements, and classifying it as an agreement concerning current operations concluded under normal conditions.

This procedure also provides for follow-up in the form of an annual update on its implementation to the Audit Committee and the Board of Directors. In accordance with the regulations, it should also be noted that persons directly or indirectly involved in one of the above agreements do not take part either in discussions or in voting on its assessment and its adoption.

4.5.2 REGULATED AGREEMENTS AND RELATED PARTY AGREEMENTS

The special report of the Statutory Auditors on related party agreements referred to in Article L.225-38 et seq. of the French Commercial Code for fiscal year 2022 is provided in Section 4.7 of this chapter.

Details of transactions with related parties as specified by the regulations adopted under EC regulation 1606/2002, are provided in Note 20 to the Consolidated Financial Statements (Section 6.2.2).

4.5.3 SERVICE CONTRACTS BINDING MEMBERS OF CORPORATE GOVERNANCE BODIES

To ENGIE's knowledge, there is no service contract binding members of the Company's management bodies or any of its subsidiaries that provides for benefits to be granted under such a contract.

4.5.4 AUTHORIZATIONS RELATING TO SHARE CAPITAL AND SHARE EQUIVALENT AND THEIR UTILIZATION

The Company's shareholders delegated the following powers and authorizations in relation to financial matters to the Board of Directors:

Authorizations granted by the Ordinary and Extraordinary Shareholders' Meeting of April 21, 2022

Resolution	Nature of authorization or delegation of authority	Validity and expiration	Maximum nominal amount per authorization	Amounts utilized	Remaining balance
5th	Authorization to trade in the Company's shares	**18 months until October 20, 2023** Terminates the delegation granted by the Combined Shareholders' Meeting of May 20, 2021 (5th resolution)	Maximum purchase price: **€30** Maximum ownership: **10%** of the share capital Aggregate amount of purchases: €**7.3** billion ***May not be used during a public tender offer for the shares of the Company***	0.60% of share capital at 12/31/2022	Remaining 9.40% of share capital
16th	Issue of shares and / or marketable securities with PSR[1] *(to be used outside public tender offer periods only)*	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14, 2020 (19th resolution)	€**225** million for shares[2][3] and €**5** billion for marketable securities representing debt	None	Full amount of the authorization

Resolution	Nature of authorization or delegation of authority	Validity and expiration	Maximum nominal amount per authorization	Amounts utilized	Remaining balance
17th	Issue of shares and / or marketable securities without PSR(1) *(to be used outside public tender offer periods only)*	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14, 2020 (20th resolution)	**€225** million for shares(2)(3) and **€5** billion for marketable securities representing debt	None	Full amount of the authorization
18th	Issue of shares and / or marketable securities without PSR(1) in the context of an offer governed by Article L. 411-2-1 of the French Monetary and Financial Code *(to be used outside public tender offer periods only)*	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14, 2020 (21st resolution)	**€225** million for shares(2)(3) and **€5** billion for marketable securities representing debt	None	Full amount of the authorization
19th	Increase in the amount of capital increases (greenshoe option) carried out pursuant to the 19th, 20th and 21st resolutions *(to be used outside public tender offer periods only)*	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14, 2020 (22nd resolution)	Up to **15%** of the initial issue(2)(3)	None	Full amount of the authorization
20th	Issue of ordinary shares and / or various securities in consideration for contributions of securities made to the Company, up to a limit of 10% of the share capital *(to be used outside public tender offer periods only)*	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14, 2020 (23rd resolution)	**€225** million for shares(2)(3) and **€5** billion for marketable securities representing debt	None	Full amount of the authorization
22nd	Emissions of shares via the capitalization of additional paid-in capital, retained earnings, profit or any other amounts *(to be used outside public tender offer periods only)*	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14, 2020 (25th resolution)	Total amount of the sums that may be incorporated (excluding ceiling)	None	Full amount of the authorization
23rd	Authorization to reduce the share capital by canceling treasury shares	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 14 202 (26th resolution)	10% of the share capital per 24 month period	Reduction through the cancellation of 3,081,774 treasury shares under the December 22, 2022 Link 2022 transaction *i.e. 0.03% of the share capital*	9.97% of the share capital
24th	Capital increase reserved for employees who are members of employee saving plans of the ENGIE group	**26 months until June 20, 2024** Terminates the delegation granted by the Combined Shareholders' Meeting of May 20, 2021 (16th resolution)	**2%** of the share capital as of the date of implementation of the delegation. **Amount common with the 25th resolution of the Combined Shareholders' Meeting of 04/21/2022**(2)(3)	Capital increase of 2,310,951 shares under the December 22, 2022 Link 2022 transaction *i.e. 0.1% of the share capital*	1.87% of the share capital(4)

Resolution	Nature of authorization or delegation of authority	Validity and expiration	Maximum nominal amount per authorization	Amounts utilized	Remaining balance
25th	Capital increase reserved for all entities formed as part of the implementation of the international employee shareholding plan offered by the ENGIE group	**18 months until October 20, 2023** Terminates the delegation granted by the Combined Shareholders' Meeting of May 20, 2021 (17th resolution)	**0.5%** of the share capital as of the date of implementation of the delegation, **which will be counted against the 2% ceiling under the 24th resolution of the Shareholders' Meeting of 04/21/2022**(2)(3)	Capital increase of 770,823 shares under the December 22, 2022 Link 2022 transaction *i.e. 0.03% of the share capital used*	1.87% of the share capital(4)
26th	Authorization to be given to the Board of Directors for the purpose of awarding bonus shares (i) to employees and / or corporate officers of ENGIE Group companies (with the exception of corporate officers of ENGIE SA) and (ii) to employees participating in a group international employee shareholding plan of the ENGIE group (World Plans)	**38 months until June 20, 2025** Terminates, up to the unused portion, the delegation granted by the Combined Shareholders' Meeting of May 20, 2021 (18th resolution)	**0.75%** of the share capital, (with an annual cap of 0.25% of the share capital), **ceiling common to the 26th and 27th resolutions of the Combined Shareholders' Meeting of** 04/21/2022(5)	*Dated December 22, 2022* Award of 247,163 bonus shares as a contribution to the international classic formula for the Link 2022 transaction *i.e a total award of 0.01% of capital as at December 31, 2022*	0.52% of share capital(6)
27th	Authorization for the purpose of awarding bonus shares to certain employees and corporate officers of ENGIE Group companies, (including executive corporate officers of ENGIE) *(Discretionary Plans)*	**38 months until June 20, 2025** Terminates, up to the unused portion, the delegation granted by the Combined Shareholders' Meeting of May 20, 2021 (19th resolution)	**0.75%** of the share capital, (with an annual cap of 0.25% of the share capital), **ceiling common to the 26th and 27th resolutions of the Combined Shareholders' Meeting of 04/21/2022**(5)	For 2022 • *Dated April 21, 2022* Allocation of 120,000 Performance Shares to the Chief Executive Officer. • *Dated December 08, 2022* Award of 4,739,350 of Performance Shares *i.e. 0.20% of the share capital as at December 21,2022* For 2023 • *Dated February 20, 2023* Award of 448,027 Performance Shares *i.e. a total award of 0.22% of capital as at February 20, 2023*	0.52% of share capital(6)

(1) DPS: preferential subscription rights.

(2) Amounts common to issues of marketable securities decided under the 16th, 17th, 18th, 19th, 20th, 24th and 25th resolutions of the Combined Shareholders' Meeting of April 21, 2022.

(3) Common ceiling set by the 21st resolution of the Combined Shareholders' Meeting of April 21, 2022, under the 16th, 17th, 18th, 19th, 20th, 24th and 25th resolutions of the same Meeting: €265 million.

(4) Amount common not utilized for authorizations decided under the 24th and 25th resolutions of the Combined Shareholders' Meeting of April 21, 2022.

(5) This is a common ceiling set by the Combined Shareholders' Meeting of April 21, 2022 for the awards approved under the 26th and 27th resolutions.

(6) Unused common amounts for authorizations decided under the 26th and 27th resolutions of the Combined Shareholders' Meeting of April 21, 2022.

4

4.5.5 PROVISIONS IN THE BYLAWS ON THE PARTICIPATION OF SHAREHOLDERS AT SHAREHOLDERS' MEETINGS

Notice to attend meetings (Articles 20, 21 and 22 of the bylaws)

Combined Shareholders' Meetings and, where applicable, Special Shareholders' Meetings, are called, meet and deliberate in accordance with the conditions provided for by law. The party issuing the notice convening the meeting also draws up the meeting agenda. However, one or more shareholders may, in accordance with the conditions provided for by law, request that draft resolutions be entered on the agenda.

The meeting may take place at the Company's head office or at any other location stated in the notice.

Meetings are chaired by the Chairman of the Board of Directors or, in his absence, by the Vice-Chairman of the Board of Directors, a Deputy Chief Executive Officer if he or she is also Director, or, in the absence of a Deputy Chief Executive Officer, by a Director specially authorized by the Board for this purpose. Otherwise, the meeting elects its own Chairman.

The two members of the General Shareholders' Meeting present who accept the duties thereof and who hold the greatest number of votes act as vote tellers. The officers of the meeting appoint the secretary, who may be chosen from outside the shareholders.

An attendance sheet is kept in accordance with the conditions provided for by law. Minutes of meetings are drawn up and copies thereof are issued and certified in accordance with the conditions provided for by law.

Attendance at meetings (Article 20 of the bylaws)

All shareholders have the right to attend the meetings provided their shares are paid in full.

The right to attend meetings or to be represented therein is subject to the registration of the securities in the shareholder's name by midnight (CET) of the second business day prior to the meeting, either in the registered securities' accounts held by the Company or in bearer securities' accounts held by the authorized intermediary.

The Board of Directors may, if it deems necessary, send to the shareholders individualized admission cards in each shareholder's name and require them to be presented in order to gain access to the Shareholders' Meeting.

If the Board of Directors so decides at the time the Meeting is called, shareholders may participate in the meeting by videoconference or by any telecommunication or remote transmission means, including via the Internet, that permits their identification in accordance with the terms and conditions set under current regulations. Where applicable, this decision shall be announced in the notice convening the meeting published in the Bulletin des Annonces Légales Obligatoires (Bulletin of Mandatory Legal Announcements or BALO).

Voting rights (Articles 10, 11, 12 and 20 of the bylaws)

Unless otherwise provided for by law, each shareholder has as many voting rights and may cast as many votes at meetings as he or she holds shares, which are fully paid up. Effective April 2, 2016, in accordance with Article L.22-10-46 of the French Commercial Code, all registered and fully paid-up shares registered in the name of the same beneficiary for at least two years are automatically entitled to a double voting right (see Section 5.1.1.3 "Voting rights").

The shares are indivisible with regard to the Company. Where the shares are subject to a right of usufruct, voting rights attached to shares belong to the beneficial owner of the shares in the case of Ordinary Shareholders' Meetings, and to the bare owner in the case of Extraordinary Shareholders' Meetings.

Any time it is necessary to own several shares in order to exercise any right whatsoever, the owners of isolated shares or an insufficient number of shares may exercise such a right provided that they combine or, as the case may be, buy or sell the necessary shares or rights.

Any shareholder may cast a vote by proxy in accordance with the terms and conditions provided for by the law and regulations in all meetings. The owners of securities mentioned in the seventh paragraph of Article L.228-1 of the French Commercial Code may be represented, in accordance with the conditions provided for by law, by a registered intermediary. Any shareholder may cast a vote by proxy in accordance with the terms and conditions provided for by the law and regulations. The shareholders may, in accordance with the terms and conditions provided for by the law and regulations, send their postal proxy form either as a printed form or, further to a decision of the Board of Directors published in the notice of meeting and the notice to attend the meeting, by electronic transmission.

Dividends (Article 26.2 of the bylaws)

Any shareholder who can, at the end of a fiscal year, provide proof of registration for at least two years and continuation thereof on the dividend payment date for the fiscal year in question, shall receive a 10% increase in the dividend for the shares so registered, over the dividend paid on other shares. This increase will be capped at 0.5% of the share capital for a single shareholder.

Golden share (Article 6 of the bylaws)

In accordance with the French Energy Code and Decree No. 2015-1823 of December 30, 2015, the share capital includes a golden share resulting from the conversion of one ordinary share, which is held by the French State and is aimed at protecting France's critical interests in the energy sector and ensuring the continuity and safeguarding of energy supplies (see Section 5.4.4 "Golden share").

Changes in rights attached to shares

Except where otherwise specified by law, the rights attached to the Company's shares may be modified only by the Extraordinary Shareholders' Meeting, subject to the special terms relating to the French State's golden share under Article 6 of the bylaws (see also Section 5.4.4 "Golden share").

In accordance with the provisions of the applicable law and regulations, which define the rights attached to ENGIE shares, any amendment of the bylaws must be approved by a two-thirds majority at the Extraordinary Shareholders' Meeting. All increases in the commitments of the shareholders must be unanimously approved by all shareholders.

4.5.6 INFORMATION ON ELEMENTS THAT COULD HAVE AN IMPACT ON TAKEOVER BIDS OR PUBLIC EXCHANGE OFFERS

Pursuant to Article L.22-10-11 of the French Commercial Code, the elements that could have an impact in the event of a public tender offer or exchange offer are specified in Section 3.4.5 "Employees Savings and Shareholding," 4.1 "Governing bodies," 4.1.2 "Functioning of the Board of Directors and its Committees," 4.4 "Compensation and benefits paid to members of the administration and management," 4.5.4 "Authorizations relating to share capital and share equivalents and their utilization," 4.5.5 "Provisions in the bylaws on the participation of shareholders at Shareholders' Meetings," 5.4.2 "Breakdown of share capital," 5.4.3 "Statutory disclosure thresholds," 5.4.4 "Golden share" and 7.1 "General information concerning ENGIE and its bylaws."

4.5.7 STATUTORY AUDITORS

Deloitte & Associés

Company represented by Patrick Suissa and Nadia Laadouli.

6, place de la Pyramide, 92908 Paris-La Défense Cedex, France

Deloitte & Associés has been a Statutory Auditor for the Company since July 16, 2008. Its term of office was renewed at the Ordinary and Extraordinary Shareholders' Meeting of May 14, 2020 for a period of six years and will expire at the close of the 2026 Ordinary Shareholders' Meeting held to approve the financial statements for the fiscal year ending December 31, 2025.

Ernst & Young et Autres

Company represented by Charles-Emmanuel Chosson and Guillaume Rouger.

1/2, place des Saisons, 92400 Courbevoie – Paris-La Défense 1, France

Ernst & Young et Autres has been a Statutory Auditor for the Company since May 19, 2008. Its term of office was renewed at the Ordinary and Extraordinary Shareholders' Meeting of May 14, 2020 for a period of six years and will expire at the close of the 2026 Ordinary Shareholders' Meeting held to approve the financial statements for the fiscal year ending December 31, 2025.

Previously, Ernst & Young Audit was an auditor between 1995 and 2007.

4.6 CORPORATE GOVERNANCE CODE

ENGIE maintains its commitment to implementing corporate governance guidelines and for this purpose refers to the Afep-Medef Corporate Governance Code for listed companies (amended in December 2022), with the exception of the following:

AFEP-MEDEF Code recommendations	Explanation
18.1 Composition With regard the Appointments Committee, the committee must not include any executive corporate officers and must be composed on majority of independent Directors. It is recommended that the Chairman of the committee is independent and that an employee Director is a member.	Each Board committee includes either an employee Director, or a Director representing employee shareholders. In line with the appointment of new employee Directors, and the suitability of the profiles with Committee membership, ENGIE has decided to appoint a director representing employee shareholders as a member of the ACGC.

4.7 STATUTORY AUDITORS' REPORT ON RELATED PARTY AGREEMENTS

Shareholders' Meeting held to approve the financial statements for the year ended December 31, 2022

This is a translation into English of a report issued in French and it is provided solely for the convenience of English-speaking users.

This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the ENGIE Shareholders' Meeting,

In our capacity as statutory auditors of your Company, we hereby present to you our report on related party agreements.

We are required to inform you, on the basis of the information provided to us, of the terms and conditions of those agreements indicated to us, or that we may have identified in the performance of our engagement, as well as the reasons justifying why they benefit the Company. We are not required to give our opinion as to whether they are beneficial or appropriate or to ascertain the existence of other agreements. It is your responsibility, in accordance with Article R. 225-31 of the French Commercial Code *(Code de commerce)*, to assess the relevance of these agreements prior to their approval.

We are also required, where applicable, to inform you in accordance with Article R. 225-31 of the French Commercial Code *(Code de commerce)* of the continuation of the implementation, during the year ended December 31, 2022, of the agreements previously approved by the Annual General Meeting.

We performed those procedures which we deemed necessary in compliance with professional guidance issued by the French Institute of Statutory Auditors *(Compagnie nationale des commissaires aux comptes)* relating to this type of engagement. These procedures consisted in verifying the consistency of the information provided to us with the relevant source documents.

A. Agreements submitted for approval to the Annual General Meeting

Agreements authorized during the year ended December 31, 2022

We hereby inform you that we have not been notified of any agreements authorized during the year ended December 31, 2022 to be submitted to the Annual General Meeting for approval in accordance with Article L. 225-38 of the French Commercial Code *(Code de commerce)*.

B. Agreements previously approved by the Annual General Meeting

Agreements approved in prior years whose implementation continued during the year ended December 31, 2022

In accordance with Article R.225-30 of the French Commercial Code *(Code de commerce)*, we have been notified that the implementation of the following agreements, which were approved by the Annual General Meeting in prior years, continued during the year ended December 31, 2022.

With M. Clamadieu, Chairman of the Board of Directors of your Company

a) Nature, purpose and terms: Benefit plan for Jean-Pierre Clamadieu

Your Board of Directors, at its meeting of June 19, 2018, resolved to grant M. Clamadieu a benefit plan equivalent to the policy for all ENGIE executives in France, through a group insurance policy taken out by your Company. This policy provides life insurance and disability insurance.

b) Nature, purpose and terms: Healthcare plan for Jean-Pierre Clamadieu

Your Board of Directors, at its meeting of December 11, 2018, approved a health insurance policy equivalent to the policy for all ENGIE executives in France, granted through a group insurance policy taken out by your Company. This policy covers the standard coverage items for reimbursement of medical costs for the insured and his beneficiaries as of March 1, 2019.

Paris-La Défense, March 7 2023
The Statutory Auditors
French original signed by

ERNST & YOUNG et Autres		**Deloitte & Associés**	
Charles-Emmanuel CHOSSON	Guillaume ROUGER	Patrick E. SUISSA	Nadia LAADOULI

5

INFORMATION ON THE SHARE CAPITAL AND SHAREHOLDING

5.1 INFORMATION ON CAPITAL

5.1.1 SHARE CAPITAL AND VOTING RIGHTS

5.1.1.1 Share capital

ENGIE shares are listed on Compartment A of Euronext Paris and Euronext Brussels under ISIN Code FR0010208488 and ticker symbol ENGI. ENGIE shares are included in the CAC 40 index, the main index published by Euronext Paris, and are eligible for the Deferred Settlement Service (SRD). ENGIE is also listed on the following indexes: STOXX Europe 600, Euro STOXX, STOXX Europe 600 Utilities, MSCI Euro, SBF 120, MSCI Pan-Euro, Euro STOXX Utilities.

As of December 31, 2022, ENGIE's share capital stood at €2,435,285,011, divided into 2,435,285,011 fully paid-up shares with a par value of €1 each.

5.1.1.2 Pledges, guarantees and collateral

Pledges of assets

The percentage of shares pledged is not significant.

Other pledges

In millions of euros	Total Value	2023	2024	2025	2026	2027	2026 to 2029	> 2029	Account Total	Corresponding %
Intangible assets	94	93	-	-	-	-	1	-	7,364	1.3%
Property, plant and equipment	1,120	110	3	1	1	1	1	1,001	55,488	2.0%
Equity investments	3,132	343	251	-	-	741	29	1,768	10,776	29.1%
Bank accounts	694	545	110	19	8	2	4	7	15,570	4.5%
Other assets	401	0	374	0	0	8	-	18	71,847	0.6%
TOTAL	**5,439**	**1,091**	**737**	**20**	**9**	**753**	**35**	**2,794**	**161,045**	**3.4%**

Note: the total amount of the pledge relating to equity instruments may relate to consolidated equity instruments with zero value in the consolidated balance sheet (elimination of these equity instruments upon consolidation).

5.1.1.3 Voting rights

Each shareholder has as many voting rights and may cast as many votes at meetings as he or she holds shares which are fully paid up.

However, in accordance with Articles L.22-10-46 and L. 225-123 of the French Commercial Code, all registered and fully paid-up shares registered in the name of the same beneficiary for at least two years are automatically entitled to a double voting right.

On December 31, 2022, the Company had 2,435,285,011 shares corresponding to 3,222,418,447 theoretical voting rights.

Pursuant to Article L.111-68 of the French Energy Code as modified by law n°2019-486 of May 22, 2019, the French government is required to hold at least one share of the Company.

In addition, pursuant to the French Energy Code and Decree 2007-1790 of December 20, 2007, ENGIE's share capital includes a golden share (for details, see Section 5.4.4 "Golden share").

5.1.2 POTENTIAL CAPITAL AND SHARE EQUIVALENTS

As of December 31, 2022, there were no share equivalents conferring direct or indirect access to ENGIE's share capital.

5.1.3 FIVE-YEAR SUMMARY OF CHANGES IN THE SHARE CAPITAL

Date	Event	Nominal (in euros)	Premium *(in euros)*	Share capital *(in euros)*	Number of shares	Par value per share *(in euros)*
08/02/2018	Increase of the share capital resulting from the subscription of 4,813,039 shares under the capital increase reserved for participants in an employee savings plan offered by the Group (Link 2018)	4,813,039	47,745,346.88	2,440,098,050	2,440,098,050	1.00
08/02/2018	Increase of the share capital resulting from the subscription of 1,223,127 shares under the capital increase reserved for participants in an employee shareholding plan offered by the Group (Link 2018)	1,223,127	12,133,419.84	2,441,321,177	2,441,321,177	1.00
08/02/2018	Reduction of the share capital resulting from the cancellation of 6,036,166 treasury shares	6,036,166	-	2,435,285,011	2,435,285,011	1.00
12/22/2022	Increase of the share capital resulting from the subscription of 2,310,951 shares under the capital increase reserved for participants in an employee savings plan offered by the Group (Link 2022)	2,310,951	22,000,254	2,437,595,962	2,437,595,962	1.00
12/22/2022	Increase of the share capital resulting from the subscription of 770,823 shares under the capital increase reserved for Link International Employees (Link 2022)	770,823	7,338,235	2,438,366,785	2,438,366,785	1.00
12/22/2022	Reduction of the share capital resulting from the cancellation of 3,081,774 treasury shares	3,081,774	-	2,435,285,011	2,435,285,011	1.00

5.1.4 STOCK REPURCHASE

5.1.4.1 Treasury stock

The 5th resolution of the Ordinary and Extraordinary Shareholders' Meeting of April 21, 2022 authorized the Company to trade in its own shares in order to manage its shareholders' equity according to the applicable laws and regulations.

Terms:

- maximum unit purchase price: €30 (excluding transaction costs);
- maximum number of shares that may be purchased for the duration of the program: 10% of the share capital;
- maximum total amount of acquisitions, net of fees: €7.3 billion.

A one-year liquidity agreement, renewable by tacit agreement, of an initial value of €55 million was signed on May 2, 2006, on the Euronext Paris market with Rothschild & Cie Banque. This agreement was amended on several occasions, with the most recent amendment signed on January 24, 2019, in order to comply with the AMF's decision of July 2, 2018, setting the maximum amount of the contract at €50 million as of January 1, 2019.

The main purpose of this agreement is to reduce the volatility of the ENGIE share and therefore the risk perceived by investors. This agreement complies with the Code of Conduct drawn up by the Association Française des Entreprises d'Investissement (French Association of Investment Companies). This agreement continued to apply in 2022 and 2023.

Between January 1 and December 31, 2022, the Company purchased 14,713,176 shares, for a total value of €180.2 million (or €12.25 per share) under the liquidity agreement. Over the same period, and also under this liquidity agreement, ENGIE disposed of 14,713,176 shares for a total price of €180.4 million (or €12.26 per share).

Moreover, between January 1 and December 31, 2022, ENGIE purchased 19,054,771 shares for a total value of €244.7 million (or €12.84 per share) to hedge the employee shareholding plan.

Between January 1 and February 28, 2023, ENGIE purchased 4,400,369 shares for a total value of €59.1 million (or €13.44 per share) under the liquidity agreement. Over the same period, and also under this agreement, ENGIE disposed of 4,210,369 shares for a total price of €56.5 million (or €13.43 per share).

Furthermore, between January 1 and February 28, 2023, ENGIE did not purchase any shares to cover its commitments to the beneficiaries of stock options, bonus shares, and company savings plans.

On February 28, 2023, the Company held 0.60% of its share capital, or 14,720,427 shares to cover its commitments to the beneficiaries of stock options, bonus shares, and company savings plans.

5.1.4.2 Description of the treasury stock repurchase program to be submitted to the Shareholders' Meeting of April 26, 2023

Pursuant to Articles 241-1 to 241-5 of the AMF's General Regulations, the purpose of the following program description is to set out the objectives, terms and conditions of ENGIE's stock repurchase program, as it will be submitted to the Shareholders' Meeting to be held on April 26, 2023.

A. Main features of the program

The main features and goals of the program are summarized below:

- relevant securities: shares listed on Eurolist – SRD at the Paris Stock Exchange or on Eurolist at the Brussels Stock Exchange;
- maximum capital repurchase percentage authorized by the Shareholders' Meeting: 10% of the share capital;
- maximum unit purchase price: €30 (excluding transaction costs).

B. Objectives of the stock repurchase program

The objectives of the ENGIE stock repurchase program are summarized below:

- to ensure liquidity in the Company's shares by an investment service provider under liquidity agreements;
- to provide for the subsequent cancellation of the repurchased shares under a decision or authorization to reduce the share capital by the Extraordinary Shareholders' Meeting;
- to allocate or assign such shares to employees or former employees and corporate officers or former corporate officers of the Group;
- to set up stock purchase plans, bonus share plans on existing shares, or employee shareholding plans under company savings plans;
- to allocate or dispose of such shares to any entity as part of implementing an international employee shareholding plan;
- to provide for the holding and subsequent delivery of shares (as exchange, payment or otherwise) in the context of external growth transactions within the limit of 5% of the share capital;
- to provide for the hedging of securities conferring entitlement to Company share allocations, through issuance of shares, upon the exercise of the rights attached to securities conferring entitlement to Company shares by conversion, redemption, exchange, upon presentation of a warrant or other means of allocation;
- to implement any other market practices previously or subsequently authorized or to be authorized by market authorities.

C. Terms and conditions

Maximum percentage of share capital that may be repurchased and maximum amount payable by ENGIE

The maximum number of shares that may be purchased by ENGIE may not exceed 10% of the share capital of the Company on the date of the Shareholders' Meeting, i.e. 243.5 million shares, for a maximum theoretical amount of €7.3 billion. ENGIE reserves the right to hold the maximum amount authorized.

On December 31, 2022, ENGIE directly held 14,530,427 shares, i.e. 0.60% of the share capital.

Therefore, based on the estimated share capital on the date of the Meeting, the stock repurchase program could cover 229 million shares, representing 9.40% of the share capital, for a maximum amount of €6.6 billion.

Maximum term of the stock repurchase program

The stock repurchase program will be in effect for a period of 18 months beginning on the date of this Shareholders' Meeting, i.e. until October 25, 2024.

5.1.4.3 Book value and nominal value

The book value and the nominal value of the shares held by ENGIE itself or in its name, or by its subsidiaries, are indicated respectively in Note 7 of Section 6.4.2 "Notes to parent company financial statements," and in Section 5.1.3. "Five-year summary of changes in the share capital."

5.2 NON-EQUITY SECURITIES

5.2.1 DEEPLY SUBORDINATED SECURITIES

On October 24, 2022, ENGIE bought back outstanding deeply-subordinated perpetual notes on the markets for a nominal amount of €344.2 million (€244.2 million for the FR0013310505 bond, €55.1 million for the FR0011942283 bond and €44.9 million for the FR00140046Y4 bond). Moreover, on December 5, 2022, ENGIE fully repaid the balance of the FR0013310505 bond, i.e. €30 million.

Following these transactions, as of December 31, 2022, the outstanding amount of deeply subordinated perpetual bonds was reduced by 10% and was as follows:

Curren cy	Coupon rate	Issue date	Maturity	First call date (1)	Outstanding amount *(in millions of euros)*	Exchange	ISIN Code
EUR	3.875%	06/02/2014	Perpetual	06/02/2024	337.8	Paris	FR0011942283
EUR	3.250%	01/28/2019	Perpetual	11/28/2024	1,000.0	Paris	FR0013398229
EUR	1.625%	07/08/2019	Perpetual	04/08/2025	500.0	Dublin	FR0013431244
EUR	1.500%	11/30/2020	Perpetual	05/30/2028	850.00	Paris	FR0014000RR2
EUR	1.875%	07/02/2021	Perpetual	01/02/2031	705.1	Paris	FR00140046Y4

(1) Nearest date for early redemption in accordance with applicable conditions

All of the above securities are rated Baa3 by Moody's, BBB- by Standard and Poor's, and BBB by Fitch.

In accordance with the provisions of IAS 32, and given their characteristics, these instruments are recognized in equity in the Group's consolidated financial statements (see Note 16.2.1 of Section 6.2.2 "Notes to consolidated financial statements").

5.2.2 EURO MEDIUM TERM NOTE (EMTN) PROGRAM

ENGIE has a €25 billion Euro Medium Term Note (EMTN) program. This program, valid for 12 months, is renewed every year. The latest version of the program's base prospectus is available on ENGIE's website (www.engie.com/en/finance/fixed-incomes/debt-programmes-mtn-cp).

5.2.3 BOND ISSUES

The main features of the bond issues outstanding as of December 31, 2022, issued by the Company, are detailed in Note 11 of Section 6.4.2 "Notes to the parent company financial statements."

5.3 GREEN BONDS

5.3.1 DESCRIPTION OF THE BOND

To support its development plan in line with its purpose ("Raison d'être"), particularly in renewable energies and energy efficiency, ENGIE issued a new Green Bond in 2022 for total amount of €650 million.

A tender offer targeting, among others, several Green Bonds, was also launched in October 2022. Following this transaction, a total of €564.8 million in securities on four Green Bonds were bought back and canceled: €222 million on the senior bond maturing on March 27, 2024, €53.7 million on the senior bond maturing on May 19, 2026, €44.9 million on the hybrid with the first call date on January 2, 2031 and €244.2 million on the hybrid with the first call date on January 16, 2023. This last instrument was fully redeemed following the exercise of an early redemption option that became exercisable following the above mentioned repurchase.

Following these transactions, as of December 31, 2022, the outstanding amount of green bonds issued by the Group was the following:

Type	Currency	Coupon rate	Issue date	Maturity	Outstanding amount *(in millions of euros)*	Exchange	ISIN Code	Details on allocations
Senior	EUR	2.375%	05/19/2014	05/19/2026	1,246.3	Paris	FR0011911247	Registration documents 2014, 2015 and 2016
Senior	EUR	0.875%	03/27/2017	03/27/2024	478	Paris	FR0013245859	Registration Document 2017
	EUR	1.500%	03/27/2017	03/27/2028	800	Paris	FR0013245867	
Senior	EUR	0.375%	09/28/2017	02/28/2023	500	Paris	FR0013284247	Registration Document 2018
	EUR	1.375%	09/28/2017	02/28/2029	750	Paris	FR0013284254	
Hybrid	EUR	3.250%	01/28/2019	Perpetual (11/28/2024 (1))	1,000	Paris	FR0013398229	2019 Universal Registration Document
Senior	EUR	0.375%	06/21/2019	06/21/2027	750	Paris	FR0013428489	2020 Universal Registration Document
	EUR	1.375%	06/21/2019	06/21/2039	750	Paris	FR0013428513	

Type	Currency	Coupon rate	Issue date	Maturity	Outstanding amount *(in millions of euros)*	Exchange	ISIN Code	Details on allocations
Senior	EUR	0.500%	10/24/2019	10/24/2030	900	Paris	FR0013455813	2020 Universal Registration Document
Senior	EUR	1.750%	03/27/2020	03/27/2028	750	Paris	FR0013504677	2020 and 2021 Universal Registration Documents
	EUR	2.125%	03/27/2020	03/30/2032	750	Paris	FR0013504693	
Hybrid	EUR	1.500%	11/30/2020	Perpetual (05/30/2028 [(1)])	850	Paris	FR0014000RR2	2020 and 2021 Universal Registration Documents
Hybrid	EUR	1.875%	07/02/2021	Perpetual (01/02/2031 [(1)])	705.1	Paris	FR00140046Y4	2021 Universal Registration Document
Senior	EUR	0.375%	10/26/2021	10/26/2029	750	Paris	FR0014005ZP8	2021 Universal Registration Document and 2022 Universal Registration Document
	EUR	1.000%	10/26/2021	10/26/2036	750	Paris	FR0014005ZQ6	
Senior	EUR	3.500%	09/27/2022	09/27/2029	650	Paris	FR001400A1H6	2022 Universal Registration Document

(1) First Call Date, or nearest date for early redemption in accordance with applicable conditions

The total amount of Green Bonds issued by ENGIE reached €14.9 billion at the end of 2022, of which €12.38 billion is still outstanding. By issuing three new Green Bonds in January 2023, totaling €2.75 billion, ENGIE has maintained its leadership and its commitment to playing a leading role in energy transition while supporting the development of green finance.

The Green Bonds meet the terms of a referential framework (the "Green Bond Framework" updated and renamed "Green Financing Framework" in March 2020) that ENGIE has defined for its green bond issues. The Green Bond Framework and Green Financing Framework are available on ENGIE's website at the following address: www.engie.com/en/finance/credit/green-finance.

It is to be recalled that the principles of the Green Financing Framework are as follows:

- the funds raised are allocated to projects supporting the transition to a low-carbon economy directly linked to ENGIE's strategy ("Green Eligible Projects"). The Green Eligible Projects must fall in a pre-defined category of projects and meet certain technical criteria. The eligibility criteria were determined by ENGIE and approved by VE (previously Vigeo Eiris). The Second Party Opinion delivered by VE is available on ENGIE's website at the following address: www.engie.com/sites/default/files/assets/documents/2020-03/20200315_Vigeo%20Eiris_SPO_Engie%20_vFinal.pdf;
- until the funds raised are entirely allocated to Green Eligible Projects (or after, in case of a substantial change in allocations), ENGIE is committed to providing information in its Universal Registration Document on the fund allocations made during the period concerned;
- the funds can be allocated to Green Eligible Projects carried out after the issue of the green financing instrument, or can be used to refinance past investments in existing Green Eligible Projects, without any time limit for Capex-type of investments, or not more than 36 months prior to the issue of the green financing instrument for Opex-type of expenses. The amounts allocated are calculated after deduction of any external funding already dedicated to these projects;
- the funds raised can be allocated for refinancing other green financing instruments previously issued by ENGIE. For each issue, ENGIE undertakes to allocate at least 25% of the funds raised to Green Eligible Projects to which no funds have ever been allocated before;
- as of December 31 of each year, the Group must hold cash (and cash equivalents) of an amount at least equal to the funds raised by the Green Bond, less amounts allocated to fund Green Eligible Projects as of that date.

ENGIE aims to have fully allocated each Green Bond within two years of the date of issue (three years if the bond has a maturity of 10 years or more). If, for a given fiscal year, several Green Bonds must be allocated, the allocation in that year will be based, as far as possible, on the following principles:

- first by issuance date order, i.e. priority will be given to bonds issued first; and
- then in order of duration, with a shorter tranche having priority over a longer one.

In the specific case of refinancing of Green Eligible Projects, these projects will be allocated to all the Green Bonds in proportion to the amounts remaining to be allocated to them. It is however specified that in the event of repurchase of Green Bonds with a new concomitant green issue, the Green Eligible Projects will be reallocated as a priority to this new issue.

In line with its commitments, ENGIE requested one of its Statutory Auditors (Deloitte & Associés), to provide a statement certifying compliance of the selected projects with the eligibility criteria and the amounts allocated to those projects (see Section 5.3.4).

ENGIE refers to the four principles established by the International Capital Market Association ("Green Bond Principles"), which are:

- the use of the proceeds;
- existing processes to evaluate and select Green Eligible Projects;
- the management of the proceeds; and
- reporting.

5.3.2 PROJECTS AND ELIGIBILITY CRITERIA

The categories of projects covered by the Green Financing Framework of 2020 are described below:

- renewable energy production (hydropower, geothermal energy, wind, solar, bioenergy, low-carbon hydrogen, marine energy);
- energy storage (electricity storage by pumped storage and batteries);
- electricity transmission and distribution infrastructure;
- energy efficiency (including district heating network and cooling);
- carbon capture and storage;
- green buildings;
- clean transportation (including electric charging stations);
- sustainable management of living natural resources and land use.

The technical eligibility criteria for the different categories of the Green Financing Framework are available on ENGIE's website at the following address: www.engie.com/sites/default/files/assets/documents/2020-03/engie-green-bond-framework-March%202020-version%20finale%202_0.pdf.

The Green Bond Committee was established in 2017. This Committee meets regularly to review market developments and Green Eligible Projects and to approve the allocation of the Green Bonds. It is jointly led by the CSR Department and the Finance Department and brings together the procurement Department, the Global Care Department and the main GBU concerned.

5.3.3 GREEN ELIGIBLE PROJECTS

During 2022, the Group proceeded to the allocation of €2.11 billion of Green Eligible Projects, as per the below repartition:

In millions of euros **Allocated Green Bond**	Nominal amount	Amount (re)allocated in 2021 (1)	Amount allocated in 2022: Reallocations after repurchase/ redemption	Amount allocated in 2022: New allocations	Allocation balance
Senior 8 y October 2021 (ISIN FR0014005ZP8)	750	43.5	107.4	599.1	-
Senior 15 y October 2021 (ISIN FR0014005ZQ6)	750	-	113.9	636.1	-
Senior 7 years September 2022 (ISIN FR001400A1H6)	650	-	98.7	551.3	-
TOTAL	**2,150**	**43.5**	**320.1**	**1,786.5**	**-**

(1) See 2021 Universal Registration Document.

These allocations mean that all the funds raised by the three Green Bonds have been fully allocated.

5.3.3.1 Reallocation after repurchase/redemption

In the context of the above-mentioned tender offer and early redemption, green bonds issued in October 2021 (ISIN: FR0014005ZP8 and FR0014005ZQ6) and September 2022 (ISIN: FR001400A1H6) benefited from the partial reallocation of the Green Eligible Projects allocated to the repurchased/redeemed bonds.

The breakdown of the reallocations on these three tranches is proportional to the respective balance of funds to be allocated.

The total to be reallocated stood at €320 million, and breaks down as follows:

- €30.6 million initially allocated to the senior bond maturing on May 19, 2026 (ISIN FR0011911247);
- €84.8 million initially allocated to the senior bond maturing on March 27, 2024 (ISIN FR0013245859);
- €161.8 million initially allocated to the hybrid with the first call date on January 16, 2023 (ISIN FR0013310505);
- €42.9 million initially allocated to the hybrid with the first call date on January 2, 2031 (ISIN FR00140046Y4).

The amounts reallocated take into account (1) the percentage of securities repurchased / redeemed compared with the instrument's nominal amount, and (2) the initial amount allocated to Green Eligible Projects that fulfill the Green Financing Framework criteria.

The production of wind renewable energy represents the main category of reallocated projects (€145.9 million), followed by solar (€86.3 million), energy efficiency (€44.1 million), and bioenergy (€28.9 million). With the remainder spread across renewable hydropower, geothermal energy production and energy storage projects.

The reallocated amounts relate to Green Eligible Projects located in the following geographic areas: Europe 35%, North America 26%, South America 26%, the Middle East 7%, Africa 5% and Asia / Oceania 1%.

5.3.3.2 New allocations

The main Green Eligible Projects financed by the Green Bond issues of October 2021 (ISIN: FR0014005ZP8 and FR0014005ZQ6) and of September 2022 (ISIN: FR001400A1H6) that meet the aforementioned conditions of the Green Financing Framework are listed in the table below:

In millions of euros	Projects	Country	Senior €750M 8 yrs Oct. 21	Senior €750M 15 yrs Oct. 21	Senior €650M 7 yrs Sept. 22
Renewable energy					
Bioenergy			**71.2**	**75.6**	**65.5**
Europe	ENGIE BIOZ, Biogaz injection, synthetic methane projects	France			
Solar Power			**123.8**	**131.4**	**113.9**
North America	Hawtree, Solidago, Sun Valley, Sunnybrook	United States			
Asia and Oceania	Wallis photovoltaic power plants	France (overseas territories)			
Europe	Jan / Joseph	Germany			
	Eolia	Spain			
	Spark	Poland			
Wind Power			**301.0**	**319.5**	**276.9**
North America	Century Oak, Iron Star, Limestone, Priddy	United States			
Asia and Oceania	SECI 3&4	India			
	Negandi	France (Nouvelle-Calédonie)			
Europe	Karstadt repowering	Germany			
	LVDP repowering	Belgium			
	Eolia, Ocean Winds	Spain			
Low carbon H2			**5.0**	**5.3**	**4.6**
Africa	Rhyno	South Africa			
Asia and Oceania	Yuri	Australia			
Europe	Hypster	France			
Geothermal energy			**3.7**	**3.9**	**3.4**
Europe	Champs sur Marnes, Georueil, Boucles Thalassothermiques Larvotto	France			
Energy Storage					
Battery			**48.9**	**51.9**	**45.0**
North America	Monarch	United States			
Asia and Oceania	Hazelwood Battery Energy Storage System	Australia			
Pumped Storage			**15.7**	**16.7**	**14.5**
Europe	Coo	Belgium			
	First Hydro	United Kingdom			
Energy Efficiency					
Energy Efficiency			**29.9**	**31.8**	**27.5**
Europe	District heating and cooling networks	France			
Middle East	Industrial Waste Heat Recovery project	United Arab Emirates			
TOTAL			**599.1**	**636.0**	**551.3**

The projects and the related Capex set out in the above table for a total amounting to €1.79 billion are allocated globally to the Green Bonds of October 2021 (8 and 15 year tranches) and September 2022 (7 year tranche), in proportions to complete and finalize the allocation of these Green Bonds.

As a reminder, the Green Bonds issued in 2014, 2017, 2018, 2019, 2020 as well as the 2021 hybrid have been fully allocated. Details of the Eligible Projects and the corresponding allocations were published in the 2014 to 2021 Registration and Universal registration documents.

The funds allocated to Green Eligible Projects throughout 2022 relate solely to investments made in the same year.

The retained allocations contribute to the funding or acquisition of Green Eligible Projects in:

- renewable energy (wind power, solar power, bioenergy, low-carbon hydrogen, and / or geothermal energy);
- energy storage;
- energy efficiency.

1) Renewable Energy

Energy transition and the development of renewable energy on a global scale are a strategic priority for ENGIE. In 2021, the Group set itself the target of stepping up its investments in renewables to enable it to install 3 GW of additional capacity in 2021, then 4 GW per year on average from 2022 to 2025, and finally 6 GW per year from 2026. The Group's installed electricity production capacity, taken at 100% for its renewables production businesses, reached 38 GW in 2022, accounting for 38% of its installed capacity. ENGIE is targeting a 58% share of renewable energy installed capacity in its electricity production portfolio taken at 100% by 2030. In 2022, ENGIE continued to expand its portfolio of renewable assets, mainly in wind and solar by developing new projects in particular in North America, South America and Europe. At the beginning of May 2022, the Group and its partner Crédit Agricole Assurances finalized the acquisition of Eolia, a major Renewables player in Spain, adding 0.9 GW of assets in operation and 1.2 GW of additional projects to ENGIE's platform in Iberia. Investments in offshore wind continued via the joint venture Ocean Winds. In France, the Group, through ENGIE BIOZ, and its infrastructure business lines, also pursued its efforts to develop the sector of methanization of waste into renewable gases and to recover them through injection into the natural gas transmission and distribution network. These low-carbon resources play an essential role in energy transition and the fight against climate change.

During 2022, a total of €1.50 billion had been allocated to Green Eligible Projects in the field of renewable energy in respect of the Green Bonds of October 2021 (8 year and 15 year tranches) and September 2022 (7 year tranche). When fully operational, these projects should contribute to avoiding greenhouse gas emissions by a minimum of 3.35 million metric tons of CO_2 eq. per year.

The methodology for calculating avoided emissions is based on a comparison of the Life-Cycle Analysis (LCA) emission value of the energy generation technology being used by the project and the one of the energy mix of the country in question. ENGIE estimates the contribution to avoided emissions resulting from Green Bond-funded projects by multiplying the difference between the two LCA values stated with the plant's capacity and the technology's average load factor. The contribution to avoided emissions are calculated for one year of operation of the projects, considered in a full operational mode and taken at 100% regardless of the Group's ownership rate of these projects.

Per-country reference data for the average operating rates of technologies used and the average CO_2 emissions rates per kWh of the generation mix were drawn from data from Enerdata. The technologies' LCA data is derived from work performed by the Intergovernmental Panel on Climate Change (IPCC). For the projects involving bioenergy and injection in the network, the quantities of biogas produced and injected into the network are regarded as avoiding an equivalent quantity of energy of the country mix.

2) Energy storage

Energy storage solutions play a major role in the energy transition and are an essential link in the electricity networks. By storing energy produced at times when wind and solar sources are at their most productive, and / or when demand is lowest, they respond to the need to balance intermittent supplies of renewable energy, which make up an increasing proportion of energy production.

ENGIE invests in pumped storage and battery storage for this reason.

The Green Eligible Projects in question include:

- the Dinorwig (1,728 MW) and Ffestiniog (360 MW) pumped storage facilities in the United Kingdom, owned and operated by First Hydro, which is 75% owned by ENGIE;
- the Coo pumped storage plant (Belgium) where investments are being made to expand its storage facilities in order to increase its installed power by 79 MW;
- the power battery storage project at Hazelwood in Australia;
- the acquisition of a pipeline of development projects in solar energy and paired and stand-alone battery storage from Belltown Power U.S. in the United States (Monarch transaction). The transaction covers 33 projects, including 0.7 GW of paired storage and 2.6 GW of stand-alone battery storage.

During 2022, a total amount of €192.6 million was allocated to Green Eligible Projects developed in the field of energy storage in respect of the Green Bonds of October 2021 (8 year and 15 year tranches) and September 2022 (7 year tranche). When fully operational, these projects should contribute to reducing greenhouse gas emissions by a minimum of 0.016 million metric tons of CO_2 eq. per year.

The methodology for calculating the contribution to avoided emissions for storage projects is based on a comparison of the emission factors of the energy production technique implemented by the project and the reference scenario. In the case of pumped storage, the gas turbine is taken as the reference. ENGIE estimates the contribution to avoided emissions of Green Bond-funded projects by multiplying the difference between the above emission factors by the average production of the facilities. The contribution to avoided emissions are calculated for one year of operation of the projects, considered in a full operational mode and taken at 100% regardless of the Group's ownership rate of these projects.

3) Energy Efficiency

Another strategic focus of the Group is the development of high efficiency energy networks supporting the transition to a low-carbon economy. In 2022, ENGIE continued to develop urban heating or cooling networks in Europe and mainly in France.

During 2022, a total of €89.3 million had been allocated to Green Eligible Projects in the field of energy efficiency in respect of the Green Bonds of October 2021 (8 year and 15 year tranches) and September 2022 (7 year tranche). When fully operational, these projects should contribute to reducing greenhouse gas emissions by a minimum of 0.45 million metric tons of CO_2 eq. per year.

The calculation of avoided emissions is done by comparing the level of emissions of ENGIE projects with a reference scenario, in this case the use of an individual gas heating system when it comes to a district heating network, or individual air conditioning in the case of a district cooling network. The contributions to reduced emissions are calculated for one year of operation of the projects, considered in a fully operational mode and taken at 100% regardless of the Group's ownership rate of these projects.

5.3.3.3 Statement of finalized overall allocations

5.3.3.3.1 Green bonds of October 2021 (tranche 8 years ISIN FR0014005ZP8)

The main geographic areas concerned by the projects allocated to the October 2021 tranche 8 year Green Bonds are Europe, North America, South America, and Asia and Oceania, which respectively accounted for 62.8%, 25.6%, 4.5% and 4.6% of the amounts invested. With regard to the technologies used, the main sub-categories of project allocated are wind (48.3%), solar (21.6%), bioenergy (11.4%), energy storage (10.2%) and energy efficiency (6.5%).

Geographic areas	Allocated funds *(in %)*
Europe	62.8%
North America	25.6%
Asia and Oceania	4.6%
South America	4.5%
Middle East	1.5%
Africa	1.0%

Technology	Allocated funds *(in %)*
Wind Power	48.3%
Solar Power	21.6%
Bioenergy	11.4%
Energy Storage	10.2%
Energy Efficiency	6.5%
Other (geothermal energy, low-carbon H_2, hydropower)	2.0%

5.3.3.3.2 Green bond of October 2021 (tranche 15 years ISIN FR0014005ZQ6)

The main geographic areas concerned by the projects allocated to the October 2021 tranche 15 year Green Bonds are Europe, North America, and Asia and Oceania, which respectively accounted for 63.3%, 25.4% and 4.8% of the amounts invested. With regard to the technologies used, the main sub-categories of project allocated are wind (49.5%), solar (21.6%), bioenergy (11.5%), energy storage (9.5%) and energy efficiency (6.3%).

Geographic areas	Allocated funds *(in %)*
Europe	63.3%
North America	25.4%
Asia and Oceania	4.8%
South America	3.9%
Middle East	1.6%
Africa	1.0%

Technology	Allocated funds *(in %)*
Wind Power	49.5%
Solar Power	21.6%
Bioenergy	11.5%
Energy Storage	9.5%
Energy Efficiency	6.3%
Other (geothermal energy, low-carbon H_2, hydropower)	1.6%

5.3.3.3.3 Green bond of September 2022 (ISIN FR001400A1H6)

The main geographic areas concerned by the projects allocated to the September 2022 Green Bond are Europe, North America, and Asia and Oceania, which respectively accounted for 63.3%, 25.4% and 4.8% of the amounts invested. With regard to the technologies used, the main sub-categories of project allocated are wind (49.5%), solar (21.6%), bioenergy (11.5%), energy storage (9.5%) and energy efficiency (6.3%).

Geographic areas	Allocated funds *(in %)*
Europe	63.3%
North America,	25.4%
Asia and Oceania	4.8%
South America	3.9%
Middle East	1.6%
Africa	1.0%

Technology	Allocated funds *(in %)*
Wind Power	49.5%
Solar Power	21.6%
Bioenergy	11.5%
Energy Storage	9.5%
Energy Efficiency	6.3%
Other (geothermal energy, low-carbon H_2, hydropower)	1.6%

In line with the Group's commitments, a more detailed description of the impacts in terms of avoided emissions and the related methodology is available on the Sustainable Development page of the Group's website (www.engie.com/en/csr/green-bonds).

5.3.4 ATTESTATION FROM ONE OF THE STATUTORY AUDITORS OF ENGIE SA ON THE INFORMATION RELATED TO THE ALLOCATION, AS OF DECEMBER 31, 2022, OF FUNDS RAISED THROUGH THE GREEN BONDS ISSUED ON OCTOBER 26, 2021, AND SEPTEMBER 27, 2022

This is a free translation into English of the attestation from one of the Statutory Auditors of ENGIE SA on the information related to the allocation, as of December 31, 2022, of funds raised through the Green Bonds issued on October 26, 2021, and September 27, 2022 originally issued in French and is provided solely for the convenience of English speaking readers. This attestation should be read in conjunction and construed in accordance with French law and professional auditing standards applicable in France.

To the Chief Executive Officer of ENGIE,

In our capacity as statutory auditor of ENGIE SA (the "**Company**") and in accordance with your request, we have prepared this attestation on the information related to the allocation, as of December 31, 2022, of funds raised through the Green Bonds issued on October 26, 2021, for a total amount of €500 million in two tranches, and on September 27, 2022, for a total amount of €650 million (the "**Issues**"), contained in the attached document and in the "**Green Bonds**" section of the 2022 Universal Registration Document, and prepared pursuant to the use of proceeds referred to in the final terms of the Issues, signed on October 22, 2021 (FR0014005ZP8 and FR0014005ZQ6) and September 23, 2022 (FR001400A1H6) (the "**Final Terms**").

This document, prepared for the purposes of informing the Green Bond debt securities holders, presents in reference to the Green Financing Framework an allocation, during the 2022 financial year, of the funds raised from the Issues on October 26, 2021, and September 27, 2022:

- eligible projects (the "**Green Eligible Projects**"), over the period from January 1, 2022 to December 31, 2022, in the amount of €1,786.5 million, and
- refinancing of eligible projects, previously financed by the Green Bonds issued in May 2014 (FR0011911247), March 2017 (FR0013245859), January 2018 (FR0013310505) and July 2021 (FR00140046Y4) (the "**Refinanced Eligible Projects**") in the amount of €320.1 million,

it being recalled that in respect of the issue of October 26, 2021 - 8-year tranche (FR0014005ZP8), an amount of €43.5 million had been allocated in 2021 to eligible projects.

This resulted in the allocation as of December 31, 2022 of all the funds raised from the Issues on October 26, 2021, and September 27, 2022.

This information was prepared under your responsibility, based on the accounting records used for the preparation of the consolidated financial statements for the years ended December 31, 2021 and 2022.

Our role is to report on:

- the compliance, in all material respects, of the Green Eligible Projects and the Refinanced Eligible Projects referred to in the attached document, with the Green Financing Framework referred to in the attached document and in the appendices to the Final Terms (the "**Green Eligibility Criteria**");
- the consistency of the amounts raised from the Issues allocated to Green Eligible Projects, as of December 31, 2022, with data underlying the accounting records; and
- the consistency of the amounts raised from the Issues allocated to Refinanced Eligible Projects, as of December 31, 2022, with the previously financed amounts.

However, we have no responsibility for:

- challenging the Green Eligibility Criteria and, in particular, we give no interpretation on the Final Terms;
- forming an opinion on the use of the funds allocated to Green Eligible Projects and Refinanced Eligible Projects after such funds have been allocated.

In the context of our role as Statutory Auditor, we have audited, jointly with the other Statutory Auditor, the consolidated financial statements of the Company for the years ended December 31, 2021 and 2022. Our audits were conducted in accordance with professional standards applicable in France, and were planned and performed for the purpose of forming an opinion on the consolidated financial statements taken as a whole and not on any individual components of the accounts used to determine the information. Accordingly, our audit tests and samples were not carried out with this objective and we do not express any opinion on any component of the accounts taken individually. The consolidated financial statements for the year ended December 31, 2022, which have not yet been approved by the Shareholders' Meeting, have been certified and our report thereon is dated March 6, 2023.

Our work for the purposes of this attestation, which constitutes neither an audit nor a review, was performed in accordance with professional guidelines of the French National Institute of Statutory Auditors (*Compagnie Nationale des Commissaires aux Comptes*) applicable to this engagement. Using sampling techniques or other methods of selection, this work consisted in:

- understanding the procedures implemented by the Company for producing the information contained in the attached document in accordance with the provisions of the Green Financing Framework;
- verifying the compliance, in all material respects, of the Green Eligible Projects and the Refinanced Eligible Projects referred to in the attached document with the Green Eligibility Criteria;
- verifying the consistency of the amounts raised from the Issues allocated to Green Eligible Projects with data underlying the accounting records;
- verifying the consistency of the amounts raised from the Issues allocated to Refinanced Eligible Projects with the previously financed amounts; and
- verifying the mathematical accuracy of the information produced.

On the basis of our work, we have no matters to report on:

- the compliance, in all material respects, of the Green Eligible Projects and the Refinanced Eligible Projects with the Green Eligibility Criteria;
- the consistency of the amounts raised from the Issues allocated to Green Eligible Projects as of December 31, 2022 with data underlying the accounting records;
- the consistency of the amounts raised from the Issues allocated to Refinanced Eligible Projects, as of December 31, 2022, with the previously financed amounts.

This attestation has been prepared solely for your attention within the context described above and may not be used, distributed or referred to for any other purpose.

In our capacity as statutory auditor of ENGIE SA, our responsibility towards the Company and its shareholders is defined by French law and we do not accept any extension of our responsibility beyond that provided for by French law. We are not liable and accept no responsibility towards any third party.

This attestation is governed by French law. The French courts have exclusive jurisdiction in relation to any dispute, claim or difference which may arise out of or in connection with our engagement letter or this attestation, or any related issues. Each party irrevocably waives any right it may have to object to an action being brought in any of those Courts, to claim that the action has been brought in an inconvenient forum or to claim that those Courts do not have jurisdiction

Paris-La Defense, March 7, 2023

One of the Statutory Auditors

Deloitte & Associés

Nadia Laadouli

Patrick E. Suissa

5.4 SHAREHOLDING

5.4.1 STOCK EXCHANGE QUOTATION

Trading volumes and high and low prices of ENGIE shares in Paris

2022	High (1) *(in euros)*	Low (1) *(in euros)*	Trading volume (2)
January	13.89	13.13	6,038,824
February	14.57	13.72	7,411,715
March	12.39	10.10	10,568,784
April	12.16	11.16	7,249,733
May	12.86	10.99	6,636,201
June	12.60	10.97	5,952,329
July	12.06	10.38	6,212,588
August	12.98	11.87	4,740,849
September	13.26	11.82	5,746,344
October	13.15	11.54	4,764,264
November	14.52	13.30	6,262,766
December	14.49	13.39	4,980,855

(1) Rate obtained from daily closing prices.
(2) Daily average (source: Bloomberg).

Subsequent to the deregistration of ENGIE with the U.S. Securities & Exchange Commission on October 30, 2009, ENGIE maintains an unlisted Level 1 American Depositary Receipt (ADR) program on a U.S. stock exchange. These ADRs are traded on the Nasdaq over-the-counter market.

5.4.2 BREAKDOWN OF SHARE CAPITAL

5.4.2.1 Change in the breakdown of share capital and voting rights

As of December 31, 2022, the Company held 2,435,285,011 shares, including 14,530,427 in treasury stock. The Company's share capital did not change during the 2022 fiscal year, it being noted that the capital increase of 3,081,774 shares which took place on December 22, 2022 as part of the Link 2022 shareholder transaction, was immediately followed by the cancellation of 3,081,774 treasury shares.

Major changes in ENGIE shareholdings during the past three fiscal years

	12/31/2022				12/31/2021		12/31/2020	
	Number of shares	% of share capital	% of theoretical voting rights (1)	% of exercisable voting rights	% of share capital	% of theoretical voting rights (1)	% of share capital	% of theoretical voting rights (1)
Public	1,414,239,687	58.07	49.82	50.04	58.50	50.28	63.35	54.71
French State	575,693,307	23.64	33.56	33.71	23.64	33.20	23.64	33.19
The Capital Group Companies	117,733,578	4.83	3.79	3.81	5.02 (2)	4.00 (2)	-	-
CDC group	112,201,739 (3)	4.61	4.24	4.26	4.59 (4)	4.28 (4)	4.59 (4)	3.83 (4)
BlackRock	106,479,528	4.37	3.32	3.34	4.47 (5)	3.46 (5)	4.46 (6)	3.43 (6)
Employee shareholding	94,406,745	3.88	4.82	4.84	3.16	4.31	3.20	4.26
Treasury stock	14,530,427	0.60	0.45	0.00	0.62	0.47	0.76	0.58
Management	NS	NS	NS	NS	NS	NS	NS	NS
TOTAL	**2,435,285,011**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

(1) Pursuant to Article 223-11 of the AMF General Regulations, the number of theoretical voting rights is calculated on the basis of all shares to which voting rights are attached, including shares held by the Group, from which voting rights have been removed.
(2) Information not available on December 31, 2021 (data on November 16, 2021 from the disclosures threshold notification).
(3) Shares allocated in the following way: CDC (directly) holds 88,303,888 shares (3.63% of the share capital and 3.50% of theoretical voting rights) and CNP Assurances hold 23,897,851 shares (0.98% of the share capital and 0.74% of theoretical voting rights).
(4) CDC Group (Caisse des Dépôts et Consignations + CNP Assurances).
(5) Information not available on December 31, 2021 (data on December 30, 2021 from the disclosures threshold notification).
(6) Information not available on December 31, 2020 (data on December 07, 2020 from the disclosures threshold notification).

Pursuant to the provisions of Article L. 233-13 of the French Commercial Code, it is stipulated that, to ENGIE's knowledge, only the French State held a stake of more than 5% of the share capital or voting rights at the end of fiscal year 2022.

On December 31, 2022, individual shareholders held 214.1 million shares, or nearly 8.8% of the Company's share capital.

5.4.2.2 Breakdown of shares held directly and indirectly by employees

On December 31, 2022, employees held 94.4 million ENGIE shares, i.e. 3.88% of the share capital and 4.82% of theoretical voting rights within the meaning of paragraph 1 of Article L.225-102 of the French Commercial Code, broken down as follows:

Link France mutual fund (FCPE)	52.2 million
Link International mutual fund (FCPE)	17.5 million
Direct shareholding formulas	24.7 million
TOTAL SHARES HELD BY EMPLOYEES	**94.4 MILLION**

5.4.3 DISCLOSURE THRESHOLDS

Date threshold crossed	Movement	% of share capital	% of theoretical voting rights	Reporting party
01/06/2022	Decrease	23.64%	33.20%	French State
03/07/2022	Decrease	4.83%	3.82%	The Capital Group Companies
04/03/2022	Increase	23.64%	33.71%	French State
04/14/2022	Increase	5.13%	3.92%	BlackRock
04/19/2022	Decrease	4.93%	3.77%	BlackRock

The State exceeded the legal threshold of one-third of voting rights on January 6, 2022 following the increase in the total number of voting rights. The State exceeded the legal threshold of one-third of voting rights on April 3, 2022. This threshold was crossed due to the allocation of 23,888,889 double voting rights.

On March 7, 2022, The Capital Group Companies fell below the legal threshold of a twentieth (5%) of ENGIE's share capital. This threshold was crossed due to shares being disposed of by ENGIE on the market.

Following the acquisition of ENGIE shares on the market and the change in the number of shares held as collateral, BlackRock exceeded the legal threshold of one-twentieth of voting rights on April 14, 2022 and dropped below the threshold on April 19, 2022.

To the Company's knowledge, as of the date of this Universal Registration Document, only the French State holds share capital and / or voting rights in ENGIE that exceed one of the legal thresholds.

5.4.4 GOLDEN SHARE

Pursuant to Article L.111-68 of the French Energy Code as modified by law n°2019-486 of May 22, 2019, the French government is required to hold at least one share of the Company.

Pursuant to Article L.111-69 of the French Energy Code and to French Decree 2007-1790 dated December 20, 2007, ENGIE's share capital includes a "golden share" resulting from the conversion of one common share owned by the French State to preserve the essential interests of France in the energy sector relating to the continuity and security of the energy supply. The golden share is granted to the French government indefinitely and entitles it to veto decisions made by ENGIE or its French subsidiaries, which directly or indirectly seek to sell in any form whatsoever, transfer operations, assign as collateral or guarantee, or change the intended use of certain assets covered by the French Energy Code, if it considers they could harm French energy interests, particularly as regards the continuity and safeguarding of supplies.

Under the terms of Article D.111-21 of the French Energy Code, the assets covered by the French State's right of veto pursuant to the golden share are:

- natural gas transmission pipelines located in France;
- assets related to the distribution of natural gas in France;
- underground natural gas storage located in France;
- liquefied natural gas facilities located in France.

Pursuant to those same provisions, all decisions of this nature must be reported to the French Minister of the Economy.

The decisions mentioned above are deemed to be authorized if the Minister of the Economy does not veto them within one month of the date of their disclosure, as recorded by a receipt issued by the administration. This period may be extended for a period of 15 days by order of the Minister of the Economy. Before the expiration of the aforementioned one-month period, the Minister of the Economy may waive its right to veto. If there is a veto, the Minister of the Economy will communicate the reasons of his or her decision to the Company in question. The decision of the Minister of the Economy may be appealed.

Pursuant to Article 2 of Decree No. 2019-1071 of October 22, 2019 and Article 3 of Decree No. 93-1296 of December 13, 1993, any transaction executed in violation of these rules is automatically null and void.

As of the date of this Universal Registration Document, to ENGIE's knowledge, there is no agreement relating to an operation on any entity that is a member of the ENGIE Group, concerned by these provisions, or any agreement which, if implemented, could lead to a change in its control.

5.4.5 DIVIDEND DISTRIBUTION POLICY

ENGIE seeks to pursue a dynamic and attractive dividend distribution policy. The Board of Directors has thus reaffirmed the Group's dividend policy, which aims to distribute 65 to 75% of net recurring income, Group share, including a dividend floor of €0.65 per share for the period from 2023 to 2025.

For 2022, the Board of Directors has therefore proposed to distribute 65% of the net recurring income, Group share, i.e. a dividend of €1.40 per share. This proposal will be submitted to the shareholders for approval at the Shareholders' Meeting on April 26, 2023.

Furthermore, in order to encourage and reward shareholder loyalty, the General Shareholders' Meeting of April 28, 2014 instituted a 10% dividend mark-up for shareholders who have held their shares in registered form for at least two years, this 10% being the maximum amount authorized by Article L.232-14 of the French Commercial Code, as set out in Article 26.2 of ENGIE's bylaws. This measure was applied for the first time to the dividend payment for fiscal year 2016 and will be capped at 0.5% of the share capital for a single shareholder, as stipulated in Article L.232-14 of the French Commercial Code.

The Group's outlook and guidance, presented in Section 6.1.1.1.2 "2023-2025 outlook and guidance," do not constitute under any circumstances a commitment by the Company. Future dividends will be assessed on a year-by-year basis depending on the Company's performance, financial position and any other factors considered relevant by the Board of Directors in preparing its proposals to the Shareholders' Meeting.

Dividend per share in the last five years

Fiscal year *(fully paid up shares)*	**Net dividend per share** *(in euros)*
2017	0.70
2018	1.12
2019 (1)	0
2020	0.53
2021	0.85

(1) On April 1, 2020, the Board of Directors decided not to distribute dividends for fiscal year 2019, in a spirit of responsibility and prudence in the exceptional context of the Covid-19 epidemic

After a period of five years, unclaimed dividends are automatically paid to the French Treasury.

5.4.6 SHAREHOLDERS' AGREEMENT

At the date of this document and to the best of ENGIE's knowledge, there are no shareholders' agreements nor any agreement whose implementation may lead to a change in control over the Company in place.

5.5 FINANCIAL REPORTING SCHEDULE

Publication of annual earnings 2022 and mid-term ambitions	02/21/2023
Annual Shareholders' Meeting	04/26/2023
Publication of first quarter 2023 results	05/11/2023
Publication of the 2023 half-year results	07/28/2023

6

FINANCIAL INFORMATION

6.1 REVIEW OF THE FINANCIAL POSITION

6.1.1 MANAGEMENT REPORT

6.1.1.1 ENGIE 2022 results

ENGIE FY 2022 Financial results

- Significant progress on execution of strategic plan;
- Strong financial and operational performance;
- Proposal to pay a dividend of €1.40 per share for 2022.

Business Highlights

- Leading role played by ENGIE to support security of supply in Europe;
- Continued contribution to public policy measures through Working Capital support, extraordinary taxes and dedicated customer actions;
- Major progress on simplification with €11.0 billion disposals signed or closed;
- €5.5 billion growth Capex, primarily in Renewables, Networks and Energy Solutions;
- Acceleration in Renewables with +3.9 GW of capacity added in 2022, taking total installed capacity to c. 38 GW;
- Further progress on coal exit, coal represents 2.6% of centralised generation capacity.

Financial Performance

- 2022 guidance achieved with continuing NRIgs of €5.2 billion;
- EBIT of €9.0 billion, up 43% organically, with growth across most activities. Key contribution from GEMS and Thermal in unprecedented market conditions as well as from new capacity additions for Renewables;
- Impact of windfall profit taxes of €0.9 billion in 2022, mainly in Belgium and Italy, in addition to existing Government profit sharing mechanisms in Belgium and France (nuclear and hydro) of €1.1 billion;
- Strong balance sheet and high liquidity with improvement in credit ratios;
- Improved Cash Flow From Operations [(1)], despite Working Capital headwinds due to energy prices;
- Net financial debt at €24.1 billion, down €1.3 billion;
- 2022 proposed dividend of €1.40 per share.

6.1.1.1.1 Key financial figures at December 31, 2022

In billions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis) [(1)]
Revenues	93.9	57.9	+62.2%	+60.4%
EBITDA	13.7	10.6	+29.8%	+27.0%
EBIT	9.0	6.1	+47.2%	+42.7%
Net recurring income of continuing activities, Group share	5.2	2.9	+78.4%	+76.2%
Net income, Group share	0.2	3.7	-94.1%	-
CAPEX [(1)]	7.9	6.7	+17.4%	-
Cash Flow From Operations (CFFO)	8.0	6.5	+24.0%	-
Net financial debt	24.1		-€1.3 billion *versus* Dec. 31, 2021	
Economic net debt	38.8		+€0.5 billion *versus* Dec. 31, 2021	
Net financial debt	2.8x		-0.8X *versus* Dec. 31, 2021	

(1) Net of DBSO (Develop, Build, Share & Operate) and tax equity proceeds.

(1) Cash Flow From Operations: Free Cash Flow before maintenance Capex and nuclear phase-out expenses.

6.1.1.1.2 2023-2025 outlook and guidance

The forecasts set forth below are based on data, assumptions and estimates considered to be reasonable by the Group at the date of issuance of this document.

These data and assumptions may evolve or be amended due to uncertainties related to the economic, financial, accounting, competitive, regulatory and tax environment or other factors that the Group may not be aware of at the date of this report. In addition, the fulfilment of forecasts requires the success of the Group's strategy. The Group therefore makes no commitment or warranty regarding the fulfilment of the forecasts set out in this section.

The forecasts presented below and the underlying assumptions, also been prepared in accordance with the provisions of Delegated Regulation (EU) N° 2019/980 supplementing Regulation (EU) N° 2017/1129 and the ESMA recommendations on forecasts.

The forecast presented below result from the budget and medium-term plan process as described in Note 13 of Section 6.2.2 "Notes to the consolidated financial statements"; they have been prepared on a comparable basis with historical financial information and in accordance with the accounting methods applied to the Group's consolidated financial statements, for the year ended December 31, 2022.

6.1.1.1.2.1 Assumptions

- Strategy: reinforcing the ENGIE group's ambition to be a leader in the energy and climate transition. With its refocusing and simplification now complete, ENGIE is now embarking on the second stage of its strategic plan and accelerating its growth in the energy transition. The completion of the divestment plan will allow for a significant increase in growth investments in renewable energies, both electricity and gas, and decarbonization solutions: €22 to 25 billion over the period 2023-2025, *i.e.* a 50% increase compared to 2021-2023;
- No change in accounting policies;
- No major regulatory or macro-economic change;
- Average temperature in France;
- Average hydro, wind ans solar productions;
- Average forex:
  - €/USD: 1.08 for 2023, 1.09 for 2024 and 1.10 for 2025,
  - €/BRL: 5.56 over 2023-25;
- Belgian nuclear availability: c. 90% in 2023, 92% in 2024 and 94% in 2025 – based on availabilities as published on REMIT as of 01/01/2023;
- Contingencies on Belgian operations of €0.5 billion in 2023, €0.5 billion in 2024 and €0.2 billion in 2025;
- Market commodity prices at December 30, 2022;
- Hedged positions and captured prices at December 31, 2022, Belgium and France:
  - 100% to 90 €/MWh for 2022,
  - 74% to 93 €/MWh for 2023,
  - 52% to 120 €/MWh for 2024,
  - 15% to 165 €/MWh for 2025,
  - Captured prices are shown:
    - before specific Belgian nuclear and French CNR hydro tax contributions,
    - before inframarginal rent cap in Belgium and France,
    - excluding the mark-to-market impact of the proxy hedging used for part of Belgian nuclear volumes over 2023-2025, which is volatile and historically unwinds to close to zero at delivery;
- Recurring net financial costs of €(2.2)-(2.6) billion per year over 2023-2025;
- Recurring effective tax rate: 23-26% over 2023-2025;
- Discount rate for post-employment benefit provisions: based on market conditions at December 31, 2022, as described in Note 18 of Section 6.2.2 "Notes to consolidated financial statements";
- Regulatory review on French networks in 2024-2025;
- Inframarginal rent caps based on current legal texts and additional contingencies;
- Full pass through of supply costs in French BtoC retail tariffs.

The progress on the execution of the strategic plan solidifies the foundation for ENGIE towards delivering long-term growth while achieving its purpose of carbon neutrality.

The Group anticipates delivering growth in the medium-term primarily fueled by investment in Renewables and improved results from Energy Solutions, alongside a stable contribution from Networks. GEMS is projected to further enhance the integrated business model securing energy supply, optimising and managing risks for ENGIE and third parties. Nuclear contribution, due to the ongoing phase-out capacity plan in Belgium, has been excluded from the EBIT indication.

European commodity price assumption in the guidance for residual merchant exposure: the price assumption used in the guidance for 2023-2025 provided today is based on the European forward prices as at December 31, 2022.

ENGIE outlook for 2023 to 2025:

In billions of euros	2023 Results	2024 Results	2025 Results
EBIT excluding Nuclear	6.6 – 7.6	7.2 – 8.2	7.5 – 8.5
NRIgs guidance	3.4 – 4.0	3.8 – 4.4	4.1 – 4.7

ENGIE remains committed to a "strong investment grade" rating and continues to target a leverage ratio of below or equal to 4.0x economic net debt to EBITDA.

6.1.1.1.2.2 Overview of key financial targets

The Group has set itself the goal of accelerating its growth by focusing on the second stage of its strategic plan:

Accelerating growth in Renewables

Ramp-up in Renewables underpinned by a growing and well-balanced pipeline. The Group commissioned 7 GW of renewable capacity over the last two years, leading to 38 GW total installed capacity. Despite the supply chain challenges, ENGIE continues to accelerate its average annual renewable capacity additions to 4 GW until 2025, stepping-up to 6 GW from 2026 to 2030. This will bring total the installed capacity to 50 GW by 2025 and 80 GW by 2030.

This ambition is fuelled by a growing pipeline of 80 GW at end-2022 (*vs.* 56 GW at end-2020), which enjoys a good balance across onshore wind, offshore wind and solar. More than half of this pipeline includes projects already under construction, secured or at an advanced stage of development.

The geographic priorities remain Europe, North America, and Latin America, with offshore wind across a wider geographic footprint.

In total, ENGIE will invest between €13 billion and €14 billion over 2023-2025 in Renewables in a balanced portfolio with limited exposure to merchant risk.

The alliance between the molecule and the electron at the heart of ENGIE model to ensure flexibility and security of supply

As gas infrastructure owner, operator, and supplier, ENGIE has a critical role to play in Europe. Gas infrastructure (networks, storage capacities, LNG terminals) played a major role in the energy crisis and will continue to do so in the energy transition, ensuring security of supply and overall system resilience. Gas networks are also facilitators of the development of renewable gases and thus contribute to decarbonisation.

ENGIE's gas networks business is largely regulated bringing stability and visibility. ENGIE's networks have consistently demonstrated strong operational performance and respect the highest safety standards. They generate strong cash-flow, enabling the Group to maintain safety and reliability, and finance growth Capex such renewable gases expansion.

Overall our regulated asset base (RAB), in France and international, is expected to reach €39 billion in 2025, compared to €36 billion in 2022.

A balanced portfolio is key to ensuring the energy system's flexibility and efficiency. In a context of strong growth in Renewables, ENGIE benefits from its large portfolio of flexible generation assets and energy storage, including CCGTs (51 GW) and pumped storage plants (c. 4 GW), which are absolutely key to absorbing the intermittency associated with these Renewables.

ENGIE will continue to adapt its fleet to bring more flexibility and optionality to the grid and to its own generation portfolio, make it leaner, nimbler, more efficient and less CO_2 intensive. The business model of CCGTs will increasingly be shifting to capacity remuneration mechanism and ancillary services.

The Group intends to strongly accelerate in battery storage to complement its gas-fired generation and pumped storage fleet and has an ambitious target of c. 10 GW of battery capacity by 2030, mainly in Europe and the US.

Ramping up in renewable gases

The development of renewable gases will capitalize on existing infrastructure, contributing to security of supply. The Group will leverage on its existing networks to develop renewable gases and will invest €3.5 billion in decarbonized gases by 2030.

The renewable and low-carbon gas market is set to grow rapidly in the coming decade, driven by the decarbonization commitments of governments and corporate offtakers.

ENGIE has a target of c. 10 TWh of biomethane production per year by 2030.

ENGIE will focus on ramping up in low carbon hydrogen, which is key for hard-to-abate sectors for which electricity is an unrealistic option for decarbonization.

ENGIE is in a strong position to benefit from the buoyant growth in green hydrogen by leveraging on its world-leading capabilities in renewable power generation and its expertise in managing complex industrial processes. ENGIE has also global energy management capabilities to trade hydrogen and e-molecules.

ENGIE has set an ambitious target by 2030 to:

- develop green hydrogen production capacity of 4 GW;
- have 700 km dedicated hydrogen networks and 1 TWh of storage capacity;
- operate more than 100 refuelling stations.

Total Capex for hydrogen is earmarked at c.€4 billion over 2023-2030.

Playing a major role in the decarbonization of ENGIE's customers through distributed infrastructure

Energy Solutions is ideally positioned to capture the growth of the market driven by strong demand from clients for decarbonized solutions and energy independence as well as increasingly support from public authorities.

Energy Solutions has streamlined its organization through three activities: local energy networks, on-site energy production, and energy performance services.

In the first two platforms, which benefit from long-term infrastructure-like contracts with stable and recurring revenues as well as long-term contracted cash flows, ENGIE invests in infrastructure and operates them as part as an asset-based business model. Capturing the long-term growth opportunities, using greater selectivity in targeting contracts, and with a more efficient base, EBIT annual growth from distributed energy infrastructure should be high-single digit on average over 2022-2025.

In energy management services, the EBIT margin is expected to increase more than 200bps over 2022-2025 to reach 5%.

ENGIE remains committed to adding 8 GW of distributed energy infrastructure by 2025 (vs 2020), translating into around €3 billion Capex growth over 2023-2025.

Leveraging ENGIE extensive market knowledge through GEMS

GEMS is at the heart of ENGIE's integrated business model. On the upstream side, GEMS' mandate is to add value from technical differences, complementarity, flexibility and optionality within ENGIE's and partners' portfolio of assets. On the downstream side, GEMS provides ENGIE clients with risk management services and tailor-made energy supply contracts.

GEMS EBIT is likely to be lower over 2023-2025 compared to the exceptional level of 2022, but it should remain above the historical level of 2020-2021 due mainly to commercial growth and continuing challenging energy markets, bringing optionality and volatility as well as increased customers demand for risk management.

Capital allocation and medium-term financial outlook

ENGIE targets growth Capex of €22-25 billion between 2023 and 25, an increase of 50% *versus* the previous 2021-23 plan, with 40% being already committed. These will be split 55-65% for Renewables, 10-15% for Networks, and 10-15% for Energy Solutions. Around 10% will be dedicated to ramping up in renewable gas and batteries. Capital allocation is based on a strict discipline of financial and ESG-related criteria. The contribution to 2023-25 EBIT of new capacities commissioned should amount to €1.5 billion.

Return On Average Capital Employed excluding nuclear should benefit from this rigorous process to drive value creation: Group ROACE excluding nuclear is expected to increase to between 7% and 9% in a sustainable way from 6% in 2021.

Maintenance Capex should amount to €7 to 8 billion between 2023 and 2025, of which around 50% in French regulated infrastructure activities.

Around €9 billion will go towards the funding of Belgian nuclear provisions over 2023-2025.

ENGIE will continue to drive efficiency by strong control of general and administrative costs, increasing support functions efficiency, and turning around underperforming businesses. The Group is aiming for a positive net impact on EBIT of €0.6 billion in 2023-25.

Main drivers for 2022-2025 EBIT evolution by activity

2022	Activity	Expectations for main EBIT evolution drivers vs 2022		2025
EBIT excluding Nuclear €8.0 billion	**Renewables**	Investments contribution, higher prices	+ +	EBIT excluding Nuclear indication €7.5 billion to €8.5 billion
	Networks	Inflation, temperature normalization, investments and portfolio management, regulatory reviews in France	= -	
	Energy Solutions	Investments contribution, EVBox contribution improvement and continued improvement of performance	= +	
	FlexGen (ex Thermal)	Dilution, normalization of spreads, higher fleet availability	=	
	Retail (ex Supply)	Temperature normalization, margin increase, growth in B2C services and power customer portfolio	= +	
	GEMS	Decrease of prices and volatility but still high	- - -	
	Nuclear	Higher prices, lower volumes	= +	

Convention: each "+" sign amounts to c. +€500m, each "-" sign amounts to c. -€500m, "=+" sign amounts to a variation between 0 and +€250m, "=-" sign amounts to a variation between -€250m to €0m.

6.1.1.1.3 Dividend policy reaffirmed and €1.40 per share proposal for 2022

ENGIE is focused on delivering a progressively growing and sustainable dividend for shareholders.

The Board has reaffirmed the Group's dividend policy with a payout ratio of 65-75% of net recurring income Group share, and a floor of €0.65 per share for the 2023 to 2025 period.

For 2022, the Board has proposed a payout ratio of 65%. This translates to a dividend of €1.40 per share, which will be proposed for shareholder approval at the Annual General Meeting on April 26, 2023.

6.1.1.1.4 ENGIE playing a leading role in security of supply and contributing to support energy affordability

As gas infrastructure owner, operator, and gas supplier, ENGIE has played a crucial role in Europe.

In France, ENGIE's networks activities have operated at record high utilisation rates, with LNG terminals working at nearly full capacity, two-fold increase in transit at GRTgaz including reversed flows from France to Germany, and gas storage levels filled at 82% as at December 31, 2022 compared to c. 53% at December 31, 2021.

ENGIE has contributed €1.1 billion in 2022 to existing Government profit-sharing mechanisms for Belgian Nuclear (specific tax framework) and French hydro (CNR).

ENGIE has pledged to support its French customers with €90 million in measures for vulnerable customers and a €60 million fund for industrial/tertiary customers affected by rising energy prices. ENGIE has also launched platforms for retail and SME customers to monitor and save energy.

ENGIE is contributing to public policy measures to address high energy prices. In France, ENGIE has increased working capital support for the tariff shield mechanism, now including small and medium-sized enterprises as well as customers under market prices (by linking their contracts to the regulated tariff). Most of ENGIE's B2C gas and power contracts in France benefit from protection against price increases through this tariff shield mechanism or fixed prices over the lifetime of the contract.

The Group is supporting the implementation of social tariffs in Belgium and a price cap mechanism in Romania and Chile. In addition, the Group has engaged with various local authorities to provide support through payment facilities. The overall impact of delayed payment plans worldwide is close to €1.0 billion. The Group is more focused than ever to work collaboratively with clients on energy efficiency to reduce their energy bill and achieve their decarbonisation goals.

ENGIE has also recognised the engagement of its employees around the world with an exceptional bonus of €1,500 awarded to each employee in an unprecedented energy situation to support in a high inflation environment.

6.1.1.1.5 ENGIE is contributing to public policy measures to address high energy prices

In France, ENGIE has increased working capital support for the tariff shield mechanism, now including small and medium-sized enterprises as well as customers under market prices (by linking their contracts to the regulated tariff). Most of ENGIE's B2C gas and power contracts in France benefit from protection against price increases through this tariff shield mechanism or fixed prices over the lifetime of the contract.

The Group is supporting the implementation of social tariffs in Belgium and a price cap mechanism in Romania and Chile. In addition, the Group has engaged with various local authorities to provide support through payment facilities. The overall impact of delayed payment plans worldwide is close to €1.0 billion. The Group is more focused than ever to work collaboratively with clients on energy efficiency to reduce their energy bill and achieve their decarbonisation goals.

ENGIE has also recognised the engagement of its employees around the world with an exceptional bonus of €1,500 awarded to each employee in an unprecedented energy situation to support in a high inflation environment.

6.1.1.1.6 Update on European proposals for windfall taxes

In December 2022, the Governments of Belgium and France, ENGIE's two most significant power generation countries in the EU, have passed new measures into Law to address inframarginal rent in relation to power prices.

In Belgium, an inframarginal rent cap was implemented retroactively, from August 1, 2022 to June 30, 2023, at a level depending on the power production's technology. A possible extension of this period will be evaluated next April. ENGIE's nuclear assets, owned and operated *via* its subsidiary Electrabel, fall into the scope of this measure: normative revenues exceeding €130/MWh are subject to the new levy but with a mechanism limiting potential double taxation with existing nuclear taxes.

In France, the Finance Bill for 2023 provides for a rent cap applicable over a period of eighteen months, (from July 1, 2022 until December 31, 2023). The cap ranges from €40/MWh to €175/MWh depending on the power production technology. The excess revenue is subject to a tax rate of 90%. ENGIE is mainly impacted through its drawing rights on two EDF nuclear power plants (Chooz B and Tricastin, 1.2 GW, 9 TWh of annual output at an availability rate of 85%) subject to a €90/MWh cap and its gas power plants (1.4 GW capacity) subject to a €40/MWh cap on the clean spark spread.

In Italy, the Government has already enacted an "extraordinary solidarity contribution" on energy companies calculated on a variation of VAT-taxable basis between October 2021 and April 2022 *versus* the same duration a year earlier, at a rate of 25%. ENGIE has been significantly and adversely impacted due to an ill-designed methodology, not representative of the excess revenues over the period.

The overall impact of extraordinary taxes in Europe is close to €0.9 billion in 2022, 85% in EBIT and 15% in corporate income tax.

6.1.1.1.7 Significant progress on the execution of strategic plan

Acceleration in Renewables, infrastructures and renewable gases

ENGIE added 3.9 GW of renewable capacity in 2022, including 1.8 GW of onshore wind, 1.2 GW of solar and 1.0 GW of offshore wind, taking total renewable installed capacity at 100% to c. 38 GW at the end of 2022. Geographically, the 3.9 GW additions include 2.6 GW in Europe (mainly in UK, Spain and France), 0.8 GW in US and 0.4 GW in Latin America. The Group is therefore on track with its target to add 4 GW on average per year of renewable capacity until 2025. This ambition is fuelled by a growing pipeline that totalled 80 GW at end of December 2022, up 14 GW compared to December 2021.

Ocean Winds, ENGIE's joint venture with EDPR dedicated to offshore wind continues to grow strongly. In December, Ocean Winds was awarded a lease area for a floating offshore wind site of 2 GW capacity in California.

In 2022, the Group continued supporting its customers in their decarbonisation efforts by signing a total amount of 2.0 GW of green Power Purchase Agreements (PPAs).

Energy Solutions has achieved major wins in District Heating and Cooling (DHC) and sustainable mobility in the 2022, including 12,000 electric vehicle charging points mainly in Belgium and Singapore. In 2022, c. 1 GW net installed capacity has been added in distributed energy infrastructures.

In Brazil, the internalization of TAG O&M activities has been successfully completed and the two power transmission lines, Gralha Azul and Novo Estado, are now close to full completion.

ENGIE continues to unlock the potential of renewable gases: 492 biomethane production units, with a yearly production capacity of up to 8.3 TWh are connected to ENGIE's networks in France. On hydrogen, the European Commission has approved up to €5 billion in public support. ENGIE has submitted five projects across Belgium, France, the Netherlands and Spain, and all of them have been selected.

Simplifying and refocusing

The disposal plan financial target of at least €11 billion by the end of 2023 has been achieved with €11.0 billion already closed or signed, with EQUANS being the main contributor.

On geographic rationalization, the Group will be operating in 31 countries, down from 70 in 2018, once closing of the signed deals is effective. ENGIE exited seven countries as part of the EQUANS disposal and targets to be in less than 30 countries by the end of 2023.

Disciplined capital allocation

In 2022, total Capex amounted to €7.9 billion. Growth Capex reached €5.5 billion, of which 58% dedicated to Renewables, 20% to Networks and 13% to Energy Solutions, thus fully aligned with ENGIE's strategic roadmap.

Performance plan delivering

In a context of rising inflation, ENGIE maintained its momentum on cost efficiency and is on track to achieve its 3-year target, with a net EBIT contribution in 2022 of €0.4 billion.

6.1.1.1.8 Update on Belgian nuclear assets

In line with the planned nuclear phase-out in Belgium, the Doel 3 reactor was shut down in September 2022 and the Tihange 2 reactor in February 2023.

In January 2023, ENGIE and the Belgian federal government set a framework for the extension of the nuclear reactors Doel 4 and Tihange 3, signing the Heads of Terms and Commencement of LTO Studies Agreement which builds on the Letter of Intent signed on July 21, 2022, with the objective to extend the operational lifetime of both reactors for ten years, for a total production capacity of 2 GW.

This agreement in principle comprises three conditions, including the establishment of a legal structure dedicated to the two extended nuclear units equally owned by the Belgian State and ENGIE, the framework for a cap on future nuclear waste management costs, and a set of guarantees to ensure the proper execution of the nuclear operator's commitments. With this agreement, both parties confirm their objective to make reasonable endeavours to restart the Doel four and Tihange three nuclear units in November 2026.

In December 2022, ENGIE was informed on the new parameters considered by the Commission for Nuclear Provisions (CPN) for the calculation of the nuclear provision for the dismantling and spent fuel management of Belgian nuclear power plants following the triennial revision. Based on these parameters, nuclear provisions have increased by €3.3 billion, of which €2.9 billion borne by Synatom, compared to ENGIE's initial proposal of an increase of €0.9 billion. ENGIE considers the increase by €2.9 billion unjustified and has submitted an adapted proposal to the CPN.

6.1.1.1.9 ESG

Key ESG targets

In 2022, greenhouse gas emissions from energy production were reduced to 60 million tons, a decrease of 44% compared to 2017, and in line with the target of 43 million tons by 2030. 2022 results were positively impacted by the weather and a lower utilization rate of our CCGTs.

ENGIE increased the share of renewables in its portfolio to 38% at the end of 2022 from 34% at the end of 2021 with the addition of 3.9 GW of renewables.

ENGIE continues to progress on coal exit with the signing in September of the disposal of Pampa Sul in Brazil and the closure of Tocopilla in Chile which comprises a total of 0.6 GW installed capacity. ENGIE is committed to exiting all coal assets in continental Europe by 2025 and globally by 2027, including coal generation for district heating and cooling networks. At the end of 2022, coal represented 2.6% of ENGIE's centralized power generation portfolio.

On gender diversity, ENGIE had 30% women in management at the end of 2022 and is implementing action plans towards its ambition of managerial parity of 40% to 60% between men and women.

6.1.1.1.10 Health & Safety

In 2022, ENGIE and its subcontractors experienced severe work-related accidents including four fatalities, notably at construction sites. A major company-wide response and comprehensive action plan are being deployed by the ENGIE leadership, to re-assess all safety standards and procedures in every activity and geography to ensure the application of the highest safety standards across the Group and its subcontractors.

6.1.1.1.11 FY 2022 financial review

6.1.1.1.11.1 Revenues

Revenue at €93.9 billion was up 62.2% on a gross basis and 60.4% on an organic basis.

Contributive revenues, after elimination of intercompany transactions

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
Renewables	6,216	3,653	+70.1%	+58.3%
Networks	6,961	6,700	3.9%	+2.9%
Energy Solutions	11,552	9,926	16.4%	+21.1%
Thermal	7,129	4,089	74.3%	+62.6%
Supply	16,810	10,396	61.7%	+61.3%
Nuclear	35	56	-37.7%	-37.7%
Others	45,163	23,046	96.0%	+92.6%
Of which GEMS	*45,137*	*22,870*	*97.4%*	*+92.7%*
TOTAL	**93,865**	**57,866**	**+62.2%**	**+60.4%**

Revenue for **Renewables** amounted to €6,216 million, up 70.1% on a gross basis and up 58.3% organically. The gross increase was due to favourable foreign exchange effects mainly from the appreciation of the Brazilian real against the euro. On an organic basis, revenue growth was mainly driven by capacity additions and higher hydro prices in France.

Revenue for **Networks** amounted to €6,961 million, up 3.9% on a gross basis and up 2.9% organically. The gross increase was due to favourable foreign exchange effects mainly in Latin America and the scope out effect related to the Turkey and Argentina disposals. French infrastructures revenue rose driven by significantly higher volumes transported, notably with exceptional West-East reverse flows, terminals as well as storage activities reflecting own account operations (in the UK) which offset lower volumes in distribution and expected tariff evolution. Outside France, revenues increased organically notably in Latin America with higher volumes in distribution. Lower revenues in Brazil reflect the decrease in construction revenues following progressive commissioning of transmission lines.

Revenue for **Energy Solutions** amounted to €11,552 million, up 16.4% on a gross basis and 21.1% organically. The gross increase was driven by favourable foreign exchange effects mainly related to US dollar and scope out effects. Organically, revenue in France increased significantly on all activities: energy performance management, local energy networks and on-site energy production. International activities increased significantly driven by commodity prices in all geographies.

Revenue for **Thermal** amounted to €7,129 million, up 74.3% on a gross basis and up 62.6% organically. The gross increase benefited from positive foreign exchange effects mainly in Chile, Peru and Pakistan. The organic performance is mainly driven with exceptional level of spreads and increased ancillaries in Europe. Americas shows a positive growth thanks to the indexation of PPA contracts in a context of rising commodity prices and inflation.

Revenue for **Supply** amounted to €16,810 million, up 61.7% on a gross basis and 61.3% organically. The gross variation was due to favourable foreign exchange effects. Organically, the increase was mainly driven by increasing commodity prices, offset by negative volume effect mainly due to warmer temperature.

Nuclear reported almost no external revenue post-elimination of intercompany operations, as its production was sold internally to other ENGIE businesses.

Revenue for **Others** amounted to €45,163 million. The increase compared to last year is mainly driven by GEMS (€+45,137 million) essentially impacted by increase in commodity prices combined with higher volumes.

6.1.1.1.11.2 EBITDA

EBITDA at €13.7 billion, was up 29.8% on a gross basis and up 27.0% on an organic basis.

Activity/geography matrix

In millions of euros	France	Rest of Europe	Latin America	USA & Canada	Middle East, Asia & Africa	Others	December 31, 2022
Renewables	535	370	1,003	313	17	(35)	2,202
Networks	3,396	96	731	(3)	-	(8)	4,212
Energy Solutions	605	240	(2)	34	70	(69)	879
Thermal	-	1,475	295	47	436	(17)	2,235
Supply	(8)	199	6	-	70	(9)	258
Nuclear	-	1,510	-	-	-	-	1,510
Others	-	(16)	1	(1)	-	2,433	2,417
Of which GEMS						*2,837*	*2,837*
TOTAL EBITDA	**4,528**	**3,875**	**2,033**	**390**	**592**	**2,295**	**13,713**

In millions of euros	France	Rest of Europe	Latin America	USA & Canada	Middle East, Asia & Africa	Others	December 31, 2021
Renewables	462	172	1,016	86	12	(47)	1,702
Networks	3,518	121	470	-	18	(7)	4,121
Energy Solutions	592	215	(3)	60	41	(119)	786
Thermal	-	743	424	43	448	(30)	1,628
Supply	356	114	-	-	48	(20)	498
Nuclear	-	1,403	-	-	-	-	1,403
Others	-	2	1	10	-	412	426
Of which GEMS						*679*	*679*
TOTAL EBITDA	**4,928**	**2,770**	**1,908**	**199**	**568**	**190**	**10,563**

6.1.1.1.11.3 EBIT

EBIT at €9.0 billion was up 47.2% on a gross basis and up 42.7% on an organic basis.

- foreign exchange: a total positive effect of €325 million at EBIT mainly driven by the appreciation of the Brazilian real and the US dollar.
- scope: a net negative scope effect of €115 million at EBIT mainly due to 2021 events including partial sale of GTT's shares that led to a change in consolidation method, asset sales to achieve the Group's geographical refocus and coal exit targets. These effects were only partly offset by the acquisition of Eolia in Spain in May 2022.
- French temperature: compared to average, the temperature effect stood at negative €190 million, generating a negative year-on-year variation of €308 million compared to 2021 across Networks, Supply and Others in France.

EBIT growth mainly driven by GEMS, Thermal and Renewables.

Activity/geography matrix

In millions of euros	France	Rest of Europe	Latin America	USA & Canada	Middle East, Asia & Africa	Others	December 31, 2022
Renewables	375	313	796	172	9	(39)	1,627
Networks	1,675	49	658	(3)	-	(8)	2,371
Energy Solutions	311	148	(5)	23	58	(123)	412
Thermal	-	1,278	51	44	417	(22)	1,768
Supply	(164)	115	6	-	49	(13)	(7)
Nuclear	-	1,026	-	-	-	-	1,026
Others	-	(16)	-	(11)	-	1,875	1,848
Of which GEMS	-	-	-	-	-	*2,618*	*2,618*
TOTAL EBIT	**2,197**	**2,913**	**1,506**	**226**	**532**	**1,671**	**9,045**

In millions of euros	France	Rest of Europe	Latin America	USA & Canada	Middle East, Asia & Africa	Others	December 31, 2021
Renewables	273	117	846	(6)	8	(47)	1,191
Networks	1,823	77	403	-	18	(7)	2,314
Energy Solutions	307	132	(5)	48	27	(159)	350
Thermal	-	564	189	41	421	(32)	1,183
Supply	202	28	-	-	25	(23)	232
Nuclear	-	959	-	-	-	-	959
Others	-	2	-	(1)	-	(86)	(85)
Of which GEMS	-	-	-	-	-	*507*	*507*
TOTAL EBIT	**2,605**	**1,880**	**1,433**	**82**	**498**	**(355)**	**6,145**

EBIT contribution by activity

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)	o/w temp. effect (France) *vs.* 2021
Renewables	1,627	1,191	+36.6%	+19.1%	-
Networks	2,371	2,314	2.5%	+0.5%	(197)
Energy Solutions	412	350	17.7%	+16.6%	-
Thermal	1,768	1,183	49.4%	46.6%	-
Supply	(7)	232			(87)
Nuclear	1,026	959	+6.9%	+6.9%	-
Others	1,848	(85)			(24)
Of which GEMS	*2,618*	*507*			*(24)*
TOTAL	**9,045**	**6,145**	**+47.2%**	**+42.7%**	**(308)**
TOTAL EXCLUDING NUCLEAR	**8,019**	**5,185**	**+54.7%**	**+49.1%**	**(308)**

Renewables: contribution of newly commissioned assets and productivity improvements

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
EBIT	1,627	1,191	+36.6%	+19.1%
Total CAPEX	3,333	1,881	+77.2%	-
CNR achieved prices *(in €/MWh)*	60	56	+7.0%	-
DBSO [(1)] Margins (EBIT level)	102	31		-
Operational KPIs				
Commissioning (GW at 100%)	3.9	3.0	+30.0%	-
Hydro volumes France (TWh at 100%)	12.8	15.2	-2.4	-

(1) Develop, Build, Share and Operate.

Renewables reported a 19.1% organic EBIT growth, benefiting from the contribution of new capacity across Group's key geographies and technologies (+€268 million), performance plan (+€87 million), positive volume effects (+€69 million, resulting mainly from the reversal of the -€90 million Texas extreme weather event in Q1 2021) and positive price effects (+€55 million, mainly due to higher prices for French hydro, partly offset by hydro buybacks in France and Portugal in the context of low hydrology in Europe). Overall growth more than offset the 2021 one-off linked to GFOM ruling effect in Brazil (-€300 million).

Profit sharing mechanism on CNR hydro production in France has evolved after the adoption in February 2022 of the *Aménagement du Rhône* law under which the tax rate varies according to captured power prices, varying from 10% for volumes below €26.5/MWh up to 80% for volumes above €80/MWh. The Group EBIT impact in 2022 amounted to -€176 million.

Networks: strong performance in Latin America, partly offset by warmer temperatures in Europe

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
EBITDA	4,212	4,121	+2.2%	+1.0%
EBIT	2,371	2,314	+2.5%	+0.5%
Total CAPEX	2,321	2,524	-8.0%	
Operational KPIs				
Temperature effect – France *(EBIT in €m)*	(122)	75.0	(197)	-
Smart meters *(m)*	10.9	9.2	1.7	-

EBIT amounted to €2,371 million, up 0.5% on an organic basis.

French infrastructures EBIT was down €148 million due to lower distributed volumes following warmer temperatures *versus* last year and lower tariffs revenues reflecting regulatory reviews (smoothed out over the 4-year regulatory period). These effects were partly offset by significant growth in short term revenues in transport, including reversed flows from France to Germany, as well as in terminals and storage.

The Group performed strongly outside France with EBIT organically up €160 million mainly due to higher contribution from Latin America, driven by intrinsic growth and inflation indexations.

Energy Solutions: higher energy prices and strong commercial performance despite warmer temperature

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
Revenues	11,552	9,926	+16.4%	+21.1%
EBIT	412	350	+17.7%	+16.6%
Total CAPEX	886	903	-1.8%	-
Operational KPIs				
Distrib. Infra installed cap. *(in GW)*	24.9	24,1 [(1)]	+3.8%	-
EBIT margin (excluding Evbox)	4.6%	5.0%	-47 bps	-
Backlog – French concessions *(in billions of euros)*	18.4	16.8	+1.6	-

(1) Restated data to exclude countries ENGIE exited or stopped developments following geographical rationalization presented in May 2021.

EBIT amounted to €412 million, up 16.6% on an organic basis.

Organic growth was driven by the positive impact of energy prices, positive effect of performance plan in energy efficiency services, commercial market dynamics notably in cogeneration and DHC as well as production ramp up and process enhancements ongoing on EVBox, despite slowdown of EV market growth pace. These elements were partly offset by warmer temperature and positive 2021 one-offs on on-site energy production.

Thermal: higher spreads and ancillaries captured by flexible assets in Europe

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
EBITDA	2,235	1,628	+37.3%	+33.7%
EBIT	1,768	1,183	+49.4%	+46.6%
Operational KPIs				
Average captured CSS Europe *(in €/MWh)*	28.0	19.0	+50%	-
Installed capacity (GW at 100%)	59.5	59.9	(0.4)	-

Thermal EBIT amounted to €1,768 million, up 46.6% on an organic basis.

Organic growth was mainly driven by price effects (+€922 million, mainly from higher spread from European assets partly offset by negative impact from higher sourcing spot prices in Chile and adverse gas merchant position in Australia) as well as ancillaries and capacity remuneration mechanisms (+€175 million). These effects were partly offset by lower volumes (-€440 million) mainly in Europe, due to outages and strikes, and Italy windfall profit tax which ENGIE is contesting.

Supply: timing effects, warmer temperatures in Europe, price caps and support measures

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
EBITDA	258	498	-48.2%	-47.3%
EBIT	(7)	232	-	-
French temperature effect *(EBIT in m€)*	(53)	34	(87)	-

EBIT amounted to -€7 million. Organically, the decrease (-€230 million) was driven by lower energy volumes mainly in France and Belgium, negative price effects in France and support measures to customers, partially offset by improved performance and higher results in most of the other European countries. EBIT decreased by €626 million over the last quarter of the year mainly due to expected reversal of timing effects mostly linked to the existing ARENH mechanism as well as negative climate effects.

Nuclear: higher prices triggered higher profit sharing through specific Belgian nuclear tax and inframarginal rent cap

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)	% change (organic basis)
EBITDA	1,510	1,403	+7.6%	+7.6%
EBIT	1,026	959	+6.9%	+6.9%
Total Capex	229	201	+14.2%	
Operational KPIs				
Output (BE + FR, @ share, TWh)	42.1	47.4	-5,4 TWh	-
Availability (Belgium at 100%)	83.6%	91.8%	-820 bps	-

EBIT for Nuclear amounted to €1,026 million, up 6.9% on organic basis.

Organic increase was driven by higher achieved prices (+€1,694 million, at €97/MWh in 2022 vs €60/MWh in 2021) resulting in higher nuclear tax contribution on second generation units (-€759 million) and inframarginal rent cap. Also, a negative volume effect (-€494 million) due to higher outages in Belgium (availability rate at 83.6%, -820 bps vs 2021) and France.

Others: unprecedented contribution from GEMS in a context of extreme market conditions

GEMS EBIT amounted to €2,618 million, representing an organic increase of €2,087 million compared to 2021.

ENGIE, as an integrated player, operates in the energy markets through GEMS. It sources energy, sells its own production and hedges upstream and downstream positions to meet customers' needs for risk management and decarbonisation, as well as secure supply in Europe. GEMS saw a record level of activity in all activities in an exceptionally volatile price environment and optimized long-term contracts by leveraging the optionality in ENGIE's commercial contract-base.

6.1.1.1.11.4 Comparable basis organic growth analysis

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported/organic basis)
Revenues	**93,865**	**57,866**	**+62.2%**
Scope effect	(21)	(807)	-
Exchange rate effect	-	1,462	-
Comparable data	**93,844**	**58,523**	**+60.4%**

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported/organic basis)
EBITDA	**13,713**	**10,563**	**+29.8%**
Scope effect	(48)	(219)	-
Exchange rate effect	-	418	-
Comparable data	**13,665**	**10,762**	**+27.0%**

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported/organic basis)
EBIT	**9,045**	**6,145**	**+47.2%**
Scope effect	(47)	(163)	-
Exchange rate effect	-	325	-
Comparable data	**8,998**	**6,307**	**+42.7%**

The calculation of organic growth aims to present comparable data both in terms of the exchange rates used to convert the financial statements of foreign companies and in terms of contributing entities (consolidation method and contribution in terms of comparable number of months). Organic growth in percentage terms represents the ratio between the data for the current year (N) and the previous year (N-1) restated as follows:

- the N-1 data is corrected by removing the contributions of entities transferred during the N-1 period or *prorata temporis* for the number of months after the transfer in N;
- the N-1 data is converted at the exchange rate for the period N;
- the N data is corrected with the N acquisition data or *prorata temporis* for the number of months prior to the N-1 acquisition.

6.1.1.2 Other income statement items

The reconciliation between EBIT and Net income/(loss) is presented below:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	% change (reported basis)
EBIT	**9,045**	**6,145**	**+47.2%**
(+) Mark-to-Market on commodity contracts other than trading instruments	(3,661)	721	
(+) Non-recurring share in net income of equity method entities	(17)	50	
Current operating income including operating MtM and share in net income of equity method entities	**5,367**	**6,916**	**-22.4%**
Impairment losses	(2,774)	(1,028)	
Restructuring costs	(230)	(204)	
Changes in scope of consolidation	91	1,107	
Other non-recurring items	(1,328)	(69)	
Income/(loss) from operating activities	**1,127**	**6,722**	**-83.2%**
Net financial income/(loss)	(3,003)	(1,350)	
Income tax benefit/(expense)	83	(1,695)	
NET INCOME/(LOSS)	**390**	**3,758**	**-89.6%**
Net recurring income/(loss) relating to continued operations, Group share	**5,223**	**2,927**	
Net recurring income/(loss) Group share per share	**2.24**	**1.26**	
Net income/(loss) Group share	**216**	**3,661**	
Non-controlling interests	**173**	**97**	

The reconciliation between Net recurring income/(loss) Group share and Net income/(loss) Group share is presented below:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Net recurring income/(loss) relating to continued operations, Group share	**5,223**	**2,927**
Impairment & Others	(1,494)	(970)
Restructuring costs	(230)	(204)
Changes in scope of consolidation	91	1,107
Mark-to-Market on commodity contracts other than trading instruments	(3,661)	721
Net recurring income/(loss) relating to discontinued operations, Group share	287	231
Net income/(loss) Group share	**216**	**3,582**

Income from operating activities amounted to €1,127 million, representing a decrease compared with December 31, 2021, mainly due to unrealized losses on commodity hedges driven by price increases, in particular on certain economic hedges on gas and electricity not designated as cash flow hedges, higher impairment losses, lower gains on asset disposals, the recognition of additional costs related to the triennial review of nuclear provisions in Belgium, partly offset by EBIT growth.

Income from operating activities was affected by:

- net impairment losses of €2,774 million (compared with €1,028 million in 2021) *(see Note 9.1)*;
- restructuring costs of €230 million (compared with €204 million in 2021) *(see Note 9.2)*;
- positive scope effects of €91 million (compared with a positive €1,107 million in 2021). This amount included in particular the gain on the disposal of the Group's interest in Gaztransport et Technigaz (GTT) representing approximately 24.6% of its share capital (a positive €280 million), renewable geothermal assets in Indonesia (a positive €111 million), Energy Solutions activities in Africa and in France (a negative €127 million), and the purchase of shares in renewable assets in India with refinancing obligations scheduled for 2023 (a negative €110 million) *(see Note 9.3)*;
- other non-recurring items for a negative €1,328 million (compared with a negative €69 million in 2021), mainly including the €979 million net expense related to additions to provisions for the back-end of the nuclear fuel cycle as part of the triennial review of nuclear provisions in Belgium *(see Note 9.4)*.

The **net financial loss** amounted to €3,003 million in 2022, compared with €1,350 million in 2021 *(see Note 10)*. This change is mainly due to the impairment loss recognized on the Nord Stream 2 loan (€987 million) and the negative impact of the changes in the fair value of money market funds held by Synatom (€280 million). Adjusted for non-recurring items, the financial loss amounted to €1,819 million in 2022, compared with €1,494 million in 2021. This deterioration is due to the increase in other financial expenses, as well as to the increase in the cost of net debt, in particular due to the increase in lease liabilities related to the extension of the Compagnie Nationale du Rhône concession. The increase in the average cost of gross debt, mainly as a result of higher interest rates, was offset by the increase in interest on cash and cash equivalents and liquid debt instruments.

The **income tax** for 2022 amounted to a benefit of €83 million (compared with a tax expense of €1,695 million in 2021). It includes a €1,474 million tax benefit relating to non-recurring taxable items (compared with a tax expense of €552 million in 2021), mainly MtM losses recognized by ENGIE SA.

Adjusted for these non-recurring items, the recurring effective tax rate was 22.6% at December 31, 2022 compared with 29.3% at December 31, 2021, mainly due to:

- the favorable change in the tax situation in certain countries that only partially recognize their deferred tax assets, notably in Europe, the United States and Australia – approximately -7.6 points;
- the effect on deferred tax liabilities of the increase in the future income tax rate voted in the United Kingdom in 2021 – approximately -2.1 points;
- the unfavorable impact of the non-deductibility of the one-off tax contribution voted in 2022 in Italy and recognized as an operating expense by the Group – approximately +1.2 points;
- the one-off solidarity contribution voted in 2022 in Italy, which increases the income tax charge – by about +2.1 points.

Net recurring income, Group share relating to continuing operations amounted to €5,223 million compared with €2,927 million in 2021. This increase was mainly driven by the strong growth in EBIT, the recurring effective tax rate decrease from 29.3% to 22.6%, partly offset by the increase in the recurring financial expense.

Net income, Group share amounted to €216 million, €3,445 million lower compared with 2021, mainly due to impairment losses, the recognition of additional costs related to the triennial revision of nuclear provisions in Belgium, the negative effect of mark-to-market on commodity contracts other than trading instruments, and the recognition of the credit loss on Nord Stream 2, partially offset by the capital gain realized on the sale of EQUANS.

Net income attributable to non-controlling interests amounted to €173 million, compared with €97 million in 2021, due to the relatively good performance of companies with minority shareholders, notably in Renewables in the United States and Networks in France.

Return on Capital Employed (ROCE) improved during 2022 from approximately 9.1% in 2021 to 12.6% in 2022, mainly due to improved EBIT and a lower effective tax rate.

6.1.1.3 Changes in net financial debt

Net financial debt stood at €24.1 billion down by €1.3 billion compared to December 31, 2021. This decrease was mainly driven by:

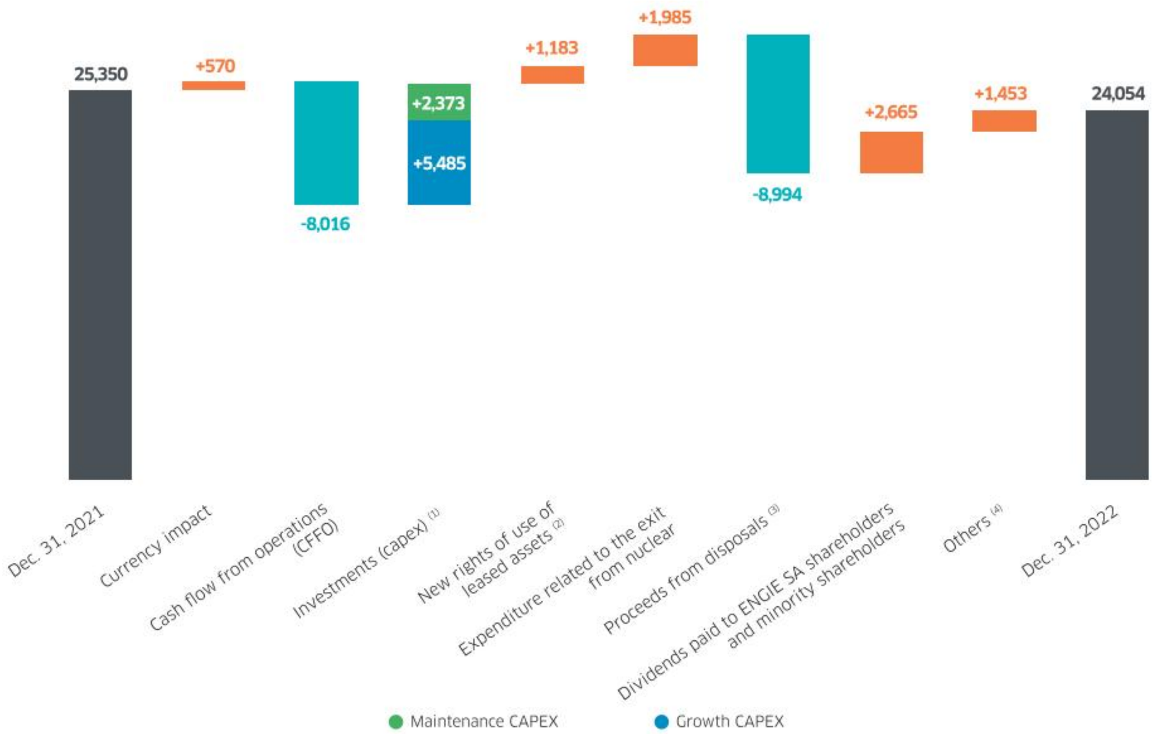
- Cash Flow From Operations of €8.0 billion;
- disposals of €9.0 billion, mainly related to the disposal of EQUANS.

These positive elements were partly offset by:

- capital expenditure over the period of €7.9 billion;
- dividends paid to ENGIE SA shareholders and to non-controlling interests of €2.7 billion;
- Belgian nuclear phase-out funding and expenses [1] of €2.0 billion;
- new rights of use of €1.2 billion, mainly following the extension of the CNR hydro concession;
- other elements of €1.9 billion, mainly related to foreign exchange rates.

(1) *Financing flows relating to Synatom were previously recorded in gross Capex and waste management/dismantling expenses in CFFO.*

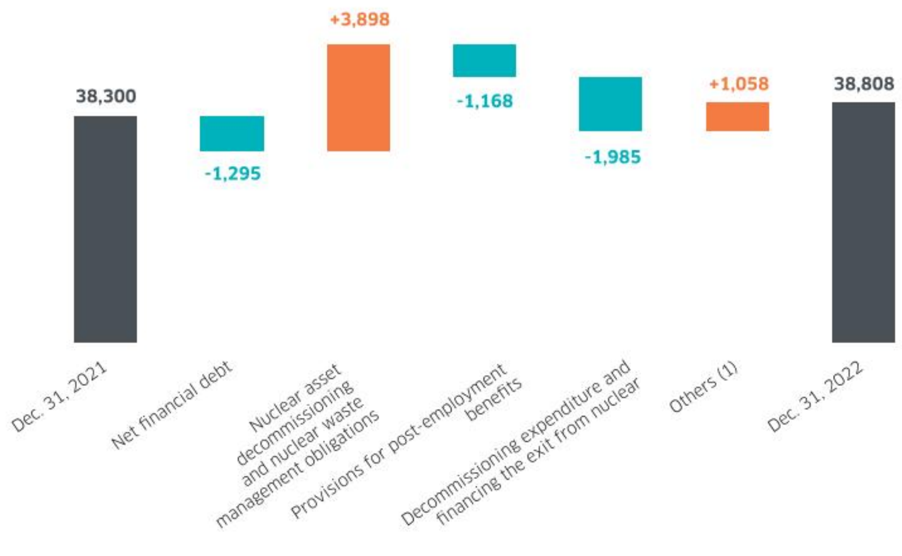
Changes in net financial debt break down as follows:
In millions of euros



(1) Capital expenditure net of DBSO proceeds, and changes in the scope of net financial debt of acquired companies.
(2) Mainly related to the extension of the CNR concession.
(3) Excluding DBSO proceeds.
(4) Mainly derivatives and MtM.

Economic net debt stood at €38.8 billion, up €0.5 billion compared to December 31, 2021, mainly due to the increase in asset retirement obligation provisions (€+3.9 billion, mainly including the increase in nuclear provisions of €+3.3 billion following the triennial review) and other variation (€+1.1 billion, including fair value variation of dedicated assets relating to nuclear provisions and related derivative financial instruments), partly offset by funding from Synatom and waste/dismantling expenses (-€2.0 billion), lower financial net debt (-€1.3 billion) and employment benefits provisions (-€1.2 billion).

Changes in economic net debt break down as follows:
In millions of euros



(1) Change in fair value of dedicated assets relating to nuclear provisions and associated financial derivative instruments.

6

The **net financial debt to EBITDA ratio** stood at 1.7x, down 0.6x compared to December 31, 2021.

The average cost of gross debt was 2.73%, up 8 bps compared with December 31, 2021.

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Net financial debt	24,054	25,350
EBITDA	13,713	10,563
NET DEBT/EBITDA RATIO	**1.75**	**2.40**

The **economic net debt to EBITDA ratio** stood at 2.8x, down 0.8x compared to December 31, 2021, and in line with the target ratio of below or equal to 4.0x.

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Economic net debt	38,808	38,300
EBITDA	13,713	10,563
ECONOMIC NET DEBT/EBITDA RATIO	**2.83**	**3.63**

6.1.1.3.1 Cash flow from operations (CFFO)

Cash Flow From Operations amounted to €8.0 billion, up €1.6 billion compared to 2021. This increase was mainly due to higher operating cash-flows (+€2.6 billion) driven by higher EBITDA (+€3.1 billion).

Working Capital Requirements were negative €2.4 billion, identical to previous year, with flat variation due to net negative price effects (-€4.8 billion), mainly due to higher valuation of gas stocks (-€1.8 billion), net receivables (-€2.3 billion) and unbilled volumes (-€0.5 billion linked to energy in the meter) and European supply tariff shields (-€1.0 billion), due to French gas and electricity tariff freeze (-€1.7 billion), Romania tariff shield and Belgium social tariff (-€0.6 billion), partly offset by the French gas tariff freeze monetization (+€1.4 billion). These effects were offset by positive effects of margin calls (+€4.0 billion) and nuclear activities (+€1.5 billion, mainly G2 tax, inframarginal rent cap and ONDRAF tariff revision).

6.1.1.3.2 Liquidity

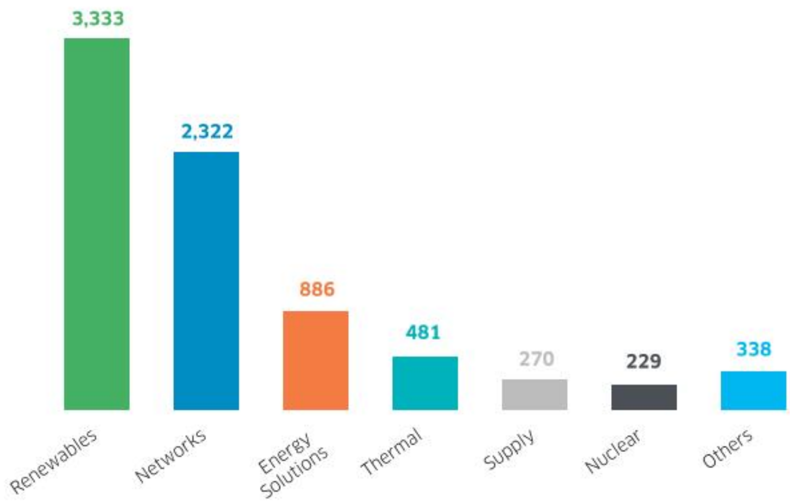
Liquidity stood at €20.9 billion, including €15.7 billion of cash [1]. The Group maintained a strong level of liquidity, by implementing dedicated management actions to address pressure on liquidity, mainly caused by unprecedented levels of commodity prices.

6.1.1.3.3 Net investments

Total Capex amounted to €7.9 billion, including growth CAPEX of €5.5 billion.

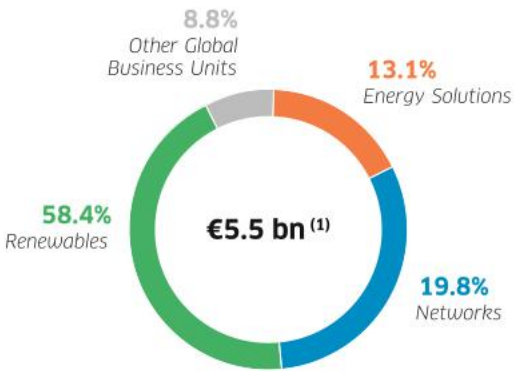
Capital expenditure (CAPEX) by activity

In millions of euros



(1) *Cash and cash equivalents plus liquid debt instruments held for cash investment purposes minus bank overdrafts.*

Growth capital expenditure amounted to €5.5 billion, breaking down as follows by activity:



Main projects *(In € bn)*	
Renewables	**3.2**
Spain – Acquisition of EOLIA Renovables	0.5
United States – Saturn projects	0.5
Ocean Winds – liquidity injection	0.5
United States – Pluto projects	0.4
Latin America W&S – Brazil, Chile, Peru and Mexico	0.4
ENGIE Green W&S	0.2
United States – Acquisition of Photosol and Libra BESS	0.1
United States – Mercury project	-0.6
Networks	**1.1**
GRDF – Smart meters + development of networks	0.4
Brazil – Electricity transmission lines	0.1
GRTGaz	0.1
Energy Solutions	**0.7**
Various projects in (notably energy distribution networks)	0.2
Various international projects (notably solar in the United States, cooling and heating networks in Europe and performance)	0.2

(1) Net of DBSO and US tax equity proceeds, including net debt acquired.

The **geography/activity matrix** for growth capital expenditure is presented below:

In millions of euros	France	Rest of Europe	Latin America	USA & Canada	Middle East, Asia & Africa	Others	Dec. 31, 2022
Renewables	361	1,094	876	648	214	10	3,202
Networks	779	63	245	-	-	-	1,087
Client Solutions	354	122	19	66	75	80	716
Thermal	-	181	9	34	(9)	6	220
Supply	62	42	-	-	7	63	174
Nuclear	-	-	-	-	-	-	-
Others	-	4	-	-	-	80	85
Of which GEMS	-	-	-	-	-	*63*	*63*
TOTAL CAPEX	**1,556**	**1,506**	**1,148**	**748**	**287**	**240**	**5,485**

In millions of euros	France	Rest of Europe	Latin America	USA & Canada	Middle East, Asia & Africa	Others	Dec. 31, 2021 (1) (2)
Renewables	244	224	462	767	183	2	1,881
Networks	812	68	440	-	-	-	1,320
Client Solutions	209	118	15	305	29	40	715
Thermal	-	8	26	-	(52)	1	(17)
Supply	74	46	-	-	11	24	154
Nuclear	-	-	-	-	-	-	-
Others	-	4	-	(1)	-	218	221
Of which GEMS	-	-	-	-	-	*(31)*	*(31)*
TOTAL CAPEX	**1,338**	**468**	**942**	**1,071**	**171**	**285**	**4,275**

(1) Growth capital expenditure (CAPEX) now include changes in the scope of net financial debt of acquired companies. Data at December 31, 2021 have been restated accordingly.

(2) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

Net investments for the period amounted to €0,2 billion and include:

- growth capital expenditure for €5.5 billion (see above);
- gross maintenance capital expenditure amounting to €2.4 billion;
- new right-of-use assets recognized over the period for €1.2 billion;
- the effects of the reduction in net financial debt recognized in accordance with IFRS 5 as Non-current assets held for sale and discontinued operations for a negative €0.9 billion;
- proceeds from disposals representing an inflow of -€7.9 billion.

6.1.1.3.4 Dividends and movements in treasury stock

Dividends and movements in treasury stock during the period amounted to €3.1 billion and include ENGIE's dividend payment in May 2022 for the 2021 fiscal year for €2.1 billion, and dividends paid by various subsidiaries to their non-controlling interests in an amount of €0.5 billion, the hybrid debt repurchase and payment of interest for €0.5 billion, and capital movements relating to the global employee share ownership plan Link 2022 for €0.1 billion.

6.1.1.3.5 Net financial debt at December 31, 2022

Excluding amortized cost but including the impact of foreign currency derivatives, at December 31, 2022 a total of 83% of net financial debt was denominated in euros, 11% in US dollars and 10% in Brazilian real.

Including the impact of financial instruments, 90% of net debt is at fixed rates.

The average maturity of the Group's net debt is 12.5 years.

At December 31, 2022, the Group had total undrawn confirmed credit lines of €12.5 billion.

6.1.1.3.6 Rating

On August 17, 2022, S&P reaffirmed its BBB+ long-term issuer rating and short-term issuer rating at A-2, with a stable outlook.

On September 1, 2022, Moody's reaffirmed its Baa1/P-2 senior unsecured rating, with a stable outlook.

On October 19, 2022 Fitch confirmed its long-term issuer rating at A-, and its short-term rating at F1, with a stable outlook.

6.1.1.4 Other items in the statement of financial position

In millions of euros	Dec. 31, 2022	Dec. 31, 2021	Net change
Non-current assets	**131,521**	**117,418**	**14,102**
Of which goodwill	*12,854*	*12,799*	*55*
Of which property, plant and equipment and intangible assets, net	*62,853*	*57,863*	*4,990*
Of which derivative instruments	*33,134*	*25,616*	*7,517*
Of which investments in equity method entities	*9,279*	*8,498*	*780*
Current assets	**103,969**	**107,915**	**(3,946)**
Of which trade and other payables	*31,310*	*32,556*	*(1,245)*
Of which derivative instruments	*15,252*	*19,373*	*(4,120)*
Of which assets classified as held for sale	*428*	*11,881*	*(11,452)*
Total equity	**39,285**	**41,980**	**(2,695)**
Provisions	27,027	25,459	1,568
Borrowings	40,591	41,048	(457)
Financial instruments derivatives	51,276	46,931	4,346
Other liabilities	77,311	69,916	7,395
Of which liabilities directly associated with assets classified as held for sale	*371*	*7,415*	*(7,045)*

The carrying amount of **property, plant and equipment and intangible assets** was €62.9 billion, up €5.0 billion compared with December 31, 2021. This increase was primarily the result of investments carried out over the period (positive €8.7 billion impact) and translation adjustments (positive €1.0 billion impact, mainly due to the appreciation of the US dollar and the Brazilian real), partially offset by depreciation and amortization (negative €4.6 billion impact) and impairment losses (negative €2.3 billion impact).

Goodwill amounted to €12.9 billion, stable compared with December 31, 2021.

Investments in equity method entities increased by €0.8 billion, primarily due to the acquisition of Eolia Renovables *(see Note 4.3)*.

Total equity amounted to €39.3 billion, a decrease of €2.7 billion compared with December 31, 2021, essentially reflecting the payment of dividends (negative €2.6 billion impact), operations on deeply-subordinated perpetual notes (negative €0.5 billion impact), and other comprehensive income (€0.2 billion negative impact, including a negative €4.7 billion of cash flow hedges on commodities, a positive €2.7 billion of actuarial gains and losses, a positive €0.9 billion of share in equity method entities, and a positive €0.8 billion of translation adjustments) offset by net income for the period (positive €0.4 billion impact).

Provisions increased by €1.6 billion to €27.0 billion compared with December 31, 2021. This increase stemmed mainly from the increase in provisions for the decommissioning of nuclear production facilities and for the management of the back-end of the nuclear fuel cycle by Synatom *(see Note 17)*, partially offset by actuarial gains on provisions for post-employment benefits and other long-term benefits (which deducted €2.8 billion from the provision amount) owing to the sharp rise in discount rates over the period *(see Note 18)*.

The increase in **derivative instruments** is mainly due to the extreme volatility in commodity prices over the year.

"**Assets classified as held for sale**" and "**Liabilities directly associated with assets classified as held for sale**" correspond solely to a thermal power plant in Brazil, following the disposal of EQUANS in October 2022.

6.1.1.5 Parent company financial statements

The figures provided below relate to the financial statements of ENGIE SA, prepared in accordance with French GAAP and applicable regulations.

Revenues for ENGIE SA in 2022 totaled €68,500 million, an increase compared to 2021 (€36,224 million), both on the gas and electricity markets.

Net operating income amounted to €1,051 million in 2022, an improvement of €1,897 million compared with a loss of €846 million in 2021. The energy margin deteriorated by €152 million.

Net financial income amounted to €1,786 million, an increase of €1,405 million compared to 2021 due to higher dividends received.

Non-recurring items represented a loss of €1,461 million, mainly comprising changes in the value of equity interests (including Electrabel) and capital gains on the disposal of shares (including GazTransport et Technigaz).

The income tax benefit amounted to €321 million, *versus* an income tax benefit of €474 million in 2021, including a tax consolidation benefit of €253 million.

Net income for the year came in at €1,697 million.

Shareholders' equity amounted to €31,117 million at end-2022 compared with €31,211 million at end-2021. The €94 million decrease was mainly due to the 2022 net income of €1,697 million, and to the 2021 dividend payment for an amount of €2,093 million.

At December 31, 2022, borrowings and debt stood at €40,885 million, and cash and cash equivalents totaled €16,809 million (of which €10,105 million relating to subsidiaries' current accounts).

Information relating to payment terms

Pursuant to Articles L.441-14 and D.441-6 of the French Commercial Code, companies whose annual financial statements are subject to a statutory audit must publish information regarding supplier and customer payment terms. The purpose is to demonstrate that there is no significant failure to comply with such terms.

Information relating to supplier and customer payment terms mentioned in Articles L.441-10 to L.441-16 of the French Commercial Code

	Articles L.441-10 to L.441-16: Invoices received, unpaid and overdue at the reporting date						**Articles L.441-10 to L.441-16: Invoices issued, unpaid and overdue at the reporting date**					
In millions of euros	**0 day (indicative)**	**1 to 30 days**	**31 to 60 days**	**61 to 90 days**	**91 days or more**	**Total (1 day or more)**	**0 day (indicative)**	**1 to 30 days**	**31 to 60 days**	**61 to 90 days**	**91 days or more**	**Total (1 day or more)**
(A) By aging category												
Number of invoices	-					46,998	-					4,221,959
Aggregate invoice amount (incl. VAT)	-	53.7	130.1	8.0	799.8	991.5	-	287.8	147.1	208.3	918.5	1,561.8
Percentage of total amount of purchases (incl. VAT) for the period	-	0.06%	0.16%	0.01%	0.96%	1.19%						
Percentage of total revenues (incl. VAT) for the period							-	0.36%	0.18%	0.26%	1.14%	1.93%
(B) Invoices excluded from (A) relating to disputed or unrecognized receivables and payables												
Number of excluded invoices						540						542
Aggregate amount of excluded invoices						(6.9)						0.8
(C) Standard payment terms used (contractual or legal terms – Article L.441-6 or Article L.443-1 of the French Commercial Code)												
Payment terms used to calculate late payments						Legal payment terms: 30 days						Contractual payment terms: 14 days Legal payment terms: 30 days

6.1.2 Capital resources

6.1.2.1 Borrowing conditions and financial structure applicable to the issuer

6.1.2.1.1 Debt structure

Gross debt, excluding bank overdrafts, amortized cost and financial derivative instruments amounted to €36.8 billion at the end of 2022, down from year-end 2021. It was primarily composed of €23.6 billion in bond issues and €5.5 billion in bank loans. Other loans and drawdowns on credit lines accounted for a total of €0.4 billion. Short-term loans (short-term marketable securities) accounted for 20% of total gross debt at the end of 2022.

84% of the gross debt was issued on financial markets (bond issues and short-term marketable securities). Net debt, excluding amortized costs, the effect of financial derivative instruments and cash collateral, came to €21.0 billion at the end of 2022. At the end of 2022, net debt was 66% denominated in euros, 16% in US dollars and 13% in Brazilian reals, excluding amortized cost and after the foreign exchange impact of derivatives.

After the impact of derivatives, 90% of the net debt was at a fixed rate. The average cost of gross debt was 2.73%. The average maturity of net debt was 12.5 years at the end of 2022.

The principal contracts carried by ENGIE SA are described in Note 11 of Section 6.4.2 "Notes to the parent company financial statements."

6.1.2.1.2 Main transactions in 2022

The principal transactions performed in 2022 affecting financial debt are described in Note 14.3.3. of Section 6.2.2 "Notes to consolidated financial statements."

In response to the extremely volatile commodity markets, in March 2022 the Group entered into a bilateral credit facility of €1.5 billion with a swingline. This line expired in October.

In November 2022, the Group exercised its option to extend its €4 billion syndicated credit line entered into in December 2021, this extending its current maturity to December 17, 2027. The Group still has one extension option of one year for this line of credit.

6.1.2.1.3 Ratings

ENGIE has solicited ratings by Standard & Poor's, Moody's and Fitch.

In April 2022, S&P confirmed ENGIE SA's issuer rating at BBB+/A-2, with a stable outlook.

In September 2022, Moody's confirmed ENGIE SA's issuer rating at -Baa1/P-2, with a stable outlook.

In September 2022, Fitch confirmed ENGIE SA's issuer rating at A-/F1, with a stable outlook.

6.1.2.2 Restrictions on the use of capital

At December 31, 2022, the Group had total undrawn confirmed credit lines of €12.5 billion. These lines are usable, among other things, as back-up lines for the short-term marketable securities programs. Over 90% of these lines are centrally managed and their availability is not subject to any financial covenant or linked to a credit risk rating.

The counterparties of these lines are well diversified, with no single counterparty holding more than 10% of the total of these centralized lines. No centralized credit facility was in use as at the end of 2022.

Furthermore, the Group has set up credit lines for some subsidiaries, for which the documentation includes ratios based on their financial statements. These lines of credit are not guaranteed by ENGIE SA or GIE ENGIE Alliance. The definition, as well as the level of these ratios, also known as "financial covenants," are determined by agreement with the lenders and may be reviewed during the life of the loan.

The most frequent ratios are:

- Debt Service Cover Ratio = Free Cash Flow (Principal + interest expense) or for servicing interest (Interest Cover Ratio = EBITDA / interest expense);
- Loan Life Cover Ratio (adjustment of the average cost of the future Free Cash Flows debt divided by the borrowed amount still owed);
- Debt / Equity ratio or maintenance of a minimum amount of equity.

At December 31, 2022, all Group companies whose debt is consolidated were compliant with the covenants and representations contained in their financial documentation, with the exception of a few non-significant entities for which appropriate actions to achieve compliance are being implemented.

6.1.2.3 Expected sources of financing to honor commitments relating to investment decisions

The Group believes that its funding needs will be covered by available cash and the possible use of its existing credit facilities. However, it may call upon the capital markets on an ad hoc basis.

If necessary, dedicated financing could be established for very specific projects.

The Group has a total of €3.4 billion in financing that matures in 2023 (excluding the maturity of €7.4 billion in short-term marketable securities). In addition, at December 31, 2022, it had €15.7 billion in cash (net of bank overdrafts) and a total of €12.5 billion in available lines, including €1.3 billion expiring in 2023. The amount of these available lines is not net of the amount of short-term marketable securities.

6.2 CONSOLIDATED FINANCIAL STATEMENTS

6.2.1 CONSOLIDATED FINANCIAL STATEMENTS

Income statement

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
REVENUES	**6.2 & 7**	**93,865**	**57,866**
Purchases and operating derivatives	8.1	(74,535)	(38,861)
Personnel costs	8.2	(8,078)	(7,692)
Depreciation, amortization and provisions	8.3	(5,187)	(4,840)
Taxes	8.4	(3,380)	(1,479)
Other operating income		1,624	1,122
Current operating income including operating MtM		**4,309**	**6,116**
Share in net income of equity method entities	6.2	1,059	800
Current operating income including operating MtM and share in net income of equity method entities	**0**	**5,367**	**6,916**
Impairment losses	9.1	(2,774)	(1,028)
Restructuring costs	9.2	(230)	(204)
Changes in scope of consolidation	9.3	91	1,107
Other non-recurring items	9.4	(1,328)	(69)
NET INCOME/(LOSS) FROM OPERATING ACTIVITIES	**9**	**1,127**	**6,722**
Financial expenses		(3,700)	(2,061)
Financial income		697	711
NET FINANCIAL INCOME/(LOSS)	**10**	**(3,003)**	**(1,350)**
Income tax benefit/(expense)	11	83	(1,695)
NET INCOME/(LOSS) RELATING TO CONTINUING OPERATIONS		**(1,793)**	**3,678**
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS		**2,183**	**80**
NET INCOME/(LOSS)		**390**	**3,758**
Net income/(loss) Group share		216	3,661
Of which Net income/(loss) relating to continuing operations, Group share		*(1,965)*	*3,582*
Of which Net income/(loss) relating to discontinued operations, Group share		*2,182*	*79*
Non-controlling interests		173	97
Of which Non-controlling interests relating to continuing operations		*172*	*96*
Of which Non-controlling interests relating to discontinued operations		*1*	*1*
BASIC EARNINGS/(LOSS) PER SHARE *(EUROS)*	**12**	**0.08**	**1.46**
Of which Basic earnings/(loss) relating to continuing operations per share		*(0.84)*	*1.43*
Of which Basic earnings/(loss) relating to discontinued operations per share		*0.93*	*0.03*
DILUTED EARNINGS/(LOSS) PER SHARE *(EUROS)*	**12**	**0.08**	**1.46**
Of which Diluted earnings/(loss) relating to continuing operations per share		*(0.84)*	*1.42*
Of which Diluted earnings/(loss) relating to discontinued operations per share		*0.93*	*0.03*

NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

Statement of comprehensive income

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
NET INCOME/(LOSS)		**390**	**3,758**
Debt instruments	14.1	(378)	(21)
Net investment hedges	15	(15)	(215)
Cash flow hedges (excl. commodity instruments)	15	938	511
Commodity cash flow hedges	15	(4,719)	3,980
Deferred tax on recyclable or recycled items		951	(1,333)
Share of equity method entities in recyclable items, net of tax		871	270
Translation adjustments		848	909
Recyclable items relating to discontinued operations, net of tax		(118)	114
TOTAL RECYCLABLE ITEMS		**(1,622)**	**4,215**
Equity instruments	14.1	(685)	159
Actuarial gains and losses		2,718	1,742
Deferred tax on non recyclable items		(613)	(451)
Share of equity method entities in actuarial gains and losses, net of tax		5	-
Non-recyclable items relating to discontinued operations, net of tax		48	48
TOTAL NON-RECYCLABLE ITEMS		**1,472**	**1,499**
TOTAL RECYCLABLE ITEMS AND NON-RECYCLABLE ITEMS		**(150)**	**5,713**
TOTAL COMPREHENSIVE INCOME/(LOSS)		**240**	**9,471**
Of which owners of the parent		*(257)*	*9,415*
Of which non-controlling interests		*497*	*56*

NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

Statement of financial position

Assets

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
Non-current assets			
Goodwill	13.1	12,854	12,799
Intangible assets, net	13.2	7,364	6,784
Property, plant and equipment, net	13.3	55,488	51,079
Other financial assets	14	10,599	10,949
Derivative instruments	14	33,134	25,616
Assets from contracts with customers	7	9	34
Investments in equity method entities	3	9,279	8,498
Other non-current assets	22	766	478
Deferred tax assets	11	2,029	1,181
TOTAL NON-CURRENT ASSETS		**131,521**	**117,418**
Current assets			
Other financial assets	14	2,394	2,495
Derivative instruments	14	15,252	19,373
Trade and other receivables, net	7	31,310	32,555
Assets from contracts with customers	7	12,575	8,344
Inventories	22	8,145	6,175
Other current assets	22	18,294	13,202
Cash and cash equivalents	14	15,570	13,890
Assets classified as held for sale	4.2	428	11,881
TOTAL CURRENT ASSETS		**103,969**	**107,915**
TOTAL ASSETS		**235,490**	**225,333**

NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

Liabilities

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
Shareholders' equity		34,253	36,994
Non-controlling interests	2	5,032	4,986
TOTAL EQUITY	**16**	**39,285**	**41,980**
Non-current liabilities			
Provisions	17	24,663	23,394
Long-term borrowings	14	28,083	30,458
Derivative instruments	14	39,417	24,228
Other financial liabilities	14	90	108
Liabilities from contracts with customers	7	121	68
Other non-current liabilities	22	3,646	2,342
Deferred tax liabilities	11	6,408	7,738
TOTAL NON-CURRENT LIABILITIES		**102,427**	**88,336**
Current liabilities			
Provisions	17	2,365	2,066
Short-term borrowings	14	12,508	10,590
Derivative instruments	14	11,859	22,702
Trade and other payables	14	39,801	32,822
Liabilities from contracts with customers	7	3,292	2,671
Other current liabilities	22	23,583	16,752
Liabilities directly associated with assets classified as held for sale	4.2	371	7,415
TOTAL CURRENT LIABILITIES		**93,778**	**95,019**
TOTAL EQUITY AND LIABILITIES		**235,490**	**225,333**

NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

Statement of changes in equity

In millions of euros	Share capital	Additional paid-in capital	Consolidated reserves	Deeply-subordinated perpetual notes	Changes in fair value and other	Translation adjustments	Treasury stock	Shareholders' equity	Non-controlling interests	Total
EQUITY AT DECEMBER 31, 2020	**2,435**	**31,291**	**(3,874)**	**3,913**	**(1,719)**	**(2,850)**	**(251)**	**28,945**	**4,911**	**33,856**
Net income/(loss)			3,661					3,661	97	3,758
Other comprehensive income/(loss)			1,490		3,431	833		5,753	(40)	5,713
TOTAL COMPREHENSIVE INCOME/(LOSS)			**5,151**		**3,431**	**833**		**9,415**	**56**	**9,471**
Share-based payment	-	-	48					48	1	49
Dividends paid in cash (1)		(1,296)	-					(1,296)	(410)	(1,706)
Purchase/disposal of treasury stock			(52)				52	-	-	-
Operations on deeply-subordinated perpetual notes (1)			(129)	(146)				(275)		(275)
Transactions between owners (1) (2)			324					324	740	1,064
Transactions with impact on non-controlling interests (1) (3)			-					-	(312)	(312)
Share capital increases and decreases								-	(1)	(1)
Normative changes			43					43	1	44
Other changes (1) (4)		(3,937)	3,726		-			(211)	1	(209)
EQUITY AT DECEMBER 31, 2021	**2,435**	**26,058**	**5,238**	**3,767**	**1,711**	**(2,017)**	**(199)**	**36,994**	**4,986**	**41,980**

(1) Transactions of the period are listed in Note 19 "Equity" to the consolidated financial statements for the year ended December 31, 2021.

(2) Mainly relates to the disposal of 11.5% of GRTgaz.

(3) Mainly relates to the partial disposal of Gaztransport & Technigaz SA (GTT).

(4) Mainly concerns the dispute with the French tax authorities on the assignment without recourse of the withholding tax claim made in 2005 by SUEZ. This dispute is presented in Note 26.7.1 "Legal and anti-trust proceedings" in the consolidated financial statements for the year ended December 31, 2021.

NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

In millions of euros	Share capital	Additional paid-in capital	Consolidated reserves	Deeply-subordinated perpetual notes	Changes in fair value and other	Translation adjustments	Treasury stock	Shareholders' equity	Non-controlling interests	Total
EQUITY AT DECEMBER 31, 2021	**2,435**	**26,058**	**5,238**	**3,767**	**1,711**	**(2,017)**	**(199)**	**36,994**	**4,986**	**41,980**
Net income/(loss)			216	-	-	-		216	173	390
Other comprehensive income/(loss)			1,311	-	(2,379)	595		(474)	324	(150)
TOTAL COMPREHENSIVE INCOME/ (LOSS)			**1,527**	**-**	**(2,379)**	**595**		**(257)**	**497**	**240**
Share-based payment		3	45					48	-	48
Dividends paid in cash [1]		(394)	(1,689)					(2,082)	(482)	(2,565)
Purchase/disposal of treasury stock			(43)	-	-	-	10	(33)	-	(33)
Operations on deeply-subordinated perpetual notes [1]			(77)	(374)				(451)		(451)
Transactions between owners [1] [2]			154					154	56	210
Transactions with impact on non-controlling interests								-	(41)	(41)
Share capital increases and decreases								-	19	19
Normative change [3]			(116)					(116)	(6)	(121)
Other changes		-	(5)	-	-			(5)	3	(1)
EQUITY AT DECEMBER 31, 2022	**2,435**	**25,667**	**5,036**	**3,393**	**(668)**	**(1,422)**	**(189)**	**34,253**	**5,032**	**39,285**

(1) Transactions of the period are listed in Note 16 "Equity".
(2) Mainly relates to the sale of part of the renewable assets portfolio in the United States (see Note 16.2.4 "Other transactions").
(3) SaaS arrangement (see Note 1.1.2 "Other text").
NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

Statement of cash flows

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
NET INCOME/(LOSS)		**390**	**3,758**
- Net income/(loss) relating to discontinued operations		2,183	80
NET INCOME/(LOSS) RELATING TO CONTINUING OPERATIONS		(1,793)	3,678
- Share in net income of equity method entities		(1,059)	(800)
+ Dividends received from equity method entities		713	662
- Net depreciation, amortization, impairment and provisions		8,057	5,484
- Impact of changes in scope of consolidation and other non-recurring items		74	(1,039)
- Mark-to-market on commodity contracts other than trading instruments		3,661	(721)
- Other items with no cash impact		(157)	(501)
- Income tax expense	11	(83)	1,695
- Net financial income/(loss)	10	3,003	1,350
Cash generated from operations before income tax and working capital requirements		**12,415**	**9,807**
+ Tax paid		(1,504)	(603)
Change in working capital requirements	**22.1**	**(2,424)**	**(2,377)**
CASH FLOW FROM OPERATING ACTIVITIES RELATING TO CONTINUING OPERATIONS		**8,488**	**6,827**
CASH FLOW FROM OPERATING ACTIVITIES RELATING TO DISCONTINUED OPERATIONS		**98**	**486**
CASH FLOW FROM OPERATING ACTIVITIES		**8,586**	**7,313**
Acquisitions of property, plant and equipment and intangible assets	13.2 & 13.3	(6,379)	(5,990)
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	4 & 14	(289)	(392)
Acquisitions of investments in equity method entities and joint operations	4 & 14	(407)	(369)
Acquisitions of equity and debt instruments	14	175	(1,548)
Disposals of property, plant and equipment, and intangible assets	13.2 & 13.3	173	88
Loss of controlling interests in entities, net of cash and cash equivalents sold	4 & 14	6,728	(173)
Disposals of investments in equity method entities and joint operations	4 & 14	1,461	62
Disposals of equity and debt instruments	14	268	73
Interest received on financial assets		(37)	32
Dividends received on equity instruments		18	57
Change in loans and receivables originated by the Group and other	5.6	(2,877)	121
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES RELATING TO CONTINUING OPERATIONS		**(1,167)**	**(8,039)**
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES RELATING TO DISCONTINUED OPERATIONS		**(3,123)**	**(3,003)**
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES		**(4,290)**	**(11,042)**
Dividends paid [1]		(2,665)	(1,859)
Repayment of borrowings and debt		(10,972)	(5,054)
Change in financial assets held for investment and financing purposes		188	464
Interest paid		(822)	(719)
Interest received on cash and cash equivalents		194	52
Cash flow on derivatives qualifying as net investment hedges and compensation payments on derivatives and on early buyback of borrowings		(216)	(219)
Increase in borrowings		8,669	8,353
Increase/decrease in capital		(259)	226
Purchase and/or sale of treasury stock		(115)	-
Changes in ownership interests in controlled entities	5.6	-	1,085
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES RELATING TO CONTINUING OPERATIONS		**(5,997)**	**2,329**
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES RELATING TO DISCONTINUED OPERATIONS		**3,019**	**2,519**
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES		**(2,979)**	**4,848**
Effects of changes in exchange rates and other relating to continuing operations		356	223
Effects of changes in exchange rates and other relating to discontinued operations		7	10
Effects of changes in exchange rates and other		363	233
TOTAL CASH FLOW FOR THE PERIOD		**1,680**	**1,352**
Reclassification of cash and cash equivalents relating to discontinued operations		-	(440)
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD		**13,890**	**12,980**
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**15,570**	**13,890**

(1) The line "Dividends paid" includes the coupons paid to owners of deeply-subordinated perpetual notes (see Note 16 "Equity").
NB:The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

6.2.2 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

ENGIE SA, the parent company of the Group, is a French *société anonyme* with a Board of Directors that is subject to the provisions of Book II of the French Commercial Code (Code du commerce), as well as to all other provisions of French law applicable to French commercial companies. It was incorporated on November 20, 2004 for a period of 99 years.

It is governed by current and future laws and by regulations applicable to sociétés anonymes and its bylaws.

The Group is headquartered at 1 place Samuel de Champlain, 92400 Courbevoie (France).

ENGIE shares are listed on the Paris, Brussels and Luxembourg stock exchanges.

On February 20, 2023, the Group's Board of Directors approved and authorized for issue the consolidated financial statements of the Group for the year ended December 31, 2022.

NOTE 1 Accounting framework and basis for preparing the consolidated financial statements

1.1 Accounting standards

Pursuant to European Regulation (EU) 2019/980 dated March 14, 2019, financial information concerning the assets, liabilities, financial position, and profit and loss of ENGIE has been provided for the last two reporting periods (ended December 31, 2021 and 2022). This information was prepared in accordance with European Regulation (EC) 1606/2002 "on the application of international accounting standards" dated July 19, 2002. The Group's consolidated financial statements for the year ended December 31, 2022 have been prepared in accordance with IFRS Standards as published by the International Accounting Standards Board and endorsed by the European Union [1].

The accounting standards applied in the consolidated financial statements for the year ended December 31, 2022 are consistent with the policies used to prepare the consolidated financial statements for the year ended December 31, 2021, except for those described below.

1.1.1 IFRS Standards, amendments or IFRIC Interpretations applicable in 2022

- Amendments to IAS 37 – *Provisions, Contingent Liabilities and Contingent Assets: Onerous Contracts* – Cost of Fulfilling a Contract.
- Annual improvements to IFRSs – 2018-2020 cycle.

These amendments and improvements have no material impact on the Group's consolidated financial statements.

- Amendments to IAS 16 – *Property, Plant and Equipment*: Proceeds before Intended Use.

The Group elected to early adopt these amendments, as indicated in Note 1.1.3 to the consolidated financial statements for the year ended December 31, 2021. These amendments have no material impact on the Group's consolidated financial statements.

1.1.2 Other text

- In its March 2021 agenda decision, the IFRS Interpretations Committee (IFRIC) clarified the accounting treatment of configuration and customization costs for software in a SaaS (Software as a Service) arrangement. According to the IFRIC, some of these costs should be recognized as an expense (and not as an intangible asset). This decision does not have a material impact on the Group's consolidated financial statements.

1.1.3 IFRS Standards, amendments or IFRIC Interpretations effective as from 2023 and that the Group has elected not to early adopt

- Amendments to IAS 1 – *Presentation of Financial Statements*: Classification of Liabilities as Current or Non-Current [2].
- IFRS 17 – *Insurance Contracts* (including amendments).
- Amendments to IAS 1 – *Presentation of Financial Statements* and the Materiality Practice Statement: Disclosure of Accounting Policies.
- Amendments to IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors*: Definition of Accounting Estimates.
- Amendments to IAS 12 – *Income Taxes*: Deferred Tax related to Assets and Liabilities arising from a Single Transaction.
- Amendments to IFRS 16 – *Leases*: Lease Liability in a Sale and Leaseback [1].

The impact of these standards and amendments is currently being assessed.

1.2 Measurement and presentation basis

1.2.1 Historical cost convention

The Group's consolidated financial statements are presented in euros and have been prepared using the historical cost convention, except for financial instruments, which are accounted for under the financial instrument categories defined by IFRS 9.

1.2.2 Chosen options

1.2.2.1 Reminder of IFRS 1 transition options

The Group used some of the options available under IFRS 1 for its transition to IFRS in 2005. The options that continue to have an impact on the consolidated financial statements are:

- translation adjustments: the Group elected to reclassify cumulative translation adjustments within consolidated equity at January 1, 2004;
- business combinations: the Group elected not to restate business combinations that took place prior to January 1, 2004 in accordance with IFRS 3.

(1) Available on the European Commission's website (http://eur-lex.europa.eu/legal-content/FR/TXT/?uri=CELEX:02002R1606-20080410).

(2) These standards and amendments have not yet been adopted by the European Union.

1.2.2.2 Business combinations

Business combinations carried out prior to January 1, 2010 were accounted for in accordance with IFRS 3 prior to the revision. In accordance with IFRS 3 revised, these business combinations have not been restated.

Since January 1, 2010, the Group applies the purchase method as defined in IFRS 3 revised, which consists in recognizing the identifiable assets acquired and liabilities assumed at their fair values at the acquisition date, as well as any non-controlling interests in the acquiree. Non-controlling interests are measured either at fair value or at the entity's proportionate interest in the net identifiable assets of the acquiree. The Group determines on a case-by-case basis which measurement option to be used to recognize non-controlling interests.

1.2.2.3 Consolidated statement of cash flows

The consolidated statement of cash flows is prepared using the indirect method starting from net income.

"Interest received on non-current financial assets" is classified within investing activities because it represents a return on investments. "Interest received on cash and cash equivalents" is shown as a component of financing activities because the interest can be used to reduce borrowing costs. This classification is consistent with the Group's internal organization, where debt and cash are managed centrally by the Group treasury department.

As impairment losses on current assets are considered to be definitive losses, changes in current assets are presented net of impairment.

Cash flows relating to the payment of income tax are presented on a separate line.

1.2.3 Foreign currency transactions

1.2.3.1 Translation of foreign currency transactions

Foreign currency transactions are recorded in the functional currency at the exchange rate prevailing on the date of the transaction.

Functional currency is the currency of the primary economic environment in which an entity operates, which in most cases corresponds to local currency. However, certain entities may have a functional currency different from the local currency when that other currency is used for an entity's main transactions and better reflects its economic environment.

At each reporting date:

- monetary assets and liabilities denominated in foreign currencies are translated at year-end exchange rates. The resulting translation gains and losses are recorded in the consolidated income statement for the year to which they relate;
- non-monetary assets and liabilities denominated in foreign currencies are recognized at the historical cost applicable at the date of the transaction.

1.2.3.2 Translation of the financial statements of subsidiaries with a functional currency other than the euro (the presentation currency)

The statements of financial position of these subsidiaries are translated into euros at the official year-end exchange rates. Income statement and cash flow statement items are translated using the average exchange rate for the year. Any differences arising from the translation of the financial statements of these subsidiaries are recorded under "Translation adjustments" as other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of foreign entities are classified as assets and liabilities of those foreign entities and are therefore denominated in the functional currencies of the entities and translated at the year-end exchange rate.

1.3 Use of estimates and judgment

1.3.1 Estimates

The preparation of consolidated financial statements requires the use of estimates and assumptions to determine the value of assets and liabilities and contingent assets and liabilities at the reporting date, as well as income and expenses reported during the period.

Developments in the economic and financial environment, particularly relating to highly volatile commodities markets and the war in Ukraine, have prompted the Group to step up its risk oversight procedures, mainly in measuring financial instruments, assessing contingencies related to interruptions in the natural gas supply, as well as counterparty and liquidity risks. The estimates used by the Group, among other things, to test for impairment and to measure provisions, also take into account this environment and the sharp market volatility.

Accounting estimates are made in a context that remains sensitive to energy market developments, therefore making it difficult to apprehend medium- and short-term economic prospects. Particular attention has been paid to the consequences of sharp fluctuations in the price of gas and electricity.

Due to uncertainties inherent in the estimation process, the Group regularly revises its estimates in light of currently available information. Final outcomes could differ from those estimates.

The key estimates used in preparing the Group's consolidated financial statements relate mainly to:

- measurement of the recoverable amount of goodwill *(see Note 13.1)*, other intangible assets *(see Note 13.2)* and property, plant and equipment *(see Note 13.3)*;
- measurement of the fair value of financial assets and liabilities, and, in the current context, factoring in the uncertainty surrounding the key assumptions used, in particular the contingencies related to interruptions in the natural gas supply as well as the effects on the minority interest held by the Group in Nord Stream AG and on the loan related to the financing of the Nord Stream 2 pipeline project *(see Note 14)*. The Group has also updated the main valuation inputs of its commodity derivatives, in particular the "bid ask" reserve, to reflect the increased volatility of commodity prices and the reduced liquidity observed in the European gas and electricity markets in the second half of 2022 *(see Notes 14 and 15)*;

- assessment of expected credit losses, particularly in order to update probabilities of default and other inputs, mainly for calculating the CVA (Credit Valuation Adjustment) in an uncertain context with high market price volatility *(see Note 15)*;
- measurement of provisions, particularly for the back-end of the nuclear fuel cycle, dismantling obligations, disputes, and pensions and other employee benefits *(see Notes 17 and 18)*;
- measurement of the fair value of assets acquired and liabilities assumed in a business combination *(see Note 4)*;
- measurement of un-metered revenues (energy in the meter), for which the valuation techniques have been impacted by changes in certain customers' consumption habits in a context of sharp fluctuations in commodity prices *(see Note 7)*;
- measurement of recognized tax loss carry-forwards, taking into account, where applicable, taxable income revisions and projections *(see Note 11)*.

1.3.2 Judgment

As well as relying on estimates, Group management also makes judgments to define the appropriate accounting policies to apply to certain activities and transactions, particularly when the IFRS Standards and IFRIC Interpretations in force do not specifically deal with the related accounting issues.

In particular, the Group exercised its judgment in:

- assessing the type of control *(see Notes 2 and 3)*;
- identifying the performance obligations of sales contracts *(see Note 7)*;
- determining how revenues are recognized for distribution or transmission services invoiced to customers *(see Note 7)*;
- recognizing support measures granted by certain governments, particularly in France and Romania ("tariff shield"), aimed at protecting both consumers and suppliers of gas and electricity against sharp fluctuations in commodity prices *(see Note 7)*;
- identifying "own use contracts" as defined by IFRS 9 within non-financial purchase and sale contracts (electricity, gas, etc.) *(see Note 14)*;
- identifying offsetting arrangements that meet the criteria set out in IAS 32 – *Financial Instruments: Presentation (see Note 14)*;
- determining whether arrangements are or contain a lease *(see Note 13.3)*;
- recognizing new contributions in the energy sector in Europe *(see Note 8)*.

Entities for which judgment on the nature of control has been exercised are listed in Note 2 "Main subsidiaries at December 31, 2022" and Note 3 "Investments in equity method entities".

1.3.3 Consideration of climate issues in the preparation of the Group's financial statements

In addition to the operational and financial issues and risks taken into account in determining future cash flows, the discount rate net of inflation and projected growth, the Group has also exercised its judgment to use assumptions reflecting climate change issues, in order to determine the potential impact on the consolidated financial statements, particularly if there were indications that non-financial assets might be impaired:

- the commitments made by France, Europe and various countries at international level, in particular with regard to long-term carbon neutrality, are taken into account (i) in assessing the value of the Group's assets, in particular through the long-term price scenarios used in impairment tests *(see Note 13.4)*, and (ii) in assessing dismantling provisions, in particular by assessing the useful life of the gas infrastructures in France based on the expected change in the energy mix *(see Note 17);*
- the commitments specifically made by ENGIE are also reflected in the assessment of the value of the Group's assets *(see Note 13.1)*, in particular (i) the complete withdrawal from coal by 2027, which primarily concerns South America, depending on each asset's specific prospects (closure, conversion or disposal), and (ii) the gradual decarbonization of the Group's power generation activities to net zero by 2045 and, more broadly, the Group's investment strategy in favor of the energy transition by expanding its renewable energy fleet, substituting natural gas with renewable gas, thereby confirming a mixed gas/electricity scenario in the Group's long-term projections under the present regulation/remuneration methods for regulated assets (in France in particular), and developing low-carbon services offerings.

As a reminder, the management of climate and environmental risks and their challenges for the Group are presented in Chapter 2 "Risk factors" and Chapter 3 "Non-Financial Statement and CSR Information" of this Universal Registration Document.

NOTE 2 Main subsidiaries at December 31, 2022

ACCOUNTING STANDARDS

Controlled entities (subsidiaries) are fully consolidated in accordance with IFRS 10 – *Consolidated Financial Statements*. An investor (the Group) controls an entity and therefore must consolidate it if all of the following three criteria are met:

- it has the ability to direct the relevant activities of the entity;
- it has the rights and is exposed to variable returns from its involvement with the entity;
- it has the ability to use its power over the entity to affect the investor's return.

2.1 List of main subsidiaries at December 31, 2022

The following lists are made available by the Group to third parties, pursuant to Regulation No. 2016-09 of the French accounting standards authority (ANC) issued on December 2, 2016:

- list of companies included in consolidation;
- list of companies excluded from consolidation because their individual and cumulative incidence on the Group's consolidated financial statements is not material. They correspond to entities deemed not significant as regards the Group's main key figures (revenues, total equity, etc) or entities that have ceased all activities and are undergoing liquidation/closure proceedings;
- list of main non-consolidated interests.

This information is available on the Group's website (www.engie.com, Investors/Regulated information section). Non-consolidated companies are classified under non-current financial assets *(see Note 14.1.1.1)* under "Equity instruments at fair value".

The list of the main subsidiaries consolidated under the full consolidation method presented below was determined, as regards operating entities, based on their contribution to Group revenues, EBITDA, net income and net debt. The main equity-accounted investments (associates and joint ventures) are presented in Note 3 "Investments in equity method entities".

Some entities such as ENGIE SA, ENGIE Énergie Services SA or Electrabel SA comprise both operating activities and headquarters functions which report to management teams of different reportable segments. In the following tables, these operating activities and headquarters functions are shown within their respective reportable segments under their initial company name followed by a * sign.

Renewables

			% interest	
Company name	**Activity**	**Country**	**Dec. 31, 2022**	**Dec. 31, 2021**
Compagnie Nationale du Rhône	Electricity distribution and generation	France	50.0	50.0
ENGIE Energía Perú*	Electricity distribution and generation	Peru	61.8	61.8
ENGIE Green	Electricity distribution and generation	France	100.0	100.0
ENGIE Infinity Renewables	Electricity distribution and generation	United States	100.0	100.0
ENGIE Resources Inc.	Energy sales	United States	100.0	100.0
ENGIE Romania*	Natural gas distribution, Energy sales	Romania	51.0	51.0
ENGIE Solar	Solar EPC	France	100.0	100.0
ENGIE Brazil Energia Group*	Electricity distribution and generation	Brazil	68.7	68.7
ENGIE Renewables	Electricity distribution and generation	France	100.0	100.0
ENGIE Energía Chile Group*	Electricity distribution and generation	Chile	60.0	60.0
Jupiter Equity Holding LLC	Electricity distribution and generation	United States	51.0	51.0

Networks

			% interest	
Company name	**Activity**	**Country**	**Dec. 31, 2022**	**Dec. 31, 2021**
Elengy	Natural gas, LNG	France	60.8	60.9
ENGIE Romania*	Natural gas distribution, Energy sales	Romania	51.0	51.0
Fosmax LNG	Natural gas, LNG	France	60.8	60.9
GRDF	Natural gas distribution	France	100.0	100.0
ENGIE Brazil Energia Group*	Electricity distribution and generation	Brazil	68.7	68.7
ENGIE Energía Chile Group*	Electricity distribution and generation	Chile	60.0	60.0
GRTgaz Group (excluding Elengy)	Natural gas transportation	France, Germany	60.8	60.9
Storengy Deutschland GmbH	Underground natural gas storage	Germany	100.0	100.0
Storengy SAS	Underground natural gas storage	France	100.0	100.0

Energy Solutions

Company name	Activity	Country	% interest Dec. 31, 2022	% interest Dec. 31, 2021
Cofely Besix	Systems, facilities and maintenance services	UAE	100.0	100.0
CPCU	Urban heating networks	France	66.5	66.5
ENGIE Deutschland GmbH	Energy services	Germany	100.0	100.0
ENGIE Energie Services SA*	Energy services, Networks	France	100.0	100.0
ENGIE Servizi SpA	Energy services	Italy	100.0	100.0
Endel Group	Systems, facilities and maintenance services	France	-	100.0
Tractebel Engineering	Engineering	Belgium	100.0	100.0

Thermal

Company name	Activity	Country	% interest Dec. 31, 2022	% interest Dec. 31, 2021
Electrabel SA*	Electricity generation, Energy sales	Belgium	100.0	100.0
ENGIE Cartagena	Electricity generation	Spain	100.0	100.0
ENGIE Deutschland AG*	Electricity generation	Germany	100.0	100.0
ENGIE Energía Perú*	Electricity distribution and generation	Peru	61.8	61.8
ENGIE Energie Nederland NV*	Electricity generation, Energy sales	Netherlands	100.0	100.0
ENGIE Italia SpA*	Energy sales	Italy	100.0	100.0
ENGIE SA*	Energy sales	France	100.0	100.0
ENGIE Thermique France	Electricity generation	France	100.0	100.0
First Hydro Holdings Company	Electricity generation	United Kingdom	75.0	75.0
ENGIE Brazil Energia Group*	Electricity distribution and generation	Brazil	68.7	68.7
ENGIE Energía Chile Group*	Electricity distribution and generation	Chile	60.0	60.0
Pelican Point Power Limited	Electricity generation	Australia	72.0	72.0
UCH Power Limited	Electricity generation	Pakistan	100.0	100.0

Supply

Company name	Activity	Country	% interest Dec. 31, 2022	% interest Dec. 31, 2021
Electrabel SA*	Electricity generation, Energy sales	Belgium	100.0	100.0
ENGIE Italia S.p.A*	Energy sales	Italy	100.0	100.0
ENGIE Romania*	Natural gas distribution, Energy sales	Romania	51.0	51.0
ENGIE SA*	Energy sales	France	100.0	100.0
ENGIE Supply Holding UK Limited	Energy sales	United Kingdom	100.0	100.0
Simply Energy	Energy sales	Australia	72.0	72.0

Nuclear

Company name	Activity	Country	% interest Dec. 31, 2022	% interest Dec. 31, 2021
Electrabel SA*	Electricity generation, Energy sales	Belgium	100.0	100.0
Synatom	Managing provisions relating to power plants and nuclear fuel	Belgium	100.0	100.0

Others

Company name	Activity	Country	% interest Dec. 31, 2022	% interest Dec. 31, 2021
Electrabel SA*	Electricity generation, Energy sales	Belgium	100.0	100.0
ENGIE CC	Financial subsidiaries, Central functions	Belgium	100.0	100.0
ENGIE Deutschland AG*	Holding, Energy management trading	Germany	100.0	100.0
ENGIE Energie Nederland Holding BV*	Holding, Energy management trading	Netherlands	100.0	100.0
ENGIE Energie Nederland NV	Electricity generation, Energy sales	Netherlands	100.0	100.0
ENGIE Energie Services SA*	Energy services, Networks	France	100.0	100.0
ENGIE Energy Management*	Energy management trading	France, Belgium, Italy, United Kingdom	100.0	100.0
ENGIE Energy Management Holding Switzerland AG	Holding	Switzerland	100.0	100.0
ENGIE FINANCE SA	Financial subsidiaries	France	100.0	100.0
ENGIE Global Markets	Energy management trading	France, Belgium, Singapore	100.0	100.0
ENGIE Holding Inc.	Holding – parent company	United States	100.0	100.0
ENGIE Italia SpA*	Holding, Energy management trading	Italy	100.0	100.0
ENGIE North America	Electricity distribution and generation, Natural gaz, LNG, Energy services	United States	100.0	100.0
ENGIE Romania*	Natural gas distribution, Energy sales	Romania	51.0	51.0
ENGIE Energía Chile Group*	Electricity distribution and generation	Chile	60.0	60.0
ENGIE SA*	Holding – parent company, Energy management trading, energy sales	France	100.0	100.0
Cogac	Holding	France	100.0	100.0
GDFI	Holding	France	100.0	100.0
Engie Energie Services International SA	Holding	Belgium	100.0	100.0
Genfina	Holding	Belgium	100.0	100.0
International Power Limited	Holding	United Kingdom	100.0	100.0

EQUANS (1)

Company name	Activity	Country	% interest Dec. 31, 2022	% interest Dec. 31, 2021
Axima Concept	Systems, facilities and maintenance services	France	-	100.0
Cofely Fabricom SA	Systems, facilities and maintenance services	Belgium	-	100.0
Conti Service LLC	Energy services	United States	-	100.0
ENGIE Regeneration	Energy services	United Kingdom	-	100.0
ENGIE Services Nederland NV	Energy services	Netherlands	-	100.0
ENGIE Services Holding UK Ltd	Energy services	United Kingdom	-	100.0
ENGIE Services Limited	Energy services	United Kingdom	-	100.0
INEO Group	Systems, facilities and maintenance services	France	-	100.0

(1) Activities held for sale and classified as "Discontinued operations" at December 31, 2021 (see Note 4 "Main changes in Group structure").

2.2 Significant judgments exercised when assessing control

The Group primarily considers the following information and criteria when determining whether it has control over an entity:

- governance arrangements: voting rights and whether the Group is represented in the governing bodies, majority rules and veto rights;
- the nature of substantive or protective rights granted to shareholders, relating to the entity's relevant activities;
- deadlock resolution mechanisms;
- whether the Group is exposed, or has rights, to variable returns from its involvement with the entity.

The Group exercised its judgment regarding the entities and sub-groups described below.

Entities in which the Group has the majority of the voting rights

GRTgaz (France Infrastructures): 60.8%

The analysis of the shareholders' agreement concluded with Société d'Infrastructures Gazières, a subsidiary of Caisse des Dépôts et Consignations (CDC), which holds 38.6% of the share capital of GRTgaz, was completed by an assessment of the rights granted to the French Energy Regulatory Commission (Commission de Régulation de l'Énergie – CRE). As a regulated activity, GRTgaz has a dominant position on the gas transportation market in France. Accordingly, since the transposition of the Third European Directive of July 13, 2009 into French law (*Code de l'énergie* – Energy Code) on May 9, 2011, GRTgaz has been subject to independence rules as regards its directors and senior management team. The French Energy Code confers certain powers on the CRE in the context of its duties to control the proper functioning of the gas markets in France, including verifying the independence of the members of the Board of Directors and senior management and assessing the choice of investments. The Group considers that it exercises control over GRTgaz and its subsidiaries (including Elengy) based on the Group's ability to appoint the majority of the members of the Board of Directors and take decisions about the relevant activities, especially in terms of the level of investment and planned financing.

Entities in which the Group does not have the majority of the voting rights

In the entities in which the Group does not have the majority of the voting rights, judgment is exercised with regard to the following items, in order to assess whether there is a situation of *de facto* control:

- dispersion of the shareholding structure: number of voting rights held by the Group relative to the number of rights held respectively by the other vote holders and their dispersion;
- voting patterns at shareholders' meetings: the percentages of voting rights exercised by the Group at shareholders' meetings in recent years;
- governance arrangements: representation in the governing body with strategic and operational decision-making power over the relevant activities;
- rules for appointing key management personnel;
- contractual relationships and material transactions.

The main fully consolidated entity in which the Group does not have the majority of the voting rights at December 31, 2022 is Compagnie Nationale du Rhône (49.98%).

Compagnie Nationale du Rhône ("CNR" – Renewables France): 49.98%

The Group holds 49.98% of the share capital of CNR, with CDC holding 33.2%, and the balance of 16.82% being dispersed among around 200 local authorities. In view of the current provisions of the French "Murcef" law, under which a majority of CNR's share capital must remain under public ownership, the Group is unable to hold more than 50% of the share capital. However, the Group considers that it exercises *de facto* control as it holds the majority of the voting rights exercised at shareholders' meetings due to the widely dispersed shareholding structure and the absence of evidence of the minority shareholders acting in concert.

6

2.3 Main subsidiaries with non-controlling interests

The following table shows the subsidiaries with non-controlling interests that are deemed to be material, the respective contributions to equity and to net income at December 31, 2022 and December 31, 2021, as well as the dividends paid to non-controlling interests:

In millions of euros		Percentage interest of non-controlling interests		Net income/(loss) of non-controlling interests		Equity of non-controlling interests		Dividends paid	
Company name	**Activity**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**
GRTgaz Group (France Infrastructures, France)	Regulated gas transportation activities and management of LNG terminals	39.2	39.1	190	106	1,614	1,554	168	105
ENGIE Energía Chile Group (Latin America, Chile) (1)	Electricity distribution and generation – thermal power plants	40.0	40.0	(158)	17	680	781	-	31
ENGIE Romania Group (Rest of Europe, Romania)	Distribution of natural gas, Energy sales	49.0	49.0	31	34	607	592	-	15
ENGIE Brasil Energia Group (Latin America, Brazil) (1)	Electricity distribution and generation	31.3	31.3	116	45	296	294	112	38
ENGIE Energía Perú (Latin America, Peru) (1)	Electricity distribution and generation – thermal and hydroelectric power plants	38.2	38.2	21	22	433	393	12	20
Other subsidiaries with non-controlling interests (2)				(27)	(127)	1,401	1,372	190	201
TOTAL				**173**	**97**	**5,032**	**4,986**	**482**	**410**

(1) ENGIE Energia Chile, ENGIE Brasil Energia and ENGIE Energia Perú are listed in their respective countries.

(2) The net income/(loss) of other non-controlling interests is mainly impacted by the net loss of the operating MtMs for an amount of -€58 million in 2022 and -€361 million in 2021.

2.3.1 Condensed financial information on main subsidiaries with non-controlling interests

The condensed financial information concerning these subsidiaries presented in the table below is based on a 100% interest and is shown before intragroup eliminations.

	GRTgaz Group		ENGIE Energía Chile Group		ENGIE Romania Group	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Income statement						
Revenues	2,535	2,209	1,648	1,187	2,819	1,473
Net income/(loss)	485	388	(395)	42	63	69
Net income/(loss) Group share	295	282	(237)	25	32	35
Other comprehensive income/(loss) – Owners of the parent	54	130	85	107	(15)	9
TOTAL COMPREHENSIVE INCOME/(LOSS) – OWNERS OF THE PARENT	**349**	**412**	**(152)**	**132**	**17**	**45**
Statement of financial position						
Current assets	1,319	1,089	1,108	635	1,091	729
Non-current assets	9,961	10,098	3,210	3,150	975	903
Current liabilities	(1,360)	(1,272)	(540)	(345)	(753)	(357)
Non-current liabilities	(5,803)	(5,946)	(2,091)	(1,498)	(86)	(79)
TOTAL EQUITY	**4,116**	**3,969**	**1,688**	**1,941**	**1,227**	**1,196**
TOTAL NON-CONTROLLING INTERESTS	**1,614**	**1,554**	**680**	**781**	**607**	**592**
Statement of cash flows						
Cash flow from operating activities	1,117	1,149	(320)	186	(365)	102
Cash flow from (used in) investing activities	(450)	(464)	(384)	(234)	(121)	(131)
Cash flow from (used in) financing activities	(663)	(650)	635	29	317	39
TOTAL CASH FLOW FOR THE PERIOD (1)	**4**	**35**	**(68)**	**(19)**	**(169)**	**9**

(1) Excluding effects of changes in exchange rates and other.

6

In millions of euros	ENGIE Brasil Energia Group		ENGIE Energía Perú	
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Income statement				
Revenues	2,164	2,118	525	445
Net income/(loss)	370	144	56	57
Net income/(loss) Group share	254	99	34	35
Other comprehensive income/(loss) – Owners of the parent	72	10	51	37
TOTAL COMPREHENSIVE INCOME/(LOSS) – OWNERS OF THE PARENT	**326**	**109**	**85**	**72**
Statement of financial position				
Current assets	1,322	1,390	384	360
Non-current assets	4,731	4,236	1,923	1,687
Current liabilities	(1,019)	(900)	(257)	(302)
Non-current liabilities	(4,213)	(3,912)	(915)	(716)
TOTAL EQUITY	**822**	**813**	**1,135**	**1,029**
TOTAL NON-CONTROLLING INTERESTS	**296**	**294**	**433**	**393**
Statement of cash flows				
Cash flow from operating activities	1,027	941	62	185
Cash flow from (used in) investing activities	(685)	(629)	(186)	(92)
Cash flow from (used in) financing activities	(1,010)	(126)	17	(14)
TOTAL CASH FLOW FOR THE PERIOD (1)	**(668)**	**185**	**(107)**	**80**

(1) Excluding effects of changes in exchange rates and other.

NOTE 3 Investments in equity method entities

ACCOUNTING STANDARDS

The Group accounts for its investments in associates (entities over which the Group has significant influence) and joint ventures using the equity method. Under IFRS 11 – *Joint Arrangements*, a joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The respective contributions of associates and joint ventures in the statement of financial position, the income statement and the statement of comprehensive income at December 31, 2022 and December 31, 2021 are as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Statement of financial position		
Investments in associates	4,187	4,007
Investments in joint ventures	5,092	4,492
INVESTMENTS IN EQUITY METHOD ENTITIES	**9,279**	**8,498**
Income statement		
Share in net income/(loss) of associates	400	306
Share in net income/(loss) of joint ventures	659	495
SHARE IN NET INCOME/(LOSS) OF EQUITY METHOD ENTITIES	**1,059**	**800**
Statement of comprehensive income		
Share of associates in "Other comprehensive income/(loss)"	510	208
Share of joint ventures in "Other comprehensive income/(loss)"	366	62
SHARE OF EQUITY METHOD ENTITIES IN "OTHER COMPREHENSIVE INCOME/(LOSS)"	**876**	**270**

Significant judgments

The Group primarily considers the following information and criteria in determining whether it has joint control or significant influence over an entity:

- governance arrangements: whether the Group is represented in the governing bodies, majority rules and veto rights;
- the nature of substantive or protective rights granted to shareholders, relating to the entity's relevant activities. This can be difficult to determine in the case of "project management" or "one-asset" entities, as certain decisions concerning the relevant activities are made upon the creation of the joint arrangement and remain valid throughout the project. Accordingly, the analysis of rights relates to the relevant residual activities of the entity (those that significantly affect the variable returns of the entity);
- deadlock resolution mechanisms;
- whether the Group is exposed, or has rights, to variable returns from its involvement with the entity. This can also involve analyzing the Group's contractual relations with the entity, in particular the conditions in which these contracts are entered into, their duration as well as the management of conflicts of interest that may arise when the entity's governing body casts votes.

The Group exercised its judgment regarding the following entities and sub-groups:

Project management entities in the Middle East and in Africa

The significant judgments made in determining the consolidation method to be applied to these project management entities related to the risks and rewards relating to contracts between ENGIE and the entity concerned, as well as an analysis of the residual relevant activities over which the entity retains control after its creation. The Group considers that it exercises significant influence or joint control over these entities, since the decisions taken throughout the term of the project about the relevant activities such as refinancing, or the renewal or amendment of significant contracts (sales, purchases, operating and maintenance services) require, depending on the case, the unanimous consent of two or more parties sharing control.

Joint ventures in which the Group holds an interest of more than 50%

Tihama (60%)

ENGIE holds a 60% stake in the Tihama cogeneration plant in Saudi Arabia and its partner Saudi Oger holds 40%. The Group considers that it has joint control over Tihama since the decisions about its relevant activities, including for example the preparation of the budget and amendments to major contracts, etc., require the unanimous consent of the parties sharing control.

Transportadora Associada de Gás SA ("TAG" – Latin America): 65.0% holding interest (directly and indirectly) representing a net interest in TAG of 54.8%

The Group exercises joint control over TAG since the decisions about its relevant activities, including, for example, the preparation of the budget and medium-term plan, investments, operations and maintenance, etc., are taken according to a majority vote requiring the agreement of ENGIE and Caisse de Dépôt et Placement du Québec (CDPQ). The Group holds potential voting rights but they are not yet exercisable. Consequently, this investment is accounted for using the equity method.

Joint control – difference between joint ventures and joint operations

Classifying a joint arrangement requires the Group to use its judgment to determine whether the entity in question is a joint venture or a joint operation. IFRS 11 requires an analysis of "other facts and circumstances" when determining the classification of jointly controlled entities.

The IFRS Interpretations Committee (IFRS IC) (November 2014) decided that for an entity to be classified as a joint operation, other facts and circumstances must give rise to direct enforceable rights to the assets, and obligations for the liabilities, of the joint arrangement.

In view of this position and its application to our analyses, the Group has no material joint operations at December 31, 2022.

3.1 Investments in associates

3.1.1 Contribution of material associates and of associates that do not have material impact on the Group's financial statements taken individually

The table hereafter shows the contribution of each material associate along with the aggregate contribution of associates deemed not material taken individually, in the consolidated statement of financial position, income statement, statement of comprehensive income, and the "Dividends received from equity method entities" line of the statement of cash flows.

The Group used qualitative and quantitative criteria to determine material associates. These criteria include the contribution to the consolidated line items "Share in net income/(loss) of associates" and "Investments in associates", the total assets of associates in Group share, and associates carrying major projects in the study or construction phase for which the related investment commitments are material.

In millions of euros			Consolidation percentage of investments in associates		Carrying amount of investments in associates		Share in net income/(loss) of associates		Other comprehensive income/(loss) of associates		Dividends received from associates	
Company name	**Activity**	**Capacity**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**
Project management entities in the Middle East (Middle-East, Asia & Africa, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman, Kuwait) (1)	Gas-fired power plants and seawater desalination facilities		-		1,378	940	181	139	411	102	145	107
Gaztransport & Technigaz (GTT)	Engineering company in containment systems for shipping and storage of LNG		5.76 (2)	30.43	139	757	8	1	-	-	20	35
Movhera	Hydro power plant	1,688 MW	40.00	40.00	521	493	(13)	1	41	(23)	-	-
Energia Sustentável do Brasil (Brazil)	Hydro power plant	3,750 MW	40.00	40.00	567	501	(3)	21	-	-	-	-
GASAG (Germany)	Gas and heat networks		31.57	31.57	279	333	26	29	(62)	75	17	11
Eolia Renovables	Wind power plant		40.00		359		33	-	2	-	-	
Other investments in associates that are not material taken individually					943	982	168	114	118	54	89	81
INVESTMENTS IN ASSOCIATES					**4,187**	**4,007**	**400**	**306**	**510**	**208**	**271**	**234**

(1) Investments in associates operating gas-fired power plants and seawater desalination facilities in the Arabian Peninsula have been grouped together under "Project management entities in the Middle East". This mainly includes around 40 associates operating thermal power plants with a total installed capacity of 26,974 MW (at 100%).

These associates have fairly similar business models and joint arrangements: the project management entities selected as a result of a competitive bidding process develop, build and operate power generation plants and seawater desalination facilities. The entire output of these facilities is sold to government-owned companies under power and water purchase agreements, over periods generally spanning 20 to 30 years.

In accordance with their contractual arrangements, the corresponding plants are recognized in accordance with IFRIC 12, IFRS 16 or IAS 16 as property, plant and equipment or as financial receivables. The shareholding structure of these entities systematically includes a government-owned company based in the same country as the project management entity. The Group's percentage interest and percentage voting rights in each of these entities varies between 20% and 50%.

(2) See Note 4.1.4 "Disposal of a portion of ENGIE's interest in French company Gaztransport & Technigaz SA ("GTT")".

The share in net income/(loss) of associates includes a net non-recurring loss of €18 million in 2022 (compared to net non-recurring income of €6 million in 2021), mainly including changes in the fair value of derivative instruments, impairment losses and disposal gains and losses, net of tax *(see Note 5.3 "Net recurring income Group share (NriGs)")*.

3.1.2 Financial information regarding material associates

The tables below provide condensed financial information for the Group's main associates. The amounts shown have been determined in accordance with IFRS, before the elimination of intragroup transactions and after (i) adjustments made in line with Group accounting policies and (ii) fair value measurements of the assets and liabilities of the associate performed at the acquisition date at the level of ENGIE, as required by IAS 28. All amounts are presented based on a 100% interest with the exception of "Total equity attributable to ENGIE".

In millions of euros	Revenues	Net income/ (loss)	Other compre-hensive income	Total compre-hensive income/ (loss)	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Total equity	Consoli-dation % of Group	Total equity attribut-able to ENGIE
AT DECEMBER 31, 2022											
Project management entities in the Middle East	5,067	764	1,695	2,459	2,824	19,711	3,343	13,781	5,411	-	1,378
Gaztransport & Technigaz (GTT)	307	139	2	141	412	2,225	224	2	2,411	5.76	139
Energia Sustentável do Brasil	581	(7)	-	(7)	239	3,275	2,098	-	1,416	40.00	567
Movhera	384	(33)	103	70	147	2,124	699	269	1,303	40.00	521
GASAG	1,606	82	(196)	(114)	1,491	2,140	2,462	284	885	31.57	279
Eolia Renovables	216	82	4	86	297	2,097	340	1,155	900	40.00	359
AT DECEMBER 31, 2021											
Project management entities in the Middle East	4,442	576	425	1,001	3,067	19,513	4,310	14,693	3,578	-	940
Gaztransport & Technigaz (GTT)	169	3	-	2	330	2,299	144	(2)	2,488	30.43	757
Energia Sustentável do Brasil	496	54	-	54	110	2,941	1,800	(3)	1,253	40.00	501
Movhera	276	2	(58)	(57)	198	2,189	226	929	1,232	40.00	493
GASAG	1,368	93	237	331	1,199	2,078	1,927	297	1,054	31.57	333

3.1.3 Transactions between the Group and its associates

The data below set out the impact of transactions with associates on the Group's 2022 consolidated financial statements.

In millions of euros	Purchases of goods and services	Sales of goods and services	Net financial income (excluding dividends)	Trade and other receivables	Loans and receivables at amortized cost	Trade and other payables	Borrowings and debt
Project management entities in the Middle East	-	177	16	59	175	-	-
Contassur [(1)]	-	-	-	208	2	-	-
Energia Sustentável do Brasil	136	-	-	-	-	13	-
Movhera	-	25	6	7	120	5	22
Other	11	34	18	34	218	-	18
AT DECEMBER 31, 2022	**146**	**235**	**41**	**307**	**516**	**18**	**40**

(1) *Contassur is a life insurance company accounted for using the equity method. Contassur offers insurance contracts, chiefly with pension funds that cover post-employment benefit obligations for Group employees and also employees of other companies mainly engaged in regulated activities in the electricity and gas sector in Belgium. Insurance contracts entered into by Contassur represent reimbursement rights recorded within "Other assets" in the statement of financial position. These reimbursement rights totaled €208 million at December 31, 2022 (€229 million at December 31, 2021).*

3.2 Investments in joint ventures

3.2.1 Contribution of joint ventures to the Group

The table below shows the contribution of each material joint venture along with the aggregate contribution of joint ventures deemed not material taken individually to the consolidated statement of financial position, income statement, statement of comprehensive income, and the "Dividends received from equity method entities" line of the statement of cash flows.

The Group used qualitative and quantitative criteria to determine material joint ventures. These criteria include the contribution to the line items "Share in net income/(loss) of joint ventures" and "Investments in joint ventures", the Group's share in the total assets of joint ventures, and joint ventures conducting major projects in the study or construction phase for which the related investment commitments are material.

In millions of euros			Consolidation percentage of investments in joint ventures		Carrying amount of investments in joint ventures		Share in net income/(loss) of joint ventures		Other comprehensive income		Dividends received from joint ventures	
Company name	**Activity**	**Capacity**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2022**	**Dec. 31, 2021**
Transportadora Associada de Gás SA (TAG) (Brazil) (1)	Gas transmission network		65.00	65.00	1,129	792	267	189	153	7	184	222
National Central Cooling Company "Tabreed" (Middle-East, Asia & Africa, Abu Dhabi)	District cooling networks		40.00	40.00	874	787	53	45	-	-	18	14
EcoÉlectrica (Puerto Rico)	Combined-cycle gas-fired power plant and LNG terminal	534 MW	50.00	50.00	314	310	42	46	-	-	60	63
Movhera	Electricity generation	2,392 MW	50.00	50.00	240	253	33	3	15	8	61	35
WSW Energie und Wasser AG (Germany)	Electricity distribution and generation		33.10	33.10	249	240	19	41	1	-	11	7
Iowa University partnership (United States)	Energy services		39.10	39.10	229	208	6	3	2	1	1	2
Ocean Winds	Electricity generation		50.00	50.00	431	169	80	13	124	5	-	-
Georgetown University partnership (United States)	Energy services		50.00	50.00	203	184	6	2	3	-	-	-
Tihama Power Generation Co (Saudi Arabia)	Electricity generation	1,544 MW	60.00	60.00	94	91	21	13	5	4	29	27
Ohio State Energy Partners (United States)	Energy services		50.00	50.00	82	78	4	3	8	6	16	9
Megal GmbH (Germany)	Gas transmission network		49.00	49.00	61	67	2	5	-	-	9	9
Transmisora Eléctrica del Norte (Chile) (2)	Electricity transmission line		50.00	50.00	116	96	5	(1)	19	25	-	-
Other investments in joint ventures that are not material taken individually					1,071	1,216	120	132	37	7	53	40
INVESTMENTS IN JOINT VENTURES					**5,092**	**4,492**	**659**	**495**	**366**	**62**	**442**	**428**

(1) The Group's interest in Transportadora Associada de Gás SA (TAG) is 54.83%.
(2) The Group's interest inTransmisora Eléctrica del Norte is 30%.

The share in net income/(loss) of joint ventures includes non-recurring gain of €1 million in 2022 (non-recurring gain of €44 million in 2021), resulting chiefly from changes in the fair value of derivatives, impairment losses and disposal gains and losses, net of tax *(see Note 5.3 "Net recurring income Group share (NriGs)")*.

3.2.2 Financial information regarding material joint ventures

The amounts shown have been determined in accordance with IFRS before the elimination of intragroup items and after (i) adjustments made in line with Group accounting policies and (ii) fair value measurements of the assets and liabilities of the joint venture performed at the date of acquisition at the level of ENGIE, as required by IAS 28. All amounts are presented based on a 100% interest with the exception of "Total equity attributable to ENGIE" in the statement of financial position.

3.2.2.1 Information on the income statement and statement of comprehensive income

In millions of euros	Revenues	Depreciation and amortization of intangible assets and property, plant and equipment	Net financial income/ (loss)	Income tax benefit/ (expense)	Net income/ (loss)	Other comprehensive income	Total comprehensive income/(loss)
AT DECEMBER 31, 2022							
Transportadora Associada de Gás SA (TAG)	1,549	(292)	(386)	(215)	411	235	647
National Central Cooling Company "Tabreed"	167	-	(35)	-	133	-	133
EcoÉlectrica	166	(32)	1	(4)	85	-	85
Portfolio of power generation assets in Portugal	512	(50)	(14)	(27)	74	48	122
WSW Energie und Wasser AG	1,213	(14)	-	(28)	50	3	53
Iowa University partnership	87	-	(21)	-	16	6	22
Ocean Winds	40	(9)	(23)	(1)	160	247	407
Georgetown University partnership	60	(1)	(22)	-	12	5	17
Tihama Power Generation Co	119	(6)	(9)	(6)	35	9	45
Ohio State Energy Partners	180	(1)	(65)	(2)	7	15	22
Megal GmbH	122	(67)	(4)	1	5	-	5
Transmisora Eléctrica del Norte	70	-	(27)	(7)	13	19	32
AT DECEMBER 31, 2021							
Transportadora Associada de Gás SA (TAG)	1,109	(248)	(254)	(150)	290	11	301
National Central Cooling Company "Tabreed"	170	(40)	(35)	-	113	-	113
EcoÉlectrica	174	(38)	-	(5)	104	-	104
Portfolio of power generation assets in Portugal	369	(54)	(27)	(19)	3	26	29
WSW Energie und Wasser AG	781	(14)	(1)	(62)	126	-	126
Iowa University partnership	65	-	(19)	-	9	3	12
Ocean Winds	-	(12)	(13)	(1)	25	10	35
Georgetown University partnership	19	-	(9)	-	5	-	5
Tihama Power Generation Co	107	(5)	(11)	(6)	22	6	28
Ohio State Energy Partners	193	(1)	(48)	-	6	12	18
Megal GmbH	122	(64)	(3)	1	10	-	10
Transmisora Eléctrica del Norte	41	-	(22)	-	(1)	49	48

3.2.2.2 Information on the statement of financial position

In millions of euros	Cash and cash equivalents	Other current assets	Non-current assets	Short-term borrowings	Other current liabilities	Long-term borrowings	Other non-current liabilities	Total equity	Consolidation % of Group	Total equity attributable to ENGIE
AT DECEMBER 31, 2022										
Transportadora Associada de Gás SA (TAG)	124	367	6,216	668	71	2,771	1,460	1,737	65.00	1,129
National Central Cooling Company "Tabreed"	402	150	2,631	-	194	805	-	2,184	40.00	874
EcoÉlectrica	6	79	580	3	15	-	18	629	50.00	314
Portfolio of power generation assets in Portugal	247	514	733	99	278	500	60	557	50.00	240
WSW Energie und Wasser AG	82	518	950	263	260	147	150	731	33.10	249
Iowa University partnership	2	17	1,162	7	7	581	-	586	39.10	229
Ocean Winds	337	-	2,425	1,149	189	137	424	863	50.00	431
Georgetown University partnership	5	3	954	-	-	555	3	404	50.00	203
Tihama Power Generation Co	49	145	221	78	51	119	11	156	60.00	94
Ohio State Energy Partners	14	65	1,441	-	10	1,331	17	162	50.00	82
Megal GmbH	18	14	696	-	44	511	49	125	49.00	61
Transmisora Eléctrica del Norte	41	34	770	35	3	574	-	233	50.00	116
AT DECEMBER 31, 2021										
Transportadora Associada de Gás SA (TAG)	70	251	5,721	540	75	3,174	1,036	1,218	65.00	792
National Central Cooling Company "Tabreed"	294	141	2,469	-	182	755	-	1,967	40.00	787
EcoÉlectrica	14	77	572	3	22	-	18	620	50.00	310
Portfolio of power generation assets in Portugal	294	495	793	159	208	558	72	583	50.00	253
WSW Energie und Wasser AG	17	268	852	156	36	93	142	711	33.10	240
Iowa University partnership	-	7	1,070	9	4	527	3	534	39.10	209
Ocean Winds	79	-	1,079	83	175	362	200	338	50.00	169
Georgetown University partnership	9	-	868	-	-	509	1	367	50.00	184
Tihama Power Generation Co	53	135	286	73	49	191	10	151	60.00	91
Ohio State Energy Partners	31	70	1,274	-	63	1,126	30	156	50.00	78
Megal GmbH	9	13	729	-	50	511	52	138	49.00	67
Transmisora Eléctrica del Norte	45	9	730	30	3	559	-	193	50.00	96

3.2.3 Transactions between the Group and its joint ventures

The data below set out the impact of transactions with joint ventures on the Group's 2022 consolidated financial statements.

In millions of euros	Purchases of goods and services	Sales of goods and services	Net financial income (excluding dividends)	Trade and other receivables	Loans and receivables at amortized cost	Trade and other payables	Borrowings and debt
EcoÉlectrica	-	-	-	-	-	-	62
WSW Energie und Wasser AG	2	47	-	6	-	4	-
Megal GmbH	65	-	-	-	-	6	-
Futures Energies Investissements Holding	14	21	4	8	210	2	-
Ocean Winds	-	-	41	2	569	-	-
Other	115	123	7	49	164	10	44
AT DECEMBER 31, 2022	**196**	**191**	**53**	**64**	**942**	**22**	**105**

3.3 Other information on investments accounted for using the equity method

3.3.1 Unrecognized share of losses of associates and joint ventures

Cumulative unrecognized losses of associates (corresponding to the cumulative amount of losses exceeding the carrying amount of investments in the associates concerned) including other comprehensive income/(loss), amounted to €6 million in 2022 (*versus* €49 million in 2021).

These unrecognized losses correspond to the negative fair value of derivative instruments designated as interest rate and commodity hedges ("Other comprehensive income/(loss)") contracted by associates in the Middle-East, Africa and Asia in connection with the financing of construction projects for power generation plants.

3.3.2 Commitments and guarantees given by the Group in respect of equity method entities

At December 31, 2022, the main commitments and guarantees given by the Group in respect of equity method entities concern:

- Energia Sustentável do Brasil ("Jirau"), for an aggregate amount of BRL 4,204 million (€755 million).

  At December 31, 2022, the amount of loans granted by Banco Nacional de Desenvolvimento Econômico e Social, the Brazilian Development Bank, to Energia Sustentável do Brasil amounted to BRL 10,511 million (€1,889 million). Each partner stands as guarantor for this debt to the extent of its ownership interest in the consortium;
- TAG for bank guarantees for an amount of €140 million;
- the project management entities in the Middle East and Africa, for an aggregate amount of €694 million.

Commitments and guarantees given by the Group in respect of these project management entities chiefly correspond to:

- letters of credit to guarantee debt service reserve accounts for an aggregate amount of €179 million, The project financing set up in certain entities can require those entities to maintain a certain level of cash within the company (usually enough to service its debt for six months). This is particularly the case when the financing is without recourse. However, this level of cash may be replaced by letters of credit,
- collateral given to lenders in the form of pledged shares in the project management entities, for an aggregate amount of €280 million,
- performance bonds and other guarantees for an amount of €235 million.

NOTE 4 Main changes in Group structure

ACCOUNTING STANDARDS

In accordance with IFRS 5 – *Non-Current Assets Held for Sale and Discontinued Operations*, assets or groups of assets held for sale are presented separately on the face of the statement of financial position and are measured and accounted for at the lower of their carrying amount and fair value less costs to sell.

An asset is classified as "held for sale" when its sale is highly probable within twelve months from the date of classification, when it is available for immediate sale under its present condition and when management is committed to a plan to sell the asset and an active program to locate a buyer and complete the plan has been initiated. To assess whether a sale is highly probable, the Group takes into consideration among other things indications of interest and offers received from potential buyers as well as specific execution risks attached to certain transactions.

If an asset classified as "held for sale" no longer meets the above conditions it will be reclassified in accordance with the standard.

Furthermore, assets or groups of assets are presented as discontinued operations in the Group's consolidated financial statements when they are classified as "held for sale" and represent a separate major line of business under IFRS 5.

4.1 Disposals carried out in 2022

4.1.1 Impact of the main disposals and sale agreements during the period

As part of the presentation of its new strategy, on May 18, 2021, the Group confirmed a significant €11 billion increase in its asset portfolio rotation program, the majority of which was carried out end of 2022.

The table below shows the impact of the main disposals and sale agreements of 2022 on the Group's net financial debt, excluding partial disposals with respect to DBSO [(1)] activities:

In millions of euros	Disposal price	Reduction in net debt
Disposal of EQUANS [(1)]	6,146	6,975
Earn out related to the disposal of a share of ENGIE's interest in SUEZ – France	347	347
Disposal of ENGIE's residual interest in SUEZ – France	227	227
Disposal of a share of ENGIE's interest in GTT – France	835	835
Disposals of ENGIE's interests in geothermal assets – Indonesia	263	342
Other disposals that are not material taken individually	177	(29)
Effects of classification as "assets held for sale"	-	297
TOTAL	**7,995**	**8,994**

(1) Does not include the reduction in external net financial debt recognized as held for sale in accordance with IFRS 5 at December 31, 2021.

The €8,994 million reduction in net financial debt at December 31, 2022 is in addition to the €2,025 million decrease previously recognized at December 31, 2021 as part of the asset disposal program, representing a total of €11,018 million to date. Disposals in the process of completion at December 31, 2022 are described in Note 4.2 "Assets held for sale".

4.1.2 Disposal of EQUANS

On October 4, 2022, the Group completed the sale of its interest in EQUANS to Bouygues.

The combined effects of the transaction and of the cash generated by these activities since January 1, 2022 have reduced the Group's net debt by €6,975 million (€7,134 million with the reduction of external net financial debt recognized under IFRS 5 – Non-current assets held for sale and discontinued operations, as of December 31, 2021).

The disposal gain recognized in "Net income/(loss) relating to discontinued operations" *(see Note 4.2.1)*, amounted to €2,086 million in 2022.

(1) Develop, Build, Share and Operate, a model used in renewable energies based on continuous rotation of capital employed.

4.1.3 Earn-out from the disposal of a portion of ENGIE's interest in French company SUEZ SA in 2021 and the disposal of its remaining stake in 2022

On October 6, 2020, the Group sold 29.9% of its stake in SUEZ SA to the VEOLIA Group. This sale was subject to an earn-out mechanism if the VEOLIA Group carried out other capital transactions on SUEZ at a price higher than that of the 29.9% block sold by ENGIE.

In 2021, the VEOLIA Group launched a takeover bid for SUEZ at a price of €20.50 per share (cum dividend) which closed successfully on January 7, 2022. At the end of 2021, the ENGIE group considered that all the conditions had been met to recognize the €347 million in profit or loss related to the earn-out mechanism negotiated with the VEOLIA Group.

ENGIE cashed in this earn-out on January 19, 2022, once the takeover bid had been closed

On January 18, 2022, the Group also contributed its remaining 1.8% stake in SUEZ as part of the public offer initiated by the VEOLIA Group. This transaction had no impact on the Group's 2022 results, as the interest was measured at fair value at December 31, 2021. The effects of the transaction have reduced the Group's net financial debt by €227 million.

4.1.4 Disposal of a portion of ENGIE's interest in French company Gaztransport & Technigaz SA ("GTT")

On March 24, 2022, ENGIE announced the sale of a stake in GTT representing approximately 9% of the share capital at a price of €90 per share.

On September 16, 2022, ENGIE sold an additional stake in GTT representing approximately 6% of the share capital at a price of €115.50 per share.

At December 31, 2022, 96% of the bond redeemable for GTT shares had been converted. The balance was either converted or redeemed at par in January 2023.

At December 31, 2022, these transactions did not change ENGIE's representation on GTT's Board of Directors. Consequently, following these disposals and conversions, ENGIE has maintained its significant influence and therefore continues to account for its residual 5.76% interest in GTT using the equity method.

These transactions, which are part of the targeted plan to withdraw from non-strategic businesses and non-controlling interests, have reduced the Group's net financial debt by €835 million. The disposal gain before tax, including the effects of the embedded derivative on the bond redeemable for GTT shares, amounted to €280 million in 2022.

4.1.5 Disposal of ENGIE's interests in geothermal assets in Indonesia

On September 16, 2022, ENGIE finalized the sale of its entire stake in PT Supreme Energy Muara Laboh to Sumitomo Corporation and INPEX Geothermal Ltd.

On October 14 and October 24, 2022, ENGIE finalized the sale of its entire stake in PT Supreme Energy Rantau Dedap to Merit Power Holding bv and INPEX Geothermal Ltd.

These transactions have reduced the Group's net financial debt by €342 million. The disposal gain before tax amounted to €111 million in 2022.

4.2 Assets held for sale

Total "Assets classified as held for sale" and total "Liabilities directly associated with assets classified as held for sale" amounted to €428 million and €371 million, respectively, at December 31, 2022.

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Property, plant and equipment and intangible assets, net	336	4,235
Other assets	92	7,645
TOTAL ASSETS CLASSIFIED AS HELD FOR SALE	**428**	**11,881**
of which Assets relating to discontinued operations		*11,186*
Borrowings and debt	290	368
Other liabilities	80	7,047
TOTAL LIABILITIES DIRECTLY ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE	**371**	**7,415**
of which Liabilities directly associated with assets relating to discontinued operations		*6,952*

The assets related to the EQUANS entities, as well as Endel and its main subsidiaries recorded as "Assets held for sale" at December 31, 2021 were sold in 2022. Due to unfavorable developments in the planned sale of certain renewable assets in Mexico, they were no longer classified as "Assets held for sale" at December 31, 2022.

At December 31, 2022, "Assets held for sale" relate solely to a thermal power plant in Brazil. Given the expected sale price, a non-material value adjustment was recognized for the year. This transaction is expected to be completed in first half 2023.

4.2.1 Financial information on discontinued operations

Net income/(loss) from discontinued operations

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
REVENUES	**9,937**	**12,860**
Purchases and operating derivatives	(6,164)	(7,942)
Personnel costs	(3,497)	(4,420)
Depreciation, amortization and provisions	38	(239)
Taxes	(48)	(59)
Other operating income	150	166
Current operating income including operating MtM	**416**	**366**
Share in net income of equity method entities	4	-
Current operating income including operating MtM and share in net income of equity method entities	**420**	**367**
Impairment losses	(3)	2
Restructuring costs	(28)	(100)
Changes in scope of consolidation	2,030	(53)
Other non-recurring items	-	(30)
RESULT FROM OPERATING ACTIVITIES	**2,420**	**185**
Financial expenses	(47)	(73)
Financial income	17	24
NET FINANCIAL INCOME/(LOSS)	**(30)**	**(49)**
Income tax benefit/(expense)	(206)	(55)
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS	**2,183**	**80**
Of which Net income/(loss) relating to discontinued operations, Group share	**2,181**	**79**
Of which Non-controlling interests relating to discontinued operations	**1**	**1**
Financial indicators used in financial communication		
EBITDA	424	622
EBIT [(1)]	420	368
Net recurring income/(loss) Group Share [(1)]	287	231

(1) Includes the impact at December 31, 2022 of no longer depreciating the assets as of their date of classification as "Assets held for sale", of a positive €229 million on EBIT (compared with €51 million in 2021) and a positive €170 million on "Recurring net income, Group share" (compared to €37 million in 2021).

Income from discontinued operations relates to ENGIE's activities relating to the EQUANS entities, including their disposal gain *(see Note 4.1.2)*.

Cash flows from discontinued operations

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
NET INCOME/(LOSS)	**2,183**	**80**
Cash generated from operations before income tax and working capital requirements	356	462
+ Tax paid	(17)	(71)
Change in working capital requirements	(241)	96
CASH FLOW FROM OPERATING ACTIVITIES	**98**	**486**
Acquisitions of property, plant and equipment and intangible assets	(135)	(208)
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	(2)	(14)
Loss of controlling interests in entities, net of cash and cash equivalents sold	595	-
Disposals of property, plant and equipment and intangible assets	3	6
Interest received on financial assets	(6)	(12)
Change in loans and receivables originated by the Group and other [(1)]	(3,580)	(2,782)
Other	1	7
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES	**(3,123)**	**(3,003)**
Repayment of borrowings and debt	(124)	(155)
Interest paid	(20)	(33)
Interest received on cash and cash equivalents	-	(1)
Increase in borrowings	26	8
Others	(2)	-
Cash flow from (used in) financing activities excluding intercompany transactions	(120)	(181)
Transactions with ENGIE [(2)]	3,138	2,700
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES	**3,018**	**2,519**
Effects of changes in exchange rates and other [(3)]	(422)	(1)
TOTAL CASH FLOW FOR THE PERIOD	**(429)**	**1**
Cash and cash equivalents at beginning of period	**429**	**428**
Cash and cash equivalents at end of period	**-**	**429**

(1) The line "Change in loans and receivables originated by the Group and other" includes the acquisition by EQUANS of shares in the "Asset-Light Client Solutions business" held by ENGIE for a negative €3,555 million and disposals, by EQUANS, of shares not constituting the "Asset-Light Client Solutions business" to ENGIE for a positive €7 million.

(2) The line "Transactions with ENGIE" includes the capital increases of EQUANS, for an amount of €2,774 million subscribed by ENGIE.

(3) The line "Effects of changes in exchange rates and other" corresponds to EQUANS' cash and cash equivalents at December 31, 2021 for €429 million.

4.3 Acquisitions carried out in 2022

In total, acquisitions carried out in 2022 had an impact of €1,951 million on net financial debt.

On May 4, 2022, ENGIE and Crédit Agricole Assurances completed the acquisition of a 97.33% stake in Eolia Renovables, a renewable energy producer in Spain, from Canadian institutional investment manager Alberta Investment Management Corporation. The transaction covers the ownership and operation of 899 MW of operating assets (821 MW of onshore wind and 78 MW photovoltaic) and a 1.2 GW pipeline of renewable energy projects.

The operating assets are 40% owned by ENGIE and 60% by Crédit Agricole Assurances while ENGIE is developing and building the pipeline of projects. The Group will provide a complete range of services (O&M, Asset Management, Energy Management and Development services) for the full asset scope.

The acquired assets benefit from a regulated scheme ensuring predictability of returns for the next ten years. This transaction has an impact of €0.5 billion on the Group's net financial debt. The interest in the company holding the operating assets is accounted for using the equity method. The company responsible for developing and building the pipeline of projects is fully consolidated by ENGIE. The Group will finalize the purchase price allocation during the first half of 2023.

Other acquisitions during the year relate mainly to the financing of the development of the Group's offshore wind energy activities (Ocean Winds joint venture) for €0.4 billion, concession contracts in Brazil for €0.2 billion, the effect of acquiring a controlling interest in renewable activities in France and India for €0.2 billion each and the acquisition of renewable energy assets in Chile for €0.1 billion.

NOTE 5 Financial indicators used in financial communication

The purpose of this note is to present the main non-GAAP financial indicators used by the Group as well as their reconciliation with the indicators of the IFRS consolidated financial statements.

5.1 EBITDA

The reconciliation between EBITDA and current operating income including operating MtM and share in net income of equity method entities is as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Current operating income including operating MtM and share in net income of equity method entities	**5,367**	**6,916**
Mark-to-market on commodity contracts other than trading instruments	3,661	(721)
Net depreciation and amortization/Other	4,576	4,370
Share-based payments (IFRS 2)	92	48
Non-recurring share in net income of equity method entities	17	(50)
EBITDA	**13,713**	**10,563**

5.2 EBIT

The reconciliation between EBIT and current operating income including operating MtM and share in net income of equity method entities is as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Current operating income including operating MtM and share in net income of equity method entities	**5,367**	**6,916**
Mark-to-market on commodity contracts other than trading instruments	3,661	(721)
Non-recurring share in net income of equity method entities	17	(50)
EBIT	**9,045**	**6,145**

5.3 Net recurring income Group share (NriGs)

Net recurring income Group share is a financial indicator used by the Group in its financial reporting to present net income Group share adjusted for unusual, inhabitual or non-recurring items.

The reconciliation of net income/(loss) with net recurring income Group share is as follows:

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
NET INCOME/(LOSS) GROUP SHARE		**216**	**3,661**
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS, GROUP SHARE		2,182	79
Net income/(loss) relating to continuing operations, Group share		**(1,965)**	**3,582**
Net income attributable to non-controlling interests relating to continuing operations		172	96
Net income/(loss) relating to continuing operations		**(1,793)**	**3,678**
Reconciliation items between “Current operating income including operating MtM and share in net income of equity method entities” and “Net income/(loss) from operating activities”		**4,241**	**194**
Impairment losses	*9.1*	*2,774*	*1,028*
Restructuring costs	*9.2*	*230*	*204*
Changes in scope of consolidation	*9.3*	*(91)*	*(1,107)*
Other non-recurring items		*1,328*	*69*
Other adjusted items		**3,389**	**(363)**
Mark-to-market on commodity contracts other than trading instruments	*8*	*3,661*	*(721)*
Ineffective portion of derivatives qualified as fair value hedges	*10*	*(7)*	*2*
Gains/(losses) on debt restructuring and early unwinding of derivative financial instruments	*10*	*(46)*	*-*
Change in fair value of derivatives not qualified as hedges and ineffective portion of derivatives qualified as cash flow hedges	*10*	*(16)*	*153*
Non-recurring income/(loss) from debt instruments and equity instruments	*10*	*1,254*	*(298)*
Other adjusted tax impacts		*(1,474)*	*552*
Non-recurring income/(loss) included in share in net income of equity method entities		*17*	*(50)*
Net recurring income/(loss) relating to continuing operations		**5,836**	**3,509**
Net recurring income/(loss) attributable to non-controlling interests		614	581
NET RECURRING INCOME/(LOSS) RELATING TO CONTINUING OPERATIONS, GROUP SHARE		**5,223**	**2,927**
Net recurring income/(loss) relating to discontinued operations, Group share		287	231
NET RECURRING INCOME/(LOSS) GROUP SHARE		**5,510**	**3,158**

5.4 Industrial capital employed

The reconciliation of industrial capital employed with items in the statement of financial position is as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
(+) Property, plant and equipment and intangible assets, net	62,853	57,863
(+) Goodwill	12,854	12,799
(-) Goodwill Gaz de France - SUEZ and International Power [(1)]	*(7,241)*	*(7,213)*
(+) IFRIC 4, IFRS 16 and IFRIC 12 receivables	2,521	2,456
(+) Investments in equity method entities	9,279	8,498
(-) Goodwill arising on the International Power combination [(1)]	*(40)*	*(38)*
(+) Trade and other receivables, net	31,310	32,556
(-) Margin calls [(1)] [(2)]	*(5,405)*	*(13,856)*
(+) Inventories	8,145	6,175
(+) Assets from contracts with customers	12,584	8,377
(+) Other current and non-current assets	19,060	13,681
(+) Deferred tax	(4,379)	(6,557)
(+) Cancellation of deferred tax on other recyclable items [(1)] [(2)]	*(14)*	*841*
(-) Provisions	(27,027)	(25,459)
(+) Actuarial gains and losses in shareholders' equity (net of deferred tax) [(1)]	*1,058*	*3,162*
(-) Trade and other payables	(39,801)	(32,822)
(+) Margin calls [(1)] [(2)]	*6,351*	*7,835*
(-) Liabilities from contracts with customers	(3,412)	(2,739)
(-) Other current and non-current liabilities	(27,279)	(19,175)
INDUSTRIAL CAPITAL EMPLOYED	**51,416**	**46,382**

(1) For the purpose of calculating industrial capital employed, the amounts recorded in respect of these items have been adjusted from those appearing in the statement of financial position.

(2) Margin calls included in "Trade and other receivables, net" and "Trade and other payables" correspond to advances received or paid as part of collateralization agreements set up by the Group to manage counterparty risk on commodity transactions.

From January 1, 2023, the Group will expand its definition of industrial capital employed to include financial assets covering nuclear provisions, as well as the initial margins required by certain market activities. The following table shows the impact of these changes on industrial capital employed:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
INDUSTRIAL CAPITAL EMPLOYED	**51,416**	**46,382**
(+) Financial assets covering nuclear provisions	6,626	5,505
(+) Initials Margins	1,740	4,722
INDUSTRIAL CAPITAL EMPLOYED (NEW DEFINITION FOR 2023)	**59,782**	**56,609**

5.5 Cash flow from operations (CFFO)

The reconciliation of cash flow from operations (CFFO) with items in the statement of cash flows is as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021 (1)
Cash generated from operations before income tax and working capital requirements	12,415	9,806
Tax paid	(1,504)	(603)
Change in working capital requirements	(2,424)	(2,377)
Interest received on financial assets	(37)	32
Dividends received on equity investments	18	57
Interest paid	(822)	(719)
Interest received on cash and cash equivalents	194	52
Nuclear – expenditure on power plant dismantling and reprocessing, fuel storage	163	202
Change in financial assets held for investment or financing purposes	188	464
(+) Change in financial assets held for investment or financing purposes recorded in the statement of financial position and other and other	*(176)*	*(448)*
CASH FLOW FROM OPERATIONS (CFFO)	**8,016**	**6,466**

(1) In view of the start of work related to the nuclear exit in Belgium, the definition of cash flow from operations (CFFO) has been adjusted to exclude expenditure on the dismantling of nuclear power plants and the management of radioactive materials and waste. These expenses are now presented together with investments to cover nuclear provisions, under a dedicated heading. The data at December 31, 2021 have been restated accordingly.

5.6 Capital expenditure (CAPEX) and growth CAPEX

The reconciliation of capital expenditure (CAPEX) with items in the statement of cash flows is as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021 (1) (2)
Acquisitions of property, plant and equipment and intangible assets	6,379	5,990
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	289	392
(+) Cash and cash equivalents acquired	*14*	*6*
Acquisitions of investments in equity method entities and joint operations	407	369
Acquisitions of equity and debt instruments	(175)	1,548
Change in loans and receivables originated by the Group and other	2,877	(121)
(+) Other	*(10)*	*3*
Change in ownership interests in controlled entities	-	35
(-) Disposal impacts relating to DBSO (3) activities	(472)	(270)
(-) Synatom Financial investments/Disposal of Synatom financial assets (1)	(1,822)	(1,261)
(+) Change in scope – Acquisitions (2)	371	-
TOTAL CAPITAL EXPENDITURE (CAPEX)	**7,858**	**6,693**
(-) Maintenance CAPEX	(2,373)	(2,418)
TOTAL GROWTH CAPEX	**5,485**	**4,275**

(1) In view of the start of work related to the nuclear exit in Belgium, the definition of capital expenditure (CAPEX) has been adjusted to exclude hedging of nuclear provisions carried out by Synatom. These expenses are now presented together with investments to cover expenditure for the dismantling of nuclear power plants and the management of radioactive materials and waste, under a dedicated heading. The data at December 31, 2021 have been restated accordingly.

(2) Capital expenditure (CAPEX) now includes changes in the scope of net financial debt of acquired entities. The impact at December 31, 2021 is not material.

(3) Develop, Build, Share & Operate; including Tax equity financing received (See Note 22 "Working capital requirements, inventories, other assets and other liabilities").

5.7 Net financial debt

The reconciliation of net financial debt with items in the statement of financial position is as follows:

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
(+) Long-term borrowings	14.2 & 14.3	28,083	30,458
(+) Short-term borrowings	14.2 & 14.3	12,508	10,590
(+) Financial instruments – carried in liabilities	14.4	51,276	46,931
(-) Derivative instruments hedging commodities and other items		*(50,542)*	*(46,617)*
(-) Other financial assets	14.1	(12,992)	(13,444)
(+) Loans and receivables at amortized cost not included in net financial debt		*6,720*	*5,143*
(+) Equity instruments at fair value		*1,495*	*2,827*
(+) Debt instruments at fair value not included in net financial debt		*3,394*	*3,853*
(-) Cash and cash equivalents	14.1	(15,570)	(13,890)
(-) Financial instruments – carried in assets	14.4	(48,386)	(44,989)
(+) Derivative instruments hedging commodities and other items		*48,067*	*44,489*
NET FINANCIAL DEBT		**24,054**	**25,350**

5.8 Economic net debt

Economic net debt is as follows:

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
NET FINANCIAL DEBT	**14.3**	**24,054**	**25,350**
Provisions for back-end of the nuclear fuel cycle	17	9,088	8,030
Provisions for dismantling of plant and equipment	17	11,015	8,015
Provisions for site rehabilitation	17	244	246
Post-employment benefits – Pensions	18	452	1,779
(-) Infrastructures regulated companies		*272*	*(16)*
Post-employment benefits – Reimbursement rights	18	(208)	(228)
Post-employment benefits – Other benefits	18	3,704	5,149
(-) Infrastructures regulated companies		*(2,392)*	*(3,289)*
Deferred tax assets for pensions and related obligations	11	(812)	(1,501)
(-) Infrastructures regulated companies		*490*	*780*
Plan assets relating to nuclear provisions, inventories of uranium, related derivative financial instruments and a receivable of Electrabel towards EDF Belgium	17 & 22	(7,098)	(6,014)
ECONOMIC NET DEBT		**38,808**	**38,300**

NOTE 6 Segment information

6.1 Operating segment and reportable segment

ENGIE is organized around:

- four Global Business Units (GBU) representing the Group's four strategic activities: Renewables GBU, Energy Solutions GBU, Networks GBU and Thermal & Supply GBU;
- two operating entities: Nuclear and Global Energy Management & Sales ("GEMS");
- an Other group mainly comprising the Corporate functions and certain Holdings.

From 2022 onwards and given the significant volatility of the commodity markets, the Group Executive Committee, which represents the chief operating decision maker as defined by IFRS 8 – *Operating Segments*, monitors the activities of GEMS, which has become an operating segment.

The reportable segments are identical to the operating segments and correspond to the activities underlying the organization of the GBU.

- **Renewables**: comprises all centralized renewable energy generation activities, including financing, construction, operation and maintenance of renewable energy facilities, using various energy sources such as hydroelectric, onshore wind, photovoltaic solar, biomass, offshore wind, and geothermal. The energy produced is fed into the grid and sold either on the open or regulated market or to third parties through electricity sale agreements.
- **Networks**: comprises the Group's electricity and gas infrastructure activities and projects. These activities include the management and development of (i) gas and electricity transportation networks and natural gas distribution networks in and outside of Europe, (ii) natural gas underground storage in Europe, and (iii) regasification infrastructure in France and Chile. Apart from the historical infrastructure management activities, its asset portfolio also contributes to the challenges of energy decarbonization and network greening (gradual integration of green gas, hydrogen-based projects, etc.).
- **Energy Solutions**: encompasses the construction and management of decentralized energy networks to produce low-carbon energy (heating and cooling networks, distributed power generation plants, distributed solar power parks, low-carbon mobility, low-carbon cities and public lighting, etc.) and related services (energy efficiency, technical maintenance, sustainable development consulting).
- **Thermal**: encompasses all the Group's centralized power generation activities using thermal assets, whether contracted or not. It includes the operation of power plants fueled mainly by gas or coal, as well as pump-operated storage plants. The energy produced is fed into the grid and sold either on the open or regulated market or to third parties through electricity sale agreements. It also includes the financing, construction and operation of desalination plants, whether or not connected to power plants as well as the development of hydrogen production capacities.
- **Supply**: encompasses all the Group's activities relating to the sale of gas and electricity to end customers, whether professional or individual. It also includes all the Group's activities in services for residential clients.
- **Nuclear**: encompasses all of the Group's nuclear power generation activities, with seven reactors in Belgium (four in Doel and three in Tihange) and drawing rights in France.
- **Others**: encompasses the activities of GEMS and GTT, as well as Corporate and holdings. The GEMS operating entity is responsible, at the global level, for the supply of energy and the management of risk and optimization of assets on the markets. It sells energy to companies and offers energy management services and solutions to support the decarbonization of the Group and its customers.

6.2 Key indicators by reportable segment

Revenues

	Dec. 31, 2022			Dec. 31, 2021 (2)		
In millions of euros	External revenues	Intra-Group revenues	Total	External revenues	Intra-Group revenues	Total
Renewables	6,216	136	6,352	3,653	61	3,714
Networks	6,961	961	7,922	6,700	878	7,578
Energy Solutions	11,552	262	11,814	9,926	230	10,155
Thermal	7,129	1,144	8,274	4,089	827	4,916
Supply	16,810	534	17,344	10,396	117	10,513
Nuclear	35	2,653	2,688	56	1,705	1,762
Others	45,163	2,007	47,169	23,046	16,102	39,148
Of which GEMS (1)	*45,137*	*1,979*	*47,115*	*22,870*	*16,077*	*38,947*
Elimination of internal transactions	-	(7,697)	(7,697)	-	(19,920)	(19,920)
TOTAL REVENUES	**93,865**	-	**93,865**	**57,866**	-	**57,866**

(1) *Of which a c. €20 billion price effect compared to 2021.*
(2) *Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.*

EBITDA

In millions of euros	Dec. 31, 2022	Dec. 31, 2021 (1)
Renewables	2,202	1,702
Networks	4,212	4,121
Energy Solutions	879	786
Thermal	2,235	1,628
Supply	258	498
Nuclear	1,510	1,403
Others	2,417	426
Of which GEMS	*2,837*	*679*
TOTAL EBITDA	**13,713**	**10,563**

(1) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

EBIT

In millions of euros	Dec. 31, 2022 (1)	Dec. 31, 2021 (2)
Renewables	1,627	1,191
Networks	2,371	2,314
Energy Solutions	412	350
Thermal	1,768	1,183
Supply	(7)	232
Nuclear	1,026	959
Others	1,848	(85)
Of which GEMS	*2,618*	*507*
TOTAL EBIT	**9,045**	**6,145**

(1) Including €739 million in taxes on "excess profits" and €917 million relating to the tax on nuclear energy production.

(2) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

Share in net income/(loss) of equity method entities

In millions of euros	Dec. 31, 2022	Dec. 31, 2021 (1)
Renewables	217	95
Networks	323	233
Energy Solutions	118	148
Thermal	397	301
Supply	-	-
Nuclear	-	(11)
Others	4	34
Of which GEMS	*(1)*	*2*
TOTAL SHARE IN NET INCOME/(LOSS) OF EQUITY METHOD ENTITIES	**1,059**	**800**

(1) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

Associates and joint ventures accounted for €400 million and €659 million respectively of share in net income of equity method entities at December 31, 2022 (compared to €306 million and €494 million at December 31, 2021).

Industrial capital employed

In millions of euros	Dec. 31, 2022	Dec. 31, 2021 (1)
Renewables	16,588	12,508
Networks	25,221	24,167
Energy Solutions	7,575	6,687
Thermal	8,091	7,846
Supply	1,023	1,322
Nuclear (2)	(16,481)	(12,666)
Others	9,399	6,517
Of which GEMS (3)	*7,320*	*2,915*
TOTAL INDUSTRIAL CAPITAL EMPLOYED	**51,416**	**46,382**

(1) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

(2) Including €19,017 million of nuclear provisions at December 31, 2022 (€15,119 million as of December 31, 2021). Capital employed does not include assets dedicated to covering provisions for €6,626 million as of December 31, 2022 (€5,505 million at December 31, 2021).

(3) Industrial Capital employed does not include the initial margin required by certain market activities for €1,740 million at December 31, 2022 (€4,722 million at December 31, 2021).

As indicated in Note 5.4, from January 1, 2023, the Group will expand its definition of industrial capital employed to include financial assets covering nuclear provisions (with an impact on the Nuclear operating segment) as well as the initial margins required by certain market activities (with an impact on the GEMS operating segment). The following table shows the impact of these changes to industrial capital employed of the reportable segments:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Renewables	16,588	12,508
Networks	25,221	24,167
Energy Solutions	7,575	6,687
Thermal	8,091	7,846
Supply	1,023	1,322
Nuclear	(9,855)	(7,161)
Others	11,139	11,239
Of which GEMS	*9,060*	*7,637*
TOTAL INDUSTRIAL CAPITAL EMPLOYED (NEW DEFINITION FOR 2023)	**59,782**	**56,609**

Capital expenditure

In millions of euros	Dec. 31, 2022 (1)	Dec. 31, 2021 (1) (2) (3)
Renewables	3,333	2,000
Networks	2,322	2,524
Energy Solutions	886	903
Thermal	481	268
Supply	270	300
Nuclear	229	201
Others	338	496
Of which GEMS	*149*	*76*
TOTAL CAPITAL EXPENDITURE (CAPEX)	**7,858**	**6,693**

(1) Capital expenditure (CAPEX) now include changes in the scope of net financial debt of acquired entities. The impact at December 31, 2021 is not material.

(2) In the context of the start of work related to the end of life of the nuclear power plant in Belgium, the definition of capital expenditures (CAPEX) has been modified to exclude investments made by Synatom to cover nuclear provisions. These expenses are now presented together with investments to cover expenditure for the dismantling of nuclear power plants and the management of radioactive materials and waste, under a dedicated heading. Data at December 31, 2021 have been restated accordingly.

(3) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

Growth CAPEX

In millions of euros	Dec. 31, 2022 (1)	Dec. 31, 2021 (1) (2)
Renewables	3,202	1,881
Networks	1,087	1,320
Energy Solutions	716	715
Thermal	220	(17)
Supply	174	154
Nuclear	1	-
Others	85	221
Of which GEMS	*63*	*(31)*
TOTAL GROWTH CAPEX	**5,485**	**4,275**

(1) Growth Capex now includes changes in the scope of net financial debt of acquired companies. The impact at December 31, 2021 is not material.

(2) Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.

6.3 Key indicators by geographic area

The amounts set out below are analyzed by:

- destination of products and services sold for revenues;
- geographic location of consolidated companies for industrial capital employed.

	Revenues		Industrial capital employed	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
France	34,248	24,341	32,495	30,241
Belgium	12,705	4,372	(14,201)	(10,775)
Other EU countries	22,687	12,501	9,261	6,938
Other European countries	4,202	3,110	1,610	1,447
North America	6,133	4,752	7,101	5,342
Asia, Middle East & Oceania	8,875	4,441	3,507	2,709
South America	4,778	4,053	11,095	9,521
Africa	237	297	548	960
TOTAL	**93,865**	**57,866**	**51,417**	**46,382**

Due to the variety of its businesses and their geographical location, the Group serves a very diverse range of situations and customer types (industry, local authorities and individual customers). Accordingly, no external customer represents individually 10% or more of the Group’s consolidated revenues.

NOTE 7 Revenues

7.1 Revenues

ACCOUNTING STANDARDS

Revenues from contracts with customers concern revenues from contracts that fall within the scope of IFRS 15. Revenues are recognized when the customer obtains control of goods or services promised in the contract, for the amount of consideration to which an entity expects to be entitled in exchange for said promised goods or services.

A contractual analysis of the Group's sale contracts has led to the application of the following revenue recognition principles:

- **Gas, electricity and other energies**

  Revenues from sales of gas, electricity and other energies are recognized upon delivery of the power to the retail, business or industrial customer.

  Power deliveries are monitored in real time or on a deferred basis for those customers whose energy consumption is metered during the accounting period, in which case the portion of not yet metered revenues "in the meter" is estimated on the closing date.

- **Gas, electrical and other energy infrastructures**

  Revenues derived by gas and electricity infrastructure operators upon providing transportation or distribution or storage capacities, are recognized on a straight-line basis over the contract term.

  In the countries where the Group acts as an energy provider (supplier) without being in charge of its distribution or transportation, mainly in France and Belgium, an analysis of the energy sales contracts and of the related regulatory framework is carried out to determine whether the distribution or transportation services invoiced to the customers have to be excluded from the revenues recognized under IFRS 15.

  Judgment may be exercised by the Group for this analysis in order to determine whether the energy provider acts as an agent or a principal for the gas or electricity distribution or transportation services re-invoiced to the customers. The main criteria used by the Group to exercise its judgment and conclude, in certain countries, that the energy provider acts as an agent of the infrastructure operator are as follows: who is primarily responsible for fulfillment of the distribution or transportation services? Does the energy provider have the ability to commit to capacity reservation contracts towards the infrastructure operator? To what extent does the energy provider have discretion in establishing the price for the distribution or transportation services?

- **Constructions, installations, Operations and Maintenance (O&M)**

  Construction and installation contracts mainly concern assets built on the premises of customers such as cogeneration units, heaters or other energy-efficiency assets. The related revenues are usually recognized according to the percentage of completion on the basis of the costs incurred where the contracts fall within the scope of IFRS 15.

  O&M contracts generally require the Group to perform services ensuring the availability of power generating facilities. These services are performed over time and the related revenues are recognized according to the percentage of completion on the basis of the costs incurred.

If it is not possible to conclude from the contractual analysis that the contract falls within the scope of IFRS 15, the revenues are accounted for as non-IFRS 15 revenues.

Revenues from other contracts, corresponding to revenues from operations that do not fall within the scope of IFRS 15, presented in the "Others" column include trading, lease and concession income, as well as any financial component of operating services, and the effects of the tariff shield mechanisms

The table below shows a breakdown of revenues by type:

In millions of euros	Sales of gas	Sales of electricity and other energies	Sales of services linked to infrastructures	Constructions, installations, and O&M	Others	Dec. 31, 2022
Renewables	-	5,797	88	242	89	6,216
Networks	232	1	6,021	478	230	6,961
Energy Solutions	246	4,713	96	6,424	73	11,552
Thermal	22	4,522	1,601	396	588	7,129
Supply	7,793	5,372	153	958	2,534	16,810
Nuclear	-	5	8	24	(3)	35
Others	21,405	19,595	170	70	3,923	45,163
Of which GEMS	*21,405*	*19,595*	*170*	*45*	*3,923*	*45,137*
TOTAL REVENUES	**29,697**	**40,004**	**8,135**	**8,593**	**7,435**	**93,865**

The significant change in natural gas and electricity prices has led some governments to introduce a "tariff shield" for natural gas and electricity, particularly in France and Romania.

The measure with the most significant impact on the Group's consolidated financial statements is the one introduced by the French government for natural gas. Under the Finance Law for 2022 (No. 2021-1900 of December 30, 2021), as amended by the first Amending Finance Law for 2022 (No. 2022-1157 of August 16, 2022), the regulated natural gas sales tariffs applied by ENGIE were capped at the level of October 31, 2021, including all taxes, until December 31, 2022. The loss of revenue borne by ENGIE constitutes an expense attributable to public service obligations and is subject to guaranteed compensation by the State. The subsidy recognized in 2022 amounts to approximately €1,591 million (€248 million in 2021) and is recorded under "Supply" business in the "Others" column ("Non-IFRS 15 revenues"). During 2022, the Group signed three non-recourse assignment agreements with Natixis, under the so-called "Dailly" law, in order to sell part of the receivable relating to the subsidy, amounting to approximately €1,395 million.

In millions of euros	Sales of gas	Sales of electricity and other energies	Sales of services linked to infrastructures	Constructions, installations, and O&M	Others	Dec. 31, 2021 (1)
Renewables	-	3,335	85	142	91	3,653
Networks	205	1	5,715	606	173	6,700
Energy Solutions	157	3,368	102	6,247	51	9,926
Thermal	66	3,165	345	451	62	4,089
Supply	5,532	3,539	74	985	265	10,396
Nuclear	-	4	11	22	19	56
Others	10,019	11,448	231	353	994	23,046
Of which GEMS	*10,019*	*11,448*	*231*	*177*	*994*	*22,870*
TOTAL REVENUES	**15,978**	**24,861**	**6,565**	**8,806**	**1,656**	**57,866**

(1) *Certain internal reclassifications, which have no impact on the total, have been made between the business lines at December 31, 2021. The main internal reclassifications concern the transfer of international Energy Supply activities to Others, of the North American Renewable Energies activities to Energy Solutions, and the reallocation of Corporate costs between business lines.*

7.2 Trade and other receivables, assets and liabilities from contracts with customers

ACCOUNTING STANDARDS

On initial recognition, trade and other receivables are recorded at their transaction price as defined in IFRS 15.

A contract asset is an entity's right to consideration in exchange for goods or services that have been transferred to a customer but for which payment is not yet due or is contingent on the satisfaction of a specific condition stipulated in the contract. When an amount becomes due, it is transferred to receivables.

A receivable is recorded when the entity has an unconditional right to consideration. A right to consideration is unconditional if only the passage of time is required before payment of that consideration.

A contract liability is an entity's obligation to transfer goods or services to a customer for which the entity has already received consideration from the customer. The liability is derecognized upon recognition of the corresponding revenue.

Trade and other receivables and assets from contracts with customers are tested for impairment in accordance with the provisions of IFRS 9 on expected credit losses.

The impairment model for financial assets is based on the expected credit loss model. To calculate expected losses, the Group uses a matrix approach for trade receivables and assets from contracts with customers, for which the change in credit risk is monitored on a portfolio basis. An individual approach is used for large customers and other large counterparties, for which the change in credit risk is monitored on an individual basis.

See Note 15 "Risks arising from financial instruments" for the Group's assessment of counterparty risk.

7.2.1 Trade and other receivables and assets from contracts with customers

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Trade and other receivables, net	31,310	32,555
Of which IFRS 15	*7,587*	*6,453*
Of which non-IFRS15	*23,723*	*26,103*
Assets from contracts with customers	12,584	8,377
Accrued income and unbilled revenues	*9,513*	*6,817*
Energy in the meter (1)	*3,071*	*1,560*

(1) Net of advance payments.

In 2022, the most significant assets from contracts mainly concerned GEMS (€5,023 million), Energy Solutions (€2,758 million) and Supply (€3,097 million).

	Dec. 31, 2022			Dec. 31, 2021		
In millions of euros	Gross	Allowances and expected credit losses	Net	Gross	Allowances and expected credit losses	Net
Trade and other receivables, net	33,282	(1,973)	31,310	33,920	(1,365)	32,555
Assets from contracts with customers	12,632	(48)	12,584	8,393	(16)	8,377
TOTAL	**45,914**	**(2,020)**	**43,894**	**42,313**	**(1,381)**	**40,932**

Gas and electricity in the meter

For customers whose energy consumption is metered during the accounting period, the gas supplied but not yet metered at the reporting date is estimated based on historical data, consumption statistics and estimated selling prices.

For sales on networks used by a large number of grid operators, the Group is allocated a certain volume of energy transiting through the networks by the grid managers. As the final allocations are sometimes only known several months down the line, revenue figures cannot be determined with absolute certainty. However, the Group has developed measuring and modeling tools allowing it to estimate revenues with a reasonable degree of accuracy and subsequently ensure that risks of error associated with estimating quantities sold and the related revenues can be considered as immaterial.

In France and Belgium, un-metered revenues ("gas in the meter") are calculated using a direct method taking into account customers' estimated consumption based on the last invoice or metering not yet billed. These estimates are in line with the volume of energy allocated by the grid managers over the same period. The average price is used to measure "gas in the meter" and takes account of the category of customer and the age of the delivered unbilled "gas in the meter". The portion of unbilled revenues at the reporting date varies according to the assumptions about volume and average price.

"Electricity in the meter" is also determined using a direct allocation method similar to that used for gas, but taking into account specific factors related to electricity consumption. It is also measured on a customer-by-customer basis or by customer type.

Realized but not yet metered revenues ("un-metered revenues") mainly related to France and Belgium for an amount of €5,883 million at December 31, 2022 (€4,638 million at December 31, 2021).

7.2.2 Liabilities from contracts with customers

	Dec. 31, 2022			Dec. 31, 2021		
In millions of euros	Non-current	Current	Total	Non-current	Current	Total
Liabilities from contracts with customers	121	3,292	3,412	68	2,671	2,739
Advances and downpayments received	*53*	*2,201*	*2,253*	-	*1,955*	*1,955*
Deferred revenues	*68*	*1,091*	*1,159*	*68*	*716*	*784*

In 2022, the Global Business Units reporting the greatest amounts of liabilities from contracts with customers were Supply (€1,717 million) and Energy Solutions (€1,467 million).

7.3 Revenues relating to performance obligations not yet satisfied

Revenues relating to performance obligations only partially satisfied at December 31, 2022 amounted to €1,131 million. They mainly concern Energy Solutions (€1,013 million) and Renewables (€117 million) which handle a large number of construction, installation, and maintenance contracts under which revenues are recognized over time.

NOTE 8 Operating expenses

ACCOUNTING STANDARDS

Operating expenses include:

- purchases and operating derivatives including:
  - the purchase of commodities and associated costs (infrastructure, transport, storage, etc.),
  - the realized impact, as well as the change in fair value (MtM), of commodity transactions, with or without physical delivery, that fall within the scope of IFRS 9 – *Financial Instruments* and that do not qualify as trading or hedging. These contracts are set up as part of economic hedges of operating transactions in the energy sector;
- purchases of services and other items such as subcontracting and interim expenses, lease expenses (short-term lease contracts, leases with a low underlying asset value or leases with variable expenses), concession expenses, etc.;
- personnel costs;
- depreciation, amortization, and provisions; and
- taxes.

8.1 Purchases and operating derivatives

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Purchases and other income and expenses on operating derivatives other than trading (1)	(67,676)	(32,135)
Service and other purchases (2)	(6,860)	(6,726)
PURCHASES AND OPERATING DERIVATIVES	**(74,535)**	**(38,861)**

(1) Of which net expense of €3,661 million in 2022 relating to MtM on commodity contracts other than trading (compared to a net income of €721 million in 2021), notably on certain economic gas and electricity hedging positions not documented as cash flow hedges.

(2) Of which €56 million in lease expenses not included in the IFRS 16 lease liability (compared to €51 million in lease expenses in 2021).

The increase in purchases and operating derivatives is mainly due to changes in commodity prices over the period.

8.2 Personnel costs

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
Short-term benefits		(7,712)	(7,373)
Share-based payments	19	(104)	(48)
Costs related to defined benefit plans	18.3.4	(172)	(178)
Costs related to defined contribution plans	18.4	(91)	(93)
PERSONNEL COSTS		**(8,078)**	**(7,692)**

8.3 Depreciation, amortization and provisions

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
Depreciation and amortization	13.2 & 13.3	(4,576)	(4,370)
Net change in write-downs of inventories, trade receivables and other assets		(768)	(310)
Net change in provisions	17	157	(159)
DEPRECIATION, AMORTIZATION AND PROVISIONS		**(5,187)**	**(4,840)**

At December 31, 2022, depreciation and amortization mainly break down as €1,041 million for intangible assets and €3,534 million for property, plant and equipment.

8.4 Taxes

In millions of euros	Dec. 31, 2022	Dec. 31, 2022
TAXES	**(3,380)**	**(1,479)**

Taxes at December 31, 2022 include taxes on “excess profits”, mainly the tax on infra-marginal income in Belgium and the temporary solidarity contribution in Italy, amounting to €739 million, as well as the tax on nuclear power generation for €917 million. The Italian temporary solidarity contribution of €132 million is recognized in income tax.

NOTE 9 Other items of net income/(loss) from operating activities

ACCOUNTING STANDARDS

Other items of Net income/(loss) from operating activities include:

- “Impairment losses”: this line include impairment losses on goodwill, other intangible assets, property, plant and equipment and investments in entities consolidated using the equity method;
- “Restructuring costs”: this line concern costs corresponding to a restructuring program planned and controlled by management that materially changes either the scope of a business undertaken by the entity, or the manner in which that business is conducted, based on the criteria set out in IAS 37;
- “Changes in the scope of consolidation”. This line includes:
  - direct costs related to acquisitions of controlling interests,
  - in a business combination achieved in stages, remeasurement at fair value at the acquisition date of the previously held interest,
  - subsequent changes in the fair value of contingent consideration,
  - gains or losses from disposals of investments which result in a change of consolidation method, as well as any impact from the remeasurement of retained interests with the exception of gains and losses arising from transactions realized in the framework of “Develop, Build, Share & Operate” (DBSO) or “Develop, Share, Build & Operate” (DSBO) business models. These transactions on renewable activities are recognized in current operating income as they are part of the recurring rotation of the Group’s capital employed;
- “Other non-recurring items”: this line includes other elements of an unusual, abnormal or infrequent nature.

9.1 Impairment losses

In millions of euros	Notes	Dec. 31, 2022	Dec. 31, 2021
Impairment losses:			
Goodwill	13.1	-	(107)
Property, plant and equipment and other intangible assets	13.2 & 13.3	(2,306)	(969)
Investments in equity method entities and related provisions		(536)	(17)
TOTAL IMPAIRMENT LOSSES		**(2,841)**	**(1,093)**
Reversal of impairment losses:			
Property, plant and equipment and other intangible assets		67	64
Total reversals of impairment losses		**67**	**64**
TOTAL		**(2,774)**	**(1,028)**

9.1.1 Impairment losses recognized in 2022

Net impairment losses recognized at December 31, 2022 amounted to €2,774 million. They mainly fall into three categories *(see Note 13.4)*:

- the effects of the three-yearly revision of nuclear provisions on assets to be recognized against nuclear power plant dismantling provisions;
- the effects of the ongoing program to exit coal activities;
- the consequences of negotiations initiated or finalized during the year in connection with the renegotiation of PPA contracts or the disposal of non-strategic assets.

These impairment losses mainly concern property, plant and equipment and intangible assets. Considering the effects of deferred taxes and the portion of impairment losses attributable to non-controlling interests, the impact of the impairment losses on net income Group share amounted to €2,275 million.

With the exception of the induced effects of decisions to dispose of non-strategic assets, no impairment losses were recognized on non-financial assets as a result of measures to prevent or mitigate climate risks or to achieve the 2045 net zero-carbon objective.

Impairment tests are carried out in accordance with the procedures described in Note 13.4.

9.1.2 Impairment losses recognized in 2021

Net impairment losses recognized at December 31, 2021 amounted to €1,028 million and related mainly to:

- assets affected by the Group's announced exit from coal, in 2021, for thermal power generation assets, particularly in Brazil (€228 million);
- assets affected by the strategic review of Client Solutions, announced by the Group in 2020, in France (€90 million), Africa (€73 million) and Asia (€33 million);
- assets that have been subject to revisions to their medium- and long-term prospects, or that have encountered operational difficulties, in particular renewable energy production assets in Latin America (€221 million) and thermal power generation assets in Asia (€90 million);
- other production or support assets for less significant amounts taken individually.

9.2 Restructuring costs

In 2022, restructuring costs totaled € 230 million (*versus* €204 million in 2021). Restructuring costs in both years mainly included costs related to staff reduction plans and measures to adapt to economic situations in 2022 and 2021, as well as the shutdown or sale of operations, the closure or restructuring of certain facilities as well as other miscellaneous restructuring costs.

9.3 Changes in scope of consolidation

At December 31, 2022, the impact of changes in the scope of consolidation was a positive €91 million and mainly comprised:

- a positive impact of €280 million relating to the disposals of shares held in Gaztransport et Technigaz (GTT) for a total representing approximatively 24.6% of its share capital. This result includes the effects of the almost full conversion of the exchangeable bond issued by the Group in June 2021;
- a positive impact of €111 million relating to the disposal of geothermal assets in Indonesia;
- a negative impact of €127 million relating to the disposal of the Energy Solutions activities in Africa and France;
- a negative impact of €110 million relating to the purchase of shares in renewable assets in India with refinancing obligations due in 2023;
- a negative impact of €63 million relating to miscellaneous disposals that are not individually significant.

At December 31, 2021, the impact of changes in the scope of consolidation was a positive €1,107 million and mainly comprised:

- a positive €628 million impact related to the disposal of 10% of the shares held in GTT for €151 million and the revaluation of the remaining 30% for €478 million;
- the positive impact of the earn-out to be received on the disposal of the 29.9% stake in SUEZ for €347 million;
- a positive €113 million change in the fair value of the earn-out from the disposal of LNG activities to TOTAL in 2018;
- a positive €56 million impact relating to various disposals including EPS for €83 million, the Group's interests in Georgetown Energy Partners Holding LLC in the United States for €44 million, and in a thermal power generation asset in Greece for a negative €28 million, and
- a negative €48 million impact related to the change in the fair value of the embedded derivative of the GTT shares exchangeable bond.

9.4 Other non-recurring items

Other non-recurring items at December 31, 2022 totaled a negative €1,328 million and mainly comprised:

- a negative impact of €979 million related to the three-yearly review of provisions for the management of the back-end nuclear cycle;
- a negative impact of €205 million related to provisions set up to cover clean-up obligations in France;
- a negative impact of €161 million related to the write-off of intangible assets and property, plant and equipment, mainly in France.

Other non-recurring items at December 31, 2021 totaled a negative €69 million and comprised asset scrapping, and disposals of property, plant and equipment.

NOTE 10 Net financial income/(loss)

In millions of euros	Expense	Income	Dec. 31, 2022	Expense	Income	Dec. 31, 2021
Interest expense on gross debt and hedges	(1,104)	-	(1,104)	(943)	-	(943)
Cost of lease liabilities	(73)	-	(73)	(35)	-	(35)
Foreign exchange gains/losses on borrowings and hedges	(28)	-	(28)	(6)	-	(6)
Ineffective portion of derivatives qualified as fair value hedges	-	7	7	(2)	-	(2)
Gains and losses on cash and cash equivalents and liquid debt instruments held for cash investment purposes	-	197	197	-	63	63
Capitalized borrowing costs	109	-	109	70	-	70
Cost of net debt	**(1,097)**	**205**	**(893)**	**(916)**	**63**	**(852)**
Cash payments made on the unwinding of swaps	(9)	-	(9)	(73)	-	(73)
Reversal of the negative fair value of these early unwound derivative financial instruments	-	-	-	-	73	73
Gains/(losses) on debt restructuring transactions	-	55	55	-	-	-
Gains/(losses) on debt restructuring and early unwinding of derivative financial instruments	**(9)**	**55**	**46**	**(73)**	**73**	**-**
Net interest expense on post-employment benefits and other long-term benefits	(92)	-	(92)	(63)	-	(63)
Unwinding of discounting adjustments to other long-term provisions	(617)	-	(617)	(630)	-	(630)
Change in fair value of derivatives not qualified as hedges and ineffective portion of derivatives qualified as cash flow hedges	(5)	-	(5)	(152)	-	(152)
Income/(loss) from debt instruments and equity instruments	(1,295)	36	(1,258)	(16)	329	313
Interest income on loans and receivables at amortized cost	-	69	69	-	125	125
Other	(585)	332	(253)	(213)	121	(92)
Other financial income and expenses	**(2,594)**	**438**	**(2,156)**	**(1,073)**	**575**	**(498)**
NET FINANCIAL INCOME/(LOSS)	**(3,700)**	**697**	**(3,003)**	**(2,061)**	**711**	**(1,350)**

The cost of net debt is higher compared to December 31, 2021 notably due to the increase in lease liabilities relating to the extension of the Compagnie Nationale du Rhône concession. The higher average cost of gross debt, mainly due to the rise in interest rates, is partly offset by the increase in interest received on cash and cash equivalents and liquid debt instruments.

Losses from debt and equity instruments amounted to €1.258 million. This amount mainly includes the impairment of the loan granted to Nord Stream 2 for €987 million and the negative change in fair value of money market funds held by Synatom for €280 million *(see Note 17.2.4 "Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material")*.

At December 31, 2022, the average cost of debt after hedging came out at 2.73% compared with 2.65% at December 31, 2021.

NOTE 11 Income tax expense

ACCOUNTING STANDARDS

The Group calculates taxes in accordance with prevailing tax legislation in the countries where income is taxable.

In accordance with IAS 12, deferred taxes are recognized according to the liability method on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their tax bases, using tax rates that have been enacted or substantively enacted by the reporting date. However, under the provisions of IAS 12, no deferred tax is recognized for temporary differences arising from goodwill for which impairment losses are not deductible for tax purposes, or from the initial recognition of an asset or liability in a transaction which (i) is not a business combination and (ii) at the time of the transaction, affects neither accounting income nor taxable income. In addition, deferred tax assets are only recognized to the extent that it is probable that taxable income will be available against which the deductible temporary differences can be utilized.

A deferred tax liability is recognized for all taxable temporary differences associated with investments in subsidiaries, associates, joint ventures and branches, except if the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Net balances of deferred taxes are calculated based on the tax position of each company or on the total income of companies included within the relevant consolidated tax group, and are presented in assets or liabilities for their net amount per tax entity.

Deferred taxes are reviewed at each reporting date to take into account factors including the impact of changes in tax laws and the prospects of recovering deferred tax assets arising from deductible temporary differences.

Deferred tax assets and liabilities are not discounted.

Tax effects relating to coupon payments on deeply-subordinated perpetual notes are recognized in profit or loss.

11.1 Actual income tax expense recognized in the income statement

11.1.1 Breakdown of actual income tax expense recognized in the income statement

The tax income recognized in the income statement for 2022 amounted to €83 million (€1,695 million income tax expense in 2021). It breaks down as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Current income taxes	(1,762)	(740)
Deferred taxes	1,845	(955)
TOTAL INCOME TAX BENEFIT/(EXPENSE) RECOGNIZED IN INCOME	**83**	**(1,695)**

11.1.2 Reconciliation of theoretical income tax expense with actual income tax expense

A reconciliation of theoretical income tax expense with the Group's actual income tax expense is presented below:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Net income/(loss)	**390**	**3,758**
Share in net income of equity method entities	523	784
Net income/(loss) from discontinued operations	2,183	80
Income tax expense	83	(1,695)
Income/(loss) before income tax of consolidated companies (A)	**(2,400)**	**4,588**
Of which French companies	*(2,130)*	*5,604*
Of which companies outside France	*(270)*	*(1,016)*
Statutory income tax rate of the parent company (B)	25.8%	28.4%
Theoretical income tax expense (C) = (A) X (B)	**620**	**(1,303)**
Reconciling items between theoretical and actual income tax expense		
Difference between statutory tax rate applicable to the parent and statutory tax rate in force in jurisdictions in France and abroad	(8)	38
Permanent differences (1)	(313)	(30)
Income taxed at a reduced rate or tax-exempt (2)	427	300
Additional tax expense (3)	(327)	(230)
Effect of unrecognized deferred tax assets on tax loss carry-forwards and other tax-deductible temporary differences (4)	(940)	(958)
Recognition or utilization of tax income on previously unrecognized tax loss carry-forwards and other tax-deductible temporary differences (5)	643	510
Impact of changes in tax rates (6)	(37)	(17)
Tax credits and other tax reductions (7)	20	185
Other (8)	(1)	(189)
INCOME TAX BENEFIT/(EXPENSE) RECOGNIZED IN INCOME	**83**	**(1,695)**

(1) Mainly includes disallowable impairment losses on goodwill, disallowed operating expenses and the deduction of interest expenses arising from hybrid debt.

(2) Mainly includes capital gains on disposals of securities exempt from tax or taxed at a reduced rate in some tax jurisdictions, the impact of the specific tax regimes used by some entities, disallowable impairment losses and capital losses on securities, and the impact of untaxed income from remeasuring previously-held (or retained) equity interests in connection with acquisitions and changes in consolidation methods.

(3) Mainly includes tax on dividends resulting from the parent company tax regime, withholding tax on dividends and interest levied in several tax jurisdictions, allocations to provisions for income tax, and regional and flat-rate corporate taxes. In 2022, this line also includes the temporary Italian solidarity contribution, which amounts to €132 million.

(4) Includes (i) the cancellation of the net deferred tax asset position for some tax entities in the absence of sufficient profit being forecast and (ii) the impact of disallowable impairment losses on fixed assets.

(5) Includes the impact of the recognition of net deferred tax asset positions for some tax entities.

(6) Mainly includes the impact of tax rate changes on deferred tax balances in the United Kingdom for 2022 and in the United Kingdom, France and Argentina for 2021.

(7) Mainly includes reversals of provisions for tax litigation, tax credits in France and other tax reductions.

(8) Mainly includes the correction of previous tax charges.

11.1.3 Analysis of the deferred tax income/(expense) recognized in the income statement, by type of temporary difference

	Impact in the income statement	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Deferred tax assets:		
Tax loss carry-forwards and tax credits	1,051	(178)
Pension and related obligations	(1)	(218)
Non-deductible provisions	55	(56)
Difference between the carrying amount of PP&E and intangible assets and their tax bases	454	174
Measurement of financial instruments at fair value (IAS 32/IFRS 9)	(1,260)	6,542
Other	(135)	222
Total	**164**	**6,485**
Deferred tax liabilities:		
Difference between the carrying amount of PP&E and intangible assets and their tax bases	(545)	(498)
Measurement of assets and liabilities at fair value (IAS 32/IFRS 9)	1,781	(7,148)
Other	398	183
Total	**1,634**	**(7,463)**
DEFERRED TAX INCOME/(EXPENSE)	**1,798**	**(977)**
Of which continuing activities	*1,844*	*(955)*

11.2 Deferred tax income/(expense) recognized in "Other comprehensive income"

Net deferred tax income/(expense) recognized in "Other comprehensive income" is broken down by component as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Equity and debt instruments	33	(4)
Actuarial gains and losses	(646)	(447)
Net investment hedges	11	55
Cash flow hedges on other items	943	(1,370)
Cash flow hedges on net debt	(3)	(19)
Total excluding share of equity method entities & discontinued operations	**338**	**(1,784)**
Share of equity method entities	(132)	(50)
Discontinued operations	(21)	(13)
TOTAL	**185**	**(1,848)**

11.3 Deferred taxes presented in the statement of financial position

11.3.1 Change in deferred taxes

Changes in deferred taxes recognized in the statement of financial position, after netting deferred tax assets and liabilities by tax entity, break down as follows:

In millions of euros	Assets	Liabilities	Net position
AT DECEMBER 31, 2021	**1,181**	**(7,738)**	**(6,557)**
Impact on net income for the year	164	1,635	1,799
Impact on other comprehensive income items	(479)	792	313
Impact of changes in scope of consolidation	38	(19)	19
Impact of translation adjustments	101	(146)	(45)
Transfers to assets and liabilities classified as held for sale	(54)	51	(3)
Other	440	(344)	95
Impact of netting by tax entity	638	(638)	-
AT DECEMBER 31, 2022	**2,029**	**(6,408)**	**(4,379)**

11.3.2 Analysis of the net deferred tax position recognized in the statement of financial position (before netting deferred tax assets and liabilities by tax entity), by type of temporary difference

ACCOUNTING STANDARDS

Measurement of recognized tax loss carry-forwards

Deferred tax assets are recognized on tax loss carry-forwards when it is probable that taxable profit will be available against which the tax loss carry-forwards can be utilized. The probability that taxable profit will be available against which the unused tax losses can be utilized, is based on taxable temporary differences relating to the same taxation authority and the same taxable entity and estimates of future taxable profits. These estimates and utilizations of tax loss carry-forwards were prepared on the basis of profit and loss forecasts over a six-year tax projection period as included in the medium-term business plan validated by Management, subject to exceptions justified by a particular context and, if necessary, on the basis of additional forecasts.

	Statement of financial position at	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Deferred tax assets:		
Tax loss carry-forwards and tax credits	2,202	1,299
Pension obligations	812	1,501
Non-deductible provisions	518	388
Difference between the carrying amount of PP&E and intangible assets and their tax bases	1,830	1,440
Measurement of financial instruments at fair value (IAS 32/IFRS 9)	8,346	8,968
Other	620	523
TOTAL	**14,328**	**14,119**
Deferred tax liabilities:		
Difference between the carrying amount of PP&E and intangible assets and their tax bases	(9,873)	(9,345)
Measurement of financial instruments at fair value (IAS 32/IFRS 9)	(8,141)	(10,643)
Other	(693)	(687)
TOTAL	**(18,707)**	**(20,675)**
NET DEFERRED TAX ASSETS/(LIABILITIES)	**(4,378)**	**(6,557)**

11.4 Unrecognized deferred taxes

At December 31, 2022, the tax effect of tax losses and tax credits eligible for carry-forward but not utilized and not recognized in the statement of financial position amounted to €4,165 million (€4,642 million at December 31, 2021). Most of these unrecognized tax losses relate to companies based in countries which allow losses to be carried forward indefinitely (mainly Belgium, Australia, Luxembourg and the Netherlands). These tax loss carry-forwards did not give rise to the full or partial recognition of a deferred tax asset due to the absence of sufficient profit forecasts in the medium term.

The tax effect of other tax-deductible temporary differences not recorded in the statement of financial position was €1,590 million at end-December 2022 *versus* €1,097 million at end-December 2021.

NOTE 12 Earnings per share

ACCOUNTING STANDARDS

Basic earnings per share is calculated by dividing net income Group share for the year by the weighted average number of ordinary shares outstanding during the year. The average number of ordinary shares outstanding during the year is the number of ordinary shares outstanding at the beginning of the year, adjusted by the number of ordinary shares bought back or issued during the year.

For the diluted earnings per share calculation, the weighted average number of shares and basic earnings per share are adjusted to take into account the impact of the conversion or exercise of any dilutive potential ordinary shares (options, warrants and convertible bonds, etc.).

In compliance with IAS 33 – *Earnings per share*, earnings per share and diluted earnings per share are based on net income/(loss) Group share after deduction of payments to bearers of deeply-subordinated perpetual notes *(see Note 16.2.1 "Issuance of deeply-subordinated perpetual notes")*.

The Group's dilutive instruments included in the calculation of diluted earnings per share include bonus shares and Performance Shares granted in the form of ENGIE securities.

Numerator (in millions of euros)	Dec. 31, 2022	Dec. 31, 2021
Numerator *(in millions of euros)*		
Net income/(loss) Group share	**216**	**3,661**
Of which Net income/(loss) relating to continuing operations, Group share	*(1,965)*	*3,582*
Interest from deeply-subordinated perpetual notes	(77)	(121)
Net income/(loss)used to calculate earnings per share	**140**	**3,540**
Of which Net income/(loss) relating to continuing operations, Group share, used to calculate earnings per share	*(2,042)*	*3,461*
Diluted net income/(loss) Group share	**140**	**3,540**
Net recurring income/(loss) Group share	**5,510**	**3,158**
Of which Net recurring income/(loss) relating to continuing operations, Group share	*5,223*	*2,927*
Interest from deeply-subordinated perpetual notes	(77)	(121)
Net recurring income/(loss)used to calculate earnings per share	**5,433**	**3,037**
Of which Net recurring income/(loss) relating to continuing operations, Group share, used to calculate earnings per share	*5,146*	*2,806*
Diluted net recurring income/(loss) Group share	**5,433**	**3,037**
Denominator *(in millions of shares)*		
Average number of outstanding shares	**2,420**	**2,419**
Impact of dilutive instruments:		
Bonus share plans reserved for employees	-	12
Diluted average number of outstanding shares	**2,420**	**2,431**
Earnings per share *(in euros)*		
Basic earnings/(loss) per share	**0.06**	**1.46**
Of which Basic earnings/(loss) Group share relating to continuing operations per share	*(0.84)*	*1.43*
Diluted earnings/(loss) per share	**0.06**	**1.46**
Of which Diluted earnings/(loss) Group share relating to continuing operations per share	*(0.84)*	*1.42*
Basic recurring earnings/(loss) per share	**2.24**	**1.26**
Of which Basic recurring earnings/(loss) Group share relating to continuing operations per share	*2.13*	*1.16*
Diluted recurring earnings/(loss) per share (1)	**2.23**	**1.25**
Of which Diluted recurring earnings/(loss) Group share relating to continuing operations per share (1)	*2.12*	*1.15*

(1) In 2022, the calculation of the denominator includes 12 million potential ENGIE shares which would have a dilutive effect on the NRIgs and NRIgs relating to continuing operations per share but have not been taken into account in the calculation of the NIgs and the NIgs relating to continuing operations per share due to the antidilutive effect on the latter.

NOTE 13 Fixed assets

13.1 Goodwill

ACCOUNTING STANDARDS

Upon a business combination, goodwill is measured as the difference between:

- on the one hand the sum of:
  - the consideration transferred,
  - the amount of non-controlling interests in the acquiree, and
  - in a business combination achieved in stages, the acquisition-date fair value of the previously held equity interest in the acquiree;
- on the other hand the net fair value of the identifiable assets acquired and liabilities assumed. The key assumptions and estimates used to determine the fair value of assets acquired and liabilities assumed include the market outlook for the measurement of future cash flows as well as applicable discount rates. These assumptions reflect management's best estimates at the acquisition date.

The amount of goodwill recognized at the acquisition date cannot be adjusted after the end of the 12-month measurement period.

Goodwill relating to interests in associates is recorded under "Investments in equity method entities".

13.1.1 Movements in the carrying amount of goodwill

In millions of euros	Net amount
At December 31, 2021	12,799
Changes in scope of consolidation and Other	(27)
Translation adjustments	82
AT DECEMBER 31, 2022	**12,854**

13.1.2 Information on goodwill

For the purposes of impairment testing, goodwill is allocated to operating segments, which represent the lowest level at which it is monitored for internal management purposes.

The table below shows the amount of goodwill at December 31, 2022:

In millions of euros	Dec. 31, 2022
Networks	5,302
Renewables	2,110
Supply	1,830
Energy Solutions	1,316
Thermal	1,152
Nuclear	797
Other	350
TOTAL	**12,855**

13.2 Intangible assets

ACCOUNTING STANDARDS

Initial measurement

Intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses.

Amortization

Intangible assets are amortized on the basis of the expected pattern of consumption of the estimated future economic benefits embodied in the asset. Amortization is calculated mainly on a straight-line basis over the following useful lives:

	Useful life	
Main depreciation periods (years)	**Minimum**	**Maximum**
Concession rights	10	30
Customer portfolio	3	20
Other intangible assets	1	50

Intangible assets with an indefinite useful life are not amortized but are tested for impairment annually.

Intangible rights arising on concession contracts

IFRIC 12 – *Service Concession Arrangements* deals with the treatment to be applied by the concession operator in respect of certain concession arrangements.

For a concession arrangement to fall within the scope of IFRIC 12, usage of the infrastructure must be controlled by the concession grantor. This requirement is satisfied when the following two conditions are met:

- the grantor controls or regulates what services the operator must provide with the infrastructure, to whom it must provide them, and at what price; and
- the grantor controls any residual interest in the infrastructure at the end of the term of the arrangement, for example it retains the right to take back the infrastructure at the end of the concession.

The intangible asset model according to paragraph 17 of IFRIC 12 applies if the operator receives a right (a license) to charge the users, or the grantor, depending on the use made of the public service. There is no unconditional right to receive cash, as the amounts depend on the extent to which the public uses the service.

Concession infrastructures that do not meet the requirements of IFRIC 12 are presented as property, plant and equipment. This is the case of gas distribution infrastructures in France. The related assets are recognized in accordance with IAS 16, given that GRDF operates its network under long-term concession arrangements, most of which are mandatorily renewed upon expiration pursuant to French law No. 46-628 of April 8, 1946.

Research and development costs

Research costs are expensed as incurred.

Development costs are capitalized when the asset recognition criteria set out in IAS 38 are met. Capitalized development costs are amortized over the useful life of the intangible asset.

13.2.1 Movements in intangible assets

In millions of euros	Intangible rights arising on concession contracts	Capacity entitlements	Others	Total
Gross amount				
At December 31, 2021	3,917	2,845	12,936	19,697
Acquisitions	68	-	1,364	1,432
Disposals	(485)	(15)	(622)	(1,122)
Translation adjustments	11	-	150	162
Changes in scope of consolidation	(37)	-	15	(22)
Transfer to "Assets classified as held for sale and discontinued operations"	-	-	6	6
Other	156	453	(351)	257
AT DECEMBER 31, 2022	**3,630**	**3,282**	**13,498**	**20,410**
Accumulated amortization and impairment				
AT DECEMBER 31, 2021	(1,921)	(2,133)	(8,860)	(12,913)
Amortization	(139)	(90)	(812)	(1,041)
Impairment	(13)	-	(41)	(54)
Disposals	477	15	519	1,011
Translation adjustments	1	-	(45)	(44)
Changes in scope of consolidation	9	-	37	46
Other	(121)	-	71	(50)
AT DECEMBER 31, 2022	**(1,706)**	**(2,208)**	**(9,131)**	**(13,046)**
Carrying amount				
AT DECEMBER 31, 2021	1,996	712	4,076	6,784
AT DECEMBER 31, 2022	**1,924**	**1,074**	**4,366**	**7,364**

In 2022, the net increase in "Intangible assets" was mainly attributable to:

- the investments during the period (positive €1,432 million) relating mainly to information technology projects in progress (positive €898 million) in the business of Energy Solutions in France, Networks in France and in the Renewables businesses in Brazil and in the United States;
- a positive foreign exchange impact of €118 million primarily due to the appreciation against the euro of the Brazilian real (positive €86 million) and of the US dollar (positive €37 million);
- changes in scope of consolidation (positive €24 million) relating mainly to the acquisition of Eolia Renovables in Spain (positive €22 million) and to the acquisition of Renewables activities in the United States (positive €14 million);

partially offset by:

- amortizations (negative €1,041 million);
- the impact of the first-time application of the decision of the IFRS IC of March 2021, related to the accounting treatment of configuration and customization costs for software in a SaaS arrangement (Software as a Service) for a negative €140 million (Note 1.1 "Accounting standards");
- impairment losses (negative €54 million).

13.2.2 Capacity entitlements

The Group has acquired capacity entitlements from power stations operated by third parties. These power station capacity rights were acquired in connection with transactions or within the scope of the Group's involvement in financing the construction of certain power stations. In consideration, the Group received the right to purchase a share of the production over the useful life of the underlying assets. These rights are amortized over the useful life of the underlying assets, not exceeding 50 years. The Group currently holds entitlements in the Chooz B and Tricastin power plants in France and in the virtual power plant (VPP) in Italy.

13.2.3 Other

At December 31, 2022, this caption mainly relates to software and licenses for €1,393 million, as well as intangible assets in progress €767 million and intangible assets (client portfolio) acquired as a result of business combinations and capitalized acquisition costs for customer contracts for €1,925 million.

13.2.4 Information regarding research and development costs

Research and development activities primarily relate to various studies regarding technological innovation, improvements in plant efficiency, safety, environmental protection, service quality, and the use of energy resources. Research and development priorities are focused on climate change adaptation and mitigation, including renewable energy systems (solar photovoltaic, onshore and offshore wind), the production and use of green gases (hydrogen, biomethane) or the development of decentralized energy infrastructure (district heating and cooling, decentralized solar energy, low carbon cities and mobility.

The capitalized development costs, related to projects in the development phase that meet the criteria for recognition as an intangible asset as defined in IAS 38, totaled €44 million in 2022 and are mainly related to EV Box (€22 million) which is active in the Energy Solutions business and to the Renewables businesses of Engie Energia Chile (€20 million).

13.3 Property, plant and equipment

ACCOUNTING STANDARDS

Initial recognition and subsequent measurement

Items of property, plant and equipment are recognized at historical cost less any accumulated depreciation and any accumulated impairment losses.

The carrying amount of these items is not revalued as the Group has elected not to apply the allowed alternative method, which consists of regularly revaluing one or more categories of property, plant and equipment.

Investment subsidies are deducted from the gross value of the assets concerned.

In accordance with IAS 16, the initial cost of the item of property, plant and equipment includes an initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, when the entity has a present, legal or constructive obligation to dismantle the item or restore the site. A corresponding provision for this obligation is recorded for the amount of the asset component.

Borrowing costs that are directly attributable to the construction of the qualifying asset are capitalized as part of the cost of that asset.

Leases

In accordance with IFRS 16, the Group recognizes a right-of-use asset and a corresponding lease liability with respect to contracts considered as a lease in which the Group acts as lessee, except for leases with a term of 12 months or less (“short-term leases”), and leases for which the underlying asset is of a low value (“low-value asset”). Payments associated with these leases are recognized on a straight-line basis as expenses in profit and loss. The lease contracts in the Group mainly concern real estate, vehicles and other equipment.

The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The lease liability is initially measured at the present value of the remaining lease payments, discounted using the lessee’s incremental borrowing rate. This rate is calculated based on the Group’s incremental borrowing rate adjusted in accordance with IFRS 16, taking into account (i) the economic environment of the subsidiaries, and in particular their credit risk, (ii) the currency in which the contract is concluded and (iii) the duration of the contract at inception (or the remaining duration for contracts existing upon the initial application of IFRS 16). The methodology applied to determine the incremental borrowing rate reflects the profile of the lease payments (duration method).

The lease term is assessed, including whether a renewal option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised, on a case-by-case basis. The lease term is reassessed if a significant event or a significant change in circumstances that is within the control of the lessee occurs and may affect the assessment made. In determining the enforceable period of a lease, the Group applies a broad interpretation of the term penalty and takes into consideration not only contractual penalties arising from termination, but also ancillary costs that could arise in case of an early termination of the lease.

Cushion gas

“Cushion” gas injected into underground storage facilities is essential for ensuring that reservoirs can be operated effectively, and is therefore inseparable from these reservoirs. Unlike “working” gas which is included in inventories *(see Note 22.2 “Inventories”)*, cushion gas is reported in other property, plant and equipment.

Depreciation

In accordance with the components approach, each significant component of an item of property, plant and equipment with a different useful life from that of the main asset to which it relates is depreciated separately over its own useful life.

Property, plant and equipment is depreciated mainly using the straight-line method over the following useful lives:

	Useful life	
Main depreciation periods (years)	**Minimum**	**Maximum**
Plant and equipment		
• Storage – Production – Transport – Distribution	5	60*
• Installation – Maintenance	3	10
• Hydraulic plant and equipment	20	65
Solar and wind farms	25	30
Other property, plant and equipment	2	33

* *Excluding cushion gas.*

The range of useful lives is due to the diversity of the assets in each category. The minimum periods relate to smaller equipment and furniture, while the maximum periods concern network infrastructures and storage facilities. In accordance with the law of January 31, 2003 adopted by the Belgian Chamber of Representatives with respect to the gradual phase-out of nuclear energy for the industrial production of electricity, the useful lives of nuclear power stations were reviewed and adjusted prospectively to 40 years as from 2003, except for Tihange 1, Doel 1 and Doel 2 for which the operating lives have been extended by 10 years.

Fixtures and fittings relating to hydro plants operated by the Group are depreciated over the shorter of the contract term and the useful life of the assets, taking into account the renewal of the concession period if such renewal is considered to be reasonably certain.

The right-of-use asset related to leases is depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term. In that case the right-of-use asset is depreciated over the useful life of the underlying asset, which is determined on the same basis as that used for property, plant and equipment mentioned above.

13.3.1 Movements in property, plant and equipment

In millions of euros	Land	Buildings	Plant and equipment	Vehicles	Dismantling costs	Assets in progress	Right of use	Other	Total
Gross amount									
AT DECEMBER 31, 2021	**650**	**3,312**	**90,530**	**304**	**3,669**	**4,715**	**3,867**	**1,308**	**108,355**
Acquisitions/Increases	4	21	348	33	-	5,473	1,335	69	7,283
Disposals	(33)	(94)	(475)	(29)	(3)	(28)	(167)	(55)	(884)
Translation adjustments	8	15	934	3	13	153	110	23	1,260
Changes in scope of consolidation	5	(2)	178	(12)	22	(75)	(88)	(22)	6
Transfer to "Assets classified as held for sale and discontinued operations"	-	-	(372)	-	-	(6)	10	-	(369)
Other	16	(491)	4,873	5	2,337	(4,585)	27	(3)	2,179
AT DECEMBER 31, 2022	**649**	**2,762**	**96,016**	**304**	**6,038**	**5,649**	**5,094**	**1,319**	**117,831**
Accumulated depreciation and impairment									
AT DECEMBER 31, 2021	**(146)**	**(1,849)**	**(49,426)**	**(219)**	**(3,115)**	**(387)**	**(1,284)**	**(850)**	**(57,277)**
Depreciation	(3)	(70)	(2,797)	(29)	(102)	-	(442)	(92)	(3,534)
Impairment	(2)	(8)	(846)	-	(911)	(472)	(19)	(2)	(2,259)
Disposals	3	78	395	27	1	47	157	49	757
Translation adjustments	(1)	(8)	(331)	(2)	(4)	(12)	(24)	(8)	(390)
Changes in scope of consolidation	1	(8)	(78)	(3)	(25)	97	(76)	(4)	(97)
Transfer to "Assets classified as held for sale and discontinued operations"	-	-	260	-	-	3	(1)	-	262
Other	(4)	93	112	-	-	2	(21)	12	193
AT DECEMBER 31, 2022	**(153)**	**(1,772)**	**(52,709)**	**(226)**	**(4,155)**	**(724)**	**(1,710)**	**(895)**	**(62,343)**
Carrying amount									
AT DECEMBER 31, 2021	**503**	**1,463**	**41,105**	**85**	**554**	**4,328**	**2,583**	**458**	**51,079**
AT DECEMBER 31, 2022	**497**	**991**	**43,307**	**78**	**1,883**	**4,925**	**3,384**	**424**	**55,488**

In 2022, the net increase in "Property, plant and equipment" essentially takes into account:

- the recognition of decommissioning assets in respect of the revision of decommissioning provisions for which the main part related to nuclear installations (€2,238 million);
- maintenance and development investments for a total amount of €5,948 million mainly related to the construction and the development of wind and solar farms primarily in France, the United States and in Latin America (€2,870 million), as well as to the extension of the transportation and distribution networks in France and Romania (€1,806 million), to Energy Solutions activities (€461 million) and to Thermal operating segments assets (€516 million);
- the recognition of the right of use related to the extension of the concession of the Compagnie Nationale du Rhône (CNR) for a positive €848 million; and
- positive foreign exchange effects of €870 million, mainly resulting from the appreciation against the euro of the US dollar (positive impact of €601 million) and fluctuations in the Brazilian real (positive impact of €324 million);

largely offset by:

- depreciation for a total amount of €3,534 million;
- the classification under "Assets held for sale" for a negative €107 million, relating mainly to the classification of a thermal power plant in Brazil (negative €353 million) partially offset by the reversal of the classification as held for sale of certain renewables assets in Mexico due to the unfavorable evolution of the disposal project (positive €229 million);
- impairment losses on property, plant and equipment amounting to €2,259 million mainly relating to the nuclear assets in Belgium (negative €1,219 million).

13.3.2 Pledged and mortgaged assets

Items of property, plant and equipment pledged by the Group to guarantee borrowings and debt amounted to €1,120 million at December 31, 2022 compared to €1,373 million at December 31, 2021.

The net decrease mainly relates to the Thermal assets in Brazil for a negative €484 million due to the recognition of a thermal plant as an asset held for sale.

13.3.3 Contractual commitments to purchase property, plant and equipment

In the ordinary course of their operations, some Group companies have entered into commitments to purchase, and the related third parties to deliver plant and equipment. These commitments relate mainly to orders for equipment and material related to the construction of energy production units and to service agreements.

Investment commitments made by the Group to purchase property, plant and equipment totaled €3,548 million at December 31, 2022 compared to €1,926 million at December 31, 2021 (1).

The net increase primarily relates to the construction of renewable assets in Brazil for €680 million and in the United States for €392 million and to contractual commitments related to the Zuidwending and JemGum gas storages sites in the Netherlands for €286 million.

13.3.4 Other information

Borrowing costs for 2021 included in the cost of property, plant and equipment amounted to €109 million at December 31, 2022 compared to €70 million at December 31, 2021.

13.4 Impairment testing of goodwill, intangible assets and property, plant and equipment

ACCOUNTING STANDARDS

Risk of impairment

Goodwill

Goodwill is not amortized but is tested for impairment each year in accordance with IAS 36, or more frequently where an indication of impairment is identified. All goodwill are tested for impairment based on data at the end of June, supplemented by a review of events in the second half.

Impairment tests are carried out at the level of cash-generating units (CGUs) or groups of CGUs, which constitute groups of assets which generate cash flows that are largely independent from cash flows generated by other CGUs.

Goodwill is impaired if the net carrying amount of the CGU (or group of CGUs) to which the goodwill is allocated is greater than the recoverable amount of that CGU.

Impairment losses in relation to goodwill cannot be reversed and are shown as "Impairment losses" in the income statement.

Intangible assets and property, plant and equipment

In accordance with IAS 36, impairment tests are carried out on items of property, plant and equipment and intangible assets where there is an indication that the assets may be impaired. Such indications may be based on events or changes in the market environment, or on internal sources of information. Intangible assets that are not amortized are tested for impairment annually.

Property, plant and equipment and intangible assets with finite useful lives are only tested for impairment when there is an indication that they may be impaired. This is generally the result of significant changes in the environment in which the assets are operated or when economic performance is lower than expected.

(1) Investment commitments made by the Group to purchase property, plant and equipment as of December 31, 2021, have been adjusted for double counting.

Items of property, plant and equipment and intangible assets are tested for impairment at the level of the cash-generating unit (CGU), as appropriate and determined in accordance with IAS 36. If the recoverable amount of an asset is lower than its carrying amount, the carrying amount is written down to the recoverable amount by recording an impairment loss. Upon recognition of an impairment loss, the depreciable amount and possibly the useful life of the asset concerned is revised.

Impairment losses recorded in relation to property, plant and equipment or intangible assets may be subsequently reversed if the recoverable amount of the asset increases to exceed the carrying amount. The increased carrying amount of an item of property, plant or equipment following the reversal of an impairment loss may not exceed the carrying amount that would have been determined (net of depreciation/amortization) had no impairment loss been recognized in prior periods.

Indicators of impairment

The main indicators of impairment used by the Group are:

- using external sources of information:
  - a decline in an asset's value over the period that is significantly more than would be expected from the passage of time or normal use,
  - significant adverse changes that have taken place over the period, or will take place in the near future, in the technological market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated,
  - an increase over the period in market interest rates or other market rates of return on investments if such increase is likely to affect the discount rate used in calculating an asset's value in use and decrease its recoverable amount materially,
  - the carrying amount of the net assets of the entity exceeds its market capitalization;
- using internal sources of information:
  - evidence of obsolescence or physical damage to an asset,
  - significant changes in the extent to which, or manner in which, an asset is used or is expected to be used, that have taken place in the period or soon thereafter and that will adversely affect it. These changes include the asset becoming idle, plans to dispose of an asset sooner than expected, reassessing its useful life as finite rather than indefinite or plans to restructure the operations to which the asset belongs,
  - internal reports that indicate that the economic performance of an asset is, or will be, worse than expected.

Measurement of recoverable amount

For operating entities which the Group intends to hold on a long-term and going concern basis, the recoverable amount of a CGU corresponds to the higher of its fair value less costs to sell and its value in use. Value in use is primarily determined based on the present value of future operating cash flows including a terminal value. Standard valuation techniques are used based on the following main economic assumptions:

- market perspectives and developments in the regulatory framework;
- discount rates based on the specific characteristics of the operating entities concerned;
- terminal values in line with available market data specific to the operating segments concerned and growth rates associated with these terminal values, not exceeding the inflation rate.

Discount rates are determined on a post-tax basis and applied to post-tax cash flows. The recoverable amounts calculated on the basis of these discount rates are the same as the amounts obtained by applying the pre-tax discount rates to cash flows estimated on a pre-tax basis, as required by IAS 36.

For operating entities which the Group has decided to sell, the related recoverable amount of the assets concerned is based on market value less disposal costs. Where negotiations are ongoing, this value is determined based on the best estimate of their outcome as of the reporting date.

13.4.1 General assumptions

The impairment tests were performed in the context of a highly volatile economic environment, as described in Note 1.3 "Use of estimates and judgments".

In most cases, the recoverable amounts are determined by reference to a value in use that is calculated using cash flow projections drawn up on the basis of the 2023 budget and the 2024-2025 medium term business plan, as approved by the Executive Committee and the Board of Directors, and on the basis of extrapolated cash flows beyond that time frame.

Cash flow projections are determined on the basis of macroeconomic assumptions (inflation, exchange rates and growth rates), and price forecasts resulting from the Group's reference scenario for 2026-2050 as revised and validated by the Executive Committee in October 2022. The forecasts and projections included in the reference scenario were determined on the basis of the following inputs:

- forward market prices over the liquidity period for fuel (coal, oil and gas), CO_2 and electricity on each market against a backdrop of highly volatile energy prices;

- beyond this period, medium- and long-term energy prices were determined by the Group based on macroeconomic assumptions and fundamental supply and demand equilibrium models, the results of which are regularly compared against forecasts prepared by external energy sector specialists. Long-term projections for CO_2 prices are in line with the 2030 emissions reduction target of 55% and the 2050 climate neutrality objectives set by the European Commission as part of the "European Green Deal" presented in December 2019 and July 2021. Among the external scenarios, the Group's scenario is similar to that of the International Energy Agency, with its APS (Announced Pledges Scenario) model, and that of ADEME ("green technology");
- more specifically, medium- and long-term electricity prices were determined by the Group using electricity demand forecasting models, medium- and long-term forecasts of fuel and CO_2 prices, and expected trends in installed capacity and in the technology mix of the production assets within each power generation system. ENGIE has opted for a balanced mix, integrating renewable gas and carbon dioxide capture and storage in order to guarantee an energy system with the best levels of efficiency and resilience. This trajectory has been included in the Group's report as part of the "Task Force on Climate Related Financial Disclosures" (TCFD) initiative. The risk factors arising from climate and environmental issues are also detailed in thIS Universal Registration Document.

13.4.2 Renewables

At December 31, 2022, goodwill amounted to €2,110 million, intangible assets to €1,305 million and property, plant and equipment to €14,679 million. Renewables comprises all centralized renewable energy generation activities, including financing, construction, operation and maintenance of renewable energy facilities, using various energy sources such as hydroelectric, onshore wind, photovoltaic solar, biomass, offshore wind, and geothermal. The energy produced is fed into the grid and sold either on the open or regulated market or to third parties through electricity sale agreements.

The main assumptions and key estimates relate primarily to discount rates, assumptions as to the renewal of the hydropower concession agreements and changes in electricity prices beyond the liquidity period.

Value in use of the Compagnie Nationale du Rhône and SHEM was calculated based on assumptions including the extension or renewal of a tender process for the concession agreements, as well as on the conditions of a potential extension.

The cash flows for the periods covered by the renewal of the concession agreements are based on a number of assumptions relating to the economic and regulatory conditions for operating these assets (royalty rates, required level of investment, etc.) during this period.

In 2022, the discount rates applied to these activities ranged between 4.5% and 10.2%. In 2021, these rates ranged between 4.5% and 10%.

Results of the impairment tests

At December 31, 2022, no impairment losses were recognized on goodwill in consideration of the recoverable amount of the cash generating unit to which it belongs.

However, impairment losses totaling €232 million were recognized during the year on property, plant and equipment, notably in Latin America for €135 million and in North America for €82 million.

Sensitivity analyses

A decrease of €10/MWh in electricity prices for hydropower generation would have a negative €0.4 billion impact on the recoverable amount. However, the recoverable amount of goodwill would remain above the carrying amount. Conversely, an increase of €10/MWh in electricity prices would have a positive €0.3 billion impact on the recoverable amount.

An increase of 50 basis points in the discount rates used for hydropower generation activities in France would have a negative €0.3 billion impact on the recoverable amount. However, the recoverable amount of goodwill would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive €0.3 billion impact on the recoverable amount.

13.4.3 Networks

Networks comprises the Group's electricity and gas infrastructure activities and projects. These activities include the management and development of (i) gas and electricity transportation networks and natural gas distribution networks in and outside of Europe, (ii) underground natural gas storage in Europe, and (iii) regasification infrastructure in France and Chile.

Apart from the historical infrastructure management activities, its asset portfolio also contributes to the challenges of the energy transition and network greening (biomethane, hydrogen, etc.).

At December 31, 2022, goodwill amounted to €5,302 million, intangible assets to €1,093 million and property, plant and equipment to €29,942 million. Regulated infrastructure assets in France amounted to €940 million for intangible assets and €26,369 million for property, plant and equipment.

The valuation of activities in France is mainly based on cash flow projections determined on the basis of tariffs negotiated with the French energy regulator (CRE) and terminal values corresponding to the expected value of the Regulated Asset Base (RAB). The RAB is the value assigned by the CRE to the assets operated by distributors. It is the sum of the future pre-tax cash flows, discounted at the pre-tax rate of return guaranteed by the regulator.

In respect of the valuation of activities in France, the energy mix scenario for 2050, adopted by the Group and detailed in Note 17.3.1 "Dismantling obligations arising on non-nuclear plant and equipment", will not lead to any significant change in RAB. Given the vital role of gas, a reliable energy source able to supplement renewable energy sources that are intermittent by nature, non-controllable and difficult to store, the Group is planning to maintain or convert its gas network infrastructures to allow for the transport of green gases (biomethane, hydrogen, etc.), wich will progressively replace natural gas.

To achieve this, the Group plans to maintain its current level of investment. This approach is largely supported by a rapidly developing legal framework supporting the rise in the use of hydrogen (and to a certain extent, biomethane) in the European Union, which will result in concrete European targets, for hydrogen at least. This legal framework should be in place within the next two years.

France's political and social strategy concerning the energy transition aims to achieve carbon neutrality by 2050. The priorities of the French climate and energy policy are being updated with France's future roadmap *Stratégie Française sur l'Énergie et le Climat* (SFEC) *(see Note 17.3.1 "Dismantling obligations arising on non-nuclear plant and equipment")*. This future policy could have an impact on the role and scope of gas infrastructures in France.

In 2022, the discount rates applied to all these activities ranged between 4.7% and 8.5%. In 2021, they ranged between 4.5% and 8.5%.

Results of the impairment tests

At December 31, 2022, no impairment losses were recognized on goodwill in consideration of the recoverable amount of the cash generating unit to which it belongs.

However, impairment losses totaling €65 million were recognized during the year on property, plant and equipment, notably in Germany.

Sensitivity analysis

Given the regulated nature of the Networks business in France, as well as the progressive transition from natural gas to green gas, a reasonable change in any of the valuation inputs (discount rate, inflation rate and rate of return on assets) would not result in any impairment losses. A very substantial change in the regulatory framework could have a significant impact on the valuation of gas infrastructure assets in France. In this respect, the 2022 RAB of Networks assets in France, as well as the related depreciation and amortization charges, are as follows:

In millions of euros	2022 RAB	Depreciation and amortization
GRDF	16,137	(990)
GRTgaz	9,047	(540)
Storengy	3,958	(147)
Elengy	900	(56)

13.4.4 Energy Solutions

At December 31, 2022, goodwill amounted to €1,316 million, intangible assets to €2,302 million and property, plant and equipment to €2,496 million.

Energy Solutions encompasses the construction and management of decentralized energy networks to produce low-carbon energy (heating and cooling networks, distributed power generation plants, distributed solar power parks, low-carbon mobility, low-carbon cities and public lighting, etc.) and related services (energy efficiency, technical maintenance, sustainable development consulting).

The terminal value used to calculate the value in use of the services and energy sales businesses in France was determined by extrapolating the cash flows beyond the medium-term business plan period using a long-term growth rate of 2% per year.

The main assumptions and key estimates relate primarily to discount rates and changes in price beyond the liquidity period.

In 2022, the discount rates applied to these activities ranged between 4.9% and 8.9%. In 2021, they ranged between 4.5% and 8.6%

Results of the impairment tests

At December 31, 2022, no impairment losses were recognized on goodwill in consideration of the recoverable amount of the cash generating unit to which it belongs.

However, impairment losses totaling €132 million were recognized during the year on property, plant and equipment, mainly in connection with renegotiations of contracts due to expire shortly in France.

Sensitivity analyses

Given the essentially contractual nature of Energy Solutions activities, a reasonable change in any of the valuation inputs would not result in impairment losses on goodwill.

13.4.5 Thermal

At December 31, 2022, goodwill amounted to €1,152 million, intangible assets to €237 million and property, plant and equipment to €5,525 million.

Thermal encompasses all the Group's centralized power generation activities using thermal assets, whether contracted or not. It includes the operation of power plants fueled mainly by gas or coal, as well as pump-operated storage plants. The energy produced is fed into the grid and sold either on the open or regulated market or to third parties through electricity sale agreements. It also includes the financing, construction and operation of desalination plants, whether or not connected to power plants.

The value in use of these activities was calculated using the cash flow projections drawn up on the basis of the 2023 budget and the 2024-2025 medium-term business plan. Beyond this three-year period, cash flows were projected over the useful lives of the assets based on the reference scenario adopted by the Group.

The main assumptions and key estimates relate primarily to discount rates, estimated demand for electricity and changes in the price of CO_2, fuel and electricity beyond the liquidity period. These assumptions also concern the duration of tax measures involving inframarginal rent caps in France and Italy.

In 2022, the discount rates applied to these activities ranged between 6% and 10.3%. In 2021, they ranged between 6% and 10%.

Results of the impairment tests

At December 31, 2022, no impairment losses were recognized on goodwill in consideration of the recoverable amount of the cash generating unit to which it belongs.

However, impairment losses totaling €744 million were recognized during the year on property, plant and equipment, mainly in connection with the ongoing coal exit program which is scheduled to be completed by 2027 at the latest.

Sensitivity analyses

An increase of 50 basis points in the discount rates used would have a negative 1% impact on the excess of the recoverable amount of thermal power plants in France, Belgium, the Netherlands and Spain over their carrying amount. However, the recoverable amount of goodwill would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 1% impact on the calculation.

A 10% decrease in the margin captured by thermal power plants in France, Belgium, the Netherlands and Spain would have a negative impact of 5% on the excess of the recoverable amount of goodwill over the carrying amount. An increase of 10% in the margin captured would have a positive 5% impact on this calculation.

13.4.6 Supply

At December 31, 2022, goodwill amounted to €1,830 million, intangible assets to €682 million and property, plant and equipment to €119 million.

Supply encompasses all the Group's activities relating to the sale of gas and electricity to end customers. It also includes all the Group's activities in services for residential clients.

The terminal value used to calculate the value in use of the main services and energy sales businesses in Europe was determined by extrapolating cash flows beyond the medium-term business plan period using a long-term growth rate of approximately 2% per year.

In 2022, the discount rates applied to these activities ranged between 7.8% and 10%. In 2021, they ranged between 7% and 9%.

Results of the impairment tests

At December 31, 2022, no impairment losses were recognized on goodwill in consideration of the recoverable amount of the cash generating unit to which it belongs.

However, impairment losses totaling €53 million were recognized during the year on property, plant and equipment in connection with the geographic refocusing decided by the Group.

Sensitivity analyses

Given the capital-light nature of Supply activities, a reasonable change in any of the valuation inputs would not result in impairment losses on goodwill.

13.4.7 Nuclear

At December 31, 2022, goodwill amounted to €797 million, intangible assets to €1,075 million and property, plant and equipment to €1,719 million.

Nuclear encompasses the power generation activities from the Group's nuclear power plants in Belgium and drawing rights on the Chooz B and Tricastin power plants in France.

Key assumptions used for the impairment test

The cash flow projections for these activities are based on a large number of key assumptions, such as prices of fuel and CO_2, expected trends in electricity demand and prices, availability of power plants, the market outlook, and changes in the regulatory environment (especially concerning nuclear capacities in Belgium, the extension of drawing rights agreements for French nuclear plants and the tax measures involving inframarginal rent caps). Lastly, the key assumptions also include the discount rate used to calculate the value in use of these activities, which amounted to 7% for 2022, unchanged from 2021.

Cash flow projections for the period beyond the medium-term business plan were determined as described below:

Activities	Assumptions applied beyond the term of the business plan
Drawing rights on Chooz B and Tricastin power plants	Cash flow projection over the remaining term of existing contract plus the assumption that drawing rights will be extended for a further 10 years.

As regards second-generation reactors, the principle of a gradual phase-out of nuclear power and the schedule for this phase-out, with the shutdown of Doel 3 in 2022, Tihange 2 in 2023 and Tihange 3 and Doel 4 in 2025, after 40 years of operation, were first set out in the law of January 31, 2003 on the gradual phase-out of nuclear power for industrial electrical generation, and were reaffirmed in the Belgian government's general policy memorandum of November 4, 2020. However, this principle remained subject to analysis mechanisms enabling this decision to be reassessed based on its impacts on the security of supply, the climate, energy prices and the security of power plants subject to a monitoring process.

In March 2022, the Belgian government announced that it was considering extending the operation of certain nuclear plants beyond 2025. On July 21, 2022, the Group signed a non-binding letter of intent to assess the feasibility and conditions regarding an extension of the operating lives of the Doel 4 and Tihange 3 reactors.

Under the terms of the non-binding agreement signed on January 9, 2023, the Belgian government and ENGIE have committed to making best efforts to extend the operating life of the second-generation nuclear reactors Doel 4 and Tihange 3, and to restart these units in November 2026 with a total production capacity of 2 GW.

Given the stage of negotiations and the lack of precise information on the economic conditions of this extension to date, the period of extension beyond 2025 was not considered in the impairment tests performed at December 31, 2022.

In France, the Nuclear Safety Authority authorized the start-up of Tricastin 1 on December 20, 2019 after its shutdown for its fourth 10-yearly inspection and, on December 3, 2020, published a draft decision setting out the conditions for the 900 MW reactors to continue operating beyond 40 years. Confirmation of a 10-year extension of the operating life of the 900 MW series reactors is therefore expected to be formalized in the next few years, once the conditions for continued operation have been determined by the Nuclear Safety Authority and a public inquiry has been held. The Group has therefore considered the 10-year extension of the nuclear units, and the corresponding drawing rights, beyond their fourth 10-yearly outage. The last ten-yearly outage at Tricastin (VD4) has taken place in 2021, and in 2019 for Chooz B (VD3). The assumption of an extension was already considered in previous years.

Results of the impairment test

Taking into account the effects of the triennial review of nuclear provisions on assets to be recognized against decommissioning provisions of nuclear power plants, the Group recognized an impairment loss of €1,219 million relating to decommissioning assets for the year.

The recoverable amount of the Nuclear assets remains above the value of goodwill, particularly due to the excess value attached to the plants in France.

Sensitivity analyses

A decrease of €10/MWh in electricity prices for nuclear power generation beyond the forward period would lead to a decrease of €0.4 billion in the recoverable amount, but without any impairment of goodwill.

An increase of 50 basis points in the discount rates would lead to a decrease of €0.1 billion in the recoverable amount with non-material impairment losses on the Belgian plants.

A 5% decrease in availability of all Belgian nuclear power plants would lead to an impairment loss of around €0.3 billion on the Belgian plants. A similar decrease for the French plants would lead to a decrease of €0.2 billion in the recoverable amount, but without any impairment.

13.4.8 Other

The goodwill allocated to the Other segment amounted to €350 million at December 31, 2022. The Other segment encompasses energy management and optimization activities, the BtoB supply activities in France of *Entreprises & Collectivités* (E&C), and the Corporate and holding activities.

For the Other segment, a significant headroom exists between the recoverable amount and the carrying amount for operating activities to which goodwill is allocated at December 31, 2022.

NOTE 14 Financial instruments

14.1 Financial assets

ACCOUNTING STANDARDS

In accordance with the principles of IFRS 9 – *Financial Instruments*, financial assets are recognized and measured either at amortized cost, at fair value through equity or at fair value through profit or loss based on the following two criteria:

- a first criterion relating to the contractual cash flow characteristics of the financial asset. The analysis of contractual cash flow characteristics makes it possible to determine whether these cash flows are "only payments of principal and interest on the outstanding amounts" (known as the "SPPI" test or Solely Payments of Principal and Interest);
- a second criterion relating to the business model used by the Group to manage its financial assets. IFRS 9 defines three different business models: a first business model whose objective is to hold assets in order to collect contractual cash flows (hold to collect), a second model whose objective is achieved by both collecting contractual cash flows and selling financial assets (hold to collect and sell), and other business models.

The identification of the business model and the analysis of the contractual cash flow characteristics require judgment to ensure that the financial assets are classified in the appropriate category.

Where the financial asset is an investment in an equity instrument and is not held for trading, the Group may irrevocably elect to present the gains and losses on that investment in other comprehensive income.

Except for trade receivables, which are measured at their transaction price in accordance with IFRS 15, financial assets are measured, on initial recognition, at fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to their acquisition.

At the end of each reporting period, financial assets measured using the amortized cost method or at fair value through other comprehensive income (with a recycling mechanism) are subject to an impairment test based on the expected credit losses method.

Financial assets also include derivatives that are measured at fair value in accordance with IFRS 9.

In accordance with IAS 1, the Group presents current and non-current assets and current and non-current liabilities separately in the statement of financial position. In view of the majority of the Group's activities, it was considered that the criterion to be used to classify assets is the expected time to realize the asset or settle the liability: the asset is classified as current if this period is less than 12 months and as non-current if it is more than 12 months after the reporting period.

The following table presents the Group's different categories of financial assets, broken down into current and non-current items:

		Dec. 31, 2022			Dec. 31, 2021		
In millions of euros	Notes	Non-current	Current	Total	Non-current	Current	Total
Other financial assets	14.1	10,599	2,394	12,992	10,949	2,495	13,444
Equity instruments at fair value through other comprehensive income		*1,217*	*-*	*1,217*	*2,344*	*-*	*2,344*
Equity instruments at fair value through income		*278*	*-*	*278*	*483*	*-*	*483*
Debt instruments at fair value through other comprehensive income		*2,128*	*290*	*2,418*	*2,157*	*104*	*2,261*
Debt instruments at fair value through income		*1,178*	*568*	*1,745*	*1,794*	*395*	*2,189*
Loans and receivables at amortized cost		*5,798*	*1,537*	*7,334*	*4,171*	*1,996*	*6,167*
Trade and other receivables	7.2	-	31,310	31,310	-	32,555	32,555
Assets from contracts with customers	7.2	9	12,575	12,584	34	8,344	8,377
Cash and cash equivalents		-	15,570	15,570	-	13,890	13,890
Derivative instruments	14.4	33,134	15,252	48,386	25,616	19,373	44,989
TOTAL		**43,741**	**77,102**	**120,843**	**36,599**	**76,657**	**113,256**

14.1.1 Other financial assets

14.1.1.1 Equity instruments at fair value

ACCOUNTING STANDARDS

Equity instruments at fair value through other comprehensive income (OCI)

Under IFRS 9 an irrevocable election can be made to present subsequent changes in the fair value of an investment in an equity instrument that is not held for trading in other comprehensive income. This choice is made on an instrument by instrument basis. Amounts presented in other comprehensive income should not be transferred to profit or loss including proceeds of disposals. However, IFRS 9 authorizes the transfer of the accumulated profits and losses to another component of equity. Dividends from such investments are recognized in profit or loss unless the dividend clearly represents the recovery of a portion of the cost of the investment.

The equity instruments recognized under this line item mainly concern investments in companies that are not controlled by the Group and for which OCI measurement has been selected given their strategic and long-term nature.

Upon initial recognition, these equity instruments are recognized at fair value, which is generally their acquisition cost, plus transaction costs.

At each reporting date, for listed securities, fair value is determined based on the quoted market price at the reporting date. For unlisted securities, fair value is measured using valuation models based primarily on the latest market transactions, the discounting of dividends or cash flows and the net asset value.

Equity instruments at fair value through profit or loss

Equity instruments that are held for trading or for which the Group has not elected for measurement at fair value through other comprehensive income are measured at fair value through profit or loss.

This category mainly includes investments in companies not controlled by the Group.

Upon initial recognition, these equity instruments are recognized at fair value, which is generally their acquisition cost.

At each reporting date, for listed and unlisted securities, the same measurement method as described above should be applied.

In millions of euros	Equity instruments at fair value through other comprehensive income	Equity instruments at fair value through income	Total
AT DECEMBER 31, 2021	**2,344**	**483**	**2,827**
Increase	213	93	306
Decrease	(647)	(263)	(910)
Changes in fair value	(686)	(15)	(701)
Changes in scope of consolidation, translation adjustments and other	(7)	(20)	(27)
AT DECEMBER 31, 2022	**1,217**	**278**	**1,495**
Dividends	12	3	15

Equity instruments break down as €875 million of listed equity instruments (€1,750 million at December 31, 2021) and €620 million of unlisted equity instruments (€1,077 million at December 31, 2021). This amount includes in particular the minority interest held by the Group in Nord Stream AG, now valued at €90 million, down €474 million compared to December 31, 2021. This decrease is a result of damage to the pipeline and due to the heightened risk profile of Nord Stream's single customer, Gazprom. This change in fair value does not affect the income statement, as it is recorded as a reduction in other items of the statement of comprehensive income. The decrease notably includes the disposal of the remaining 1.8% interest in SUEZ for a negative €227 million.

14.1.1.2 Debt instruments at fair value

ACCOUNTING STANDARDS

Debt instruments at fair value through other comprehensive income

Financial assets that are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets and for which the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the outstanding amount (SPPI), are measured at fair value through OCI (with a recycling mechanism). This involves a measurement through profit or loss for interest (at amortized cost using the effective interest method), impairment and foreign exchange gains and losses, and through OCI (with a recycling mechanism) for other gains or losses.

This category mainly includes bonds.

Fair value gains and losses on these instruments are recognized in other comprehensive income, except for the following items which are recognized in profit or loss:

- expected credit losses and reversals;
- foreign exchange gains and losses.

When the financial asset is derecognized, the cumulative gain or loss that was previously recognized in other comprehensive income is reclassified from equity to profit or loss.

Debt instruments at fair value through profit or loss

Financial assets whose contractual cash flows do not consist solely of payments of principal and interest on the amount outstanding (SPPI) or that are held in view of an "other" business model are measured at fair value through profit or loss.

The Group's investments in UCITS are accounted for in this caption. They are considered as debt instruments, according to IAS 32 – *Financial Instruments*: *Presentation*, given the existence of an obligation for the issuer to redeem units, at the request of the holder. They are measured at fair value through profit or loss because the contractual cash flow characteristics do not meet the SPPI test.

In millions of euros	Debt instruments at fair value through other comprehensive income	Liquid debt instruments held for cash investment purposes at fair value through other comprehensive income	Debt instruments at fair value through income	Liquid debt instruments held for cash investment purposes at fair value through income	Total
AT DECEMBER 31, 2021	**2,260**	**1**	**1,593**	**595**	**4,449**
Increase	1,751	22	1,704	200	3,677
Decrease	(1,207)	(1)	(2,040)	(20)	(3,269)
Changes in fair value	(386)	-	(280)	(7)	(673)
Changes in scope of consolidation, translation adjustments and other	-	(22)	-	-	(22)
AT DECEMBER 31, 2022	**2,418**	**-**	**977**	**769**	**4,163**

Debt instruments at fair value at December 31, 2022 primarily included bonds and money market funds held by Synatom for €3,350 million *(see Note 17.2.4 "Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material")* and liquid instruments deducted from net financial debt for €769 million (respectively €3,806 million and €596 million at December 31, 2021).

14.1.1.3 Loans and receivables at amortized cost

ACCOUNTING STANDARDS

Loans and receivables held by the Group under a business model consisting in holding the instrument in order to collect the contractual cash flows, and whose contractual cash flows consist solely of payments of principal and interest on the principal amount outstanding (SPPI test) are measured at amortized cost. Interest is calculated using the effective interest method.

The following items are recognized in profit or loss:

- interest income using the effective interest method;
- expected credit losses and reversals;
- foreign exchange gains and losses.

The Group has entered into concession agreements with certain public authorities under which the construction, extension or improvement of infrastructure is carried out in return for an unconditional right to receive payment from the concession holder in cash or other financial assets. In this case, the Group recognizes a financial receivable from the concession holders.

The Group has entered into services or take-or-pay contracts that are, or contain, a lease and under which the Group acts as lessor and its customers as lessees. Leases are analyzed in accordance with IFRS 16 in order to determine whether they constitute an operating lease or a finance lease. Whenever the terms of the lease transfer substantially all the risk and rewards of ownership of the related asset, the contract is classified as a finance lease and a finance receivable is recognized to reflect the financing deemed to be granted by the Group to the customer.

Leasing security deposits are presented in this caption and recognized at their nominal value.

Please refer to Note 15 "Risks arising from financial instruments" regarding the assessment of counterparty risk.

	Dec. 31, 2022			Dec. 31, 2021		
In millions of euros	Non-current	Current	Total	Non-current	Current	Total
Loans granted to affiliated companies and other debt instruments at amortized cost	3,583	427	4,010	2,267	195	2,462
Other receivables at amortized cost	261	734	995	240	1,537	1,777
Amounts receivable under concession contracts	1,564	187	1,751	1,200	123	1,324
Amounts receivable under finance leases	390	189	579	463	141	604
TOTAL	**5,798**	**1,537**	**7,334**	**4,171**	**1,996**	**6,167**

Loans granted to affiliated companies and other debt instruments at amortized cost include the cash of the debt instruments held by Synatom to be invested for €2,270 million (€167 million at December 31, 2021) *(see Note 17.2.4. "Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material")*.

Amounts receivable under concession contracts amounted to €1,751 million at December 31, 2022. They are related to the Novo Estado and Gralha Azul electric power transmission networks in Brazil.

Impairment and expected credit losses against loans and receivables at amortized cost stood at €1,294 million at December 31, 2022 (*versus* €228 million at December 31, 2021), and include the impairment of the loan relating to the financing of the Nord Stream 2 pipeline project for €987 million *(see Note 15.2.2.1 "Loans and receivables at amortized cost" and Note 10 "Net financial income/(loss)")*.

Other net gains and losses recognized in the income statement relating to loans and receivables at amortized cost break down as follows:

		Post-acquisition measurement	
In millions of euros	Interest income	Foreign currency translation	Expected credit loss
At December 31, 2022	211	(64)	(6)
At December 31, 2021	223	(15)	(7)

Amounts receivable under finance leases

These contracts refer to lease contracts in which ENGIE acts as lessor, classified as finance leases in accordance with IFRS 16. They relate to energy purchase and sale contracts where the contract conveys an exclusive right to use a production asset, and certain contracts with industrial customers relating to assets held by the Group.

The Group has recognized finance lease receivables, notably for cogeneration plants for Wapda and NTDC (Uch – Pakistan).

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Undiscounted future minimum lease payments	758	713
Unguaranteed residual value accruing to the lessor	12	11
Total gross investment in the lease	**770**	**724**
Unearned financial income	**47**	**56**
NET INVESTMENT IN THE LEASE (STATEMENT OF FINANCIAL POSITION)	**723**	**668**
Of which present value of future minimum lease payments	*718*	*660*
Of which present value of unguaranteed residual value	*5*	*9*

Undiscounted minimum lease payments receivable under finance leases can be analyzed as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Year 1	137	122
Years 2 to 5 inclusive	376	351
Beyond year 5	245	240
TOTAL	**758**	**713**

14.1.2 Trade and other receivables, assets from contracts with customers

Information on trade and other receivables and assets from contracts with customers are provided in Note 7.2. “Trade and other receivables, assets and liabilities from contracts with customers”.

14.1.3 Cash and cash equivalents

ACCOUNTING STANDARDS

This item includes cash equivalents as well as short-term investments that are considered to be readily convertible into a known amount of cash and where the risk of a change in their value is deemed to be negligible based on the criteria set out in IAS 7.

Bank overdrafts are not included in the calculation of cash and cash equivalents and are recorded under “Short-term borrowings”.

Cash and cash equivalent items are subject to impairment tests in accordance with the expected credit losses model of IFRS 9.

“Cash and cash equivalents” totaled €15,570 million at December 31, 2022 (€13,890 million at December 31, 2021). This item comprises standard money market funds with daily liquidity (50%), term deposits with a maturity of less than one month (36%), and deposits with a maturity of less than three months and other products (14%).

This amount included funds related to the green bond issues, which remain unallocated to the funding of eligible projects (see section 5 of the Universal Registration Document).

At December 31, 2022, this amount also included €12 million in restricted cash (€172 million at December 31, 2021).

Gains recognized in respect of “Cash and cash equivalents” amounted to €196 million in 2022 compared to €54 million in 2021.

14.1.4 Transfer of financial assets

The Group carried out disposals without recourse to financial assets as part of transactions leading to full derecognition, for an outstanding amount of €3,733 million at December 31, 2022.

14.1.5 Financial assets and equity instruments pledged as collateral for borrowings and debt

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Financial assets and equity instruments pledged as collateral	3,532	3,915

This item mainly includes the carrying amount of equity instruments pledged as collateral for borrowings and debt.

14.2 Financial liabilities

ACCOUNTING STANDARDS

Borrowings and other financial liabilities are measured at amortized cost using the effective interest rate method.

On initial recognition, any issue or redemption premiums and discounts and issuing costs are added to/deducted from the nominal value of the borrowings concerned. These items are taken into account when calculating the effective interest rate and are therefore recorded in the consolidated income statement over the life of the borrowings using the amortized cost method.

As regards structured debt instruments that do not have an equity component, the Group may be required to separate an “embedded” derivative instrument from its host contract. When an embedded derivative is separated from its host contract, the initial carrying amount of the structured instrument is broken down into an embedded derivative component, corresponding to the fair value of the embedded derivative, and a financial liability component, corresponding to the difference between the amount of the issue and the fair value of the embedded derivative. The separation of components upon initial recognition does not give rise to any gains or losses.

The debt is subsequently recorded at amortized cost using the effective interest method while the derivative is measured at fair value, with changes in fair value recognized in profit or loss.

Financial liabilities are recognized either:

- as “Amortized cost liabilities” for borrowings, trade payables and other creditors, and other financial liabilities;
- as “Liabilities measured at fair value through profit or loss” for derivative financial instruments and for financial liabilities designated as such.

The following table presents the Group’s different financial liabilities at December 31, 2022, broken down into current and non-current items:

		Dec. 31, 2022			Dec. 31, 2021		
In millions of euros	Notes	Non-current	Current	Total	Non-current	Current	Total
Borrowings and debt	14.3	28,083	12,508	40,591	30,458	10,590	41,048
Trade and other payables	14.2	-	39,801	39,801	-	32,822	32,822
Liabilities from contracts with customers	7.2	121	3,292	3,412	68	2,671	2,739
Derivative instruments	14.4	39,417	11,859	51,276	24,228	22,702	46,931
Other financial liabilities		90	-	90	108	-	108
TOTAL		**67,711**	**67,460**	**135,171**	**54,863**	**68,785**	**123,648**

14.2.1 Trade and other payables

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Trade payables	39,165	32,197
Payable on fixed assets	636	625
TOTAL	**39,801**	**32,822**

The carrying amount of these financial liabilities represents a reasonable estimate of their fair value.

The increase in trade payables is mainly due to the rise in commodity prices.

14.2.2 Liabilities from contracts with customers

Information on liabilities from contracts with customers are provided in Note 7.2. “Trade and other receivables, assets and liabilities from contracts with customers”.

14.3 Net financial debt

14.3.1 Net financial debt by type

In milions of euros		Dec. 31, 2022			Dec. 31, 2021		
		Non-current	Current	Total	Non-current	Current	Total
Borrowings and debt	Bond issues	21,007	2,550	23,557	24,035	2,205	26,240
	Bank borrowings	4,679	797	5,476	3,829	1,977	5,806
	Negotiable commercial paper	-	7,386	7,386	-	4,962	4,962
	Lease liabilities	2,482	393	2,875	1,709	334	2,043
	Other borrowings (1)	(85)	768	682	885	613	1,498
	Bank overdrafts and current account	-	615	615	-	499	499
	Borrowings and debt	**28,083**	**12,508**	**40,591**	**30,458**	**10,590**	**41,048**
Other financial assets	Other financial assets deducted from net financial debt (2)	(249)	(1,133)	(1,383)	(251)	(1,369)	(1,621)
Cash and cash equivalents	Cash and cash equivalents	-	(15,570)	(15,570)	-	(13,890)	(13,890)
Derivative instruments	Derivatives hedging borrowings (3)	394	22	416	(147)	(41)	(187)
NET FINANCIAL DEBT		**28,228**	**(4,174)**	**24,054**	**30,060**	**(4,710)**	**25,350**

(1) This item corresponds to the revaluation of the interest rate component of debt in a qualified fair value hedging relationship for a negative €200 million, margin calls on debt hedging derivatives carried in liabilities for €364 million and the impact of amortized cost for €144 million (compared to, respectively, €227 million, €269 million and €99 million at December 31, 2021).

(2) This item notably corresponds to assets related to financing for €67 million, liquid debt instruments held for cash investment purposes for €769 million and margin calls on derivatives hedging borrowings carried in assets for €547 million (compared to, respectively, €47 million, €596 million and €977 million at December 31, 2021).

(3) This item represents the interest rate component of the fair value of derivatives hedging borrowings in a designated fair value hedging relationship. It also represents the exchange rate and outstanding accrued interest rate components of the fair value of all debt-related derivatives irrespective of whether or not they qualify as hedges.

The fair value of gross borrowings and debt (excluding lease liabilities) amounted to €35,179 million at December 31, 2022, compared with a carrying amount of €37,690 million.

Financial income and expenses related to borrowings and debt are presented in Note 10 “Net financial income/(loss)”.

14.3.2 Reconciliation between net financial debt and cash flow from (used in) financing activities

In millions of euros		Dec. 31, 2021	Cash flow from financing activities	Cash flow from operating and investing activities and change in cash and cash equivalents	Change in fair value	Translation adjustments	Change in scope of consolidation and others	Dec. 31, 2022
Borrowings and debt	Bond issues	26,240	(2,805)	-	-	218	(96)	23,557
	Bank borrowings	5,806	(639)	-	-	277	32	5,476
	Negotiable commercial paper	4,962	2,352	-	-	71	-	7,386
	Lease liabilities (1)	2,043	(501)	-	-	38	1,295	2,875
	Other borrowings	1,498	(359)	-	(105)	30	(381)	682
	Bank overdrafts and current account	499	3	-	-	115	(3)	615
	Borrowings and debt	**41,048**	**(1,949)**	**-**	**(105)**	**749**	**848**	**40,591**
Other financial assets	Other financial assets deducted from net financial debt	(1,621)	187	-	29	(1)	22	(1,383)
Cash and cash equivalents	Cash and cash equivalents	(13,890)	-	(945)	-	(363)	(371)	(15,570)
Derivative instruments	Derivatives hedging borrowings	(187)	(97)	-	525	170	5	416
NET FINANCIAL DEBT		**25,350**	**(1,859)**	**(945)**	**449**	**556**	**503**	**24,054**

(1) *Lease liabilities: the negative amount of a negative €501 million included in the "Cash flow from financing activities" column corresponds to lease payments, excluding interest (total cash outflow for leases amounted to €552 million, of which €51 million relating to interest).*

14.3.3 Main events of the period

14.3.3.1 Impact of changes in the scope of consolidation and in exchange rates on net financial debt

In 2022, changes in exchange rates resulted in a €556 million increase in net financial debt, including a €271 million increase in relation to the US dollar and a €307 million increase in relation to the Brazilian real.

The extension of the Compagnie Nationale du Rhône's concession until 2041 resulted in an increase in lease liabilities of €850 million at December 31, 2022.

Changes in the scope of consolidation (including the cash impact of acquisitions and disposals) led to a €7,043 million decrease in net financial debt. This change mainly reflects:

- asset disposals during the period, resulting in a €8,697 million decrease in net financial debt *(see Note 4.1 "Disposals carried out in 2022")*. They mainly include:
  - the disposal to Bouygues of the Group's interest in EQUANS,
  - the additional price related to the sale of part of the stake in SUEZ and the disposal of the 1.8% remaining interest in SUEZ to VEOLIA,
  - the two successive disposals of nearly 9% and then 6% of the Group's interest in Gaztransport & Technigaz SA (GTT) and the conversion of 96% of the bond redeemable for GTT shares (representing nearly 10% of the company's capital),
  - the disposal of the Group's interest in geothermic assets PT SUPREME ENERGY MUARA LABOH and RANTAU DEDAP in Indonesia;
- the change in the classification of entities under "Assets held for sale", resulting in a €297 million decrease in net financial debt. They include the ongoing disposal of a thermal power plant in Brazil and the unfavorable evolution of the planned disposal of some renewable assets in Mexico *(see Note 4.2 "Assets held for sale")*;
- acquisitions carried out in 2022 which increased net financial debt by €1,951 million *(see Note 4.3 "Acquisitions carried out in 2022")*.

6

14.3.3.2 Financing and refinancing transactions

The Group carried out the following main transactions in 2022:

ENGIE SA

- On March 9, 10 and 11, 2022 ENGIE SA drew on bilateral lines for a total amount of €1,485 million, for a one month period. The redemption took place on April 11, 2022;
- On July 6, 2022 ENGIE SA redeemed at maturity JPY 10 billion (€71 million) worth of bonds (private placement) with a 1.26% coupon;
- On July 20, 2022 ENGIE SA redeemed at maturity €410 million worth of bonds, with a 2.625% coupon;
- On September 27, 2022 ENGIE SA issued €650 million worth of green bonds, maturing in September 2029, bearing a 3.5% coupon;
- On October 10, 2022 ENGIE SA redeemed at maturity USD 750 million (€773 million) worth of bonds, with a 2.875% coupon;
- On October 18, 2022 ENGIE SA redeemed at maturity €693 million worth of bonds, with a 3.5% coupon;
- On October 24, 2022 ENGIE SA redeemed partially in advance several bonds for an aggregate nominal amount of €1,125 million, including:
  - a €220 million tranche of green bonds, maturing in March 2024, with a 0.875% coupon,
  - a €396 million tranche, maturing in March 2025, with a 1.375% coupon,
  - a €157 million tranche, maturing in September 2025, with a 0.875% coupon,
  - a €54 million tranche, maturing in May 2026, with a 2.375% coupon,
  - a €123 million tranche, maturing in March 2027, with a 0% coupon,
  - a €175 million tranche, maturing in June 2027, with a 0.375% coupon;
- In November and December 2022, 96% of the bond redeemable for GTT shares was converted for €278 million.

Other Group entities

- In June 2022, Compagnie Nationale du Rhône redeemed at maturity a bank loan of €300 million, with a 0.55% coupon;
- In May 2022, ENGIE Brasil Energia redeemed at maturity three bank loans for a total amount of €238 million;
- Throughout 2022, ENGIE Energia Chile took out several bank loans for a total amount of USD 797 millions (€748 million);
- In July 2022, ENGIE Energia Perù SA redeemed at maturity two bank loans for a total amount of €142 million, with 1.01% and 1.06% coupons;
- In August 2022, ENGIE Energia Perù SA took out a USD 264 million (€251 million) bank loan, maturing in August 2033;
- In October 2022, Compagnie Nationale du Rhône redeemed at maturity a bank loan of €300 million, with an EURIBOR 6 months plus a 0.9% spread coupon;
- Throughout 2022, Compagnie Nationale du Rhône redeemed several bilateral lines for a total amount of €525 million;
- In November 2022, ENGIE Brasil Energia redeemed at maturity a bank loan of USD 200 million (€205 million), with a 3.37% coupon.

14.4 Derivative instruments

ACCOUNTING STANDARDS

Derivative financial instruments are measured at fair value. This fair value is determined on the basis of market data, available from external contributors. In the absence of an external benchmark, a valuation based on internal models recognized by market participants and favoring data directly derived from observable data such as OTC quotations is used.

The change in fair value of derivative financial instruments is recorded in the income statement except when they are designated as hedging instruments in a cash flow hedge or net investment hedge. In this case, changes in the value of the hedging instruments are recognized directly in equity, excluding the ineffective portion of the hedges.

The Group uses derivative financial instruments to manage and reduce its exposure to market risks arising from fluctuations in interest rates, foreign currency exchange rates and commodity prices, mainly for gas and electricity. The use of derivative instruments is governed by a Group policy for managing interest rate, currency and commodity risks *(see Note 15 – Risks arising from financial instruments)*.

Derivative financial instruments are contracts (i) whose value changes in response to the change in one or more observable variables, (ii) that do not require any material initial net investment, and (iii) that are settled at a future date.

Derivative instruments include swaps, options, futures and swaptions, as well as forward commitments to purchase or sell listed and unlisted securities, and firm commitments or options to purchase or sell non-financial assets that involve physical delivery of the underlying.

For purchases and sales of electricity and natural gas, the Group systematically analyzes whether the contract was entered into in the "normal" course of operations and therefore falls outside the scope of IFRS 9. This analysis consists firstly in demonstrating that the contract is entered into and continues to be held for the purpose of physical delivery or receipt of the commodity in accordance with the Group's expected purchase, sale or usage requirements for volumes intended to be used or sold by the Group within a reasonable time frame, as part of its operations.

The second step is to demonstrate that the Group has no practice of settling similar contracts on a net basis and that these contracts are not equivalent to written options. In particular, in the case of electricity and gas sales allowing the buyer a certain degree of flexibility concerning the volumes delivered, the Group distinguishes between contracts that are equivalent to capacity sales considered as transactions falling within the scope of ordinary operations and those that are equivalent to written financial options, which are accounted for as derivative financial instruments.

Only contracts that meet all of the above conditions are considered as falling outside the scope of IFRS 9. Adequate specific documentation is compiled to support this analysis.

Embedded derivatives

The main Group contracts that may contain embedded derivatives are contracts with clauses or options potentially affecting the contract price, volume or maturity. This is the case primarily with contracts for the purchase or sale of non-financial assets, whose price is revised based on an index, the exchange rate of a foreign currency or the price of an asset other than the contract's underlying.

An embedded derivative is a component of a hybrid (combined) instrument that also includes a non-derivative host contract – with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.

If a hybrid contract contains a host that is an asset within the scope of IFRS 9, the Group applies the presentation and measurements requirements described in Note 18.1 to the entire hybrid contract.

Conversely, when a hybrid contract contains a host that is not an asset within the scope of IFRS 9, an embedded derivative shall be separated from the host and accounted for as a derivative if, and only if:

- the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host;
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
- the hybrid contract is not measured at fair value with changes in fair value recognized in profit or loss (*i.e.*, a derivative that is embedded in a financial liability at fair value through profit or loss is not separated).

Where an embedded derivative is separate from the host contract, it is measured at fair value and fair value changes are recognized in profit or loss (except if the embedded derivative is documented in a hedge relationship).

Hedging instruments: recognition and presentation

Derivative instruments qualifying as hedging instruments are recognized in the consolidated statement of financial position and measured at fair value. However, their accounting treatment varies according to whether they are classified as (i) a fair value hedge of an asset or liability; (ii) a cash flow hedge, or (iii) a hedge of a net investment in a foreign operation.

Fair value hedges

A fair value hedge is defined as a hedge of the exposure to changes in fair value of a recognized asset or liability such as a fixed-rate loan or borrowing, or of assets, liabilities or an unrecognized firm commitment denominated in a foreign currency.

The gain or loss from remeasuring the hedging instrument at fair value is recognized in profit or loss. The gain or loss on the hedged item attributable to the hedged risk adjusts the carrying amount of the hedged item and is also recognized in profit or loss even if the hedged item is in a category in respect of which changes in fair value are recognized through other comprehensive income. These two adjustments are presented net in the consolidated income statement, with the net effect corresponding to the ineffective portion of the hedge.

Cash flow hedges

A cash flow hedge is a hedge of the exposure to variability in cash flows that could affect the Group's income. The hedged cash flows may be attributable to a particular risk associated with a recognized financial or non-financial asset or a highly probable forecast transaction.

The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognized directly in other comprehensive income, net of tax, while the ineffective portion is recognized in profit or loss. The gains or losses accumulated in equity are reclassified to the consolidated income statement under the same caption as the loss or gain on the hedged item – *i.e.*, current operating income for operating cash flows and financial income or expenses for other cash flows – in the same periods in which the hedged cash flows affect income.

If the hedging relationship is discontinued, in particular because the hedge is no longer considered effective, the cumulative gain or loss on the hedging instrument remains recognized in equity until the forecast transaction occurs. However, if a forecast transaction is no longer expected to occur, the cumulative gain or loss on the hedging instrument is immediately recognized in profit or loss.

Hedge of a net investment in a foreign operation

In the same way as for a cash flow hedge, the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge of the currency risk is recognized directly in other comprehensive income, net of tax, while the ineffective portion is recognized in profit or loss. The gains or losses accumulated in other comprehensive income are transferred to the consolidated income statement when the investment is liquidated or sold.

Hedging instruments: identification and documentation of hedging relationships

The hedging instruments and hedged items are designated at the inception of the hedging relationship. The hedging relationship is formally documented in each case, specifying the hedging strategy, the hedged risk and the method used to assess hedge effectiveness. Only derivative contracts entered into with external counterparties are considered as being eligible for hedge accounting

Hedge effectiveness is assessed and documented at the inception of the hedging relationship and on an ongoing basis throughout the periods for which the hedge was designated.

Hedge effectiveness is demonstrated both prospectively and retrospectively using various methods, based mainly on a comparison between changes in fair value or cash flows between the hedging instrument and the hedged item. Methods based on an analysis of statistical correlations between historical price data are also used.

Derivative instruments not qualifying for hedge accounting: recognition and presentation

These items mainly concern derivative financial instruments used in economic hedges that have not been – or are no longer – documented as hedging relationships for accounting purposes.

When a derivative financial instrument does not qualify or no longer qualifies for hedge accounting, changes in fair value are recognized directly in profit or loss under (i) current operating income for derivative instruments with non-financial assets as the underlying, and (ii) financial income or expenses for currency, interest rate and equity derivatives.

Derivative instruments not qualifying for hedge accounting used by the Group in connection with proprietary commodity trading activities and other derivatives expiring in less than 12 months are recognized in the consolidated statement of financial position in current assets and liabilities, while derivatives expiring after this period are classified as non-current items.

Fair value measurement

The fair value of instruments listed on an active market is determined by reference to the market price. In this case, these instruments are presented in level 1 of the fair value hierarchy.

The fair value of unlisted financial instruments for which there is no active market and for which observable market data exist is determined based on valuation techniques such as option pricing models or the discounted cash flow method.

The models used to evaluate these instruments take into account assumptions based on market inputs:

- the fair value of interest rate swaps is calculated based on the present value of future cash flows;
- the fair value of forward foreign exchange contracts and currency swaps is calculated by reference to current prices for contracts with similar maturities by discounting the future cash flow spread (difference between the forward exchange rate under the contract and the forward exchange rate recalculated in line with the new market conditions applicable to the nominal amount);
- the fair value of currency and interest rate options is calculated using option pricing models;
- commodity derivatives are valued by reference to listed market prices based on the present value of future cash flows (commodity swaps or commodity forwards) and option pricing models (options), for which market price volatility may be a factor. Contracts with maturities exceeding the depth of transactions for which prices are observable, or which are particularly complex, may be valued based on internal assumptions;
- exceptionally, for complex contracts negotiated with independent financial institutions, the Group uses the values established by its counterparties.

These instruments are presented in level 2 of the fair value hierarchy except when the evaluation is based mainly on data that are not observable, in which case they are presented in level 3 of the fair value hierarchy. Most often, this is the case for derivatives with a maturity that falls outside the observability period for market data relating to the underlying or when certain inputs such as the volatility of the underlying are not observable.

Except in case of enforceable master netting arrangements or similar agreements, counterparty risk is included in the fair value of financial derivative instrument assets and liabilities. It is calculated according to the "expected loss" method and takes into account the exposure at default, the probability of default and the loss given default. The probability of default is determined on the basis of credit ratings assigned to each counterparty ("historical probability of default" approach).

Offsetting of financial assets and liabilities in the statement of financial position

Financial assets and liabilities are presented net in the statement of financial position when the offsetting criteria of IAS 32 are met. Offsetting relates to instruments entered into with counterparties for which the contractual terms provide for a net settlement of transactions and a collateralization agreement (margin calls). In particular, commodity derivative assets and liabilities are offset for transactions with the same counterparty, in the same currency, by type of commodity and delivery point and with identical maturities.

Derivative instruments recognized in assets and liabilities are measured at fair value and broken down as follows:

	Dec. 31, 2022						Dec. 31, 2021					
	Assets			Liabilities			Assets			Liabilities		
In millions of euros	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Derivatives hedging borrowings	226	92	319	620	114	735	370	130	501	224	89	313
Derivatives hedging commodities	30,932	15,076	46,008	37,210	11,698	48,907	24,474	19,190	43,664	22,335	22,507	44,842
Derivatives hedging other items [(1)]	1,975	84	2,059	1,587	47	1,634	772	52	824	1,670	106	1,775
TOTAL	**33,134**	**15,252**	**48,386**	**39,417**	**11,859**	**51,276**	**25,616**	**19,373**	**44,989**	**24,228**	**22,702**	**46,931**

(1) Derivatives hedging other items mainly include the interest rate component of interest rate derivatives (not qualifying as hedges or qualifying as cash flow hedges) that are excluded from net financial debt, as well as net investment hedge derivatives.

The increase in the balance of derivatives hedging commodities is due to the extreme volatility of commodity prices in 2022. Most of these derivatives mature in 2023 and 2024. This fair value also incorporates market parameters at December 31, 2022, in particular the “bid ask” reserve, which have been updated to reflect the higher volatility of commodity prices and the reduced liquidity in the European natural gas and electricity markets in the second half of 2022. In the main markets where the Group operates (Europe, United States, Singapore) a 10% increase or decrease in these market parameters (including the “bid ask” spread) would impact the fair value of the derivates concerned by a negative €143 million (increase) and a positive €143 million (decrease).

14.4.1 Offsetting of derivative instrument assets and liabilities

The net amount of derivative instruments after taking into account enforceable master netting arrangements or similar agreements, whether or not they are offset in accordance with paragraph 42 of IAS 32, are presented in the table below:

		Dec. 31, 2022				Dec. 31, 2021			
In millions of euros		Gross amount	Net amount recognized in the statement of financial position [(1)]	Other offsetting agreements [(2)]	Total net amount	Gross amount	Net amount recognized in the statement of financial position [(1)]	Other offsetting agreements [(2)]	Total net amount
Assets	Derivatives hedging commodities	72,322	46,008	(8,866)	37,142	75,043	43,664	(9,281)	34,383
	Derivatives hedging borrowings and other items	2,378	2,378	(364)	2,014	1,325	1,325	(269)	1,056
Liabilities	Derivatives hedging commodities	(75,221)	(48,907)	5,094	(43,813)	(76,220)	(44,842)	4,987	(39,855)
	Derivatives hedging borrowings and other items	(2,369)	(2,369)	547	(1,822)	(2,089)	(2,089)	977	(1,111)

(1) Net amount recognized in the statement of financial position after taking into account offsetting agreements that meet the criteria set out in paragraph 42 of IAS 32. Due to the extreme volatility of commodity prices, this offsetting had a significant impact on the statement of financial position at December 31, 2022 and mainly concerns OTC derivatives concluded with counterparties for which the contractual terms provide for a net settlement of the transactions as well as a collateralization agreement (margin calls).

(2) Other offsetting agreements include collateral and other guarantee instruments, as well as offsetting agreements that do not meet the criteria set out in paragraph 42 of IAS 32.

14.5 Fair value of financial instruments by level in the fair value hierarchy

14.5.1 Financial assets

The table below shows the allocation of financial instruments carried in assets to the different levels in the fair value hierarchy:

	Dec. 31, 2022				Dec. 31, 2021			
In millions of euros	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Other financial assets (excluding loans and receivables at amortized cost)	5,658	4,225	-	1,433	7,276	5,556	-	1,720
Equity instruments at fair value through other comprehensive income	*1,217*	*875*	-	*342*	*2,344*	*1,524*	-	*820*
Equity instruments at fair value through income	*278*	-	-	*278*	*483*	*227*	-	*256*
Debt instruments at fair value through other comprehensive income	*2,418*	*2,418*	-	-	*2,261*	*2,254*	-	*7*
Debt instruments at fair value through income	*1,745*	*933*	-	*813*	*2,189*	*1,552*	-	*637*
Derivative instruments	48,386	138	44,730	3,518	44,989	177	41,606	3,206
Derivatives hedging borrowings	*319*	-	*319*	-	*501*	-	*501*	-
Derivatives hedging commodities – relating to portfolio management activities (1)	*40,992*	-	*40,825*	*168*	*35,381*	-	*35,306*	*75*
Derivatives hedging commodities – relating to trading activities (1)	*5,016*	*138*	*1,528*	*3,350*	*8,284*	*177*	*4,975*	*3,131*
Derivatives hedging other items	*2,059*	-	*2,059*	-	*824*	-	*824*	-
TOTAL	**54,044**	**4,363**	**44,730**	**4,951**	**52,266**	**5,734**	**41,606**	**4,926**

(1) Derivative financial instruments relating to commodities classified in level 3 mainly include long-term gas supply contracts and electricity contracts measured at fair value through profit or loss. Due to geopolitical uncertainties, the fair value of contracts with Russian suppliers takes into account contingencies related to natural gas supply cuts.

A definition of these three levels is presented in Note 14.4 "Derivative instruments".

Other financial assets (excluding loans and receivables at amortized cost)

Changes in level 3 equity and debt instruments at fair value can be analyzed as follows:

In millions of euros	Equity instruments at fair value through other comprehensive income	Debt instruments at fair value through other comprehensive income	Equity instruments at fair value through income	Debt instruments at fair value through income	Other financial assets (excluding loans and receivables at amortized cost)
AT DECEMBER 31, 2021	**821**	**7**	**256**	**637**	**1,721**
Acquisitions	30	16	93	205	344
Disposals	(2)	(1)	(36)	(21)	(60)
Changes in fair value (1)	(499)	-	(15)	(8)	(521)
Changes in scope of consolidation, foreign currency translation and other changes	(8)	(23)	(20)	-	(51)
AT DECEMBER 31, 2022	**342**	-	**278**	**813**	**1,433**
Gains/(losses) recorded in income relating to instruments held at the end of the period					(4)

(1) Changes in fair value comprises the €474 million decrease in the value of the Group's minority interest in Nord Stream AG (see Note 14.1.1.1 "Equity instruments at fair value").

Derivative instruments

Changes in level 3 commodity derivatives can be analyzed as follows:

In millions of euros	Net Asset/(Liability)
AT DECEMBER 31, 2021	**(210)**
Changes in fair value recorded in income	3,271
Settlements	(1,336)
Transfer from level 3 to levels 1 and 2	34
Net fair value recorded in income	1,759
Deferred Day-One gains/(losses)	78
AT DECEMBER 31, 2022	**1,837**

14.5.2 Financial liabilities

The table below shows the allocation of financial instruments carried in liabilities to the different levels in the fair value hierarchy:

	Dec. 31, 2022				Dec. 31, 2021			
In millions of euros	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Borrowings used in designated fair value hedges	3,679	-	3,679	-	4,255	-	4,255	-
Borrowings not used in designated fair value hedges	31,500	17,093	14,407	-	36,875	24,262	12,613	-
Derivative instruments	51,276	-	49,595	1,681	46,931	-	43,515	3,415
Derivatives hedging borrowings	*735*	-	*735*	-	*313*	-	*313*	-
Derivatives hedging commodities – relating to portfolio management activities (1)	*48,907*	-	*47,227*	*1,681*	*35,458*	-	*34,374*	*1,084*
Derivatives hedging commodities – relating to trading activities (1)	-	-	-	-	*9,384*	-	*7,053*	*2,331*
Derivatives hedging other items	*1,634*	-	*1,634*	-	*1,775*	-	*1,775*	-
TOTAL	**86,455**	**17,093**	**67,682**	**1,681**	**88,061**	**24,262**	**60,383**	**3,415**

(1) *Derivative financial instruments relating to commodities classified in level 3 mainly include long-term gas supply contracts and electricity contracts measured at fair value through profit and loss. Due to geopolitical uncertainties, the fair value of contracts with Russian suppliers takes into account a risk of supply cuts.*

A definition of these three levels is presented in Note 14.4 “Derivative instruments”.

Borrowings used in designated fair value hedges

This caption includes bonds in a designated fair value hedging relationship, which are presented in level 2 in the above table. Only the interest rate component of the bonds is remeasured, with fair value determined by reference to observable inputs.

Borrowings not used in designated fair value hedges

Listed bond issues are included in level 1.

Other borrowings not used in a designated hedging relationship, are presented in level 2 in the above table. The fair value of these borrowings is determined on the basis of future discounted cash flows and relies on directly or indirectly observable data.

6

NOTE 15 Risks arising from financial instruments

The Group mainly uses derivative instruments to manage its exposure to market risks. Financial risk management procedures are set out in Chapter 2 "Risk factors" of this Universal Registration Document.

15.1 Market risks

15.1.1 Commodity risk

Commodity risk arises primarily from the following activities:

- portfolio management; and
- trading.

The Group has primarily identified two types of commodity risks: price risk resulting from fluctuations in market prices, and volume risk inherent to the business.

In the ordinary course of its operations, the Group is exposed to commodity risks on natural gas, electricity, coal, oil and oil products, other fuels, CO_2 and other "green" products. The Group is active on these energy markets either for supply purposes, or to optimize and secure its energy production chain and its energy sales. The Group also uses derivatives to offer hedging instruments to its clients and to hedge its own positions.

15.1.1.1 Portfolio management activities

Portfolio management seeks to optimize the market value of assets (power plants, gas and coal supply contracts, energy sales and gas storage and transportation) over various timeframes (short-, medium- and long-term). Market value is optimized by:

- guaranteeing supply and ensuring the balance between physical needs and resources;
- managing market risks (price, volume) to unlock optimum value from portfolios within a specific risk framework.

The risk framework aims to safeguard the Group's financial resources over the budget period and smooth out medium-term earnings (over three or five years, depending on the maturity of each market). It encourages portfolio managers to take out economic hedges on their portfolio.

Sensitivities of the commodity-related derivatives portfolio used as part of the portfolio management activities at December 31, 2022 are detailed in the table below. Due to the significant increase and volatility of commodity prices on the markets, particularly over the past several months in the European zone, the price assumptions for natural gas and electricity in Europe have been revised upwards for 2022. These sensitivities have been established in the current uncertain context.

These new assumptions do not constitute an estimate of future market prices and are not representative of future changes in consolidated earnings and equity, insofar as they do not include the sensitivities relating to the purchase and sale contracts for the underlying commodities, which are not recognized at fair value.

Sensitivity analysis [(1)]

		Dec. 31, 2022		Dec. 31, 2021	
In millions of euros	Changes in price	Pre-tax impact on income	Pre-tax impact on equity	Pre-tax impact on income	Pre-tax impact on equity
Oil-based products	+USD 10/bbl	-	81	19	159
Natural gas – Europe [(2)]	-€10/MWh	(700)	(1,237)	N/A	N/A
Natural gas – Europe [(2)]	+€10/MWh	700	1,237	246	588
Natural gas – Rest of the world [(2)]	+€3/MWh	29	206	52	35
Electricity – Europe [(2)]	-€20/MWh	(51)	245	N/A	N/A
Electricity – Europe [(2)]	+€20/MWh	51	(245)	(73)	(49)
Electricity – Rest of the world [(2)]	+€5/MWh	(122)	-	(37)	-
Greenhouse gas emission rights	+€2/ton	24	1	(134)	-
EUR/USD	+10%	36	(186)	16	83
EUR/GBP	+10%	(17)	(34)	(49)	(6)

(1) The sensitivities shown above apply solely to financial commodity derivatives used for hedging purposes as part of the portfolio management activities.

(2) In 2021, the impact corresponded to a sensitivity of +€3/MWh for gas and +€5/MWh for electricity. For December 2022 and in relation to the sensitivities shown, more drastic upward and downward price changes, although difficult to quantify, could occur depending how the economic or political situation evolves. For example, an increase (decrease) of €50/MWh for natural gas and €100/MWh for electricity would impact sensitivities by a positive €9.7 billion (a negative €9.7 billion) and a negative €1 billion (a positive €0.9 billion), respectively for natural gas and electricity.

The significant increase in commodity prices in 2022 contributed to substantial changes in the fair value of financial instruments, impacting the income statement *(see Note 8 "Operating expenses")* as well as the other comprehensive income for the Group (see "Statement of comprehensive income").

15.1.1.2 Trading activities

Revenues from trading activities totaled €4,499 million in 2022 (€1,011 million in 2021).

The Group's trading activities are primarily conducted within:

- ENGIE Global Markets and ENGIE Energy Management. The purpose of these wholly-owned companies is to (i) assist Group entities in optimizing their asset portfolios; and (ii) create and implement energy price risk management solutions for internal and external customers;
- ENGIE SA for the optimization of part of its long-term gas supply contracts, of a power exchange contract and of part of its gas sales contracts with retail entities in France and Benelux and with power generation facilities in France and Belgium.

These entities operate on organized or OTC markets in derivative instruments such as futures, forwards, swaps, or options. Exposure to trading activities is strictly controlled by daily monitoring of compliance with Value at Risk (VaR) limits.

The use of VaR to quantify market risk arising from trading activities provides a transversal measure of risk, taking all markets and products into account. VaR represents the maximum potential loss on a portfolio over a specified holding period based on a given confidence interval. It is not an indication of expected results but is back-tested on a regular basis.

The Group uses a one-day holding period and a 99% confidence interval to calculate VaR, as well as stress tests, in accordance with banking regulatory requirements.

The VaR shown below corresponds to the global VaR of the Group's entities with trading activities. The increase in VaR reflects the exceptional increase and significant volatility in commodity market prices in 2022.

Value at Risk

In millions of euros	Dec. 31, 2022	2022 average (1)	2022 maximum (2)	2022 minimum (2)	2021 average (1)
Trading activities	28	33	143	6	10

(1) Average daily VaR.
(2) Maximum and minimum daily VaR observed in 2022.

VaR limits are set within the framework of Group governance, which was strengthened during the year to take account of the extremely volatile market environment. These limits have been revised upwards and any excesses have been reported in accordance with the market risk control process, which may have led to the closure or reduction of certain positions, the limitation of new positions or the revision of the portfolio allocation.

The continuous monitoring of market risks and the strict application of these measures have enabled the Group to perform its trading activities in a supervised environment during the year. At December 31, 2022, VaR had fallen below its limit. The increasing average VaR in 2022 reflects extreme market conditions applied to lower positions than in 2021.

15.1.2 Hedges of commodity risks

Hedging instruments and sources of hedge ineffectiveness

The Group enters into cash flow hedges, using derivative instruments (firm or option contracts) contracted over the counter or on organized markets, to reduce its commodity risks, which relate mainly to future cash flows from contracted or expected sales and purchases of commodities. These instruments may be settled net or involve physical delivery of the underlying.

Sources of hedge ineffectiveness are mainly related to uncertainty regarding the timing and potential mismatches in settlement dates, in a context of highly volatile commodity market prices; and indices between the derivative instruments and the associated underlying exposures.

The fair values of commodity derivatives are indicated in the table below:

	Dec. 31, 2022				Dec. 31, 2021			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Derivative instruments relating to portfolio management activities	30,932	10,060	(37,210)	(11,698)	24,474	10,906	(22,335)	(13,123)
Cash flow hedges	*3,538*	*4,400*	*(2,483)*	*(4,140)*	*2,643*	*5,141*	*(1,533)*	*(3,796)*
Other derivative instruments	*27,394*	*5,660*	*(34,726)*	*(7,558)*	*21,831*	*5,765*	*(20,802)*	*(9,327)*
Derivative instruments relating to trading activities	-	5,016	-	-	-	8,284	-	(9,384)
TOTAL	**30,932**	**15,076**	**(37,210)**	**(11,698)**	**24,474**	**19,190**	**(22,335)**	**(22,507)**

6

The fair values shown in the table above reflect the amounts for which assets could be exchanged, or liabilities settled, at the end of the reporting period. They are not representative of expected future cash flows insofar as positions (i) are sensitive to changes in prices; (ii) can be modified by subsequent transactions; and (iii) can be offset by future cash flows arising on the underlying transactions.

15.1.2.1 Cash flow hedges

The fair values of cash flow hedges by type of commodity are as follows:

	Dec. 31, 2022				Dec. 31, 2021			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Natural gas	3,204	3,825	(1,825)	(3,149)	2,194	4,792	(1,044)	(2,971)
Electricity	114	324	(208)	(521)	195	171	(215)	(439)
Oil	219	248	(449)	(470)	246	176	(274)	(386)
Other (1)	1	3	(1)	1	9	2	-	-
TOTAL	**3,538**	**4,400**	**(2,483)**	**(4,140)**	**2,643**	**5,141**	**(1,533)**	**(3,796)**

(1) *Mainly includes foreign currency hedges on commodities.*

Notional amounts (net) (1)

Notional amounts and maturities of cash flow hedges are as follows:

	Unit	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022
Natural gas	GWh	158,983	68,913	19,053	(412)	6,002	-	252,539
Electricity	GWh	(7,447)	(3,226)	(835)	(465)	(457)	(649)	(13,079)
Oil-based products	Thousands of barrels	(11,913)	(11,768)	-	-	-	-	(23,681)
Forex	Millions of euros	2	-	-	-	-	-	2
Greenhouse gas emission rights	Thousands of tons	105	80	86	20	-	-	291

(1) *Long/(short) position.*

Effects of hedge accounting on the Group's financial position and performance

	Dec. 31, 2022				Dec. 31, 2021	
	Fair Value			Nominal	Fair value	Nominal
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Cash flow hedges	7,939	(6,623)	1,315	39,983	2,455	15,590
TOTAL	**7,939**	**(6,623)**	**1,315**	**39,983**	**2,455**	**15,590**

The fair values represented above are positive for assets and negative for liabilities.

In millions of euros		Nominal amount	Fair Value	Change in fair value used for calculating hedge effectiveness	Change in the value of the hedging instrument recognized in equity (1)	Ineffective portion recognized in profit or loss (1)	Amount reclassified from the hedge reserve to profit or loss (1)	Line item of profit or loss
Cash flow hedges	Hedging instruments	39,983	1,315		(1,747)	189	(3,003)	Current operating income
	Hedged items			(4,067)				

(1) *Gains/(losses).*

Hedge inefficiency, the amount of wich in 2022 is affected by the extreme volatility of commodity prices during the year and the partial decorrelation of the various markets particularly in Europe, is calculated based on the change in the fair value of the hedging instrument compared to the change in the fair value of the hedged items since inception of the hedge. The fair value of the hedging instruments at December 31, 2022 reflects the cumulative change in the fair value of the hedging instruments since inception of the hedges.

Maturity of commodity derivatives designated as cash flow hedges

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Dec. 31, 2022	Dec. 31, 2021
Fair Value of derivatives by maturity	503	645	224	(37)	(11)	(9)	1,315	2,455

Amounts presented in the statement of changes in equity and the statement of comprehensive income

The following table provides a reconciliation of each component of equity and an analysis of other comprehensive income:

	Cash flow hedge
In millions of euros	Derivatives hedging commodities
AT DECEMBER 31, 2021	**4,094**
Effective portion recognized in equity	(1,770)
Amount reclassified from hedge reserve to profit or loss	(3,023)
Translation differences	-
Changes in scope of consolidation and other	-
AT DECEMBER 31, 2022	**(699)**

15.1.2.2 Other commodity derivatives

Other commodity derivatives include:

- commodity purchase and sale contracts that were not entered into or are no longer held for the purpose of the receipt or delivery of commodities in accordance with the Group's expected purchase, sale or usage requirements;
- embedded derivatives; and
- derivative financial instruments that are not eligible for hedge accounting in accordance with IFRS 9 or for which the Group has elected not to apply hedge accounting.

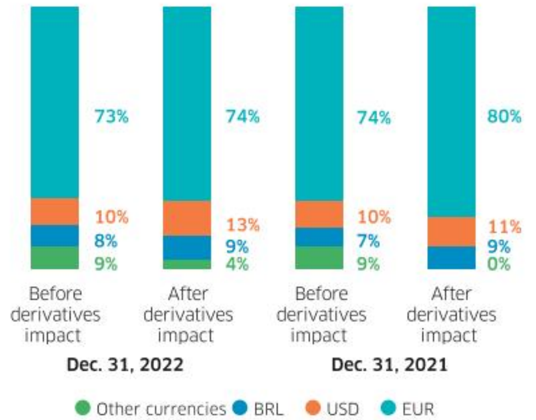
15.1.3 Currency risk

The Group is exposed to currency risk, defined as the impact on its statement of financial position and income statement of fluctuations in exchange rates affecting its operating and financing activities. Currency risk comprises (i) transaction risk arising in the ordinary course of business, (ii) specific transaction risk related to investments, mergers and acquisitions or disposal projects, and (iii) translation risk arising from the conversion into euros of income statement and statement of financial position items from subsidiaries with a functional currency other than the euro. The main translation risk exposures correspond, to assets in US dollars, Brazilian real and pounds sterling.

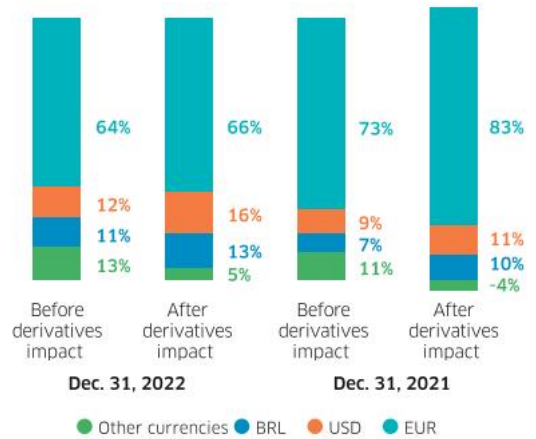
15.1.3.1 Financial instruments by currency

The following tables present a breakdown by currency of outstanding borrowings and debt and net financial debt, before and after hedging:

Outstanding borrowings and debt



Net financial debt



15.1.3.2 Currency risk sensitivity analysis

A sensitivity analysis to currency risk on financial income/(loss) – excluding the income statement translation impact of foreign subsidiaries – was performed based on all financial instruments managed by the treasury department and representing a currency risk (including derivative financial instruments).

A sensitivity analysis to currency risk on equity was performed based on all financial instruments qualified as net investment hedges at the reporting date.

For currency risk, sensitivity corresponds to a 10% rise or fall in exchange rates of foreign currencies against the euro compared to closing rates.

	Dec. 31, 2022			
	Impact on income		Impact on equity	
In millions of euros	+10% (1)	-10% (1)	+10% (1)	-10% (1)
Exposures denominated in a currency other than the functional currency of companies carrying the liabilities on their statements of financial position (2)	(19)	19	NA	NA
Financial instruments (debt and derivatives) qualified as net investment hedges (3)	NA	NA	426	(426)

(1) +(-)10%: depreciation (appreciation) of 10% of all foreign currencies against the euro.
(2) Excluding derivatives qualified as net investment hedges.
(3) This impact is countered by the offsetting change in the net investment hedged.

15.1.4 Interest rate risk

The Group seeks to manage its borrowing costs by limiting the impact of interest rate fluctuations on its income statement. The Group's policy is therefore to arbitrate between fixed rates, floating rates and capped floating rates for its net debt. The interest rate mix may shift within a range defined by Group Management in line with market trends.

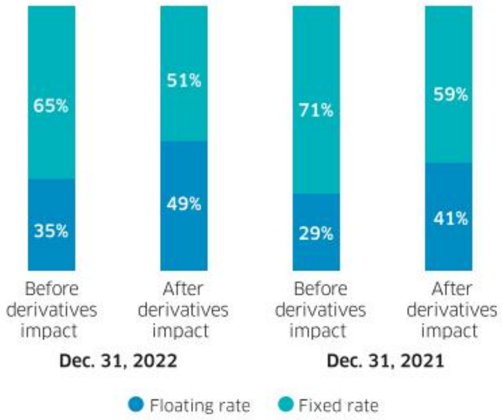
In order to manage the interest rate structure for its net debt, the Group uses hedging instruments, particularly interest rate swaps and options.

The Group has a forward interest rate pre-hedges portfolio on 2027 and 2028, with a 20-year maturity on each of the volumes initiated, to protect the refinancing interest rate on a portion of its debt.

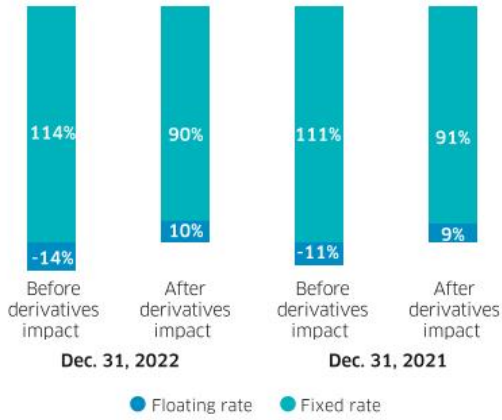
15.1.4.1 Analysis of financial instruments by type of interest rate

The following tables present a breakdown by type of interest rate of outstanding borrowings and debt and net financial debt before and after hedging:

Outstanding borrowings and debt



Net financial debt



15.1.4.2 Interest rate risk sensitivity analysis

Sensitivity was analyzed based on the Group's net debt position (including the impact of interest rate and foreign currency derivatives relating to net debt) at the reporting date.

For interest rate risk, sensitivity corresponds to a 100-basis-point rise or fall in the yield curve compared to year-end interest rates.

	Dec. 31, 2022			
	Impact on income		Impact on equity	
In millions of euros	+100 basis points	-100 basis points	+100 basis points	-100 basis points
Net interest expense on floating-rate net debt (nominal amount) and on floating-rate leg of derivatives	(16)	16	NA	NA
Change in fair value of derivatives not qualifying as hedges	(123)	135	NA	NA
Change in fair value of derivatives qualifying as cash flow hedges	NA	NA	198	(323)

15.1.5 Currency and interest rate hedges

15.1.5.1 Currency risk management

Foreign currency exchange risk (or "FX" risk) is reported and managed based on a Group-wide approach, reflected in a policy approved by Group Management. The policy distinguishes between the three following main sources of currency risk:

- **Regular transaction risk**

  Regular transaction risk corresponds to the potential negative financial impact of currency fluctuations on business and financial operations denominated in a currency other than the functional currency.

  The management of regular transaction risk is fully delegated to the subsidiaries for their scope of activities, while the risks related to central activities are managed at corporate level.

FX risks related to operational activities are systematically hedged when the related cash flows are certain, with a hedging horizon that corresponds at least to the medium-term plan horizon. For cash flows that are not certain, in their entirety, the hedge is initially based on a "no regret" volume. Exposures are monitored and managed based on the sum of nominal cash flows in FX, including highly probable amounts and related hedges.

For FX risks related to financial activities, all significant exposures related to cash, financial debt, etc. are systematically hedged. Exposures are monitored based on the net sum of balance sheet items in FX.

- **Project transaction risk**

  Specific project transaction risk corresponds to the potential negative financial impact of FX fluctuations on specific major operations such as investment projects, acquisitions, disposals and restructuring projects, involving multiple currencies.

  The management of these FX risks includes the definition and implementation of hedging transactions, taking into account the likelihood of the risk (including probability of project completion) and its evolution, the availability of hedging instruments and their associated cost. Management's aim is to ensure the viability and the profitability of the transactions.

- **Translation risk**

  Translation risk corresponds to the potential negative financial impact of FX fluctuations concerning consolidated entities with a functional currency other than the euro. It relates to the translation of their income and expenses and their net assets.

  Translation risk is managed centrally, with a focus on securing the net asset value.

  The pertinence of hedging this translation risk is assessed regularly for each currency (as a minimum) or set of assets in the same currency, taking into account notably the value of the assets and the hedging costs.

Hedging instruments and sources of hedge ineffectiveness

The Group principally uses the following risk management levers for mitigating currency risk:

- derivative instruments: these mostly correspond to over-the-counter contracts and include FX forward transactions, FX swaps, currency swaps, cross currency swaps, plain vanilla FX options or combinations (calls, puts or collars);
- monetary items such as debt, cash and loans.

Sources of hedge ineffectiveness are mainly related to uncertainty regarding the timing and in some cases the amount of the future cash flows in foreign currency that are being hedged.

15.1.5.2 Interest rate risk management

The Group is exposed to interest rate risk through its financing and investing activities. Interest rate risk is defined as a financial risk resulting from fluctuations in base interest rates that may increase the cost of debt and affect the viability of investments. Base interest rates are market interest rates, such as EURIBOR, US LIBOR, etc., that do not include the borrower's credit spread.

Reform of interbank benchmark rates

As part of the interest rate benchmark reform, the Group benchmarked all USD denominated new financing contracts to the SOFR index. ENGIE also plans to align its derivative contracts with the same index. However, the transition of existing financing and derivative contracts indexed on US Libor towards SOFR will be completed by June 2023, when the publication of US Libor is expected to end.

The Group does not expect the transition to have any impact.

The two main sources of interest rate risk are as follows:

- **Interest rate risk relating to Group net debt**

  Interest rate risk relating to Group net debt designates the financial impact of base rate movements on the debt and cash portfolio from recurring financing activities. This risk is mainly managed centrally.

  Risk management objectives are, by order of importance:

  - to protect the long-term viability of assets;
  - to optimize financing costs and ensure competitiveness; and
  - to minimize uncertainty on the cost of debt.

  Interest rate risk is actively managed by monitoring changes in market rates and their impact on the Group's gross and net debt.

- **Project interest rate risk**

  Specific project interest rate risk corresponds to the potential negative financial impact of base rate movements on specific major operations such as investment projects, acquisitions, disposals and restructuring projects. Interest rate risk after the closing of an operation is considered as regular (see "Interest rate risk" above).

  Interest rate risk is managed for specific project transactions in order to protect the economic viability of projects, acquisitions, disposals and restructuring initiatives against adverse changes in interest rates. It may include the implementation of hedging transactions, depending on a number of factors including the likelihood of completion, the availability of hedging instruments and their associated cost.

Hedging instruments and sources of hedge ineffectiveness

The Group principally uses the following risk management levers for mitigating interest rate risk:

- derivative instruments: these mostly correspond to over-the-counter contracts that are used to manage base interest rates. Such instruments include:
  - swaps, to change the nature of interest payments on debts, typically from fixed to floating rates or *vice versa*,
  - plain vanilla interest rate options;
  - caps, floors and collars that allow the impact of interest rate fluctuations to be limited by setting minimum and/or maximum limits on floating interest rates.

Sources of hedge ineffectiveness are mainly related to changes in the credit quality of the counterparties and related charges, as well as potential gaps in settlement dates and in indices between the derivative instruments and the related underlying exposures.

15.1.5.3 Currency and interest rate hedges

The Group has elected to apply hedge accounting whenever possible and suitable for currency risk and interest rate risk management purposes and also manages a portfolio of undesignated derivative instruments, corresponding to economic hedges relating to net debt and foreign currency exposures.

The Group uses the three hedge accounting methods: cash flow hedging, fair value hedging and net investment hedging.

In general, the Group does not frequently reset hedging relationships, designate specific risk components as a hedged item or designate credit exposures as measured at fair value through income.

The Group qualifies interest rate or cross currency swaps transforming fixed-rate debt into floating-rate debt as fair value hedges.

Cash flow hedges are mainly used to hedge future cash flows in foreign currency, floating-rate debt as well as future refinancing requirements.

Net investment hedging instruments are mainly FX swaps and forwards.

The fair values of derivatives (excluding commodity instruments) are indicated in the table below:

	Dec. 31, 2022				Dec. 31, 2021			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Derivatives hedging borrowings	226	92	(620)	(114)	370	130	(224)	(89)
Fair value hedges	*167*	*4*	*(394)*	*(38)*	*261*	*97*	*(24)*	*(35)*
Cash flow hedges	*30*	*5*	*(195)*	*(11)*	*36*	*1*	*(121)*	*(4)*
Derivative instruments not qualifying for hedge accounting	*30*	*84*	*(32)*	*(65)*	*73*	*33*	*(79)*	*(51)*
Derivatives hedging other items	1,975	84	(1,587)	(47)	772	52	(1,670)	(50)
Cash flow hedges	*509*	*41*	*(222)*	*(7)*	*110*	*9*	*(264)*	-
Net investment hedges	*156*	-	*(1)*	-	*6*	-	*(20)*	-
Derivative instruments not qualifying for hedge accounting	*1,310*	*43*	*(1,364)*	*(40)*	*656*	*44*	*(1,385)*	*(51)*
TOTAL	**2,201**	**176**	**(2,208)**	**(161)**	**1,142**	**183**	**(1,894)**	**(140)**

The fair values shown in the table above reflect the amounts relating to the price that would be received for the sale of an asset or paid for the transfer of a liability between market participants in the normal course of business. They are not representative of expected future cash flows insofar as the positions (i) are sensitive to changes in prices or to changes in credit ratings, (ii) can be modified by subsequent transactions, and (iii) can be offset by future cash flows arising on the underlying transactions.

Amount, timing and uncertainty of future cash flows

The following tables provide a profile of the timing at December 31, 2022 of the nominal amount of hedging instruments:

In millions of euros

Buy/Sell	Interest rate type	Derivative instrument type	Currency	Total	2023	2024	2025	2026	2027	Beyond 5 years
Buy	Fixed	CCS	USD	(443)	(94)	(117)	(89)	(96)	-	(47)
			GBP	(1,804)	-	-	-	-	-	(1,804)
			HKD	(277)	-	-	-	-	(108)	(168)
			PEN	(239)	(40)	(19)	-	(61)	(62)	(57)
			Other currencies	(602)	(107)	(367)	(73)	-	-	(54)
Sell	Fixed	CCS	EUR	2,568	-	216	75	-	98	2,179
			USD	279	47	23	-	72	72	66
	Floating	CCS	EUR	273	129	144	-	-	-	-
		CCS	BRL	392	93	114	90	95	-	-

In millions of euros

Buy/Sell	Interest rate type	Derivative instrument type	Currency	Total	2023	2024	2025	2026	2027	Beyond 5 years
Sell	Fixed	CAP	EUR	10	6	5	-	-	-	-
		IRS	EUR	8,089	(1,205)	(480)	249	1,253	389	7,883
			USD	1,963	725	12	12	725	283	205
			Other currencies	72	3	3	3	4	4	54
	Floating	SWAPTION	EUR	1,000	-	-	-	-	-	1,000
	Floating	IRS	EUR	15,376	1,398	2,000	1,415	1,950	800	7,813
			BRL	141	141	-	-	-	-	-

The tables presented above exclude currency derivatives (except for cross currency swaps – CCS). Their maturity dates are aligned with those of the hedged items.

Pursuant to the FX and interest rate risk management policy, FX sensitivity is presented in Note 15.1.3.2 “Currency risk sensitivity analysis” and the average cost of debt is 2.73% as presented in Note 10 “Net financial income/(loss)”.

Effects of hedge accounting on the Group’s financial position and performance

Currency derivatives

	Dec. 31, 2022				Dec. 31, 2021	
	Fair value			Nominal amount	Fair value	Nominal amount
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Cash flow hedges	28	(366)	(338)	3,139	(253)	3,201
Net investment hedges	156	(1)	155	5,939	(14)	2,794
Derivative instruments not qualifying for hedge accounting	217	(94)	123	12,007	(39)	10,166
TOTAL	**401**	**(461)**	**(60)**	**21,085**	**(306)**	**16,161**

Interest rate derivatives

	Dec. 31, 2022				Dec. 31, 2021	
	Fair value			Nominal amount	Fair value	Nominal amount
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Fair value hedges	171	(432)	(261)	5,148	299	4,203
Cash flow hedges	552	(67)	485	5,260	17	2,110
Derivative instruments not qualifying for hedge accounting	1,247	(1,433)	(186)	25,885	(710)	18,933
TOTAL	**1,970**	**(1,932)**	**38**	**36,293**	**(394)**	**25,246**

The fair values presented in the above table are positive for an assets and negative for a liabilities.

In millions of euros		Nominal and outstanding amount	Fair value (1)	Change in fair value used for calculating hedge ineffectiveness	Change in the value of the hedging instrument recognized in equity (2)	Ineffective portion recognized in profit or loss (2)	Amount reclassified from the hedge reserve to profit or loss (2)	Line item of the income statement
Fair value hedges	Hedging instruments	5,148	(261)	(261)	(21)	7	NA	Cost of net debt
	Hedged items (3) (4)	3,821	(200)	(576)	NA		NA	
Cash flow hedges	Hedging instruments	8,399	147	259	(446)	9	(507)	Other financial income and expenses/ Current operating income including operating MtM
	Hedged items			(253)				
Net investment hedges	Hedging instruments	5,939	155	194	82	NA	(25)	Other financial income and expenses/ Current operating income including operating MtM
	Hedged items			(194)				

(1) *The adjustment of the fair value of hedged items is presented as long term and short-term borrowings and debt for a negative amount of €200 million.*

(2) *Gains/(losses).*

(3) *The difference between the fair value used to determine the ineffective portion relating to hedging instruments and that relating to the hedged items corresponds to the amortized cost of borrowings and debt that are part of a fair value hedge relationship.*

(4) *Of which €57 million relating to hedging items that are no longer adjusted as a result of disqualification as a fair value hedge.*

Hedge inefficiency is calculated based on the change in the fair value of the hedging instrument compared to the change in the fair value of the hedged items since inception of the hedge. The fair value of the hedging instruments at December 31, 2022 reflects the cumulative change in the fair value of the hedging instruments since inception of the hedges. For fair value hedges, the same principle applies to the hedged items.

No significant impact in terms of ineffectiveness or disqualification of certain hedges was recognized at December 31, 2022.

Foreign currency and interest rate derivatives designated as cash flow hedges can be analyzed as follows by maturity

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Fair value of derivatives by maturity date	43	13	18	12	42	19	147	(235)

6

Amounts presented in the statement of changes in equity and the statement of comprehensive income

The following table provides a reconciliation of each component of equity and an analysis of other comprehensive income:

	Cash flow hedge			Net investment hedge
In millions of euros	**Derivatives hedging borrowings – currency risk hedging (1) (3)**	**Derivatives hedging other items – interest rate risk hedging (1) (3)**	**Derivatives hedging other items – currency risk hedging (2) (3)**	**Derivatives hedging other items – currency risk hedging (2) (4)**
AT DECEMBER 31, 2021	**45**	**(751)**	**27**	**(371)**
Effective portion recognized in equity		424	23	(82)
Amount reclassified from the hedge reserve to profit or loss		507	-	25
Translation differences	-	-	-	-
Changes in scope of consolidation and other	-	2	(15)	42
AT DECEMBER 31, 2022	**46**	**181**	**35**	**(386)**

(1) Cash flow hedges for given periods.
(2) Cash flow hedges for given transactions.
(3) Of which a negative €86 million of cash flow hedge reserves for which hedge accounting is no longer applied.
(4) All of the reserves relate to continuing hedging relationships.

15.2 Counterparty risk

Due to its financial and operational activities, the Group is exposed to the risk of default of its counterparties (customers, suppliers, EPC contractors, partners, intermediaries, and banks). Default could affect payments, delivery of goods and/or asset performance.

The principles of counterparty risk management are set out in the Group counterparty risk policy, which:

- assigns roles and responsibilities for managing and controlling counterparty risk at different levels (Corporate, BU or entity), and ensures operational procedures are in place and consistent across the Group;
- characterizes counterparty risk and the mechanisms by which it impacts the economic performance and financial statements of the Group;
- defines indicators, reporting and control mechanisms to ensure visibility and to provide tools for financial performance management; and
- provides guidelines on the use of mitigating mechanisms such as collateral and guarantees, which are widely used by some businesses.

Depending on the nature of the business, the Group is exposed to different types of counterparty risk. As a result some businesses use collateral instruments – particularly the Energy Management business, where the use of margin calls and other types of financial collateral (standardized legal framework) is a market standard. In addition, other businesses may request guarantees from their counterparties in certain cases (parent company guarantees, bank guarantees, etc.).

Under the new IFRS 9 standard, the Group has defined and applied a Group-wide methodology, which includes two different approaches:

- a portfolio approach, whereby the Group determines that:
  - coherent customer portfolios and sub-portfolios have to be considered (*i.e.*, portfolios that have comparable credit risk and/or comparable payment behavior), taking into account the following aspects:
    - public or private counterparties,
    - residential or BtoB counterparties,
    - geography,
    - type of activity,
    - size of the counterparty, and
    - any other aspects the Group may consider relevant,
  - impairment rates must be determined based on historical aging balances and, when correlation is proven and documentation possible, historical data must be adjusted by forward-looking elements; and
- an individualized approach for significant counterparties, for which the Group has set rules for defining the stage of the concerned asset for Expected Credit Loss (ECL) calculations:
  - stage 1 covers financial assets that have not deteriorated significantly since initial recognition. The ECL for stage 1 is calculated on a 12-month basis,
  - stage 2 covers financial assets for which the credit risk has significantly increased. The ECL for stage 2 is calculated on a lifetime basis. The decision to move an asset from stage 1 to stage 2 is based on certain criteria such as:
    - a significant downgrade in the creditworthiness of a counterparty and/or its parent company and/or its guarantor (if any),

- significant adverse change in the regulatory environment,
- changes in political or country-related risk, and
- any other aspect the Group may consider relevant.

Regarding financial assets that are more than 30 days past due, the move to stage 2 is not systematically applied as long as the Group has reasonable and verifiable information that demonstrates that, even if payments become more than 30 days past due, this does not represent a significant increase in the credit risk since initial recognition.

- stage 3 covers assets for which default has already been observed, such as:
  - when there is evidence of significant and ongoing financial difficulty of the counterparty,
  - when there is evidence of failure in credit support from a parent company to its subsidiary (in this case the subsidiary is the Group's at risk counterparty),
  - when a Group entity has initiated legal proceedings against the counterparty for non-payment.

Regarding financial assets that are more than 90 days past due, the presumption can be rebutted if the Group has reasonable and supportable information that demonstrates that even if payments become more than 90 days past due, this does not indicate counterparty default.

The ECL formula applicable in stages 1 and 2 is ECL = EAD x PD x LGD, where:

- for 12-month ECL, Exposure At Default (EAD) equals the carrying amount of the financial asset, to which the relevant Probability of Default (PD) and the Loss Given Default (LGD) are applied;
- for lifetime ECL, the calculation method consists in identifying changes in exposure for each year, especially the expected timing and amount of the contractual repayments, and then applying to each repayment the relevant PD and the LGD, and discounting the figures obtained. ECL is then the sum of the discounted figures; and
- probability of default is the likelihood of default over a particular time horizon (in stage 1, this time horizon is 12 months after the reporting period; in stage 2 this time horizon is the entire lifetime of the financial asset). This information is based on external data from a well-known rating agency. The PD depends on the time horizon and of the rating of the counterparty. The Group uses external ratings if they are available; ENGIE's credit risk experts determine an internal rating for major counterparties with no external rating.

LGD levels are notably based on Basel standards:

- 75% for subordinated assets; and
- 45% for standard assets.

For assets considered to be of strategic importance for the counterparty, such as essential public services or goods, LGD is set at 30%.

The Group has decided that write-offs apply in the following situations:

- assets for which a legal recovery procedure is pending: these should not be written off as long as the procedure is ongoing; and
- assets for which no legal recovery procedure is pending: should be written off once the trade receivable is three years overdue (five years overdue for public counterparties).

Against the backdrop of a deteriorating global economic environment, historically high energy prices and the ongoing war in Ukraine, the Group continued to monitor cash receipts throughout the year and strengthened its monitoring of default risk in its BtoB, BtoC and Energy Management activities.

In the context of its market activities (mainly on BtoB clients), the Group has taken into account, in the assessment of its expected credit losses, prospective information that best reflects the situation of a series of economic sectors considered to be the most critical. In particular, a specific adjustment of the provisioning rate for expected credit losses was made as at December 31, 2022 on certain customers in business sectors with high energy consumption, and therefore particularly exposed to a significant increase in commodity prices.

In addition, the risk of default on the Group's BtoC energy supply activities has so far been relatively limited, given the introduction of government measures in some countries to limit price increases (tariff shields, energy vouchers, payment deferral plans, etc.), as well as the existence in the Group's portfolio of customers who still have a contract with a fixed price that was signed before the crisis.

15.2.1 Counterparty risk arising on operating activities

Counterparty risk arising on operating activities is managed *via* standard mechanisms such as third-party guarantees, netting agreements and margin calls, using dedicated hedging instruments or special prepayment and debt recovery procedures, particularly for retail customers.

Under the Group's policy, each Global Business Unit is responsible for managing counterparty risk, although the Group continues to manage the biggest counterparty exposures centrally.

The credit rating of large- and mid-sized counterparties with which the Group has exposures above a certain threshold is measured based on a specific rating process, while a simplified credit scoring process is used for commercial customers with which the Group has fairly low exposures. These processes are based on formally documented, consistent methods across the Group. Consolidated exposures are monitored by counterparty and by segment (credit rating, sector, etc.) using standard indicators (payment risk, mark-to-market exposure).

GEMS' large exposures to trading counterparties and large commercial clients are regularly monitored by the Group's governance committees.

15.2.1.1 Trade and other receivables, assets from contracts with customers

Total outstanding exposures presented in the tables below do not include impacts relating to VAT or to any other item not subject to credit risk, which amounted to €6,084 million at December 31, 2022 (compared to €14,438 million at December 31, 2021).

Individual approach

In millions of euros		Individual approach	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade (1)	Other	Total by counterparty type
		Dec. 31, 2022							
Trade and other receivables, net	Gross	22,754	21,321	1,316	118	22,754	20,668	2,086	22,754
	Expected credit losses	(737)	(533)	(75)	(129)	(737)	(452)	(285)	(737)
TOTAL		**22,017**	**20,787**	**1,241**	**(11)**	**22,017**	**20,216**	**1,801**	**22,017**
Assets from contracts with customers	Gross	5,277	5,245	29	3	5,277	4,100	1,177	5,277
	Expected credit losses	(20)	(16)	-	(4)	(20)	(13)	(7)	(20)
TOTAL		**5,256**	**5,229**	**29**	**(1)**	**5,256**	**4,087**	**1,169**	**5,256**

In millions of euros		Individual approach	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade (1)	Other	Total by counterparty type
		Dec. 31, 2021							
Trade and other receivables, net	Gross	15,997	15,023	830	144	15,997	14,063	1,933	15,997
	Expected credit losses	(377)	(237)	(23)	(116)	(377)	(174)	(203)	(377)
TOTAL		**15,620**	**14,786**	**806**	**28**	**15,620**	**13,890**	**1,730**	**15,620**
Assets from contracts with customers	Gross	3,366	3,327	37	3	3,366	2,434	933	3,366
	Expected credit losses	(12)	(10)	-	(2)	(12)	(8)	(4)	(12)
TOTAL		**3,354**	**3,316**	**37**	**1**	**3,354**	**2,425**	**929**	**3,354**

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's.

Collective approach

In millions of euros		Collective approach	0 to 6 months	6 to 12 months	beyond	Total past due assets at Dec. 31, 2022
		Dec. 31, 2022				
Trade and other receivables, net	Gross	4,459	300	101	272	673
	Expected credit losses	(1,151)	(19)	(47)	(172)	(238)
TOTAL		**3,308**	**281**	**54**	**100**	**435**
Assets from contracts with customers	Gross	7,370	8	-	1	10
	Expected credit losses	(27)	-	(8)	-	(8)
TOTAL		**7,343**	**8**	**(8)**	**1**	**2**

In millions of euros		Collective approach	0 to 6 months	6 to 12 months	beyond	Total past due assets at Dec. 31, 2021
		Dec. 31, 2021				
Trade and other receivables, net	Gross	3,529	544	152	267	964
	Expected credit losses	(971)	(21)	(21)	(221)	(263)
TOTAL		**2,558**	**523**	**132**	**46**	**701**
Assets from contracts with customers	Gross	5,042	584	5	16	604
	Expected credit losses	(4)	-	-	(1)	(1)
TOTAL		**5,038**	**584**	**5**	**15**	**603**

15.2.1.2 Commodity derivatives

In the case of commodity derivatives, counterparty risk arises from positive fair value. Counterparty risk (CVA), which is taken into account when calculating the fair value of these derivative instruments, is based on default probabilities whose parameters have been updated, in a context of uncertainty, to take account of an increased risk of default.

The extreme volatility of commodity prices has not significantly changed the Group's exposure thanks to the credit quality of its counterparties.

	Dec. 31, 2022		Dec. 31, 2021	
In millions of euros	Investment Grade (1)	Total	Investment Grade (1)	Total
Gross exposure (2)	36,371	46,012	35,386	43,660
Net exposure (3)	12,434	16,124	15,796	19,089
% of credit exposure to "Investment Grade" counterparties	77.1%		82.7%	

(1) *Investment Grade corresponds to transactions with counterparties that are rated at least BBB- by Standard & Poor's, Baa3 by Moody's, or equivalent by Dun & Bradstreet. "Investment Grade" is also determined based on an internal rating tool that has been rolled out within the Group, and covers its main counterparties.*

(2) *Corresponds to the maximum exposure, i.e., the value of the derivatives shown under assets (positive fair value).*

(3) *After taking into account the liability positions with the same counterparties (negative fair value), collateral, netting agreements and other credit enhancement techniques.*

15.2.2 Counterparty risk arising on financing activities

For its financing activities, the Group has put in place procedures for managing and monitoring risk based on (i) the accreditation of counterparties according to external credit ratings, objective market data (credit default swaps, market capitalization) and financial structure, and (ii) counterparty risk exposure limits.

To reduce its counterparty risk exposure, the Group has drawn increasingly on a structured legal framework based on master agreements (including netting clauses) and collateralization contracts (margin calls).

The oversight procedure for managing counterparty risk arising from financing activities is managed by a Middle Office that operates independently of the Group's treasury department and reports to the Finance Division.

15.2.2.1 Loans and receivables at amortized cost

The total outstanding exposures presented in the tables below do not include impacts relating to VAT or to any other item not subject to credit risk, which amounted to €547 million at December 31, 2022 (compared to €977 million at December 31, 2021).

	Dec. 31, 2022						
In millions of euros	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade (1)	Other	Total by counterparty type
Gross	6,596	274	720	7,591	3,490	4,101	7,591
Expected credit losses	(99)	(38)	(1,154)	(1,291)	(158)	(1,133)	(1,291)
TOTAL	**6,497**	**236**	**(434)**	**6,300**	**3,332**	**2,967**	**6,300**

	Dec. 31, 2021						
In millions of euros	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade (1)	Other	Total by counterparty type
Gross	4,643	302	26	4,971	1,906	3,065	4,971
Expected credit losses	(76)	(36)	(113)	(226)	(147)	(79)	(226)
TOTAL	**4,567**	**265**	**(87)**	**4,745**	**1,759**	**2,986**	**4,745**

(1) *Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's.*

In 2022, the Group impaired the loan related to the financing of the Nord Stream 2 pipeline project for a total amount of €987 million (including capitalized interest).

15.2.2.2 Counterparty risk arising on investing activities and the use of derivative financial instruments

The Group is exposed to counterparty risk arising on investments of surplus cash and from the use of derivative financial instruments. In the case of financial instruments at fair value through income, counterparty risk arises on instruments with a positive fair value. Counterparty risk is taken into account when calculating the fair value of these derivative instruments.

	Dec. 31, 2022				Dec. 31, 2021			
In millions of euros	Total	Investment Grade (1)	Unrated (2)	Non Investment-Grade (2)	Total	Investment Grade (1)	Unrated (2)	Non-Investment Grade (2)
Exposure	15,738	92.3%	4.5%	3.2%	14,194	85.9%	8.2%	5.9%

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's or Baa3 by Moody's.

(2) Most of these two exposures is carried by consolidated companies that include non-controlling interests, or by Group companies that operate in emerging countries, where cash cannot be pooled and is therefore invested locally.

Furthermore, at December 31, 2022, Crédit Agricole Corporate and Investment Bank (CACIB) is the main Group counterparty and represents 30% of cash surpluses. This relates mainly to a depositary risk.

15.3 Liquidity risk

In the context of its operating activities, the Group is exposed to a risk of having insufficient liquidity to meet its contractual obligations. As well as the risks inherent in managing working capital requirements (WCR), margin calls are required in certain market activities, which are a way of mitigating counterparty risk on hedging instruments through the use of collateral.

The Group has set up a committee that meets weekly and is tasked with managing and monitoring liquidity risk throughout the Group, by maintaining a broad range of investments and sources of financing, preparing forecasts of cash investments and divestments. ENGIE has set up a comprehensive framework to monitor and streamline cash movements related to OTC margin calls and margin calls *via* clearing houses, based on the use of liquidity swaps with its key counterparties, as well as the issuing of letters of credit. Given the current high volatility of the markets, these margin calls may have a significant timing impact on the Group's cash position, and the use of the two abovementionned levers has therefore been reinforced in order to monitor the impact on its cash position. Quartely stress-tests are also performed on the margin calls put in place when commodity, interest rate and currency derivatives are negotiated to assess the Group's resilience in terms of liquidity.

The Group centralizes virtually all the financing needs and cash flow surpluses of the companies it controls, as well as most of their medium- and long-term external financing requirements. Centralization is provided by financing vehicles (long-term and short-term) and by dedicated Group cash pooling vehicles based in France, Belgium and Luxembourg.

Surpluses held by these structures are managed in accordance with a uniform policy. In accordance with this policy, unpooled cash surpluses are invested in instruments selected on a case-by-case basis in light of local financial market imperatives and the financial strength of the counterparties concerned.

The succession of financial crises since 2008 and the ensuing rise in counterparty risk prompted the Group to tighten its investment policy with the aim of keeping an extremely high level of liquidity and protecting invested capital and a daily monitoring of performance and counterparty, allowing the Group to take immediate action where required in response to market developments. Consequently, 81% of the cash pooled at December 31, 2022 was invested in overnight bank deposits and standard money market funds with daily liquidity.

The Group's financing policy is based on:

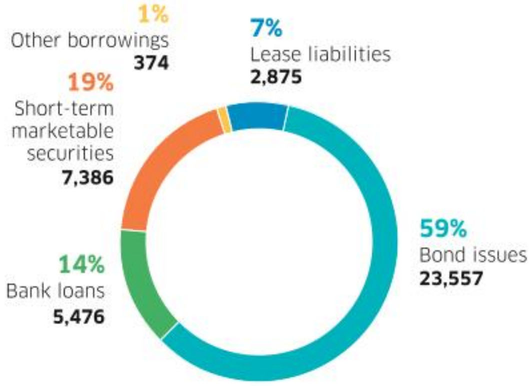
- centralizing external financing;
- diversifying sources of financing between credit institutions and capital markets;
- achieving a balanced debt repayment profile.

The Group seeks to diversify its sources of financing by carrying out public or private bond issues within the scope of its Euro Medium Term Notes program. It also issues negotiable commercial paper in France (Negotiable European Commercial Paper) and in the United States (US Commercial Paper) as well as the issuance of deeply-subordinated perpetual notes. As negotiable commercial paper is relatively inexpensive and highly liquid, it is used by the Group in a cyclical or structural manner to finance its short-term cash requirements. However, the refinancing of all outstanding negotiable commercial paper remains secured by confirmed bank lines of credit – mainly centralized – allowing the Group to continue to finance its activities if access to this financing source were to dry up. These facilities are appropriate for the scale of its operations and for the timing of contractual debt repayments.

The various actions carried out by the Group ensure a high and reinforced level of liquidity.

Diversifying sources of financing and liquidity (1)

In millions of euros



(1) These sources of funding and liquidity do not include deeply-subordinated perpetual notes which are recognized as equity (see Note 16.2.1 "Issue of deeply-subordinated perpetual notes").
(2) Net of short-term marketable securities.
(3) Cash composed of cash and cash equivalents for €15,570 million, other financial assets which reduce net financial debt for €769 million, net of bank overdrafts and current accounts for €615 million, 78% invested in the eurozone.

At December 31, 2022, all Group entities whose debt is consolidated complied with the covenants and declarations included in their financial documentation, except for some non-significant entities for which compliance actions are being implemented. None of the available centralized credit lines contain a default clause linked to financial ratios or rating level.

15.3.1 Undiscounted contractual payments relating to financial activities

Undiscounted contractual payments on outstanding borrowings and debt by maturity

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Bond issues	2,550	930	1,518	2,316	2,493	13,751	23,557	26,240
Bank borrowings	797	381	447	247	464	3,141	5,476	5,806
Negotiable commercial paper	7,386	-	-	-	-	-	7,386	4,962
Lease liabilities	403	398	304	275	251	1,624	2,875	2,043
Other borrowings	140	4	2	1	2	225	374	903
Bank overdrafts and current accounts	615	-	-	-	-	-	615	499

Other financial assets and cash and cash equivalents deducted from net financial debt have a liquidity of less than one year.

Undiscounted contractual interest payments on outstanding borrowings and debt by maturity

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Undiscounted contractual interest flows on outstanding borrowings and debt	916	796	757	701	602	7,358	11,131	10,676

6

Undiscounted contractual payments on outstanding derivatives (excluding commodity instruments) by maturity

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Derivatives (excluding commodity instruments)	(15)	(127)	(20)	(12)	(10)	423	239	126

To better reflect the economic substance of these transactions, the cash flows linked to the derivatives recognized in assets and liabilities shown in the table above relate to net positions.

Undiscounted contractual payments related to leases

At December 31, 2022, the Group, as lessee, was potentially exposed to future cash outflows not reflected in the measurement of lease liabilities for €1,407 million (of which approximately 72% relate to potential cash outflows beyond 2027). Those potential future cash outflows relate to leases not yet commenced to which the Group is committed (real estate and LNG vessels).

In addition, the Group is also exposed to future cash outflows in the form of variable lease payments in connection with the extension of the Rhone concession. These variable lease payments are dependent on revenue from electricity sales.

Undrawn credit facility programs

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Confirmed undrawn credit facility programs	1,339	854	5,670	-	4,004	644	12,511	11,961

Of these undrawn programs, an amount of €7,386 million is allocated to covering commercial paper issues.

At December 31, 2022, no single counterparty represented more than 10% of the Group's confirmed undrawn credit lines.

15.3.2 Undiscounted contractual payments relating to operating activities

The table below provides an analysis of undiscounted fair values due and receivable in respect of commodity derivatives recorded in assets and liabilities at the reporting date.

The Group provides an analysis of residual contractual maturities for commodity derivative instruments included in its portfolio management activities. Derivative instruments relating to trading activities are considered to be liquid in less than one year, and are presented under current items in the statement of financial position.

In millions of euros	2023	2024	2025	2026	2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Derivative instruments carried in liabilities								
relating to portfolio management activities	*(11,693)*	*(24,661)*	*(7,271)*	*(2,458)*	*(1,075)*	*(2,102)*	*(49,260)*	*(35,541)*
relating to trading activities	-	-	-	-	-	-	-	*(9,365)*
Derivative instruments carried in assets								
relating to portfolio management activities	*10,035*	*18,122*	*7,860*	*4,323*	*432*	*202*	*40,975*	*35,368*
relating to trading activities	*5,098*	-	-	-	-	-	*5,098*	*8,304*
TOTAL	**3,441**	**(6,538)**	**589**	**1,866**	**(644)**	**(1,900)**	**(3,187)**	**(1,234)**

15.3.3 Commitments relating to commodity purchase and sale contracts entered into in the ordinary course of business

Some Group operating companies have entered into long-term contracts, some of which include "take-or-pay" clauses. These consist of firm commitments to purchase or sell specified quantities of gas, electricity or steam as well as related services, in exchange for a firm commitment from the other party to deliver or purchase said quantities and services. These contracts were documented as falling outside the scope of IFRS 9. The table below shows the main future commitments arising from contracts entered into by GBU Renewables and GEMS (expressed in TWh).

In TWh	2023	2024-2027	Beyond 5 years	Total at Dec. 31, 2022	Total at Dec. 31, 2021
Firm purchases	(423)	(762)	(700)	(1,884)	(1,922)
Firm sales	435	552	256	1,243	1,421

NOTE 16 Equity

16.1 Share capital

	Number of shares			Value *(in millions of euros)*		
	Total	Treasury stock	Outstanding	Share capital	Additional paid-in capital	Treasury stock
AT DECEMBER 31, 2021	**2,435,285,011**	**(15,083,149)**	**2,420,201,862**	**2,435**	**26,058**	**(199)**
Dividend paid in cash	-	-	-	-	(394)	-
Link 2022 worldwide employee share	-	13,079,518	13,079,518	-	-	171
Capital increase Link	3,081,774	-	3,081,774	3	29	-
Capital decrease Link	(3,081,774)	3,081,774	-	(3)	(27)	40
Purchase/disposal of treasury stock	-	(19,054,771)	(19,054,771)	-	-	(245)
Delivery of treasury stock (bonus)	-	3,446,201	3,446,201	-	-	43
Revaluation	-	-	-	-	-	-
AT DECEMBER 31, 2022	**2,435,285,011**	**(14,530,427)**	**2,420,754,584**	**2,435**	**25,667**	**(189)**

Changes in the number of shares during 2022 resulted from:

- employee share issues as part of the "Link 2022" worldwide employee share plan. All in all, 16.2 million shares were subscribed. At December 22, 2022 the transaction resulted in the sale to employees of 13.1 million shares purchased on the market in the fourth quarter of 2022 for €171 million and a capital increase of €32.4 million. The latter amount is divided into a capital increase of €3.1 million and additional paid-in capital of €29.3 million;
- a capital decrease of €40.4 million by the cancellation of 3.1 million shares in the form of a capital decrease, €10.7 million charged to consolidated reserves and €26.6 million charged to additional paid-in capital;
- the delivery of 3.4 million treasury shares as part of bonus share plans; and
- the purchase of 2.9 million of treasury shares on the market.

16.1.1 Potential share capital and instruments providing a right to subscribe for new ENGIE SA shares

Since 2017, the Group no longer has any stock purchase or subscription option plans.

Shares to be allocated under the performance share award plans described in Note 19 "Share-based payments" are covered by existing ENGIE SA shares.

16.1.2 Treasury stock

ACCOUNTING STANDARDS

Treasury shares are recognized at acquisition cost and deducted from equity. Gains and losses on disposals of treasury shares are recorded directly in equity and do not, therefore, impact income for the period.

The Group has a stock repurchase program as a result of the authorization granted to the Board of Directors by the Ordinary and Extraordinary Shareholders' Meeting of April 21, 2022. This program provides for the repurchase of up to 10% of the shares comprising the share capital of ENGIE SA at the date of the said Shareholders' Meeting. The aggregate amount of acquisitions net of expenses under the program may not exceed €7.3 billion, and the purchase price must be less than €30 per share excluding acquisition costs.

At December 31, 2022, the Group held 14.5 million treasury shares. To date, all the shares have been allocated to cover the Group's share commitments to employees and corporate officers.

The liquidity agreement signed with an investment service provider assigns to the latter the role of operating on the market on a daily basis, to buy or sell ENGIE SA shares, in order to ensure liquidity and an active market for the shares on the Paris and Brussels stock exchanges. To date, the resources allocated to the implementation of this agreement amount to €50 million.

16.2 Other disclosures concerning additional paid-in capital, consolidated reserves and issuance of deeply-subordinated perpetual notes (Group share)

Total additional paid-in capital, consolidated reserves and issuance of deeply subordinated perpetual notes (including net income for the year), amounted to €34,097 million at December 31, 2022, including €25,667 million in additional paid-in capital. Additional paid-in capital includes a portion of the cash dividend payment for 2021 in an amount of €394 million.

Consolidated reserves include the cumulative income of the Group, the legal and statutory reserves of ENGIE SA, cumulative actuarial gains and losses, net of tax and the change in fair value of equity instruments at fair value through OCI.

Under French law, 5% of the net income of French companies must be allocated to the legal reserve until the latter reaches 10% of share capital. This reserve can only be distributed to shareholders in the event of liquidation. The ENGIE SA legal reserve amounts to €244 million.

16.2.1 Issuance of deeply-subordinated perpetual notes

In October 2022, ENGIE SA carried out an early redemption of deeply subordinated perpetual notes for a total amount of €374 million, resulting in:

- a €244 million early redemption of green deeply subordinated perpetual notes (PERP NC 04/2023, a 1.375% coupon, ISIN code: FR0013310505), out of a residual nominal amount of €274 million. Following the redemption, the Group, having redeemed more than 80% of this deeply subordinated perpetual debt, carried out a squeeze-out for the remaining €30 million, paid on December 5, 2022;
- the partial early redemption of two other tranches of deeply-subordinated perpetual notes for a total amount of €100 million, *i.e.*:
  - €55 million (PERP NC 06/2024, a 3.875% coupon, ISIN code: FR0011942283), out of a residual nominal amount of green deeply subordinated perpetual notes of €393 million,
  - €45 million (PERP NC 07/2031, a 1.875% coupon, ISIN code: FR00140046Y4), out of a nominal amount of €750 million.

In accordance with IAS 32 – Financial Instruments – Presentation, and given their characteristics, these instruments are recognized in equity in the Group's consolidated financial statements.

At December 31, 2022, the outstanding nominal value of deeply subordinated perpetual notes amounted to €3,393 million (against €3,767 million at December 31, 2021).

In 2022, the Group paid €77 million to the holders of these notes, *i.e.*, €90 million coupons, net of €13 million early redemption allowances received. This amount is accounted for as a deduction from equity in the Group's consolidated financial statements; the related tax saving is accounted for in the income statement.

16.2.2 Distributable capacity of ENGIE SA

ENGIE SA's distributable capacity totaled €27,365 million at December 31, 2022 (compared with €27,758 million at December 31, 2021), including €25,667 million of additional paid-in capital.

16.2.3 Dividends

It was proposed, at the Shareholders' Meeting convened to approve the ENGIE group financial statements for the year ended December 31, 2021, to pay a dividend of €0.85 per share, representing a total payout of €2,060 million based on the number of shares outstanding at December 31, 2021. It was increased by 10% for all shares held for at least two years on December 31, 2021 and up to the 2021 dividend payment date. Based on the number of outstanding shares on December 31, 2021, this increase is valued at €22 million.

Proposed dividend in respect of 2022

At the Shareholders' Meeting convened to approve the ENGIE group financial statements for the year ended December 31, 2022, the shareholders will be asked to approve a dividend of €1.40 per share, representing a total payout of €3,389 million based on the number of shares outstanding at December 31, 2022. It will be increased by 10% for all shares held for at least two years at December 31, 2022 and up to the 2022 dividend payment date. Based on the number of outstanding shares at December 31, 2022, this increase is valued at €40 million.

Subject to approval by the Shareholders' Meeting of Wednesday April 26, 2023, this dividend will be detached on Friday April 28, 2023 and paid on Wednesday May 3, 2023. It is not recognized as a liability in the financial statements at December 31, 2022, since the financial statements at the end of 2022 were presented before the appropriation of earnings.

16.2.4 Other transactions

On March 31, 2022, the Group signed an agreement to sell a 49% interest, without loss of control, in a portfolio of two wind and one solar projects for 665 MW of renewable energy in the United States to the American group InfraRed Capital Partners. ENGIE continues to fully consolidate these assets and to operate and maintain them. This transaction resulted in an inflow of €224 million and a similar increase in equity.

16.3 Recyclable gains and losses recognized in equity (Group share)

All items shown in the table below correspond to cumulative gains and losses (Group share) at December 31, 2022 and December 31, 2021, which are recyclable to income in subsequent periods.

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Debt instruments	(369)	9
Net investment hedges (1)	(386)	(371)
Cash flow hedges (excl. commodity instruments) (1)	218	(699)
Commodity cash flow hedges (1)	(318)	4,383
Deferred taxes on the items above	(112)	(1,064)
Share of equity method entities accounted in recyclable items, net of tax (2)	300	(546)
Recyclable items relating to discontinued operations, net of tax	-	118
TOTAL RECYCLABLE ITEMS BEFORE TRANSLATION ADJUSTMENTS	**(668)**	**1,831**
Translation adjustments	(1,422)	(2,136)
TOTAL RECYCLABLE ITEMS	**(2,090)**	**(306)**

(1) See Note 15 "Risks arising from financial instruments".
(2) See Note 3 "Investments in equity method entities".

16.4 Capital management

ENGIE SA seeks to optimize its financial structure at all times by pursuing an optimal balance between its economic net debt and its EBITDA. The Group's key objective in managing its financial structure is to maximize value for shareholders and reduce the cost of capital, while ensuring that the Group has the financial flexibility required to continue its expansion. The Group manages its financial structure and makes any necessary adjustments in light of prevailing economic conditions. In this context, it may choose to adjust the amount of dividends paid to shareholders, reimburse a portion of capital, carry out share buybacks *(see Note 16.1.2 "Treasury stock")*, issue new shares, launch share-based payment plans, recalibrate its investment budget, or sell assets in order to scale back its net debt.

The Group's policy is to maintain an "strong investment grade" rating from the rating agencies. To achieve this, it manages its financial structure in line with the indicators usually monitored by these agencies, namely the Group's operating profile, financial policy and a series of financial ratios. One of the most commonly used ratios is the ratio where the numerator includes operating cash flows less cost of debt and taxes paid, and the denominator includes adjusted net financial debt. Net financial debt is mainly adjusted for nuclear provisions and provisions for pensions, as well as for 50% of hybrid debt (deeply-subordinated notes). In addition, the Group has issued a guidance targeting an "economic net debt to EBITDA" ratio less than or equal 4x.

The Group's objectives and processes for managing capital have remained unchanged over the past few years.

ENGIE SA is not obliged to comply with any external minimum capital requirements except those provided for by law.

NOTE 17 Provisions

ACCOUNTING STANDARDS

General principles related to the recognition of a provision

The Group recognizes a provision where it has a present obligation (legal or constructive) towards a third party arising from past events and where it is probable that an outflow of resources will be necessary to settle the obligation with no expected consideration in return.

A provision for restructuring costs is recognized when the general criteria for setting up a provision are met, *i.e.*, when the Group has a detailed formal plan relating to the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it.

Provisions with a maturity of over 12 months are discounted when the effect of discounting is material. The Group's main long-term provisions are provisions for the back-end of the nuclear fuel cycle, provisions for dismantling facilities, provisions for site restoration costs, and provisions for post-employment and other long-term benefits. The discount rates used reflect current market assessments of the time value of money and the risks specific to the liability concerned. Expenses with respect to unwinding the discount on the provision are recognized as other financial income and expenses.

Estimates of provisions

Factors having a significant influence on the amount of provisions, and particularly, but not solely, those relating to the back-end of the nuclear fuel cycle, to the dismantling of nuclear facilities and of gas infrastructures in France, include:

- cost estimates (notably the retained scenario for managing radioactive nuclear fuel consumed) *(see Note 17.2)*;
- the timing of expenditure (notably, for nuclear power generation activities, the timetable for reprocessing radioactive nuclear fuel consumed and for dismantling facilities as well as the timetable for the end of gas operations regarding the main gas infrastructure businesses in France) *(see Notes 17.2 and 17.3)*; and
- the discount rate applied to cash flows.

These factors are based on information and estimates deemed by the Group to be the most appropriate as of today.

Modifications to certain factors could lead to a significant adjustment in these provisions.

In millions of euros	Post-employment and other long-term benefits	Back-end of the nuclear fuel cycle and dismantling of nuclear facilities	Dismantling of non-nuclear facilities	Other contingencies	Total
AT DECEMBER 31, 2021	**7,000**	**15,119**	**1,172**	**2,169**	**25,459**
Additions	279	1,028	6	669	1,981
Utilizations	(379)	(163)	(62)	(630)	(1,235)
Reversals	(1)	-	-	(41)	(42)
Changes in scope of consolidation	29	-	(3)	46	72
Impact of unwinding discount adjustments	89	454	28	5	576
Translation adjustments	13	-	14	4	32
Other	(2,558)	2,579	175	(13)	184
AT DECEMBER 31, 2022	**4,471**	**19,017**	**1,330**	**2,209**	**27,027**
Non-current	4,393	18,594	1,329	346	24,663
Current	78	423	1	1,863	2,365

The impact of unwinding discount adjustments in respect of post-employment and other long-term benefits relates to the interest expense on the benefit obligation, net of interest income on plan assets.

The “Other” line mainly comprises actuarial gains and losses arising on post-employment benefit obligations in 2022, which are recorded in “Other comprehensive income” as well as provisions recorded against a dismantling or site rehabilitation asset.

Additions, utilizations, reversals and the impact of unwinding discount adjustments are presented as follows in the consolidated income statement:

In millions of euros	Dec. 31, 2022
Income/	(738)
Other financial income and expenses	(577)
TOTAL	**(1,315)**

The different types of provisions and the calculation principles applied are described below.

17.1 Post-employment benefits and other long-term benefits

See Note 18 “Post-employment benefits and other long-term benefits”.

17.2 Obligations relating to nuclear power generation activities

In the context of its nuclear power generation activities, the Group assumes obligations related to the management of the back-end of the nuclear fuel cycle and the dismantling of nuclear facilities.

17.2.1 Legal framework

The Belgian law of April 11, 2003, partially repealed and amended by the law of July 12, 2022, granted Group subsidiary Synatom responsibility for managing provisions set aside to cover the costs of dismantling nuclear power plants and managing spent fuel. The tasks of the Commission for Nuclear Provisions (CNP) set up pursuant to the above-mentioned law is to oversee the process of computing and managing these provisions.

In accordance with the law, every three years the CNP conducts an audit of the application and adequacy of the calculation methods used to compute nuclear provisions.

To this end, Synatom submitted its triennial report on the revaluation of nuclear provisions to the CNP on September 2, 2022, which issued a set of remarks on December 16, 2022, confirming the reference scenarios, adding additional costs and adjusting the discount rates. The provisions recorded as of December 31, 2022 take full account of the comments and assumptions made by the CNP.

However, contesting some of the CNP’s remarks as being overly conservative or technically unsuitable, the Group submitted a new adapted proposal on February 14, 2023, in accordance with the law, explaining the reasons why it considered that these remarks could not be implemented. The CNP will then give its final opinion, if necessary, under the jurisdiction of the Belgian Market Court in Brussels.

In addition, with a view to a possible extension of the Doel 4 and Tihange 3 nuclear reactors, the ENGIE group has entered into discussions with the Belgian government on the capping of nuclear waste processing costs for ENGIE, which represent approximately 58% of the total provisions recorded at December 31, 2022. A letter of intent between the parties was signed on July 22, 2022, then reiterated and supplemented by a non-binding agreement in principle dated January 9, 2023. These documents provide for broad agreements in principle by March 15 and a binding agreement by June 2023. Assuming that the parties reach an agreement, the difference between the amount of the cap and the amount of the provisions recognized at December 31, 2022 would constitute a liability to be recognized.

In the absence of an overarching agreement to date, the provisions recognized at December 31, 2022 do not take into account any additional commitments or adjustments to the Group’s liabilities that may result from these discussions and remain based on the current contractual and legal framework, which sets the operating life of the nuclear units at 50 years for Tihange 1 and Doel 1 and 2, and at 40 years for the other units.

The provisions include in their assumptions all existing or planned environmental regulatory requirements on a European, national and regional level. If new legislation were to be introduced in the future, the cost estimates used as a basis for the calculations could vary.

The estimated provision amounts include margins for contingencies and other risks that may arise in connection with dismantling and radioactive spent fuel management procedures. Contingency margins relating to the disposal of waste are determined by the Belgian Agency for Radioactive Waste and Enriched Fissile Material (ONDRAF) and built into its fees. The Group also estimates appropriate margins for each cost category.

The CNP's remarks and the obligations related to projects to dispose of nuclear waste have resulted in a €3.3 billion increase in the ENGIE group's nuclear liabilities, in addition to the net recurring annual expense for the year due mainly to a decrease in the discount rate used for the provision for managing spent fuel and an increase in certain costs used to estimate the provision for dismantling nuclear power plants.

Lastly, the amount recorded for these provisions may also be revised in the event of an agreement yet to be signed with the Belgian government.

The breakdown of dismantling provisions between Synatom and Electrabel is shown below:

In millions of euros	Current	Non-current	Dec. 31, 2022
Provisions for dismantling nuclear facilities – Synatom	305	8,464	8,769
Provisions for the back-end of the nuclear fuel cycle – Synatom	118	8,970	9,088
Provisions for dismantling nuclear facilities – Electrabel	-	1,160	1,160
TOTAL	**423**	**18,594**	**19,017**

17.2.2 Provisions for the back-end of the nuclear fuel cycle

ACCOUNTING STANDARDS

Allocations to provisions for the management of spent fuel are computed based on the average unit cost of the quantities expected to be used up to the end of the operating life of the plants, applied to quantities used at the closing date. An annual allocation is also recognized with respect to unwinding the discount on the provisions.

When spent fuel is removed from a reactor and temporarily stored on-site, it requires conditioning, before being consigned to long-term storage.

The long-term disposal assumption in the scenario adopted by the CNP is based on the assumption that the waste will be buried in a deep geological repository at a site yet to be identified and classified in Belgium. This scenario has not yet been confirmed, as Belgium has not yet adopted a national program that complies with Article 12 of Directive 2011/70/EURATOM. On November 27, 2019, the European Commission sent a reasoned opinion to Belgium under the breach procedure provided for in Article 258 of the Treaty on the Functioning of the European Union. A Royal Decree issued on October 28, 2022 has since introduced "the first part of the National Policy for the Long-Term Management of High-Level and/or Long-Lived Radioactive Waste and specifying the process for the introduction in phases of the other parts of this National Policy". This Royal Decree confirms that "the disposal deep underground of this waste on Belgian territory on one or more sites" is "the preliminary draft concept for the long-term management of the radioactive waste referred to in Article 3, pending the outcome of the decision-making process (…)". It also sets out "the reversibility of the National Policy, which implies that, following reconsideration, one or more parts of this Policy may be reversed". It is therefore not possible to guarantee that Belgium will retain the disposal deep underground of category B waste – *i.e.*, low- or medium-activity long-lived waste from dismantling – and category C waste – *i.e.*, high-activity and/or long-lived waste – as its technical solution of choice.

If this assumption were to be challenged, the costs of downstream management may need to be adjusted. The ENGIE group has also sent a formal notice to the Belgian State requesting that it put an end to the uncertainty created by this state of affairs and to the damage caused by having postponed the various projects necessary for the management of nuclear waste in Belgium, and reserves its right to seek compensation if necessary.

In view of a series of developments in the nuclear fuel market, Synatom has proposed, and the CNP has confirmed, that the scenario of reprocessing a portion of fuel in order to allow for the processing of MOX fuel historically used in Belgian power plants, in particular, could no longer be the reference scenario. Contrary to previous assessments, the reference scenario no longer includes the cost of a reprocessing contract or the associated margins for contingencies, but includes an assumption that MOX will be directly disposed of deep underground. Should circumstances change, the costing may be revised.

The provisions booked by the Group for managing spent fuel cover all of the costs linked to this scenario, including on-site storage, transportation, conditioning, storage and geological disposal. They are calculated based on the following principles and inputs:

- storage costs primarily comprise the costs of building and operating additional dry storage facilities and operating existing facilities, along with the costs of procurement containers;
- radioactive spent fuel that has not been reprocessed is to be conditioned, which requires conditioning facilities to be built according to ONDRAF's approved criteria. ONDRAF's recommendations as regards the cost of these facilities have been fully taken into account;
- the cost of burying fuel in deep geological repositories is estimated using the fee rate established by ONDRAF based on a total disposal facility cost of €12 billion;
- the long-term obligation is calculated using estimated internal costs and external costs assessed based on offers received from third parties;
- the baseline scenario includes ONDRAF's latest scenario, with geological storage starting in around 2070 and ending in around 2135;
- the discount rate used by the CNP is 3.0% (including inflation of 2.0%).

The costs effectively incurred in the future may differ from the estimates in terms of their nature and timing of payment. Certain ONDRAF recommendations that have not yet been quantified will be discussed by the CNP, which will issue an additional opinion in 2023 if necessary.

Sensitivity

Provisions for the back-end of the nuclear fuel cycle remain sensitive to assumptions regarding costs, the timing of operations and expenditure, as well as to discount rates:

- on the basis of an analysis carried out by ENGIE group experts, certain remarks made by the CNP as part of the triennial review procedure described above are considered as unjustified and have been the subject of a reasoned opinion sent to the CNP. The impact of taking this opinion into account (at a discount rate of 3.0% as recommended by the CNP) would represent a decrease in provisions of €0.5 billion;
- ENGIE is also contesting the 25 basis points reduction from the previous rate and the 50 basis points reduction from Synatom's initial proposal. Maintaining the 3.25% rate used since 2019 would represent a decrease in provisions of €0.7 billion;
- these various elements were the subject of a reasoned opinion sent by the ENGIE group to the CNP on February 14, 2023, as provided for by the law of July 12, 2022;
- a 10% increase in ONDRAF's fees above the fee for the removal of category C waste would lead to an increase in provisions of approximately €0.3 billion based on unchanged contingency margins.

17.2.3 Provisions for dismantling nuclear facilities

ACCOUNTING STANDARDS

A provision is recognized when the Group has a present legal or constructive obligation to dismantle facilities or to restore a site. The present value of the obligation at the time of commissioning represents the initial amount of the provision for dismantling with, as the counterpart, an asset for the same amount, which is included in the carrying amount of the facilities concerned. This asset is depreciated over the operating life of the facilities and is included in the scope of assets subject to impairment tests. Adjustments to the provision due to subsequent changes in (i) the expected outflow of resources, (ii) the timing of dismantling expenses or (iii) the discount rate, are deducted from or subject to specific conditions, added to the cost of the corresponding asset. The impacts of unwinding the discount are recognized in expenses for the period.

A provision is also recorded for nuclear units for which the Group holds a capacity right up to its share of the expected dismantling costs to be borne by the Group.

Nuclear power plants have to be dismantled at the end of their operating life. Provisions are set aside in the Group's financial statements to cover all costs relating to (i) the shutdown phase, which involves removing radioactive spent fuel from the site and (ii) the dismantling phase, which consists of decommissioning and cleaning up the site.

The dismantling strategy is based on the facilities being dismantled (i) immediately after the reactor is shut down, (ii) on a mass basis rather than on a site-by-site basis, and (iii) completely, the land being subsequently returned to greenfield status.

Provisions for dismantling nuclear facilities are calculated based on the following principles and inputs:

- the start of the technical shutdown procedures depends on the facility concerned and on the timing of operations for the nuclear reactor as a whole. The shutdown procedures are immediately followed by dismantling operations;
- the scenario adopted is based on a dismantling program and on timetables that have to be approved by the nuclear safety authorities. A dialogue on the safety conditions for the shutdown and dismantling phases of the power plants has been initiated with the Belgian Federal Agency for Nuclear Control (AFCN). The costs may change depending on the outcome of these discussions and the detailed schedule for the implementation of these phases which is currently being defined;
- costs payable over the long term are calculated by reference to the estimated costs for each nuclear facility, based on a study conducted by independent experts under the assumption that the facilities will be dismantled on a mass basis. The costs effectively incurred in the future may differ from the estimates in terms of their nature and timing of payment.
- fees for handling Class A – low or medium activity and short-lived – and B – low or medium activity and long-lived dismantling waste are determined using the fee rate established by ONDRAF and include the margins recommended by ONDRAF for waste reclassification risk given the uncertainty over the definition of the criteria for classification in those classes; the difficulty in obtaining operating permits for class A waste storage led ONDRAF to redefine a technical solution for storage and set a new assessment in 2022;
- for the various phases, margins for contingencies, reviewed by ONDRAF and the Commission for Nuclear Provisions, are included;
- an inflation rate of 2.0% is applied until the dismantling obligations expire in order to determine the value of the future obligation;
- the discount rate used by the CNP is 2.5% (including inflation of 2.0%).

In addition, the liabilities for the disposal of operational waste at Electrabel include the tariff update approved by the Board of Directors of ONDRAF in May 2022.

Lastly, the Group has also set aside provisions, based on provisions for the Belgian assets most closely related to these plants, to cover the costs relating to the final shutdown phase of its drawing rights in Tricastin and Chooz B, as well as for the dismantling period leading to the decommissioning and clean-up of the Chooz B site, in accordance with the respective agreements with EDF.

Sensitivity

- On the basis of an analysis carried out by ENGIE group experts, certain remarks made by the CNP as part of the triennial review procedure described above are considered as unjustified and have been the subject of a reasoned opinion sent to the CNP. The impact of taking this opinion into account (at a discount rate of 2.50% as recommended by the CNP) would represent a decrease in provisions of €0.6 billion.
- Based on currently applied inputs for estimating costs and the timing of payments, a change of 10 basis points in the discount rate used could lead to an adjustment of approximately €85 million in dismantling provisions. A fall in discount rates would lead to an increase in outstanding provisions, while a rise in discount rates would reduce the provision amount.

17.2.4 Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material

17.2.4.1 Principles, objectives and governance

As indicated above, the Belgian law of July 12, 2022, partially repealing and amending the law of April 11, 2003, granted the Group's wholly-owned subsidiary Synatom responsibility for managing and investing funds received from operators of nuclear power plants in Belgium and intended to cover the costs of dismantling nuclear power plants and managing spent fuel. Pursuant to the law of April 11, 2003, Synatom could lend up to 75% of these funds to nuclear power plant operators provided that certain credit quality criteria are met.

In accordance with the law of July 12, 2022, the amount of the outstanding loans between Synatom and the nuclear operators representing the countervalue of the provisions for managing spent fuel will be repaid by December 31, 2025 to Synatom according to a schedule provided for in the law. The amount of the outstanding loans between Synatom and Electrabel representing the countervalue of the dismantling provisions will be repaid to Synatom by December 31, 2030 according to a schedule provided for in the law.

The percentage of the provisions not subject to loans to nuclear operators is invested by Synatom either in external financial assets or in loans to legal entities meeting the "credit quality" criteria imposed by law.

Accordingly, in 2022, Synatom invested nearly €1.9 billion in such assets.

Synatom's objective in terms of investment in these assets is to offer, in the long term and for an acceptable level of risk, a sufficient return, in order to cover dismantling costs and the management of radioactive fissile material, under the constraints of diversification, risk minimization and availability as defined by the law of July 12, 2022.

The Synatom Board of Directors and its Investment Committee are responsible for defining Synatom's investment policy after consultation with the CNP, in accordance with the law of July 12, 2022. Based on a rigorous risk control policy, the Investment Committee oversees investment decisions, which are managed by a team headed by an investment director.

17.2.4.2 Strategic allocation and composition of financial assets

The strategic allocation of financial assets is determined on the basis of a periodic asset-liability analysis, which consists of determining the asset categories and their respective weighting in order to meet the return objective while respecting the risk framework identified for each type of liability.

This allocation varies according to the type of liability and the different investment horizons and discount rates. Separate risk profiles are considered for:

- assets in relation to provisions for dismantling nuclear power plants;
- assets in relation to provisions for managing spent fuel.

The target allocation of plan assets based on the two aforementioned risk profiles is as follows:

In %	**Management of radioactive fissile material**	**Dismantling**
Shares	40%	35%
Bonds	40%	55%
Unlisted assets	20%	10%
TOTAL	**100%**	**100%**

Listed equities consist of international securities. Listed bonds consist of international sovereign bonds and international corporate bonds. Unlisted assets consist of securities representing funds or real estate, private equity, infrastructure or private debt investment vehicles. Investments are managed by specialized asset management companies.

Synatom believes that the inclusion of Environmental, Social and Governance (ESG) principles in investment decisions allows for better management of non-financial risks in order to generate long-term sustainable returns. The integration of ESG principles implies a broader consideration of the risks and opportunities that can influence financial performance. The selection process for external managers also incorporates ESG principles.

To implement this investment policy, Synatom has an investment company with variable share capital (SICAV) under Luxembourg law, the Nuclear Investment Fund ("NIF"), and an investment company with variable share capital under Belgian law, the Belgian Nuclear Liabilities Fund ("BNLF").

17.2.4.3 Changes in financial assets in 2022

The value of financial assets dedicated to covering nuclear provisions amounted to €6,626 million at December 31, 2022, and their return was -13.56% for the year. 2022 was marked by unprecedented events that greatly increased the volatility of global equity and bond markets. The inflationary pressures that followed the Covid crisis prompted the various central banks to carry out a series of interest rate hikes. Mixed published macroeconomic data and the war in Ukraine have particularly impacted the equity markets, especially in Europe. All asset classes, except monetary assets, had negative returns in 2022.

17.2.4.4 Valuation of financial assets in 2022

Loans to entities outside the Group and other cash investments are shown in the table below:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Loans to third parties	**5**	**8**
Loan to Sibelga	5	8
Other loans and receivables at amortized cost	**2,270**	**167**
Debt instruments – restricted cash UCITS	2,270	167
Total loans and receivables at amortized cost	**2,276**	**175**
Equity and debt instruments at fair value	863	1,509
Equity instruments at fair value through other comprehensive income	24	11
Equity instruments at fair value through income	**887**	**1,520**
Debt instruments at fair value through other comprehensive income	2,418	2,254
Debt instruments at fair value through income	933	1,552
Debt instruments at fair value	**3,350**	**3,806**
Total equity and debt instruments at fair value	**4,237**	**5,326**
Derivative instruments	**113**	**4**
TOTAL (1)	**6,626**	**5,505**

(1) Not including €308 million in uranium inventories at December 31, 2022 (€414 million at December 31, 2021).

Loans to legal entities outside the Group and the cash held by the Undertaking for Collective Investment in Transferable Securities (UCITS) are presented in the statement of financial position under "Loans and receivables at amortized cost". Bonds and associated hedging instruments held by Synatom through the UCITS are presented under equity or debt instruments *(see Note 14.1 "Financial assets")*.

The breakdown in the change in the cumulative fair value of Synatom's assets is presented as follows:

	Cumulative change in the fair value of dedicated financial assets	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Equity instruments at fair value through other comprehensive income	(157)	116
Debt instruments at fair value through other comprehensive income	(282)	51
Debt instruments at fair value through income	(52)	154
TOTAL	**(491)**	**321**

Net loss for the period generated by these assets amounted to €210 million in 2022 (gain of €228 million in 2021).

	Effects on the result of the return on dedicated financial assets	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Disposal proceeds	14	50
Dividends received	66	45
Interest received	7	7
Change in fair value of derivatives not designated as hedges	(15)	(115)
Change in fair value of dedicated assets through income	(282)	241
TOTAL	**(210)**	**228**

17.3 Dismantling of non-nuclear plant and equipment and site rehabilitation

17.3.1 Dismantling obligations arising on non-nuclear plant and equipment

Certain items of plant and equipment, including conventional power stations, transmission and distribution pipelines, storage facilities and LNG terminals, have to be dismantled at the end of their operational lives or at least safely shut down. These obligations are the result of prevailing environmental regulations in the countries concerned, contractual agreements, or an implicit Group commitment. The most important issue for the Group concerns gas infrastructures in France.

France's political and societal guidelines for the energy transition aim to achieve carbon neutrality by 2050, by reducing greenhouse gas emissions and promoting renewable or so-called "green" energies, particularly biomethane and hydrogen. The various scenarios that make it possible to achieve carbon neutrality, in particular the National Low Carbon Strategy in France, the French Environment and Energy Management Agency (ADEME) scenarios, and the "Energy Futures" study by the electricity transmission system operator, RTE, all lead to a significant decrease in the quantities of gas consumed, while maintaining a high number of gas connection points to manage peak electricity demand. The Group is closely analyzing this prospect, particularly for the purpose of defining its strategy and assessing the useful life of assets and evaluating provisions for their possible dismantling.

The future French Strategy for Energy and Climate (SFEC) will set out France's updated roadmap to achieve carbon neutrality by 2050 and ensure that France can adapt to the impacts of climate change. It will encompass the first five-year programming law on energy and the climate (LPEC), which must be adopted before the end of first-half 2023 and set out in the National Low-Carbon Strategy (SNBC, 3rd issue), the National Climate Change and Adaptation Plan (PNACC, 3rd issue) and the Long Term Energy Schedule (PPE 2024-2033), which must be adopted in the first half of 2024. Consequently, the next five-year review of the PPE and the SNBC will be preceded for the first time by the adoption of a programming law on energy and the climate, which will set the French policy for energy and climate's priorities for action.

In line with the objective of carbon neutrality by 2050, the long-term scenario adopted by the Group, which governs the implementation of its strategy, is one that combines reasonable electrification, *i.e.* just under 50% of final demand in 2050, with the development of a diversified range of green gases (biomethane, synthesized e-CH_4, natural gas with the Carbon-Capture and Storage process, pure hydrogen). The scenario used by the Group is close to the ADEME's S3 scenario.

Due to the importance of green gases in the French energy mix scheduled for 2050 and beyond, gas infrastructures will remain largely necessary and will be essential to provide flexibility to the energy system. The adaptation and conversion of these infrastructures to green gas mean that they can be used in the very distant future, which means that the present value of provisions for their dismantling is almost zero, except in the specific cases of LNG terminals and reduced operation and non-regulated storage sites, for which provisions for dismantling amounted to €382 million at December 31, 2022 and €402 million at December 31, 2021.

Given its time horizon and the many underlying inputs (in particular, better knowledge of the compatibility of gas infrastructures with hydrogen, and changes in French and European public policies), the Group will continue to assess the long-term scenario that will enable it to achieve carbon neutrality by 2050 on a regular basis. These assessments will be accompanied by a review of the valuation of dismantling provisions.

17.3.2 Hazelwood Power Station & Mine (Australia)

The Group and its partner Mitsui announced in November 2016 their decision to close the coal-fired Hazelwood Power Station, and cease coal extraction operations from the adjoining mine from late March 2017. The Group holds a 72% interest in the former 1,600 MW power station and adjoining coal mine, which has been consolidated as a joint operation.

At December 31, 2022, the Group's share (72%) of the provision covering the obligation to dismantle and rehabilitate the mine amounted to €220 million, *versus* €251 million at December 31, 2021.

Dismantling and site rehabilitation work commenced in 2017 and focused on: managing site contamination; planning site wide environmental clean-up; the demolition and dismantling of all of the site's industrial facilities, including the former power station; and ongoing aquifer pumping and designated earthworks within the mine to ensure mine floor and batter stability with a view to long-term rehabilitation into a pit lake.

Several policies and laws that have a direct or indirect impact on mine rehabilitation and on the agencies that administer them have recently been reformed. Consequently, the ultimate regulatory obligations are likely to be revised during the life of the project and could therefore have an impact on provisions.

The average discount rate used to determine the amount of the provisions is 4%.

The amount of the provision recognized is based on the Group's best current estimate of the demolition and rehabilitation costs that Hazelwood is expected to incur. However, the amount of this provision may be adjusted in the future to take into account any changes in the key inputs.

17.4 Other contingencies

This caption essentially includes provisions for commercial litigation, tax claims and disputes (except income tax, pursuant to IFRIC 23) as well as provisions for onerous contracts relating to storage and transport capacity reservation contracts.

NOTE 18 Post-employment benefits and other long-term benefits

ACCOUNTING STANDARDS

Depending on the laws and practices in force in the countries where the Group operates, Group companies have obligations in terms of pensions, early retirement payments, retirement bonuses and other benefit plans. Such obligations generally apply to all employees within the companies concerned.

The Group's obligations in relation to pensions and other employee benefits are recognized and measured in compliance with IAS 19. Accordingly:

- the cost of defined contribution plans is expensed based on the amount of contributions payable in the period;
- the Group's obligations concerning pensions and other employee benefits payable under defined benefit plans are assessed on an actuarial basis using the projected unit credit method. These calculations are based on assumptions relating to mortality, staff turnover and estimated future salary increases, as well as the economic conditions specific to each country or entity of the Group. Discount rates are determined by reference to the yield, at the measurement date, on investment grade corporate bonds in the related geographical area (or on government bonds in countries where no representative market for such corporate bonds exists).

Pension commitments are measured on the basis of actuarial assumptions. The Group considers that the assumptions used to measure its obligations are relevant and documented. However, any change in these assumptions could have a significant impact on the resulting calculations.

Provisions are recorded when commitments under these plans exceed the fair value of plan assets. Where the value of plan assets (capped where appropriate) is greater than the related commitments, the surplus is recorded as an asset under "Other assets" (current or non-current).

As regards post-employment benefit obligations, actuarial gains and losses are recognized in other comprehensive income. Where appropriate, adjustments resulting from applying the asset ceiling to net assets relating to overfunded plans are treated in a similar way. However, actuarial gains and losses on other long-term benefits such as long-service awards, are recognized immediately in profit or loss.

Net interest on the net defined benefit liability (asset) is presented in net financial income/(loss).

18.1 Description of the main pension plans

18.1.1 Companies belonging to the Electricity and Gas Industries sector in France

Since January 1, 2005, the CNIEG (Caisse Nationale des Industries Électriques et Gazières) has operated the pension, disability, death, occupational accident and occupational illness benefit plans for electricity and gas industry (hereinafter "EGI") companies in France. The CNIEG is a social security legal entity under private law placed under the joint responsibility of the ministries in charge of social security and the budget.

Employees and retirees of EGI sector companies have been fully affiliated to the CNIEG since January 1, 2005. The main affiliated Group entities are ENGIE SA, GRDF, GRTgaz, Elengy, Storengy, ENGIE Thermique France, CPCU, CNR and SHEM.

Following the funding reform of the special EGI pension plan introduced by Law No. 2004-803 of August 9, 2004 and its implementing decrees, specific benefits (pension benefits on top of the standard benefits payable under ordinary law) already vested at December 31, 2004 ("past specific benefits") were allocated between the various EGI entities. Past specific benefits (benefits vested at December 31, 2004) relating to regulated transmission and distribution businesses ("regulated past specific benefits") are funded by the levy on gas and electricity transmission and distribution services (*contribution tarifaire d'acheminement*) and therefore no longer represent an obligation for the ENGIE group. Unregulated past specific benefits (benefits vested at December 31, 2004) are funded by EGI sector companies to the extent defined by Decree No. 2005-322 of April 5, 2005.

The special EGI pension plan is a legal pension plan available to new entrants.

The specific benefits vested under the plan since January 1, 2005 are wholly financed by EGI sector companies in proportion to their respective weight in terms of payroll costs within the EGI sector.

As this plan is a defined benefit plan, the Group has set aside a pension provision in respect of specific benefits payable to employees of unregulated activities and specific benefits vested by employees of regulated activities since January 1, 2005. This provision also covers the Group's early retirement obligations. The provision amount may be subject to fluctuations based on the weight of the Group's companies within the EGI sector.

Pension benefit obligations and other "mutualized" obligations are assessed by the CNIEG.

At December 31, 2022, the projected benefit obligation in respect of the special pension plan for EGI sector companies amounted to €2.6 billion.

The duration of the pension benefit obligation of the EGI pension plan is 20 years.

18.1.2 Companies belonging to the electricity and gas sector in Belgium

In Belgium, the rights of employees in electricity and gas sector companies, principally Electrabel, Laborelec and some ENGIE Energy Management Trading and ENGIE CC employee categories, are governed by collective bargaining agreements.

These agreements, applicable to "wage-rated" employees recruited prior to June 1, 2002 and managerial staff recruited prior to May 1, 1999, specify the benefits entitling employees to a supplementary pension equivalent to 75% of their most recent annual income, for a full career and in addition to the statutory pension. These top-up pension payments provided under defined benefit plans are partly reversionary. In practice, the benefits are paid in the form of a lump sum for the majority of plan participants. Most of the obligations resulting from these pension plans are financed through pension funds set up for the electricity and gas sector and by certain insurance companies. Pre-funded pension plans are financed by employer and employee contributions. Employer contributions are calculated annually based on actuarial assessments.

The projected benefit obligation relating to these plans represented around 23% of total pension obligations and related liabilities at December 31, 2022. The average duration is nine years.

"Wage-rated" employees recruited after June 1, 2002 and managerial staff (i) recruited after May 1, 1999 or (ii) having opted for the transfer through defined contribution plans, are covered under defined contribution plans. Prior to January 1, 2017, the law specified a minimum average annual return (3.75% on wage contributions and 3.25% on employer contributions) when savings are liquidated.

The law on supplementary pensions, approved on December 18, 2016 and enforced on January 1, 2017 henceforth specifies a minimum rate of return, depending on the actual rate of return of Belgian government bonds, within a range of 1.75%-3.25% (the rates are now identical for employee and employer contributions). In 2022, the minimum rate of return stood at 1.75%.

An expense of €38 million was recognized in 2021 and 2022 in respect of these defined contribution plans.

18.1.3 Other pension plans

Most other Group companies also grant their employees retirement benefits. In terms of financing, pension plans within the Group are almost equally split between defined benefit and defined contribution plans.

The Group's main pension plans outside France, Belgium and the Netherlands concern:

- the United Kingdom: the large majority of defined benefit pension plans is now closed to new entrants and future benefits no longer vest under these plans. All entities run a defined contribution scheme. The pension obligations of International Power's subsidiaries in the United Kingdom are covered by the special Electricity Supply Pension Scheme (ESPS). The assets of this defined benefit scheme are invested in separate funds. Since June 1, 2008, the scheme has been closed and a defined contribution plan has been set up for new entrants;
- Germany: the Group's German subsidiaries have closed their defined benefit plans to new entrants and now offer defined contribution plans;
- Brazil: ENGIE Brasil Energia operates its own pension scheme. This scheme has been split into two parts, one for the (closed) defined benefit plan, and the other for the defined contribution plan that has been available to new entrants since the beginning of 2005.

18.2 Description of other post-employment benefit obligations and other long-term benefits

18.2.1 Other benefits granted to current and former EGI sector employees

Other benefits granted to EGI sector employees are:

- post-employment benefits:
  - reduced energy prices,
  - end-of-career indemnities,
  - bonus leave,
  - death capital benefits;
- long-term benefits:
  - allowances for occupational accidents and illnesses,
  - temporary and permanent disability allowances,
  - long-service awards.

The Group's main obligations are described below.

18.2.1.1 Reduced energy prices

Under Article 28 of the national statute for electricity and gas industry personnel, all employees (current and former employees, provided they meet certain length-of-service conditions) are entitled to benefits in kind, which take the form of reduced energy prices known as "employee rates".

This benefit entitles employees to electricity and gas supplies at a reduced price. For retired employees, this provision represents a post-employment defined benefit. Retired employees are only entitled to the reduced rate if they have completed at least 15 years' service within EGI sector companies.

In accordance with the agreements signed with EDF in 1951, ENGIE provides gas to all current and former employees of ENGIE and EDF, while EDF supplies electricity to these same beneficiaries. ENGIE pays (or benefits from) the balancing contribution payable in respect of its employees as a result of energy exchanges between the two utilities.

The obligation to provide energy at a reduced price to current and former employees during their retirement is measured as the difference between the energy sale price and the preferential rate granted (including, in 2022, the impacts of the tariff shield for electricity) and the preferential rate granted.

The provision set aside in respect of reduced energy prices stood at €2.8 billion at December 31, 2022. The duration of the obligation is 20 years.

18.2.1.2 End-of-career indemnities

Retiring employees (or their dependents in the event of death during active service) are entitled to end-of-career indemnities, which increase in line with the length of service within the EGI sector.

18.2.1.3 Compensation for occupational accidents and illnesses

EGI sector employees are entitled to compensation for accidents at work and occupational illnesses. These benefits cover all employees or the dependents of employees who die as a result of occupational accidents or illnesses, or injuries undergone on the way to work.

The amount of the obligation corresponds to the likely present value of the benefits to be paid to current beneficiaries, taking into account any reversionary annuities.

18.2.2 Other benefits granted to employees of the gas and electricity sector in Belgium

Electricity and gas sector companies also grant other post-employee benefits such as the reimbursement of medical expenses, electricity and gas price reductions, as well as length-of-service awards and early retirement schemes. These benefits are not prefunded, with the exception of the special *allocation transitoire* termination indemnity, considered as an end-of-career indemnity.

18.2.3 Other collective agreements

Most other Group companies also grant their staff post-employment benefits (early retirement plans, medical coverage, benefits in kind, etc.) and other long-term benefits such as jubilee and length-of-service awards.

18.3 Defined benefit plans

18.3.1 Amounts presented in the statement of financial position and statement of comprehensive income

In accordance with IAS 19, the information presented in the statement of financial position relating to post-employment benefit obligations and other long-term benefits results from the difference between the gross projected benefit obligation and the fair value of plan assets. A provision is recognized if this difference is positive (net obligation), while a prepaid benefit cost is recorded in the statement of financial position when the difference is negative, provided that the conditions for recognizing the prepaid benefit cost are met.

Changes in provisions for pension plans, post-employment benefits and other long-term benefits, plan assets and reimbursement rights recognized in the statement of financial position are as follows:

In millions of euros	Provisions	Plan assets	Reimbursement rights
AT DECEMBER 31, 2021	**(6,999)**	**72**	**229**
Exchange rate differences	(22)	(2)	-
Changes in scope of consolidation and other	109	(94)	(29)
Actuarial gains and losses	2,466	308	-
Periodic pension cost	(331)	(23)	2
Contributions/benefits paid	306	55	6
AT DECEMBER 31, 2022	**(4,471)**	**316**	**208**

Plan assets and reimbursement rights are presented in the statement of financial position under “Other non-current assets” or “Other current assets”.

The cost recognized for the period amounted to €354 million in 2022 (€547 million in 2021). The components of this defined benefit cost in the period are set out in Note 18.3.3 “Components of the net periodic pension cost”.

The Eurozone represented 98% of the Group’s net obligation at December 31, 2022 (same as December 31, 2021).

Cumulative actuarial gains and losses recognized in equity amounted to €1,400 million at December 31, 2022, compared to €4,232 million at December 31, 2021.

Net actuarial differences arising in the period and presented on a separate line in the statement of comprehensive income represented a net actuarial gain of €2,774 million in 2022 and a gain of €1,803 million in 2021.

18.3.2 Change in benefit obligations and plan assets

The table below shows the amount of the Group's projected benefit obligations and plan assets, changes in these items during the periods presented, and their reconciliation with the amounts reported in the statement of financial position:

		Dec. 31, 2022				Dec. 31, 2021			
In millions of euros		Pension benefit obligations (1)	Other post-employment benefit obligations (2)	Long-term benefit obligations (3)	Total	Pension benefit obligations (1)	Other post-employment benefit obligations (2)	Long-term benefit obligations (3)	Total
A – Change in projected benefit obligation									
Projected benefit obligation at January 1		**(7,566)**	**(4,649)**	**(499)**	**(12,715)**	**(9,186)**	**(5,167)**	**(565)**	**(14,919)**
Service cost		(229)	(97)	(45)	(372)	(353)	(88)	(80)	(521)
Interest expense		(124)	(60)	(6)	(190)	(85)	(39)	(3)	(126)
Contributions paid		(8)	-	-	(8)	(13)	-	-	(13)
Amendments		-	-	-	-	(2)	-	-	(2)
Changes in scope of consolidation		10	2	-	12	1,108	4	58	1,170
Curtailments/settlements		(87)	-	-	(87)	13	1	-	13
Financial actuarial gains and losses		2,118	1,390	81	3,590	869	533	32	1,434
Demographic actuarial gains and losses		8	(4)	34	39	(230)	2	11	(217)
Benefits paid		346	110	39	495	389	107	47	543
Other (of which translation adjustments)		(33)	-	(1)	(34)	(78)	-	(1)	(78)
Projected benefit obligation at December 31	**A**	**(5,565)**	**(3,308)**	**(395)**	**(9,268)**	**(7,566)**	**(4,649)**	**(499)**	**(12,715)**
B – Change in fair value of plan assets									
Fair value of plan assets at January 1		**5,843**	-	**-**	**5,843**	**6,034**	-	**-**	**6,034**
Interest income on plan assets		97	-	-	97	58	-	-	58
Financial actuarial gains and losses		(739)	-	-	(739)	629	-	-	629
Contributions received		133	-	-	133	198	-	-	198
Changes in scope of consolidation		3	-	-	3	(862)	-	-	(862)
Settlements		81	-	-	81	(11)	-	-	(11)
Benefits paid		(260)	-	-	(260)	(283)	-	-	(283)
Other (of which translation adjustments)		22	-	-	22	81	-	-	81
Fair value of plan assets at December 31	**B**	**5,181**	-	**-**	**5,181**	**5,843**	-	**-**	**5,843**
C – Funded status	**A+B**	**(384)**	**(3,308)**	**(395)**	**(4,087)**	**(1,723)**	**(4,649)**	**(499)**	**(6,872)**
Asset ceiling		(68)	-	-	(68)	(55)	-	-	(55)
Net benefit obligation		**(452)**	**(3,308)**	**(395)**	**(4,155)**	**(1,779)**	**(4,649)**	**(499)**	**(6,927)**
ACCRUED BENEFIT LIABILITY		**(768)**	**(3,308)**	**(395)**	**(4,471)**	**(1,850)**	**(4,649)**	**(499)**	**(6,999)**
PREPAID BENEFIT COST		**316**	-	-	**316**	**72**	-	-	**72**

(1) Pensions and retirement bonuses.
(2) Reduced energy prices, healthcare, gratuities and other post-employment benefits.
(3) Length-of-service awards and other long-term benefits.

18.3.3 Components of the net periodic pension cost

The net periodic cost recognized in respect of defined benefit obligations for the years ended December 31, 2022 and 2021 breaks down as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Current service cost	372	521
Actuarial gains and losses [(1)]	(116)	(43)
Gains or losses on pension plan curtailments, terminations and settlements	6	-
Total accounted for under current operating income including operating MtM and share in net income of equity method entities	**261**	**479**
Net interest expense	93	68
Total accounted for under net financial income/(loss)	**93**	**68**
TOTAL	**354**	**547**

(1) On the long-term benefit obligation.

18.3.4 Funding policy and strategy

When defined benefit plans are funded, the related plan assets are invested in pension funds and/or with insurance companies, depending on the investment practices specific to the country concerned. The investment strategies underlying these defined benefit plans are aimed at striking the right balance between return on investment and acceptable levels of risk.

The objectives of these strategies can be summarized as follows: to maintain sufficient liquidity to cover pension and other benefit payments; and as part of risk management, to achieve a long-term rate of return higher than the discount rate or, where appropriate, at least equal to future required returns.

When plan assets are invested in pension funds, investment decisions are the responsibility of the fund management concerned. For French companies, where plan assets are invested with an insurance company, the latter manages the investment portfolio for unit-linked policies or euro-denominated policies, in a manner adapted to the risk and long-term profile of the liabilities.

The funding of these obligations for each of the periods presented can be analyzed as follows:

In millions of euros	Projected benefit obligation	Fair value of plan assets	Asset ceiling	Total net obligation
Underfunded plans	(3,886)	3,391	(63)	(558)
Overfunded plans	(1,360)	1,788	(4)	424
Unfunded plans	(4,021)	-	-	(4,021)
AT DECEMBER 31, 2022	**(9,267)**	**5,180**	**(68)**	**(4,156)**
Underfunded plans	(5,891)	4,671	(50)	(1,271)
Overfunded plans	(1,116)	1,172	(5)	51
Unfunded plans	(5,708)	-	-	(5,708)
AT DECEMBER 31, 2021	**(12,715)**	**5,843**	**(55)**	**(6,927)**

The allocation of plan assets by principal asset category can be analyzed as follows:

In %	Dec. 31, 2022	Dec. 31, 2021
Equity investments	27	29
Sovereign bond investments	25	21
Corporate bond investments	35	27
Money market securities	4	3
Real estate	2	2
Other assets	8	18
TOTAL	**100**	**100**

All plan assets were quoted on an active market at December 31, 2022.

The actual return on assets of EGI sector companies stood at a negative 12.2% in 2022.

In 2022, the actual return on plan assets of Belgian entities amounted to approximately 2.6% in Group insurance and a negative 14.2% in pension funds.

The allocation of plan asset categories by geographic area of investment can be analyzed as follows:

In %	Europe	North America	Latin America	Asia – Oceania	Rest of the World	Total
Equity investments	53	33	-	12	2	100
Sovereign bond investments	76	1	19	-	3	100
Corporate bond investments	61	29	1	6	3	100
Money market securities	85	4	3	1	7	100
Real estate	92	2	6	-	1	100
Other assets	13	-	-	-	87	100

18.3.5 Actuarial assumptions

Actuarial assumptions are determined individually by country and company in conjunction with independent actuaries. Weighted discount rates for the main actuarial assumptions are presented below:

		Pension benefit obligations		Other post-employment benefit obligations		Long-term benefit obligations		Total benefit obligations	
		2022	2021	2022	2021	2022	2021	2022	2021
Discount rate	Eurozone	3.8%	1.2%	3.8%	1.2%	3.8%	1.2%	3.8%	1.2%
	UK Zone	2.1%	1.6%	-	-	-	-	-	-
Inflation rate	Eurozone	4.2%	1.8%	4.2%	1.8%	4.2%	1.8%	4.2%	1.8%
	UK Zone	3.9%	3.6%	-	-	-	-	-	-

18.3.5.1 Discount and inflation rates

The discount rate applied is determined based on the yield, at the date of the calculation, of investment grade corporate bonds with maturities mirroring the term of the plan.

The rates were determined for each monetary area based on data for AA corporate bond yields. For the Eurozone, data (from Bloomberg) are extrapolated on the basis of government bond yields for long maturities.

According to the Group's estimates, a 100-basis-point increase (decrease) in the discount rate would result in a decrease (increase) of approximately 13% in the projected benefit obligation.

The inflation rates were determined for each monetary area. A 100-basis-point increase (decrease) in the inflation rate (with an unchanged discount rate) would result in an increase (decrease) of approximately 12% in the projected benefit obligation.

18.3.6 Estimated employer contributions payable in 2023 under defined benefit plans

The Group expects to pay around €172 million in contributions into its defined benefit plans in 2023, including €122 million for EGI sector companies. Annual contributions in respect of EGI sector companies will be made by reference to rights vested during the year, taking into account the funding level for each entity in order to even out contributions over the medium term.

18.4 Defined contribution plans

In 2022, the Group recorded a €91 million expense in respect of amounts paid into Group defined contribution plans of which €9 million concerning multi-employers plans in Netherlands (€196 million in 2021, of which €74 million concerning multi-employers in Netherlands). These contributions are recorded under "Personnel costs" in the consolidated income statement.

NOTE 19 Share-based payments

ACCOUNTING STANDARDS

Under IFRS 2, share-based payments made in consideration for services provided are recognized as personnel costs. These services are measured at the fair value of the instruments awarded.

The fair value of bonus share plans is estimated by reference to the share price at the grant date, taking into account the fact that no dividend is payable over the vesting period, and based on the estimated turnover rate for the employees concerned and the probability that the Group will meet its performance targets. The fair value measurement also takes into account the non-transferability period associated with these instruments. The cost of shares granted to employees is expensed over the vesting period of the rights and offset against equity.

A Monte Carlo pricing model is used for Performance Shares granted on a discretionary basis and subject to external performance criteria.

Expenses recognized in respect of share-based payments break down as follows:

	Expense for the year	
In millions of euros	**Dec. 31, 2022**	**Dec. 31, 2021**
Employee share issues (1)	(49)	(1)
Bonus/performance share plans (2) (3)	(40)	(47)
Other Group companies' plans	(3)	-
TOTAL	**(92)**	**(48)**

(1) Including Share Appreciation Rights set up within the scope of employee share issues in certain countries.
(2) Of which an additional expense of €4.2 million in 2022 following the review of the performance conditions (a reversal of €0.3 million in 2021).
(3) Of which a reversal of €9.8 million in 2022 for failure to meet the condition of continuing employment within the Group (€4 million in 2021).

19.1 Link 2022

19.1.1 Description of available ENGIE share plans

In 2022, Group employees and former Group employees were entitled to purchase ENGIE shares as part of the "Link 2022" worldwide employee share ownership plan. The offering mainly involved the sale of treasury shares. Employees could subscribe to either:

- the Link Classique Plan: this plan allows employees to subscribe to shares at a discount, either directly or *via* an employee mutual fund and with an employer top-up contribution;
- the Link Multiple Plan: under this plan, employees may subscribe to shares at a discount, either directly or *via* an employee mutual fund, and also benefit from any increase in the share price (leverage effect) in addition to the amounts invested. Through a Swap Agreement with the bank that structures the Plan, employees are guaranteed to recover 100% of the invested amount as well as a minimum capitalized return;
- Share Appreciation Rights (SARs): this leveraged plan entitles beneficiaries who purchase shares to receive a cash bonus equal to the increase in the share price after a period of five years. The resulting employee liability is covered by warrants.

The Link Classique Plan featured an employer contribution under the terms and conditions described below:

- participating French employees were entitled to bonus ENGIE shares depending on the amount of their own contribution to the plan:
  - for an employee contribution of €200, the employer contribution corresponded to 200% of this amount; for an additional employee contribution of €100, the employer contribution represented 50% of the amount. The employer contribution was capped at €450;
- for employees in other countries, ENGIE shares were granted through a bonus share award plan, subject to the still being employed with the Group and depending on their own contribution to the plan:
  - for an employee contribution of €200, the employer contribution corresponded to 200% of this amount; for an additional employee contribution of €100, the employer contribution represented 50% of the amount. The employer contribution was capped at €450,
  - the bonus shares will be awarded to employees on December 22, 2027, provided that they are still employed by the ENGIE group.

19.1.2 Accounting impacts

The subscription price for the 2022 plan represents the average closing price of the ENGIE share on the Euronext Paris over the 20 trading days between October 18, 2022 and November 14, 2022 inclusive. The reference price is set at €13.14 less 20% for the Link Classique and the Link Multiple plans, *i.e.* €10.52.

The expense recognized in the consolidated financial statements in respect of the Link Classique, and Link Multiple plans corresponds to the difference between the fair value of the shares subscribed and the subscription price. The fair value takes into account the lock-up period of five years, as provided for by French legislation.

The following assumptions were applied:

	5 years
Risk-free interest rate	2.70%
Spread applicable to the retail banking network	1.00%
Employee financing cost	3.70%
Share lending cost	1.00%
Share price at grant date	14.38

The accounting impacts break down as follows:

	Link Classique	Link Multiple	Link Classique France – additional employer's contribution	Total
Amount subscribed (in millions of euros)	27	135	-	162
Number of shares subscribed (in millions of shares)	2.6	12.8	0.8	16.2
Discount (€/share)	3.9	3.9	14.4	-
Non-transferability restriction (€/share)	(1.4)	(1.4)	(1.4)	-
Cost for the Group *(in millions of euros)*	**6**	**32**	**10**	**48**

Subscriptions to the Link 2022 worldwide employee share ownership plan totaled €162 million and break down as follows:

- the sale of treasury shares to employees amounted to €130 million;
- a capital increase and additional paid-in capital of €32 million (excluding issuance costs). This amount is broken down into €8 million for Link Classique and €24 million for Link Multiple.

The Group recognized a total expense of €48 million for 2022 in respect of the 15.4 million shares subscribed and the 0.8 million bonus shares awarded under employer contributions.

The accounting impact of cash-settled Share Appreciation Rights consists in recognizing a payable to the employee over the vesting period, with a corresponding adjustment recorded in profit or loss. At December 31, 2022, the fair value of the liability relating to the 2018 and 2022 awards amounted to €0.2 million.

19.2 Performance Shares

19.2.1 New awards in 2022

ENGIE Performance Share plan of December 8, 2022

On December 8, 2022, the Board of Directors approved the award of 4.7 million Performance Shares to members of the Group's executive and senior management, breaking down into three tranches:

- Performance Shares vesting on March 14, 2026, subject to a one-year lock-up period;
- Performance Shares vesting on March 14, 2026, without a lock-up period; and
- Performance Shares vesting on March 14, 2027, without a lock-up period.

In addition to a condition requiring employees to be employed with the Group at the vesting date, each tranche is made up of instruments subject to four different conditions, excluding the first 500 Performance Shares granted to beneficiaries (excluding top management), which are exempt from performance conditions. The performance conditions are as follows:

- a market performance condition relating to ENGIE's Total Shareholder Return compared to that of a reference panel of six companies, as assessed between December 2022 and February 2026, which accounts for 25% of the total award;
- an internal performance condition relating to net recurring income Group share compared to that of a reference panel of six companies, as assessed between the second half of 2022 and the first half of 2025, which accounts for 25% of the total award;
- an internal performance condition relating to Return On Capital Employed (ROCE) in 2025 which accounts for 30% of the total award;
- an internal performance condition relating to non-financial criteria in terms of targets for greenhouse gas emissions from energy productions, increasing the share of renewable capacities and increasing the percentage of women in management, as assessed between December 2022 and December 2025, which accounts for 20% of the total award.

Under this plan, Performance Shares without conditions were also awarded to the winners of the Innovation and Incubation programs (6,450 shares awarded).

ENGIE Bonus Share plan of November 18, 2022

As part of the Link 2022 employee share plan, bonus shares were awarded to subscribers of the Link Classique plan (outside France). A total of 247,163 bonus shares were awarded under this plan *(see Note 19.1.1 Description of available ENGIE share plans)*.

19.2.2 Fair value of bonus share plans with or without performance conditions

The following assumptions were used to calculate the unitary fair value of the new plans awarded by ENGIE in 2022:

Award date	Vesting date	End of the lock-up period	Price at the award date	Expected dividend	Market-related performance condition	Unitary fair value
November 18, 2022	December 22, 2027	December 22, 2027	14.4	1,15	no	9.20
Weighted average fair value of the December 22, 2022 plan						**9.20**
December 8, 2022	March 14, 2026	March 14, 2027	14.3	1,15	yes	9.91
December 8, 2022	March 14, 2026	March 14, 2026	14.3	1,15	yes	9.91
December 8, 2022	March 14, 2026	March 14, 2026	14.3	1,15	no	11.05
December 8, 2022	March 14, 2027	March 14, 2027	14.3	1,15	yes	8.93
Weighted average fair value of the December 8, 2022 plan						**10.24**

19.2.3 Review of internal performance conditions applicable to the plans

In addition to the condition of continuing employment within the Group, eligibility for certain bonus share and performance share plans is subject to an internal performance condition. When this condition is not fully met, the number of bonus shares granted to employees is reduced in accordance with the plans' regulations, leading to a decrease in the total expense recognized in relation to the plans in accordance with IFRS 2. Performance conditions are reviewed at each reporting date.

NOTE 20 Related party transactions

This note describes material transactions between the Group and its related parties.

Compensation payable to key management personnel is disclosed in Note 21 "Executive compensation".

Transactions with joint ventures and associates are described in Note 3 "Investments in equity method entities".

Only material transactions are described below.

20.1 Relations with the French State and with entities owned or partly owned by the French State

20.1.1 Relations with the French State

The French State's interest in the Group at December 31, 2022 remained unchanged at 23.64% compared with the previous year. This entitles it to three of the 15 seats on the Board of Directors (one Director representing the State appointed by decree, and two Directors appointed by the Shareholders' Meeting at the proposal of the State).

The French State holds 33.56% of the theoretical voting rights (33.71% of exercisable voting rights) compared with 33.20% at end-2021.

On May 22, 2019, the PACTE Law ("Action plan for business growth and transformation") was enacted, enabling the French State to dispose of its ENGIE shares without restriction.

In addition, the French State holds a golden share aimed at protecting France's critical interests and ensuring the continuity and safeguarding of supplies in the energy sector. The golden share is granted to the French State indefinitely and entitles it to veto decisions taken by ENGIE if it considers they could harm France's interests.

Public service engagements in the energy sector are defined by the law of January 3, 2003.

Transmission rates on the GRTgaz transportation network and the gas distribution network in France, as well as rates for accessing the French LNG terminals and revenues from storage capacities, are all regulated.

The Law on Energy and Climate enacted on November 8, 2019 will put an end to regulated gas tariffs and will restrict regulated electricity tariffs for consumers and small businesses. The final date for the discontinuation of regulated gas tariffs is July 1, 2023.

20.1.2 Relations with EDF

Following the creation on July 1, 2004 of the French gas and electricity distribution network operator (EDF Gaz de France Distribution), Gaz de France SA and EDF entered into an agreement on April 18, 2005 setting out their relationship as regards the distribution business. The December 7, 2006 law on the energy sector reorganized the natural gas and electricity distribution networks. Enedis SA, a subsidiary of EDF SA, and GRDF SA, a subsidiary of ENGIE SA, were created on January 1, 2007 and December 31, 2007, respectively, and act in accordance with the agreement previously signed by the two incumbent operators. With the deployment of smart meters for both electricity and gas, the "common" activities operated by the two distributors evolved significantly. The remaining mixed activities are mainly in the areas of inventory management, human resources, medical field, local IT and accountancy. This scope will be further reduced in 2023 to be limited to areas relating to medical field and social activities.

20.2 Relations with the CNIEG (Caisse Nationale des Industries Électriques et Gazières)

The Group's relations with the CNIEG, which manages all old-age, death and disability benefits for active and retired employees of the Group who belong to the special EGI pension plan, employees of EDF and Non-Nationalized Companies (*entreprises non nationalisées* – ENN), are described in Note 18 "Post-employment benefits and other long-term benefits".

NOTE 21 Executive compensation

The executive compensation presented below includes the compensation of the members of the Group's Executive Committee and Board of Directors.

The Executive Committee had 10 members at December 31, 2022 (compared to 11 members at December 31, 2021).

Their compensation breaks down as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Short-term benefits	34	22
Post-employment benefits	-	1
Share-based payments	4	3
Termination benefits	-	7
TOTAL	**37**	**33**

NOTE 22 Working capital requirements, inventories, other assets and other liabilities

ACCOUNTING STANDARDS

In accordance with IAS 1, the Group's current and non-current assets and liabilities are shown separately in the consolidated statement of financial position. For most of the Group's activities, the breakdown into current and non current items is based on when assets are expected to be realized, or liabilities extinguished. Assets expected to be realized or liabilities extinguished within 12 months of the reporting date are classified as current, while all other items are classified as non-current.

Inventories

Inventories are measured at the lower of cost and net realizable value. Net realizable value corresponds to the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale.

The cost of inventories is determined based on the first-in, first-out method or the weighted average cost formula.

Nuclear fuel purchased is consumed in the process of producing electricity over a number of years. The consumption of this nuclear fuel inventory is recorded based on estimates of the quantity of electricity produced per unit of fuel.

Gas inventories

Gas injected into underground storage facilities includes working gas, which can be extracted without adversely affecting the subsequent operation of the reservoirs, and cushion gas, which is inseparable from the reservoirs and essential for their operation *(see Note 13.3 "Property, plant and equipment")*.

Working gas is classified in inventories and measured at weighted average purchase cost upon entering the transportation network regardless of its source, including any regasification costs.

Group inventory outflows are valued using the weighted average unit cost method.

Certain inventories are used for trading purposes and are recognized at fair value less selling costs, in accordance with IAS 2. Any changes in said fair value are recognized in the consolidated income statement for the year in which they occur.

Greenhouse gas emission rights, energy saving certificates and green certificates

In the absence of specific IFRS standards or IFRIC interpretations on accounting for greenhouse gas emission allowances, energy saving certificates and green certificates, the Group has decided to recognize certificates in inventories at their acquisition or production cost. At the reporting date, a liability is recognized if the certificates held by the Group are insufficient to meet the obligation to return certificates to the French government. When not covered by the certificates held in inventories, the liability is measured at the market value or based on the price of any future contracts that have been entered into, when applicable.

Tax equity

The ENGIE group finances its renewables projects in the United States through tax equity structures, in which part of the necessary funds is provided by a tax partner. The tax partner obtains, up to a pre-determined level, a preferential right essentially to the project's tax credits, which it can deduct from its own tax base.

The tax partner's investments meet the definition of a liability under IFRS. Since the tax equity liability corresponding to these tax benefits does not give rise to any cash outflow for the project entity, it does not represent a financial debt and is accounted for in "Other liabilities".

Besides the unwinding effect, the liability changes mainly in line with the tax credits allocated to the tax partner and recognized in profit or loss.

22.1 Composition of change in working capital requirements

In millions of euros	Change in working capital requirements at Dec. 31, 2022	Change in working capital requirements at Dec. 31, 2021
Inventories	(2,115)	(2,349)
Trade and other receivables, net	(11,614)	(11,043)
Trade and other payables, net	8,521	10,676
Tax and employee-related receivables/payables	1,545	364
Margin calls and derivative instruments hedging commodities relating to trading activities	199	(706)
Other	1,040	680
TOTAL	**(2,424)**	**(2,377)**

22.2 Inventories

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Inventories of natural gas, net	4,628	3,079
Inventories of uranium [1]	308	408
CO_2 emissions allowances, green certificates and energy saving certificates, net	1,788	1,526
Inventories of commodities other than gas and other inventories, net	1,420	1,161
TOTAL	**8,145**	**6,175**

(1) Financial hedging instruments are backed by these uranium inventories and represented a negative amount of €229 million at December 31, 2022.

22.3 Other assets and other liabilities

	Dec. 31, 2022				Dec. 31, 2021			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Other assets and liabilities	766	18,294	(3,646)	(23,583)	478	13,202	(2,341)	(16,752)
Tax receivables/payables	*-*	*14,647*	*-*	*(16,863)*	*-*	*10,628*	*-*	*(11,316)*
Employee receivables/payables	*523*	*22*	*(2)*	*(2,479)*	*300*	*18*	*(2)*	*(2,033)*
Dividend receivables/payables	*-*	*12*	*-*	*(23)*	*-*	*15*	*-*	*(9)*
Other	*243*	*3,614*	*(3,644)*	*(4,218)*	*178*	*2,541*	*(2,339)*	*(3,395)*

At December 31, 2022, other non-current assets included a receivable towards EDF Belgium in respect of nuclear provisions amounting to €162 million (€96 million at December 31, 2021).

Other liabilities include €1,981 million in investments made by tax partners as part of the financing of renewable projects in the United States by tax equity (€1,229 million at December 31, 2021).

NOTE 23 Legal and anti-trust proceedings

The Group is party to a number of legal and anti-trust proceedings with third parties or with legal and/or administrative authorities (including tax authorities) in the normal course of its business.

The main disputes and investigations presented hereafter are recognized as liabilities or give rise to contingent assets or liabilities.

In the normal course of its business, the Group is involved in a number of disputes and investigations before state courts, arbitral tribunals or regulatory authorities. The disputes and investigations that could have a material impact on the Group are presented below.

23.1 Renewables

23.1.1 Mexico – Renewable energy

In 2021, the Mexican government and public authorities took positions and legislative and regulatory measures that directly affect private players in the energy sector (in particular renewable energy producers) and go against the letter and spirit of the latest energy sector reforms introduced in 2013 and 2014. The constitutionality and legality of some of these measures have been contested in legal proceedings launched by non-government bodies and private investors, in particular by ENGIE subsidiaries that develop or implement renewable energy projects in the country. These proceedings are currently ongoing. The Mexican President has also submitted a draft revision of the Constitution that would substantially change the regulatory framework applicable to the electricity sector. The case was put on hold in the first half of 2022.

23.2 Networks

23.2.1 Investigation into the regulatory framework for natural gas storage in France

On February 29, 2020, the European Commission announced that it had launched an in-depth investigation into the regulatory framework for natural gas storage introduced on January 1, 2018 to secure France's natural gas supply. Storengy and Géométhane provided the Commission with all the necessary information to substantiate their analyses. The European Commission closed its investigation and published a press release on June 28, 2021 announcing that it had concluded that the regulatory framework for natural gas storage complies with EU rules on State aid. Nevertheless, the Commission considered that the scheme constituted illegal State aid for the period during which it was implemented without having been approved in advance. This decision was published in the Official Journal on March 18, 2022, marking the start of the two-month period for filing an appeal. To our knowledge, no appeal has been filed.

23.3 Energy Solutions

23.3.1 Spain – Púnica

In the Púnica case (procedure concerning the awarding of contracts), 15 Cofely España employees, as well as the company itself, were placed under investigation by the examining judge in charge of the case. The criminal investigation was closed on July 19, 2021 with the referral of Cofely España and eight (former) employees before the criminal court. Cofely España lodged an appeal against this decision on September 30, 2021. On March 9, 2022, the appeal was dismissed and the referral decision upheld. The hearings are expected to begin in 2023.

23.3.2 Italy – Competition procedure

On May 9, 2019, a fine of €38 million was jointly and severally imposed on ENGIE Servizi SpA and ENGIE Energy Services International SA ("ENGIE ESI") by the Italian Competition Authority (the "Authority") for certain alleged anti-competitive practices relating to the award of the Consip FM4 2014 contract. An appeal was lodged with the Lazio Regional Administrative Court (Lazio RAC). On July 18, 2019, the Lazio RAC suspended the payment of the fine, and on July 27, 2020, it overturned the Authority's decision as regards both ENGIE Servizi SpA and ENGIE ESI. On November 17, 2020, the Authority appealed the Lazio RAC's decision before Italy's highest administrative court. On May 9, 2022, the Italian administrative court rejected the Authority's appeal and upheld the Lazio RAC's reversal of the Authority's decision. Two companies filed a special appeal against the administrative court's decision before the administrative court itself on June 13, 2022, and an appeal challenging the administrative court's rejection of the appeal before the Supreme Court on July 11, 2022. These appeals do not have a suspensive effect. Both proceedings are still pending.

23.3.3 Italy – Manitalidea

In 2012, ENGIE Servizi formed a temporary association (*associazione temporanea di imprese* or ATI) with Manitalidea with the aim of submitting a bid for a public contract launched by CONSIP. ENGIE Servizi had an 85% stake in the ATI, with Manitalidea holding the remaining 15%. The purpose of the contract was to provide energy and maintenance services to hospitals.

In September 2012, three lots of the contract were awarded to the ATI.

On March 11, 2022, Manitalidea filed for damages against ENGIE Servizi with the Rome Civil Court, claiming that (i) ENGIE Servizi had not complied with the provisions of the temporary association agreement relating to the distribution of contracts between the partners, and (ii) as a result, Manitalidea had missed an opportunity to increase its revenue. After Manitalidea filed for bankruptcy, the claim was extended to include the alleged responsibility of ENGIE Servizi for Manitalidea's financial difficulties and bankruptcy.

A hearing is scheduled for the first half of 2023.

23.4 Supply

23.4.1 Canvassing

EDF brought an action against ENGIE before the Nanterre Commercial Court on July 20, 2017, seeking €13.5 million in damages for alleged losses due to unfair competitive practices pursued by ENGIE mainly in its door-to-door canvassing campaigns. In its judgment of December 14, 2017, the court ordered ENGIE to pay EDF the sum of €150,000, concluding that ENGIE was guilty of unfair competition but acknowledging that there had been no disparagement of EDF and that ENGIE had set up training and control arrangements for its partners.

ENGIE appealed the judgment and EDF brought a cross-appeal seeking €94.7 million in damages for its alleged loss. The Versailles Court of Appeal delivered its judgment on March 12, 2019, ordering ENGIE to pay EDF €1 million. It also ordered ENGIE to cease and desist from all parasitic business practices and disparagement to the detriment of EDF, subject to a penalty of €10,000 per infringement for a period of one year.

On July 6, 2020, EDF asked the enforcement judge at the Nanterre Court to assess the penalty ordered by the Versailles Court of Appeal, seeking payment from ENGIE of the sum of €106.89 million and a final penalty of €50,000 per infringement for a period of one year. On December 11, 2020, the enforcement judge ordered ENGIE to pay EDF the sum of €230,000 and ordered a new provisional penalty of €15,000 per new infringement reported by EDF for a period of one year as of notification of the judgment.

On December 22, 2020, EDF appealed the enforcement judge's decision before the Versailles Court of Appeal. The Versailles Court of Appeal handed down its decision on July 1, 2021. It reduced ENGIE's fine to €190,000 and, considering that ENGIE had demonstrably implemented measures that were likely to be efficient and that the difficulties encountered stemmed for the most part from the behavior of service providers/partners and door-to-door salespeople, annulled the new provisional penalty and rejected EDF's request to impose a definitive penalty. EDF appealed this decision before the French Court of Cassation on July 29, 2021. The Court of Cassation rejected EDF's appeal in its ruling of October 6, 2022. The case is therefore closed.

23.4.2 Peru – Antamina

In 2012, following a tender for the annual purchase of 170 MW until 2032, ENGIE Energía Perú SA entered into a long-term gas purchase agreement with the Peruvian mining company Antamina (the "Agreement").

In 2021, however, Antamina launched another tender for the same annual volume and entered into three purchase agreements with three new suppliers for a six-month period renewable twice. This called into question the exclusivity and "take or pay" clause that ENGIE Energía Perú SA believed it had been granted until 2032 under the Agreement. Following the signing of these new agreements, Antamina refused, as of January 2022, to accept delivery of the agreed upon quantity of gas under the Agreement and, consequently, to pay the corresponding penalty.

On April 26, 2022, ENGIE Energía Perú SA filed an arbitration procedure against Antamina, seeking recognition of the exclusive nature of the Agreement and Antamina's obligation to only procure gas supplies from ENGIE. The suit also seeks the payment of invoices that have been outstanding since January 2022. The arbitration procedure is governed by the rules of the Arbitration Center of the Lima Chamber of Commerce. On January 4, 2023, ENGIE Energía Perú SA filed its pleading. Antamina will have to file its pleading by the end of March at the latest.

23.4.3 GEM – GPE

At the beginning of the fourth quarter of 2022, ENGIE initiated an arbitration procedure against Gazprom Export LLC seeking, in particular to obtain (i) recognition of Gazprom Export LLC's non-performance of its gas delivery obligations towards ENGIE under long-term gas delivery agreements and (ii) payment of contractual penalties as well as compensation for damages resulting from this non-performance from Gazprom Export LLC.

This arbitration procedure is due to the significant delivery shortages by Gazprom Export LLC to ENGIE as of mid-June 2022, followed by Gazprom Export LLC's unilateral decision at the end of summer 2022 to reduce its deliveries to ENGIE due to a disagreement between the parties on the application of the agreements.

23.4.4 Commissioning

Regarding the customer management services carried out on behalf of the grid manager in the electricity sector (in this case ERDF, now ENEDIS), following proceedings brought by ENGIE, in a decision of July 13, 2016, the Conseil d'État ruled that the principle whereby the grid manager pays compensation to the supplier should apply. In the same decision, the Conseil d'État denied the CRE the right to set a customer threshold beyond which the compensation would not be payable, which hitherto prevented ENGIE from receiving any compensation. In light of this decision, ENGIE brought an action against ENEDIS seeking payment for these customer management services. The legislature has adopted a decision that retroactively validates the agreements entered into with ENEDIS and precludes any request for compensation for unpaid customer management services. In a decision handed down on April 19, 2019, the Constitutional Court ruled that this provision was constitutional. On April 11, 2022, the Paris Commercial Court recorded the termination of the proceedings. The case against ENEDIS is therefore closed.

23.4.5 Chile – TOTAL

On January 3, 2023, ENGIE Energía Chile SA initiated international arbitration proceedings against TotalEnergies Gas & Power Limited for breaching its contractual obligations under an LNG supply contract entered into in August 2011.

23.5 Thermal

23.5.1 Italy – Vado Ligure

On March 11, 2014, the Court of Savona seized and closed down the VL3 and VL4 coal-fired production units at the Vado Ligure thermal power plant belonging to Tirreno Power S.p.A. (TP), a company which is 50%-owned by the ENGIE group. This decision was taken as part of a criminal investigation against the present and former executive managers of TP into environmental infringements and public health risks. The investigation was closed on July 20, 2016. The case was referred to the Savone Court to be tried on the merits. The proceedings before the Court of First Instance began on December 11, 2018 and will continue through 2022 and 2023.

23.5.2 Brazil – Claim against sales tax adjustments

On December 14, 2018, the Brazilian tax authorities sent ENGIE Brasil Energia SA tax deficiency notices for the 2014, 2015 and 2016 fiscal years considering that the company was liable for the PIS and COFINS taxes (federal value added taxes) on the reimbursement of certain fuels used in the production of energy by thermoelectric plants. The adjustments amounted to a total of 581 million Brazilian real, including 229 million Brazilian real in taxes plus fines and interest.

ENGIE Brasil Energia disputes these tax deficiency notices and introduced tax claims in 2019, which the tax authorities have rejected, however.

On November 22, 2022, ENGIE Brasil Energia filed a special administrative appeal, which was not recognized by the Administrative Court. On January 9, 2023, the company filed another administrative appeal seeking recognition of the special administrative appeal and an analysis of the merits of the case. If these proceedings are unsuccessful, the case will have to be brought before the ordinary courts and tribunals.

23.5.3 Italy – Tax on excess profits

In December 2022, ENGIE filed an action to obtain the reimbursement of the tax it paid in July and November 2022 for a total amount of more than €308 million, pursuant to two legislative decrees (no. 21 and 50/2022) that introduced an exceptional solidarity contribution to be paid by operators in the energy sector. ENGIE contests the validity of the basis of the tax in relation to the decree's objective, its compatibility with the Italian Constitution as well as its compatibility with Italy's European commitments (European law).

23.5.4 Flémalle – EPC

In November 2021, Electrabel SA entered into an EPC (Engineering, Procurement, Construction) agreement with SEPCO III for the construction of a gas-fired power plant in Flémalle (Belgium), in the context of the CRM (Capacity Remuneration Mechanism).

In August 2022, Electrabel SA terminated the EPC agreement with SEPCO III for non-performance of its contractual obligations and initiated arbitration proceedings in November 2022, to obtain compensation for its damages.

23.6 Nuclear

23.6.1 Extension of operations at the nuclear power plants 2015-2025

Various associations have brought actions before the Constitutional Court, the Conseil d'État and the ordinary courts against the laws and administrative decisions authorizing the extension of operations at the Doel 1 and 2 reactors. On June 22, 2017 the Constitutional Court referred the case to the Court of Justice of the European Union (CJEU) for a preliminary ruling. In its judgment of July 29, 2019, the CJEU ruled that the Belgian law extending the operating lives of the Doel 1 and Doel 2 reactors (law extending Doel 1 and Doel 2) was adopted without the required environmental assessments being carried out first, but that the effects of the law on extension may provisionally be maintained where there is a genuine and serious threat of an interruption to electricity supply, and then only for the length of time that is strictly necessary to eliminate this threat. In its decision of March 5, 2020, the Constitutional Court overturned the law extending Doel 1 and Doel 2, while maintaining its effects until the legislator adopts a new law after having carried out the required environmental assessment, including a cross-border public consultation process, by December 31, 2022 at the latest.

The environmental assessment and the cross-border public consultation were carried out by the Belgian State in 2021. The draft law incorporating the conclusion of the assessment and the consultation was passed by the Belgian Federal Parliament on October 11, 2022 and published on November 3, 2022.

The appeal before the Conseil d'État against the administrative decisions that allowed the extension of operations at the Doel 1 and Doel 2 plants is still pending.

23.6.2 Shutdown of the Doel 3 and Tihange 2 power plants

Various associations have lodged appeals before the Brussels Court of First Instance against Electrabel, the Belgian State, the Nuclear Safety Authority and/or the Elia electricity transmission network to contest the decisions and actions to shut down the Doel 3 (on September 23, 2022) and/or Tihange 2 (on January 31, 2023) power plants. In a first judgment dated November 16, 2022, the Brussels Court of First Instance, ruling in summary proceedings in one of the cases, confirmed the decisions and actions taken in relation to the shutdown. The cases are ongoing with a timetable extending into 2023.

23.7 Other

23.7.1 Withholding tax

In their tax deficiency notice dated December 22, 2008, the French tax authorities questioned the tax treatment of the non recourse sale by SUEZ (now ENGIE) of a withholding tax (*précompte*) receivable in 2005 for an amount of €995 million (receivable relating to the *précompte* paid in respect of the 1999-2003 fiscal years). The Montreuil Administrative Court handed down a judgment in ENGIE's favor in April 2019, which led the French tax authorities to appeal the decision before the Versailles Court of Appeal, which overturned the prior Court's decision on December 22, 2021. While recognizing the fiscal nature of the receivable sold, the Court did not validate the exemption of the sale price because there was no text or principle to that effect, and because the sale was not authorized by the State.

Regarding the dispute over the *précompte* itself, on February 1, 2016, the Conseil d'État dismissed the appeal before the Court of Cassation seeking the repayment of the *précompte* in respect of the 1999, 2000 and 2001 fiscal years. On June 23, 2020, the Versailles Administrative Court of Appeal found in favor of ENGIE as regards the cases seeking repayment of the *précompte* in respect of the 2002 and 2003 fiscal years but rejected the case in respect of the 2004 fiscal year. As the *précompte* receivables for 2002/2003 have been assigned, the relevant amounts have been repaid to the assignee banks. The case has been referred to the Conseil d'État by the two parties. In parallel, following the decision of the Court of Justice of the European Union of May 12, 2022, interpreting the deduction of the *précompte* on the redistribution by a parent company of dividends received from subsidiaries established in the European Union as incompatible with Directive 90/435/EC of 1990, in June 2022, several groups, including ENGIE, invited the Conseil d'État to submit a request for a priority ruling on an issue of constitutionality to the Constitutional Court to rule on the unconstitutionality of the *précompte* legislation. The Conseil d'État granted this request. In October 2022, the Constitutional Court rejected the request of ENGIE and the other groups. This decision will have no impact on ENGIE's financial statements and little impact on the other ongoing proceedings.

Furthermore, after ENGIE and several French groups lodged a complaint, on April 28, 2016, the European Commission issued a reasoned opinion to the French State as part of infringement proceedings, setting out its view that the Conseil d'État did not comply with European Union law when handing down decisions in disputes regarding the *précompte*, such as those involving ENGIE. On July 10, 2017, the European Commission referred the matter to the Court of Justice of the European Union on the grounds of France's failure to comply. On October 4, 2018, the Court of Justice of the European Union ruled partially in favor of the European Commission. Following this decision, France must revisit its methodology in order to determine the *précompte* repayment amounts in closed and pending court cases. No action has been initiated to date due to parallel litigation proceedings on the basis of Directive 90/435/EC.

23.7.2 Luxembourg – State aid investigation

On September 19, 2016, the European Commission announced its decision to open an investigation into whether or not two private rulings granted by the Luxembourg State in 2008 and 2010 covering two similar transactions between several of the Group's Luxembourg subsidiaries constituted State aid. On June 20, 2018, the European Commission adopted a final, unfavorable decision deeming that Luxembourg had provided ENGIE with State aid. On September 4, 2018, ENGIE requested the annulment of the decision before the European Courts, thereby challenging the existence of a selective advantage. As these proceedings did not have a suspensive effect, ENGIE paid a sum of €123 million into an escrow account on October 22, 2018 in respect of one of the two transactions in question, since no aid was actually received for the other. Following the proceedings before the European Courts, this sum will be returned to ENGIE or paid to the Luxembourg State depending on whether or not the Commission's decision is annulled. On May 12, 2021, the Court rejected the appeals of the Luxembourg State and of ENGIE, thereby confirming the European Commission's position on the existence of State aid granted to the Group's Luxembourg subsidiaries. On July 22, 2021, ENGIE referred the matter to the Court of Justice of the European Union seeking the annulment of the Court's decision. The proceedings are currently ongoing. After the parties exchanged their pleadings with the Commission, ENGIE filed an application for a hearing and joinder of appeals on March 21, 2022. The hearing was held in late January 2023

23.7.3 Poland – Competition procedure

On November 7, 2019, a fine of 172 million Polish zloty (€40 million) was imposed on ENGIE Energy Management Holding Switzerland AG (EEMHS) for failing to respond to a request for disclosure of documents from the Polish Competition Authority (UOKiK) in proceedings initiated by the UOKiK which suspected a potential failure to notify by EEMHS and other financial investors involved in the financing of the Nord Stream 2 pipeline (main proceeding). EEMHS filed an appeal with the Competition Protection Court. The appeal proceedings are pending.

In the context of the main proceedings, on October 6, 2020, the UOKiK ordered EEMHS to pay a fine of 55.5 million Polish zlotys (approximately €12.3 million). The UOKiK also ordered the termination of the financing agreements for the Nord Stream 2 project. On November 5, 2020, EEMHS appealed this decision with the Competition Protection Court (the "Court"). The appeal automatically suspends the execution of all of the penalties ordered by the UOKiK. On November 21, 2022, the Court overturned the UOKiK's decision in its entirety. The UOKiK has appealed this decision.

23.7.4 Claim by the Dutch tax authorities related to interest deductibility

Based on a disputable interpretation of a statutory modification that came into force in 2007, the Dutch tax authorities refused the deductibility of a portion (€1.1 billion) of the interest paid on financing contracted for the acquisition of investments made in the Netherlands since 2000. Following the Dutch tax authorities' rejection of the administrative claim against the 2007 tax assessment, action was brought before the Arnhem Court of First Instance in June 2016. On October 4, 2018, the court ruled in favor of the tax authorities. On October 26, 2020, the ruling was confirmed by the Arnhem Court of Appeal. ENGIE Energie Nederland Holding BV considers that the Court committed errors in law and that its decision was not well-founded, either under Dutch or European law. It has therefore appealed the decision before the Court of Cassation. In July 2022, the Court of Cassation decided to refer questions on the compatibility of the Dutch legislation on interest with three of the European fundamental freedoms to the Court of Justice of the European Union for a preliminary ruling.

23.7.5 Transfer price of gas

The Belgian tax authorities' Special Tax Inspectorate has issued two tax deficiency notices in respect of taxable income for fiscal years 2012 and 2013 for an aggregate amount of €706 million, considering that the price applied for the supply of gas by ENGIE (then GDF SUEZ) to Electrabel SA was excessive. ENGIE and Electrabel SA are challenging this adjustment and have submitted a request for conciliation proceedings, which was accepted by France and Belgium in May 2018. The proceedings are ongoing between the two States, who have rediscussed their respective positions, with no major progress having made in 2022. No major problems were identified.

NOTE 24 Subsequent events

No significant subsequent events have occurred since the closing of the accounts at December 31, 2022.

NOTE 25 Fees paid to the Statutory Auditors and to members of their networks

The following table presents information on the fees paid by ENGIE SA, its fully consolidated subsidiaries and joint operations to each of the Auditors in charge of auditing the annual and consolidated financial statements of the ENGIE group.

ENGIE Shareholders' Meeting of May 14, 2020 decided to renew the terms of office of Deloitte and EY as Statutory Auditors for a six-year period from 2020 to 2025.

	Deloitte			EY			
In millions of euros	Deloitte & Associés	Network	Total	EY & others	Network	Total	Total
Statutory audit and review of consolidated and parent company financial statements	**4.5**	**5.7**	**10.2**	**5.2**	**10.5**	**15.7**	**25.9**
ENGIE SA	2.4	-	2.4	2.8	-	2.8	5.1
Controlled entities	2.1	5.7	7.8	2.4	10.5	12.9	20.7
Non-audit services	**0.6**	**1.1**	**1.7**	**0.9**	**1.0**	**1.8**	**3.5**
• ENGIE SA	**0.5**	**0.5**	**1.0**	**0.7**	**-**	**0.7**	**1.8**
Of which services related to legal and regulatory requirements	*0.4*	*-*	*0.4*	*0.4*	*-*	*0.4*	*0.7*
Of which other audit services	*0.1*	*-*	*0.1*	*0.3*	*-*	*0.3*	*0.5*
Of which reviews of internal control	*-*	*-*	*-*	*0.0*	*-*	*0.0*	*0.0*
Of which due diligence services	*-*	*0.5*	*0.5*	*-*	*-*	*-*	*0.5*
Of which tax services	*0.0*	*-*	*0.0*	*-*	*-*	*-*	*0.0*
Controlled entities	**0.1**	**0.5**	**0.7**	**0.1**	**1.0**	**1.1**	**1.7**
Of which services related to legal and regulatory requirements	*0.0*	*0.3*	*0.3*	*0.1*	*0.2*	*0.3*	*0.6*
Of which other audit services	*0.1*	*0.0*	*0.1*	*0.0*	*0.2*	*0.2*	*0.3*
Of which reviews of internal control	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Of which due diligence services	*0.0*	*-*	*0.0*	*-*	*-*	*-*	*0.0*
Of which tax services	*-*	*0.2*	*0.2*	-	*0.5*	*0.5*	*0.8*
TOTAL	**5.1**	**6.8**	**11.9**	**6.1**	**11.4**	**17.5**	**29.4**

NOTE 26 Information regarding Luxembourg and Dutch companies exempted from the requirements to publish annual financial statements

Some companies do not publish annual financial statements pursuant to domestic provisions under Luxembourg law (Article 70 of the Law of December 19, 2002) and Dutch law (Article 403 of the Civil Code) relating to the exemption from the requirement to publish audited annual financial statements.

The companies exempted are notably: ENGIE Energie Nederland NV, ENGIE Energie Nederland Holding BV, ENGIE Nederland Retail BV, ENGIE United Consumers Energie BV, Electrabel Invest Luxembourg, ENGIE Treasury Management SARL and ENGIE Invest International SA.

6.3 STATUTORY AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended December 31, 2022

This is a translation into English of the statutory auditors' report on the consolidated financial statements of the Company issued in French and it is provided solely for the convenience of English-speaking users.

This statutory auditors' report includes information required by European regulations and French law, such as information about the appointment of the statutory auditors or the verification of the information concerning the Group presented in the management report.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Annual General Meeting of ENGIE,

Opinion

In compliance with the engagement entrusted to us by your Annual General Meeting, we have audited the accompanying consolidated financial statements of ENGIE for the year ended December 31, 2022.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at December 31, 2022 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for Opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the *Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report.

Independence

We conducted our audit engagement in compliance with the independence requirements of the French Commercial Code *(Code de commerce)* and the French Code of Ethics for Statutory Auditors *(Code de déontologie de la profession de commissaire aux comptes)* for the period from January 1, 2022 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No. 537/2014.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L. 823-9 and R. 823-7 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the consolidated financial statements.

Measurement of the recoverable amount of goodwill, intangible assets and property, plant and equipment

(Notes 1.3 "Use of estimates and judgment", 9.1 "Impairment losses", 13.1" Goodwill", 13.2 "Intangible Assets" and 13.3 "Property, Plant and Equipment")

Key audit matter	Our response
As at December 31, 2022, the net carrying amount of goodwill, intangible assets and property, plant and equipment amounted to € 75.7 billion (after recognition of impairment losses of € 2,8 billion in 2022), or 32.1% of total assets, and breaks down as follows: • Goodwill: € 12.9 billion; • Intangible assets: € 7.4 billion; • Property, plant and equipment: € 55.5 billion. Your Group's Management considers that the activities underlying the Global Business Units (GBUs) correspond to operating segments within the meaning of IFRS 8 – Operating segments, and therefore represent the sharpest level at which goodwill is monitored for internal management purposes. Impairment tests are carried out, in the case of assets, at the level of Cash Generating Units (CGUs) as defined by your Group and, in the case of goodwill, at the level of operating segments within the meaning of IFRS 8 which represent the finest level at which goodwill is monitored for internal management purposes, in accordance with the requirements of IAS 36 "Impairment of Assets". As at December 31, 2022 goodwill therefore breaks down as follows between the various operating segments: • Infrastructure: € 5.3 billion; • Renewables: € 2.1 billion; • Energy supply: € 1.8 billion;	We examined the definition of CGUs as well as the allocation of goodwill to the different groups of CGUs. We assessed the Group's measures aimed at identifying indications of impairment losses or reversals of impairment losses as well as the procedures used by Management for approving the estimates. We examined the data and the key assumptions used to determine the recoverable amount of assets, assessed the sensitivity of the measurements to these assumptions and verified the calculations performed by your Group with the support of our valuation experts. For significant CGUs or groups of CGUs to which goodwill was allocated, or which are exposed to a specific impairment loss risk, our work on values in use mainly covered: • the assumptions of the Group's long-term reference scenario (trends in electricity and gas prices and demand, price of CO_2, inflation) for which we have assessed the consistency with external studies carried out by international organizations or energy experts; • the operational and regulatory assumptions used to prepare cash flow forecasts for which we have assessed the consistency of the assets' operating conditions and their intrinsic performance as well as the applicable regulations to date and expected changes thereto;

Key audit matter	Our response

• Energy Solutions: € 1.3 billion;
• Thermal: € 1.2 billion;
• Nuclear: € 0.8 billion; and
• Other: € 0.4 billion.
For assets which your Group intends to hold on going concern basis, the recoverable amount corresponds, in most cases, to the value in use, determined based on:
• cash flow projections on the basis of the 2023 budget and 2024-2025 medium-term business plan approved by the Executive Committee and the Board of Directors and,
• beyond this time frame, (i) extrapolated future cash flow projections determined on the basis of macroeconomic assumptions (inflation, exchange rates and growth rates), (ii) fundamental supply and demand equilibrium models, (iii) long-term projections for CO_2 prices which take into account the 2030 emissions reduction target of 55% and the 2050 climate neutrality objectives set by the European Commission as part of the "European Green Deal" presented in December 2019 and July 2021, and (iv) price projections featured in your Group's reference scenario for 2026-2050 approved by the Executive Committee.
These recoverable amounts, after taking into account the climate issues described in Note 1.3.3, are based on key assumptions, presented in Note 13.4 to the consolidated financial statements, relating to market outlook and changes in the regulatory environment of which any modification could have a material impact on the amount of impairment losses to be recognized.
For goodwill which had the greatest risk of impairment in our opinion, valuations are primarily based on the following decisive assumptions:
• for the Nuclear activity, the values allocated to the price of fuel and $CO_2$2 electricity demand and price trends, power plant availability, future market prospects as well as the regulatory framework. The Group considered in particular:
  • a gradual phase-out, by 2025, of all units in Belgium, as your Group did not consider an extension period beyond 2025 in the impairment tests carried out as at 31 December 2022 due to the absence of (i) a binding agreement to date likely to result from the ongoing negotiations between the Belgian government and your Company and (ii) precise information on the applicable economic conditions, where appropriate, beyond 2025, for the second generation nuclear reactors Doel 4 and Tihange 3,
  • the extension of drawing rights agreements for French nuclear plants beyond the current operating periods;
For operating entities which your Group has the intention to sell, the related recoverable amount of the assets concerned is based on market value less costs of disposal.
We considered the measurement of the recoverable amount of goodwill, intangible assets and property, plant and equipment to be a key audit matter due to (i) their materiality in your Group's financial statements, (ii) the sensitivity of assessments to macroeconomic, sector and financial assumptions and (iii) the resulting judgments and estimates that Management is required to make in an uncertain economic and financial environment linked in particular to the high volatility of the commodity markets and the war in Ukraine and whose consequences make it difficult to apprehend the medium-term economic outlook.
	• methods for determining cash flow forecasts for which we assessed:
	  • the consistency of the baseline data with the budget, the medium-term business plan and, beyond, your Group's long-term scenario,
	  • the consistency with past performance and market outlook;
	• the discount rates for which we examined the determination methods and the consistency with the underlying market assumptions, using internal specialists;
	• Management's sensitivity analysis to the key price, operational and regulatory assumptions for which we assessed the relevance.
	With regard to nuclear generation assets in Belgium, we met with Management and took note of the progress of the ongoing discussions between your Group and the Belgian Government through, in particular, the letter of intent and the non-binding agreement signed by the parties on July 22, 2022 and January 9, 2023 respectively.
	For operating entities which your Group has decided to sell, we analyzed the highly probable nature of such sale, the items considered to assess the recoverable amount as well as the classification process in accordance with IFRS 5 – Non-current assets held for sale and discontinued operations."
	Finally, we assessed the appropriateness of the disclosure given in Notes 1.3, 9.1 and 13.4 to the consolidated financial statements, notably on sensitivity analyses carried out by your Group.

Measurement of provisions relating to the back-end of the nuclear fuel cycle and the dismantling of nuclear facilities in Belgium

(Notes 1.3 "Use of estimates and judgment", 17 "Provisions" and 17.2 "Obligations relating to nuclear facilities")

Key audit matter	Our response
Your Group has obligations relating to the reprocessing and storage of radioactive nuclear fuel consumed and the dismantling of nuclear facilities operated in Belgium. Pursuant to the Belgian law of April 11, 2003, partially repealed and amended by the law of July 12, 2022, the management of corresponding provisions is entrusted to the Group's wholly-owned subsidiary Synatom which submits a report every three years to the Commission for Nuclear Provisions (CNP) describing the core inputs used to measure these provisions. The CNP issues its opinion based on the opinion issued by the Belgian agency for radioactive waste and enriched fissile material (ONDRAF) which reviews all of the characteristics and technical parameters of the report. As of December 31, 2022, these medium- and long-term nuclear provisions amounted to € 9.1 billion for the management of spent nuclear fuel and € 8.8 billion for the dismantling of nuclear power plants. These provisions are estimated based on the applicable legal and contractual framework and fully take into account the opinion issued by the CNP on December 16, 2022 as part of the three-year review provided for by law and regulations. However, on February 14, 2023, your Group submitted a new suitable proposal explaining the reasons why it considers that certain remarks of the CPN cannot be addressed, which will then issue its final opinion on the quantum of provisions it considers necessary. In addition, with a view to a possible extension of the Doel 4 and Tihange 3 second-generation nuclear reactors, your Group entered into discussions with the Belgian government regarding the capping for ENGIE of nuclear waste treatment costs, which represent approximately 58% of the total provisions recorded at December 31, 2022. In the absence of a global agreement to date, the provisions recorded at December 31, 2022 do not take into account any additional commitments that may result from these discussions and which would constitute a liability to be recognised by your Group. We considered the measurement of these provisions to be a key audit matter due to their respective material amounts and their sensitivity to the macroeconomic assumptions applied (inflation and discount rates), as well as to the industrial scenarios used and the associated cost estimates, such as in particular, the decisions that will ultimately be taken by the Belgian government in respect of nuclear waste treatment solutions or the approval by the nuclear safety authorities of the decommissioning plan adopted and the timetable thereof.	This year, with the CPN's three-year review of nuclear provisions and the ongoing discussions with the Belgian Government regarding an overall agreement in respect of a possible extension of the operating lifespan of the Doel 4 and Tihange 3 second-generation nuclear reactors and the capping for your Company of nuclear waste treatment costs, we have (i) reviewed the conclusions, observations and recommendations set out in the ONDRAF opinion, the set of remarks issued by the CPN and the new adapted proposal submitted by the Group to the CPN as part of the regulatory process for the three-year review of nuclear provisions, (ii) assessed the impact on the consolidated financial statements of the ongoing discussions with the Belgian Government on a possible capping for ENGIE of the costs of nuclear waste treatment. Our work mainly consisted in assessing: • the basis used for measuring provisions; • the consistency of industrial scenarios with regard to the current legal and regulatory environment, the ongoing discussions with the Belgian government and the nuclear policy choices still to be made in Belgium; • the consistency of cost forecasts by type and of disbursement schedules with available studies and quotations and, for dismantling, with a study by a firm of independent experts mandated by Synatom; • the level of margin included for contingency and risk margin in the provisions to take into account the degree of technical expertise in the field of dismantling and radioactive fuel management techniques; • the consistency of waste fuel volumes produced to date and estimates of waste fuel volumes remaining to be produced with the Group's physical inventory data and forecast data; • the sensitivity of estimates to the technical assumptions and industrial scenarios, particularly for the management of consumed fuel as well as the assumptions regarding costs, the schedule of operations and the discount rates applied to cash flows. Finally, we evaluated the appropriateness of the disclosure given in the notes 1.3, 20 and 20 and 20.2 to the consolidated financial statements, notably on the sensitivity of provision measurement to changes in key assumptions.

Estimation of bid/ask reserves and counterparty risk in the assessment of the fair value of commodity-based financial derivatives

(Notes 1.3 " Use of estimates and judgments ", 14.3 " Derivative instruments ", 14.4 " Fair value of financial instruments by level in the fair value hierarchy " and 15.2.1.2 "Counterparty risk – Operating activities")

Key audit matter	Our response

As part of its operational activity, to optimize its physical or financial asset base and its management of market risks, your Group holds derivative instruments on commodities valued on the balance sheet at their fair value, which amounted to € 46 billion in assets and € 48.9 billion in liabilities as at December 31, 2022.
This fair value is determined based on different approaches depending on the nature and complexity of the instruments and, as a priority, on the basis of market data, available from external contributors. In the absence of an external benchmark, a valuation based on internal models recognized by market participants and favoring data directly derived from observable data such as OTC quotations shall be used.
For the most complex contracts, valuations can be based on models involving mostly unobservable parameters (the outstanding amounts concerned are therefore classified in level 3 of fair value measurement).
The breakdown of relevant outstandings by level of fair value is set out in Note 14.4 "Fair value of financial instruments by level" to the consolidated financial statements.
In view of the developments observed in the commodities market during financial year 2022, Management was required to make significant estimates in order to take into account certain uncertainties and/or specific risks in the key assumptions used for the valuations of these commodity-based financial instruments recognized on its balance sheet.
In particular, the determination of the valuation parameters of commodity derivatives involves Management' significant judgment to:
• determine the amount of bid/ask reserves to reflect the decrease in liquidity observed in gas and electricity markets in Europe during the second half of 2022; and
• assess counterparty risk (estimated on the basis of the so-called "expected credit loss" method), in particular for updating default probabilities and other parameters in a context of uncertainty and high market price volatility.
The valuation of these two significant estimates in the valuation of commodity-related derivative financial instruments is detailed in Note 14.3 "Derivative Financial Instruments" and 15.2 "Counterparty Risk" to the consolidated financial statements.
We considered that the estimation of bid/ask reserves and the measurement of counterparty risk, which are significant for the measurement of the fair value of commodity derivatives, were a key audit issue due to the part of judgment exercised in updating the parameters considered, particularly in a context of high uncertainty about the expected evolution of commodity prices and market volatility.
	We obtained an understanding of the methodologies for measuring the fair value of commodity-based financial derivatives and the associated governance as well as internal control arrangements, including those relating to the updating of parameters in estimating bid/ask reserves and assessing counterparty risk.
	By including in the team information systems experts, we carried out works on IT general controls, application controls and information produced by the tools used for the calculation of valuation adjustments related to price differences and expected credit losses.
	We discussed with risk management and finance management the key judgements made in determining the structuring assumptions applied to the valuation of bid/ask reserves and counterparty risk.
	By including in the audit team experts in the valuation of derivative financial instruments, we have:
	• tested the key controls implemented by your Group in terms of the valuation of financial instruments, in particular those relating to:
	  • the approval and regular review by risk management of valuation models,
	  • the verification of valuation parameters,
	  • the determination of value adjustments;
	• assessed the overall consistency of the valuation of these contracts, by examining, on a sample basis, the assumptions, methodologies and market parameters used in the valuation models to estimate the main valuation adjustments as at December 31, 2022 and in particular:
	  • the parameters, mainly observable, used for the modelling of reserves related to bid/ask to reflect the decrease in liquidity observed in the gas and electricity European markets in the second half of 2022,
	  • default probabilities and other key parameters used to estimate expected credit losses taking into account the context of uncertainty and high market price volatility.
	We also assessed the appropriateness of the presentation of how these adjustments are taken into account for the estimation of the fair value of commodity derivative financial instruments, set out in Notes 14.4 and 15.2.1.2 to the consolidated financial statements.

Main estimates and judgments relating to revenue

(Notes 1.3 "Use of estimates and judgment", 7.1 "Revenue" and 7.2.1 "Trade receivables and other debtors, contract assets")

Key audit matter	Our response
Your Group makes estimates and uses judgments notably for the recognition of (i) sales of electricity and gas delivered, not metered and not invoiced (known as "metered energy") and, specifically for the financial year ended December 31, 2022, (ii) gas sales made in France under the Government's "tariff shield" scheme. ***Revenue relating to un-metered and unbilled delivered sales of electricity and gas ("metered energy")*** The valuation of revenue, relating to sales of electricity and gas to customers who are metered only during the accounting period, represents a material estimate at the year-end. Indeed, as the meter readings are sometimes communicated by grid operators several months after the actual delivery date, your Group is required to estimate the energy delivered but not metered at the year-end. As at December 31, 2022, receivables relating to revenue in the meter (delivered gas and electricity that is unbilled and un-metered) totaled € 5.9 billion and involved mainly France and Belgium. These receivables are determined on the basis of a method that takes into account an estimate of customer's' consumption based on the previous bill, or on the last metering not yet billed, in line with the volume of energy allocated by grid operators, using measurement and modeling tools developed by your Group. The volumes are measured at the average energy price, taking into account the customer's' type and the age of the energy in the meter. ***Compensation relating to sales of gas in France under the French Government's "tariff shield" provision*** The high volatility observed in energy markets and the resulting significant increase in natural gas prices led the French Government to cap, from November 1, 2021 and temporarily until December 31, 2022 through the "tariff shield" introduced by the Finance Act for 2022 (Law no. 2021-1900 of December 30, 2021) and modified by the first amending Finance Act for 2022 (No. 2022-1157 of August 16, 2022), the regulated gas sale tariffs at the level of those of October 1, 2021. Losses of revenue incurred by your Group as of November 1, 2021 constitute charges attributable to public service obligations and are subject to compensation through an irrevocable guarantee given by the French State. In this context, your Group has exercised its judgment to determine accounting methods for the compensation to be received in this respect, the amount of which is estimated at approximately € 1,6 billion for the year ended December 31, 2022. Considering the amounts at stakes, the sensitivity of the assumptions estimate used for the volumes and average energy prices and the judgment made, we have considered (i) the estimate of the revenue share delivered and not recorded as well as (ii) the compensation to be received on the closing date under the "tariff shield" provision as a key audit matter.	***Revenue relating to un-metered and unbilled delivered sales of electricity and gas ("metered energy")*** The procedures conducted on the estimate of unmetered revenue recognized in France and Belgium consisted mainly in: • obtaining an understanding of the internal control procedures implemented by the Group about the billing process, and the process enabling the reliability of the accounting estimates for the metered energy; • assessing the models used by your Group and investigate the computation methods for the estimated volumes by including an algorithm specialist in our audit team. We also have: • compared the information on the volumes delivered and determined by the Group with the metering data provided by the grid operators; • examined that the computation methods used for the average price of the unmetered but delivered power take into account the customer's types and the age in the meter; • analyzed the consistency of the volumes?used for the employment operations (sales, injections and stocks) with energy resources (purchases, withdrawals and stocks) on the networks; • assessed the regular clearance of the metered energy during the year ended December 31, 2022; • assessed the age of the energy in the meter at the year-end. ***Compensation relating to sales of gas in France under the French Government's "tariff shield" provision*** Regarding the impacts arising from the implementation of the "tariff shield" provision in France, our procedures consisted mainly in: • examining the legislative provisions voted within the 2022 Finance Act ("Loi de Finance 2022"); • analyzing the financial consequences drawn by your Group from the application of the various provisions governing the "tariff shield", as well as the valuation of the shortfall for the year ended December 31, 2022; • assessing the accounting treatment and the methods of presentation of the income to be recognized in the income statement and the related receivable as at December 31, 2022. Finally, we assessed the appropriateness of the disclosure in Notes 1.3, 7.1 and 7.2.1 to the consolidated financial statements.

Specific Verifications

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by laws and regulations of the information relating to the Group given in the Board of Directors' management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We attest that the consolidated non-financial statement required by Article L. 225-102-1 of the French Commercial Code (*Code de commerce*) is included in the information relating to the Group given in the management report, it being specified that, in accordance with Article L. 823-10 of said Code, we have verified neither the fair presentation nor the consistency with the consolidated financial statements of the information contained therein. This information should be reported on by an independent third party.

Report on Other Legal and Regulatory Requirements

Format of preparation of the consolidated financial statements intended to be included in the annual financial report

We have also verified, in accordance with the professional standard applicable in France relating to the procedures performed by statutory auditors regarding the annual and consolidated financial statements prepared in the European single electronic format, that the preparation of the consolidated financial statements intended to be included in the annual financial report mentioned in Article L. 451-1-2, I of the French Monetary and Financial Code (*Code monétaire et financier*), prepared under the Chief Executive Officer's responsibility, complies with the single electronic format defined in Commission Delegated Regulation (EU) No. 2019/815 of 17 December 2018. Regarding consolidated financial statements, our work includes verifying that the tagging thereof complies with the format defined in the above-mentioned regulation.

On the basis of our work, we conclude that the preparation of the consolidated financial statements intended to be included in the annual financial report complies, in all material respects, with the European single electronic format.

Due to the technical limitations inherent to the block-tagging of the consolidated financial statements according to the European single electronic format, the content of certain tags of the notes may not be rendered identically to the accompanying consolidated financial statements.

We have no responsibility to verify that the consolidated financial statements that will ultimately be included by your Company in the annual financial report filed with the AMF *(Autorité des marchés financiers)* agree with those on which we have performed our work.

Appointment of the Statutory Auditors

We were appointed as statutory auditors of ENGIE by your Annual General Meeting held on May 19, 2008 for ERNST & YOUNG et Autres and on July 16, 2008 for DELOITTE & ASSOCIES.

As at December 31, 2022, we were in the fifteenth year of total uninterrupted engagement.

ERNST & YOUNG Audit was previously statutory auditor between 1995 and 2007.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and for such internal control as Management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Objectives and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users made on the basis of these consolidated financial statements.

As specified in Article L. 823-10-1 of the French Commercial Code (*Code de commerce*), our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management in the consolidated financial statements.

- Assesses the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the consolidated financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The statutory auditor is responsible for the direction, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed on these consolidated financial statements.

Report to the Audit Committee

We submit to the Audit Committee a report which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report significant deficiencies, if any, in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the consolidated financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in Article 6 of Regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France as set out in particular in Articles L. 822-10 to L. 822-14 of the French Commercial Code *(Code de commerce)* and in the French Code of Ethics for Statutory Auditors *(Code de déontologie de la profession de commissaire aux comptes)*. Where appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Paris-La Défense, March 7 2023

The Statutory Auditors

French original signed by

ERNST & YOUNG et Autres		**Deloitte & Associés**	
Charles-Emmanuel CHOSSON	Guillaume ROUGER	Patrick E. SUISSA	Nadia LAADOULI

6.4 PARENT COMPANY FINANCIAL STATEMENTS AT DECEMBER 31, 2022

6.4.1 PARENT COMPANY FINANCIAL STATEMENTS

Balance sheet

Assets

In millions of euros		Note	Dec. 31, 2022 Gross	Dec. 31, 2022 Depreciation, amortization and impairment	Dec. 31, 2022 Net	Dec. 31, 2021 Net
NON-CURRENT ASSETS						
Intangible assets		**3**	**2,041**	**1,465**	**576**	**555**
Property, plant and equipment		**3**	**937**	**561**	**375**	**388**
Financial fixed assets		**4**				
Equity investments			73,039	12,784	60,255	63,361
Other financial fixed assets			153	76	77	109
TOTAL NON-CURRENT ASSETS	I		76,170	14,887	61,283	64,413
CURRENT ASSETS						
Inventories		**5**				
Gas reserves			3,676	-	3,676	1,168
Energy savings certificates			492	-	492	435
Other			727	-	727	541
Advances and downpayments given on orders			93	-	93	147
Operating receivables		6				
Trade and other receivables			17,639	986	16,653	11,871
Other operating receivables			1,483	-	1,483	651
Miscellaneous receivables						
Current accounts with subsidiaries			10,105	-	10,105	7,533
Other miscellaneous receivables			6,087	2	6,085	7,554
Marketable securities		7	6,062	-	6,062	3,508
Cash and cash equivalents			641	-	641	191
TOTAL CURRENT ASSETS	II		47,006	989	46,017	33,600
Accruals	III	8	9,019	-	9,019	5,673
Unrealized foreign exchange losses	IV	8	292	-	292	272
TOTAL ASSETS	(I TO IV)		132,488	15,876	116,612	103,958

NB: Amounts in tables are generally expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals or changes.

Equity and liabilities

In millions of euros		Note	Dec. 31, 2022	Dec. 31, 2021
EQUITY				
SHAREHOLDERS' EQUITY		9		
Share capital			2,435	2,435
Additional paid-in capital			25,667	26,058
Revaluation adjustments			38	39
Legal reserve			244	244
Other reserves			-	8
Retained earnings			-	(90)
Net income			1,697	1,780
Interim dividend			-	-
Tax-driven provisions and investment subsidies		10.2	1,036	735
Total shareholders' equity	**I**		**31,117**	**31,211**
Other equity	**II**		**1**	**1**
Total equity	**I+II**		**31,118**	**31,212**
Provisions for contingencies and losses	**III**	**10.1**	**3,127**	**2,968**
Liabilities		**11**		
Borrowings and debt		**11**		
Borrowings			31,864	33,015
Amounts payable to equity investments			4,850	4,850
Current accounts with subsidiaries			3,551	1,150
Other borrowings and debt			620	346
Total borrowings and debt	**IV**		**40,885**	**39,361**
Current liabilities				
Advances and downpayments received on orders			5	6
Trade and other payables			19,543	13,976
Tax and employee-related liabilities			1,806	1,661
Other liabilities			9,438	9,176
Total current liabilities	**V**		**30,793**	**24,819**
Total liabilities	**IV+V**		**71,678**	**64,180**
Accruals	**VI**	**12**	**10,237**	**5,354**
Unrealized foreign exchange gains	**VII**	**12**	**452**	**244**
TOTAL EQUITY AND LIABILITIES	**(I TO VI)**		**116,612**	**103,958**

NB: Amounts in tables are generally expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals or changes.

Income statement

In millions of euros	Note	Dec. 31, 2022	Dec. 31, 2021
Energy sales		63,735	32,046
Other production sold		4,765	4,178
Revenues	**13.1**	**68,500**	**36,224**
Production taken to inventory		-	-
Production for own use		16	18
Total production		**68,516**	**36,242**
Energy purchases and change in reserves		(61,006)	(29,165)
Other purchases and external charges		(7,099)	(7,383)
Value added		**411**	**(305)**
Subsidies received		2,202	355
Taxes and duties		(188)	(146)
Personnel costs	13.2	(503)	(507)
Gross operating income/(loss)		**1,922**	**(603)**
Net additions to depreciation, amortization and impairment		(796)	(175)
Net additions to provisions	13.3	(134)	158
Expense transfers		5	2
Other operating income and expenses		54	(227)
Net operating income/(loss)		**1,051**	**(846)**
Net financial income/(loss)	**14**	**1,786**	**381**
Net recurring income/(loss)		**2,837**	**(465)**
Net non-recurring income/(loss)	**15**	**(1,461)**	**1,771**
Income tax benefit	**16.2**	**321**	**474**
NET INCOME		**1,697**	**1,780**

NB: Amounts in tables are generally expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals or changes.

6

Cash flow statement

In millions of euros		Dec. 31, 2022	Dec. 31, 2021
Cash flow from operations	**1**	**3,349**	**123**
Change in inventories		2,750	969
Change in trade receivables (net of trade receivables with a credit balance)		5,380	7,899
Change in trade payables		(5,567)	(7,745)
Change in other items		(2,870)	(2,006)
Change in working capital requirements	**2**	**(308)**	**(882)**
CASH FLOW FROM/USED IN OPERATING ACTIVITIES	**(1-2) = I**	**3,657**	**1,005**
Property, plant and equipment and intangible assets		245	250
Financial fixed assets		4,272	3,199
Change in amounts payable on investments		-	-
Cash flow used in investing activities	**1**	**4,517**	**3,449**
Third-party contributions		-	3
Net proceeds from asset disposals		6,922	1,531
Decrease in financial fixed assets		83	738
Cash flow from investing activities	**2**	**7,005**	**2,273**
CASH FLOW FROM/USED IN INVESTING ACTIVITIES	**(1-2) = II**	**(2,487)**	**1,176**
CASH FLOW AFTER OPERATING AND INVESTING ACTIVITIES	**(I-II) = III**	**6,145**	**(171)**
Increase/decrease in capital	**1**	**32**	**-**
Dividends and interim dividends paid to shareholders	**2**	**(2,083)**	**(1,296)**
Bonds		650	2,541
Group borrowings		-	4,001
Short- and medium-term credit facilities and other borrowings		6,414	2,414
Financing raised on capital markets	**3**	**7,064**	**8,956**
Bonds and short- and medium-term credit facilities		(8,013)	(7,624)
Repayments and redemptions	**4**	**(8,013)**	**(7,624)**
CASH FLOW FROM/USED IN FINANCING ACTIVITIES	**(1+2+3+4) = IV**	**(2,999)**	**36**
CHANGE IN CASH AND CASH EQUIVALENTS	**(III+IV) = V**	**3,146**	**(135)**

NB: Amounts in tables are generally expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals or changes.

6.4.2 NOTES TO THE PARENT COMPANY FINANCIAL STATEMENT

NOTE 1 Summary of significant accounting policies

The 2022 financial statements have been drawn up in euros in compliance with the general principles prescribed by the French chart of accounts, as set out in Regulation No. 2014-03 issued by the French accounting standards-setter (Autorité des Normes Comptables – ANC), as updated by all subsequent amending regulations, and with the recommendations published by the ANC, including recommendation 2013-02 on the rules for measuring and accounting for pension and similar employee benefit obligations in the annual financial statements, as amended on November 5, 2021. The amendment introduces the option of using a new methodology for calculating certain obligations. ENGIE SA has elected to apply the new methodology to measure these off-balance sheet commitments *(see Note 18)*.

Financial transactions involving equity investments, securities and the related receivables, especially impairment charges or reversals, are included in nonrecurring items rather than financial items. In accordance with Article 121-3 of the French chart of accounts, ENGIE SA considers that this non benchmark classification gives a more faithful view of the income statement because all items of income and expenses relating to equity investments can be shown together with capital gains or losses on disposals under non-recurring items.

Use of estimates and judgment

The preparation of financial statements requires the use of estimates and assumptions to determine the value of assets and liabilities and contingent assets and liabilities at the reporting date, as well as income and expenses reported during the period.

Developments in the economic and financial environment, particularly relating to highly volatile commodities markets, have prompted the Group to step up its risk oversight procedures, mainly in measuring financial instruments, assessing counterparty risk and liquidity. The estimates used by ENGIE SA, among other things, to test for impairment and to measure provisions, also take into account this environment and the sharp market volatility.

Accounting estimates are made in a context that remains sensitive to energy market developments, therefore making it difficult to apprehend medium- and short-term economic prospects. Particular attention has been paid to the consequences of fluctuations in the price of gas.

Due to uncertainties inherent to the estimation process, ENGIE SA regularly revises its estimates in light of currently available information. Final outcomes could differ from those estimates.

The key estimates used in preparing ENGIE SA's financial statements relate mainly to:

- measurement of equity investments *(see Note 4)*

  The recoverable amount of equity investments is based on estimates and assumptions, regarding in particular the expected market outlook and changes in the regulatory framework, which are used for the measurement of cash flows, whose sensitivity varies depending on the activity, and the determination of the discount rate. Any changes in these assumptions could have a material impact on the measurement of the recoverable amount and could result in the recognition of impairment losses or adjustments to impairment losses already recognized.

- fair value of financial instruments *(see Note 17)*

  To determine the fair value of financial instruments that are not listed on an active market, ENGIE SA uses valuation techniques that are based on certain assumptions. Any change in these assumptions could have a significant impact on the resulting calculations.

  Derivative financial instruments used by ENGIE SA to hedge and manage its currency, interest rate and commodity risk are disclosed in off-balance sheet commitments.

  Changes in the fair value of any such instruments that do not qualify for hedge accounting are recognized in the balance sheet. A provision is booked for unrealized losses, valued based on homogeneous groups of financial instruments with an equivalent underlying asset or liability, whether they are traded over-the-counter or exchange raded.

  In the case of contracts that qualify as hedging instruments, gains or losses are taken to income symmetrically with the gain or loss on the hedged items.

  If the hedged item ceases to exist, the contract is unwound and any gains or losses taken to income.

  ENGIE SA uses internal models representative of market practices to value financial derivative instruments that are not listed on financial markets.

  Option premiums are deferred and recognized in income over the life of the hedge. The premium or discount on forward currency transactions is recognized in income in the initial value of the hedged item.

- energy in the meter *(see Note 6)*

  The amounts receivable in respect of delivered, unmetered and unbilled gas and electricity are calculated using mathematical models including estimated customer consumption and estimated selling prices. The amount of energy in the meter calculated at the closing date varies depending on the assumptions about volume and price (*see section on "Other operating receivables" below)*.

- measurement of provisions for contingencies and losses *(see Note 10)*

  Provisions for contingencies and losses are estimated on the basis of various assumptions. A change in those assumptions could lead to a significant adjustment to the amount of the provisions.

- measurement of off-balance sheet pension and other employee benefit obligations *(see Note 18)*

  Pension commitments are measured on the basis of actuarial assumptions. Any change in the assumptions used by ENGIE SA could have a significant impact on the valuation of these commitments.

Intangible assets

This caption mainly comprises the purchase cost or production cost of software, amortized over its estimated useful life.

A useful life of between five and seven years is generally used to calculate software amortization.

Other development costs are capitalized provided they meet specific criteria, particularly as regards the pattern in which the intangible asset is expected to generate future economic benefits.

Research costs are expensed in the year in which they are incurred.

Royalties from software used in a SaaS (Software as a Service) model are capitalized once they contribute to the creation of fixed assets and are amortized over their useful life. In other cases, they are expensed as and when the related services are rendered.

Property, plant and equipment

All items of property, plant and equipment are carried at purchase cost or production cost, including ancillary expenses, with the exception of assets acquired prior to December 31, 1976, which are shown at their revalued amount at that date.

Almost all items of property, plant and equipment are depreciated on a straight-line basis.

Assets are depreciated over their useful lives, based on the period over which they are expected to be used. The useful lives for the main asset classes are as follows:

- buildings: 20 to 60 years;
- other: 3 to 15 years.

Borrowing costs incurred in financing an asset are recognized as an expense and amortized over the financing period.

Components

When the components of a given asset cannot be used separately, the overall asset is recognized. If one or more components have different useful lives at the outset, each component is recognized and depreciated separately.

Financial fixed assets

Equity investments

Equity investments represent long-term investments providing ENGIE SA with control or significant influence over the issuer, or helping it to establish business relations with the issuer.

Newly-acquired equity investments are recognized at purchase price plus directly attributable external transaction fees.

Investments which ENGIE SA intends to hold on a long-term basis are written down if their value in use has fallen below their book value. Value in use is assessed by reference to (i) the intrinsic value, which corresponds to net assets plus unrealized gains, or (ii) the yield value, which corresponds to the average of the last 20 stock market prices of the year, or (iii) expected cash flows, using the discounted cash flow (DCF) or dividend discount model (DDM), taking into account any currency hedges.

Investments which ENGIE SA has decided to sell are written down if their estimated sale price is lower than their book value. If sale negotiations are ongoing at the end of the reporting period, the book value of the investments is determined based on a best estimate.

Technical loss

The technical loss arising on a merger is allocated to the underlying assets, which, in this case, are equity investments.

The portion of the loss allocated to an underlying asset is written down if the value of the asset falls below its net book value plus the portion of the loss allocated to it. The write-down is first allocated to the portion of the loss.

In the event of a disposal, the portion of the loss relating to the assets sold is reversed through income.

Amounts receivable from equity investments

This caption consists of loans granted by ENGIE SA to equity investments.

They are recognized at face value. In line with the treatment adopted for equity investments, these amounts are written down if their value in use falls below their face amount.

Provisions for contingencies may be booked if the Company considers that the cost of its commitment exceeds the value of the assets held.

Other financial fixed assets

Investments other than equity investments that ENGIE SA intends to hold on a long-term basis but which do not meet the definition of equity investments are mainly included under this caption.

A write-down may be taken against other financial fixed assets in accordance with the criteria described above for equity investments.

Liquidity agreement and treasury stock

ENGIE SA has signed a liquidity agreement with an investment service provider, whose role is to trade on the market on a daily basis and buy or sell ENGIE SA shares in order to ensure liquidity and an active market for the shares on the Paris and Brussels stock exchanges.

The amounts paid to the investment services provider are included in “Other long-term investments”. An impairment loss is recognized against the shares when their average price for the month in which the accounts are closed is lower than their book value.

Inventories

Natural gas reserves

Gas injected into underground reservoirs is included in inventories. It is measured at average purchase cost including domestic and international freight costs upon entering the transportation network regardless of its source, and including any regasification costs. Outflows are measured on a monthly basis using the weighted average unit cost method.

An impairment loss is recognized when the net realizable value of inventories, representing the selling price less costs directly and indirectly attributable to distribution, is lower than weighted average cost.

Energy savings certificates (ESC)

ENGIE SA applies the provisions of the French chart of accounts on the accounting treatment of ESC covered by the "energy savings" model. Energy sales generate energy savings obligations which are settled by procurement the certificates, obtaining certificates by carrying out energy-saving work, or paying to the French Treasury (*Trésor Public*) the fines provided for in Article L.221-4 of the French Energy Code (*Code de l'énergie*).

Energy savings certificates are accounted for as follows:

- inventory inflows: certificates obtained from the French State in exchange for qualifying energy savings expenditure are recorded at acquisition or production cost;
- inventory outflows: certificates are derecognized using the weighted average cost method as and when energy sales generate energy savings obligations or upon disposal, gains or losses on which are recognized in operating income.

At the closing date, the net position is recognized in the financial statement as follows:

- an asset (inventories) is recognized when energy savings obligations are lower than energy savings. Inventories correspond to certificates that have been acquired, obtained or are in the process of being obtained, and that will cover future energy savings obligations. They will subsequently be consumed when energy sales are made, which generate energy savings obligations, or on disposal;
- a liability is recognized when energy savings obligations are higher than energy savings and corresponds to the cost of measures required to settle the obligations related to energy sales made. The liability will subsequently be settled by procurement certificates or incurring energy savings expenditure that qualify for certificates.

Capacity remuneration mechanism (CRM)

The capacity mechanism introduced by France's "NOME" (*Nouvelle Organisation du Marché de l'Électricité*) law of December 7, 2010 came into effect on January 1, 2017. It aims to secure the supply of electricity in France on a sustainable basis, by ensuring a long-term balance between production and consumption.

For each calendar year:

- electricity suppliers have an obligation to hold capacity guarantees in an amount sufficient to cover their customers' peak-period consumption;
- capacity, production and curtailment operators commit to a certain level of availability during winter peak periods and in exchange receive capacity guarantees;
- capacity guarantees are traded on Epex Spot (auctions) or under over-the-counter contracts.

In accordance with the deliberation of the French energy regulator (*Commission de Régulation de l'Énergie* – CRE) of February 28, 2019, as of delivery year 2020, the capacity difference reference price (PREC) is defined as the last auction price before the beginning of a given delivery year.

The last Epex Spot capacity guarantee auction for delivery year 2023 took place on December 9, 2022. For the first time, trading reached the maximum price under the capacity remuneration mechanism established by the CRE (decision 2021-371) for delivery year 2023, *i.e.*, €60,000/MW. This last auction price represents the capacity difference reference price (PREC) for 2023, which jumped by 151% compared with the PREC for 2022. Note that prices at the most recent auctions for delivery year 2024 were lower at €23,058/MW.

ENGIE SA markets curtailment offers that are inseparable from the supply of electricity to some customers and is also an obligee as an electricity provider.

In the absence of a specific ANC Regulation on accounting for capacity certificates, ENGIE SA applies the provisions of the French chart of accounts on operating inventories of energy savings certificates - energy savings model:

- inventory inflows are measured based on the costs incurred during the relevant period to purchase or obtain guarantees, leading to the calculation of a weighted average unit cost of inventories;
- inventory outflows upon derecognition are valued using the weighted average cost method.

Operating receivables

This caption includes all receivables arising on the sale of goods, and other receivables arising in the ordinary course of operations.

Energy delivered but unbilled

Receivables also include unbilled revenues for energy delivered, regardless of whether or not the meters have been read. This caption concerns customers not billed monthly (mainly residential customers) and customers whose billing period is not aligned with the consumption period of a given month.

The amounts receivable in respect of delivered, unmetered and unbilled gas and electricity ("energy in the meter") are calculated using a direct method taking into account estimated customer consumption based on the most recent customer bill or unbilled reading, in line with the allocation of the distribution grid manager over the same period, using measurement and modeling tools developed by the Group.

These amounts are measured at the average energy price, which takes account of the category of customer and the age of the delivered unbilled "gas in the meter". The estimated portion of unbilled revenue at the reporting date is sensitive to the average price and volume assumptions used.

Customers (mainly residential customers) can opt to pay on a monthly basis. In this case, the Company recognizes a monthly advance and a bill is issued at the anniversary date of the contract giving rise to the payment (or refund) of any difference between the amount billed and the advance payments already received.

Unbilled revenues in respect of delivered unbilled natural gas are reduced by the amount of advances already collected by the Company from customers billed monthly.

Impairment of trade receivables

Bad debt risk is analyzed on a case-by-case basis for the Company's largest customers.

Receivables from other customers are written down using rates that increase in line with the age of the related receivables.

The potential bad debt risk arising on amounts receivable in respect of delivered unbilled energy is also taken into account.

"Tariff Shield" system

Tariff shield for gas

The exceptional crisis in natural gas wholesale prices prompted the French government, in its decree of October 23, 2021 and under the conditions provided for in the Energy Code, to freeze regulated natural gas tariffs at October 2021 levels from November 1, 2021 through June 30, 2022. The 2022 Finance Act extended the system to market offer contracts indexed to regulated gas tariffs for individual customers and the Amending Finance Act for 2022 of August 16, 2022 (Article 37) extended the arrangement through to the end of 2022. In addition, Decree No. 2022-514 of April 9, 2022 introduced a system designed for collective housing equipped with collective gas heating and covering the period between November 2021 and June 2022. This system was extended through to the end of 2022 by Decree No. 2022-1430 of November 14, 2022, which set out the list of eligible structures and prices remained frozen at October 2021 regulated natural gas tariff levels.

The tariff shield for gas provides that the loss of revenue incurred from November 1, 2021 by the natural gas supplier qualifies as expenses attributable to public service obligations and is eligible for State-guaranteed compensation up to an amount sufficient to cover the supply costs actually incurred as approved by the CRE when the pricing formula was established.

A catch-up mechanism was introduced in July 2022 to compensate energy suppliers for their losses.

The 2023 Finance Act renews the tariff shield principle and limits the increase in regulated natural gas tariffs, which are used as a reference for calculating aid, to an average of 15% as of January 1, 2023. For low-income households, this increase was offset by the provision of a one-off energy voucher from December 2022.

From January 1, 2023, the tariff shield for gas provided to individual consumers has been extended to all residential consumers who consume over 30 MWh/year and to homeowner associations who consume over 150 MWh/year, regardless of the nature of the contract (*i.e.*, regulated natural gas tariffs or a market offering, or contracts indexed to regulated natural gas tariffs or fixed price contracts).

Tariff shield for electricity

The exceptional crisis in energy wholesale prices also prompted the French government to introduce a series of emergency measures in the 2022 Finance Act and additional decrees, to limit the increase in electricity bills to 4% on average, beginning from February 1, 2022. Additional measures were introduced during 2022.

The measures introduced in January 2022 included:

- a one-off increase in the maximum overall volume of ARENH (*i.e.*, historical regulated access to nuclear energy) that can be transferred by EDF to energy suppliers to 120 TWh for 2022, including 20 TWH of additional volumes (*i.e.*, "ARENH+"), offset by a partial increase in its price from €42 to €46.2/MWh from April 1 to December 31, 2022. This is transferred by EDF in accordance with a number of decrees which also include commitments for the suppliers concerned and whose terms are set out in Decree No. 2022-342 of March 11, 2022 and associated CRE decisions;
- reduction in the domestic tax on end-use electricity (TICFE) (Article 29 of the 2022 Finance Act) to its minimum rate (Decree no. 2022-84 of January 28, 2022 - applicable to energy delivered through January 31, 2023). This measure is provided for in the national budget;
- specific aid (covering the period from July 1, 2022 through end-2023) for households living in collective housing heated with electricity (Decrees No. 2022-1764 and No. 2022-1763).

Article 181 of the 2022 Finance Act, supplemented by additional disclosures made by the CRE in November 2022, confirms that revenue losses borne by energy suppliers between February 1, 2022 and February 1, 2023 qualify as expenses attributable to public service obligations for 2022 and are therefore eligible for compensation.

Accordingly, ENGIE SA has recognized a subsidy receivable in respect of the compensation for public service charges arising from the price freeze on gas sales at regulated natural gas tariffs and from revenue losses borne by electricity suppliers *(see Note 6)*.

Other operating receivables

Other operating receivables include the current account with ENGIE Finance, as well as margin calls. Items for which there is a risk of non-collection are written down.

Marketable securities

Marketable securities are shown on the balance sheet at cost.

When the market value of securities at December 31 is lower than their book value, a write-down is recognized for the difference.

For listed securities, market value is determined based on the market price at the end of the reporting period.

Shareholders' equity

Additional paid-in capital

External costs directly attributable to capital increases are deducted from additional paid-in capital. Other costs are expensed as incurred.

Merger premium

External expenses directly attributable to the merger between Gaz de France SA and SUEZ in 2008 are deducted from the merger premium.

Revaluation adjustments

This caption results from the legal revaluation of non-amortizable assets not operated under concessions carried out in 1959 and 1976.

Tax-driven provisions

Accelerated depreciation

Accelerated depreciation is recognized whenever an asset's useful life (which is used in accounting for the depreciation of property, plant and equipment) differs from that used for tax purposes or when a different depreciation method is used.

Provision for price increases

The provision for price increases was introduced by Article 39-1-5 of the French Tax Code (*Code général des impôts*) to allow companies to temporarily deduct a portion of profits used for inventory replenishment from their tax base in the event of sharp price increases.

Provisions for contingencies and losses

A provision is recognized when the Company has a legal or constructive obligation resulting from a past event which is expected to result in an outflow of resources embodying economic benefits that can be measured reliably.

The provision represents the best estimate of the amount required to settle the present obligation at the end of the reporting period.

Provisions for rehabilitating land on which former gas production plants were located

A provision for site rehabilitation and clean-up costs for former gas production plants is set aside in the books of ENGIE SA for the sites concerned. These provisions reflect the best estimate of the future costs required to complete the rehabilitation work, based on current technical knowledge and regulatory requirements.

Movements in these provisions are shown under operating items.

Provision for employee bonus share awards

The provision for employee bonus share awards is recognized on a straight-line basis over the vesting period. The provision ultimately covers the disposal loss equal to the book value of treasury stock granted free of consideration to employees. Movements in this provision and any related costs are shown in personnel costs.

Pensions and other employee benefit obligations

Companies belonging to the electricity and gas industries sector

ENGIE SA employees qualify for the disability, pension and death benefits available under the special plan for companies belonging to the electricity and gas industries sector *(see Note 18)*.

Accounting treatment

ENGIE SA recognizes provisions under liabilities for benefits granted to employees whose rights have already begun to vest (annuities for occupational accidents and illnesses, temporary incapacity or disability benefits), or benefits due during the employee's working life (long-service awards and exceptional end-of-career vacation).

As part of the 2008 merger between SUEZ and Gaz de France with retroactive effect from January 1, 2008, provisions for pensions and other employee benefits (pensions, retirement indemnities and healthcare) carried by SUEZ at December 31, 2007 were transferred to ENGIE SA.

No further amounts are set aside to these provisions in respect of newly vested employee rights or the unwinding of discounting adjustments on the provisions transferred within the scope of the merger. These provisions are written back in line with the settlement of the corresponding obligations.

No provisions are set aside in liabilities for other commitments. These are disclosed in Note 17 on offbalance sheet commitments.

Basis of measurement and actuarial assumptions

Benefit obligations are measured using the projected unit credit method. The present value of the obligations of ENGIE SA is calculated by allocating vested benefits to periods of service under the plan's benefit formula. When an employee's service in later years leads to a materially higher level of benefits than in earlier years, the Group allocates the benefits on a straight-line basis.

Future payments in respect of these benefits are calculated based on assumptions as to salary increases, retirement age, mortality and employee turnover.

The rate used to discount future benefit payments is determined by reference to the yield on investment grade corporate bonds based on maturities consistent with the benefit obligation.

Borrowings and debt

Subordinated perpetual notes

Subordinated perpetual notes issued by the Company in euros and foreign currencies are recognized in accordance with Opinion No. 28 issued by the French association of public accountants (*Ordre des Experts-Comptables* – OEC) in July 1994, *i.e.*, taking into account their specific characteristics.

Accordingly, they are classified as debt as their redemption is not perpetual.

Bond redemption premiums and issue costs

Bond issue costs are recognized on a straight-line basis over the life of the instruments. These issue costs mainly consist of advertising expenses (for public issues) and fees due to financial intermediaries.

Bonds carrying a redemption premium are recognized in liabilities for their total amount including redemption premiums. The matching entry for these premiums is recorded in assets under accruals, and amortized over the life of the bonds pro rata to interest.

Derivative instruments

In accordance with the principles reaffirmed by ANC Regulation No. 2015-05 whose application has been mandatory as of January 1, 2017, financial instruments used by ENGIE SA to hedge and manage its currency, interest rate and commodity risk are disclosed in off-balance sheet commitments.

Unrealized gains on transactions that do not qualify for hedge accounting are not recognized. A provision is recognized for unrealized losses on these transactions, however.

In the case of contracts that qualify for hedge accounting, gains or losses are taken to income symmetrically with the gain or loss on the hedged items.

If the hedged item ceases to exist, the contract is unwound and any gains or losses taken to income.

ENGIE SA uses internal models representative of market practices to value financial derivative instruments that are not listed on financial markets.

Foreign currency transactions

Income and expenses denominated in foreign currencies are recorded at their equivalent value in euros at the transaction date.

Foreign currency receivables, payables and cash and cash equivalents are converted at the exchange rate prevailing at the year-end.

Translation differences are taken to income when they arise on cash and cash equivalents, or to the balance sheet under unrealized foreign exchange gains or losses when they arise on receivables and payables. A provision is set aside for unrealized losses after taking account of any associated hedging instruments.

Income tax

Since January 1, 1988, ENGIE SA has been part of the tax consolidation regime introduced by Article 68 of Law No. 87-1060 of December 30, 1987. ENGIE SA is head of a tax consolidation group within the meaning of Articles 223-A *et seq.* of the French Tax Code.

The contribution of subsidiaries in the tax consolidation group to the Group's income tax expense equals the amount of tax for which they would have been liable if they had not been members of the tax consolidation group.

The impacts of tax consolidation are recorded under the income tax expense of ENGIE SA, as parent company.

ENGIE SA also records a provision for any tax savings generated by subsidiaries' tax losses. These savings initially benefit ENGIE SA as parent company, and are recovered by the subsidiaries once they return to profit (hence the provision booked).

NOTE 2 Significant events during the year and comparability of periods presented

Significant events during the year

Disposal of EQUANS

On October 4, 2022, the Group completed the sale of its interest in EQUANS to Bouygues.

The combined effects of the transaction and of the cash generated by these activities since January 1, 2022 have reduced the Group's net debt by €6,975 million. A pre-tax loss of €145 million on the disposal was recognized in ENGIE SA's financial statements at December 31, 2022.

Disposal of a portion of ENGIE's interest in French company Gaztransport & Technigaz SA ("GTT")

On March 24, 2022, ENGIE announced the sale of a stake in GTT representing approximately 9% of the share capital at a price of €90 per share. On September 16, 2022, ENGIE sold an additional stake in GTT representing approximately 6% of the share capital at a price of €115.50 per share. At December 31, 2022, 96% of the bond redeemable for GTT shares had been converted. The balance was either converted or redeemed at par in January 2023.

The effects of the transaction have reduced the Group's net financial debt by €835 million. A disposal gain before tax was recognized in ENGIE SA's financial statements at December 31, 2022 for an amount of €830 million.

Comparability of periods presented

The same accounting methods were used in 2022 and 2021.

NOTE 3 Property, plant and equipment and intangible assets

3.1 Gross values

Changes in the gross value of these assets can be analyzed as follows:

In millions of euros	Dec. 31, 2021	Increases	Decreases	Reclassifications	Dec. 31, 2022
Intangible assets	**2,201**	**192**	**(356)**	**4**	**2,041**
Software	1,636	-	(353)	181	1,464
Other	370	-	(2)	2	370
Intangible assets in progress (1)	195	192	(1)	(179)	207
Property, plant and equipment	**949**	**51**	**(59)**	**(4)**	**937**
Land	30	-	(3)	9	36
Dismantling assets	3	-	-	-	3
Buildings	397	1	(46)	20	372
Plant and equipment	243	2	(3)	73	315
General plant and equipment, and miscellaneous fixtures and fittings	138	-	(5)	2	135
Other	27	-	(2)	-	25
Property, plant and equipment in progress	111	48	-	(108)	51
Advances and downpayments	-	-	-	-	-
TOTAL	**3,150**	**243**	**(415)**	**-**	**2,978**

(1) Intangible assets in progress essentially concern IT projects.

3.2 Depreciation, amortization and impairment

Changes in depreciation and amortization were as follows:

In millions of euros	Dec. 31, 2021	Increases	Decreases	Dec. 31, 2022
Intangible assets	**1,467**	**179**	**(290)**	**1,356**
Software	1,247	157	(289)	1,115
Other	220	22	(1)	241
Property, plant and equipment	**543**	**40**	**(43)**	**540**
Land	-	-	-	-
Dismantling assets	3	-	-	3
Buildings	297	9	(35)	271
Plant and equipment	139	18	(1)	156
General plant and equipment, and miscellaneous fixtures and fittings	80	12	(4)	88
Other	24	1	(3)	22
Property, plant and equipment in progress	-	-	-	-
TOTAL	**2,010**	**219**	**(333)**	**1,896**

Changes in impairment were as follows:

In millions of euros	Dec. 31, 2021	Additions	Reversals	Dec. 31, 2022
Intangible assets	178	-	(70)	108
Property, plant and equipment	18	9	(5)	22
TOTAL	**196**	**9**	**(75)**	**130**

Movements in depreciation, amortization and impairment can be broken down as follows:

In millions of euros	Dec. 31, 2021	Dec. 31, 2022
Depreciation, amortization and impairment	**203**	**199**
Straight-line method	202	198
Declining-balance method	1	1
Depreciation of dismantling assets	-	-
Exceptional amortization	**22**	**20**
Reversals	**-**	**-**

3.3 Net values

The net value of intangible assets and property, plant and equipment breaks down as follows:

In millions of euros	Gross values	Accumulated depreciation and amortization	Impairment	Net value at Dec. 31, 2022	Net value at Dec. 31, 2021
Intangible assets	**2,041**	**(1,357)**	**(108)**	**576**	**555**
Software	1,464	(1,115)	(3)	346	333
Other	370	(242)	(105)	23	27
Property, plant and equipment in progress	207	-	-	207	195
Property, plant and equipment	**936**	**(539)**	**(22)**	**375**	**388**
Land	36	(1)	-	35	30
Dismantling assets	3	(3)	-	-	-
Buildings	372	(271)	(7)	94	93
Plant and equipment	315	(155)	(1)	159	104
General plant and equipment, and miscellaneous fixtures and fittings	135	(87)	(13)	35	47
Other	25	(22)	-	3	3
Property, plant and equipment in progress	51	-	(1)	50	111
Advances and downpayments	-	-	-	-	-
TOTAL	**2,978**	**(1,896)**	**(130)**	**952**	**943**

NOTE 4 Financial fixed assets

4.1 Gross values

Changes in the gross value of these assets can be analyzed as follows:

In millions of euros	Dec. 31, 2021	Increases	Decreases	Other	Dec. 31, 2022
Equity investments	**74,679**	**4,004**	**(5,644)**	-	**73,039**
Consolidated equity investments	74,101	3,821	(5,278)	-	72,644
Consolidated equity investments – technical loss (1)	32	-	-	-	32
Non-consolidated equity investments	546	183	(366)	-	363
Other financial fixed assets	**180**	**62**	**(89)**	-	**153**
Other long-term investments	31	9	-	-	40
Amounts receivable from equity investments	106	36	(70)	-	72
Loans	14	3	(1)	-	16
Other financial fixed assets	29	14	(18)	-	25
TOTAL	**74,859**	**4,066**	**(5,733)**	-	**73,192**

(1) Technical loss arising on the 2008 merger of SUEZ with Gaz de France, mainly involving Electrabel shares.

Movements in treasury stock are detailed in Note 9.1.

Equity investments and amounts receivable from these investments are detailed in Note 4.4.

Of the change in amounts receivable from equity investments, €50 million was due to the conversion of the Reservoir Sun receivable into shares.

The year-on-year change in equity investments at December 31, 2022 is essentially attributable to the following transactions:

- sale of EQUANS shares (-€5,274 million);
- sale of SUEZ shares (-€181 million);
- sale of GTT shares (-€5 million);
- subscription to the capital increase carried out by EQUANS (€2,774 million);
- subscription to the capital increase carried out by COGAC (€850 million);
- subscription to the capital increase carried out by ENGIE New Business (€148 million);
- subscription to the capital increase carried out by Reservoir Sun (€50 million).

At December 31, 2022, "Other financial fixed assets" comprised:

- deposits paid (€15 million);
- shares held under liquidity agreements (€10 million).

4.2 Impairment

In millions of euros	Dec. 31, 2021	Additions	Reversals	Other	Dec. 31, 2022
Consolidated equity investments	11,013	1,740	(280)	-	12,473
Consolidated equity investments – technical loss (1)	31	-	-	-	31
Non-consolidated equity investments	275	6	-	-	281
Other long-term investments	6	1	-	-	7
Amounts receivable from equity investments	64	5	-	-	69
Loans	-	-	-	-	-
TOTAL	**11,389**	**1,752**	**(280)**	-	**12,861**

(1) Technical loss arising on the 2008 merger of SUEZ with Gaz de France, mainly involving Electrabel shares.

The change in impairment mainly reflects:

- additions to provisions for impairment against equity investments:
  - Electrabel (€1,066 million),
  - ENGIE Energy Services International (€426 million),
  - ENGIE New Business (€203 million),
  - ENGIE China Investment Company (€29 million);
- reversals of impairment provisions against equity investments:
  - COGAC (€277 million).

The value in use of the equity investments used to calculate impairment is assessed by reference to:

- for private equity firms, the intrinsic value, which corresponds to net assets plus unrealized gains;
- for listed companies, the yield value, which corresponds to the average of the last twenty stock market prices of the year;
- for other operating subsidiaries, value in use, which corresponds to the cash flows or dividends (DCF or DDM model) expected to be generated by subsidiaries that directly or indirectly hold operating activities.

The projections on which these values are based were drawn from the 2023 budget and from the 2024-2026 medium-term business plan, as approved by the Group's Executive Committee and the Board of Directors, and on extrapolated cash flows beyond that time frame. Cash flow projections are determined on the basis of macroeconomic assumptions (inflation, exchange rates and growth rates), and price forecasts resulting from the Group's reference scenario for 2026-2050 as approved by the Group's Executive Committee in October 2022.

The forecasts and projections included in the reference scenario were determined on the basis of the following inputs:

- forward market prices over the liquidity period for fuel (coal, oil and gas), CO_2 and electricity on different markets against a backdrop of highly volatile energy prices;
- beyond this period, medium- and long-term energy prices were determined by the Group based on macroeconomic assumptions and fundamental supply and demand equilibrium models, the results of which are regularly compared against forecasts prepared by external energy sector specialists. Long-term projections for CO_2 are in line with the 2030 emissions reduction target of 55% and the 2050 climate neutrality objective set by the European Commission as part of the "European Green Deal" presented in December 2019 and July 2021. More specifically, medium- and long-term electricity prices were determined by the Group using electricity demand forecasting models, medium- and long-term forecasts of fuel and CO_2 prices, and expected trends in installed capacity and in the technology mix of the production assets within each power generation system.

In particular, for Electrabel, whose carrying amount accounts for almost half of ENGIE SA's investment portfolio, the key assumptions used to assess its value in use concern changes in:

- the regulatory environment in every country in which Electrabel operates, and in particular the Belgian regulatory framework governing the operating life of existing nuclear reactors and the level of royalties and nuclear contributions paid to the Belgian State;
- gas and electricity demand;
- electricity prices;
- exchange rates; and
- discount rates.

Electrabel owns, either directly or through equity investments in Europe or outside Europe, the following main operating activities:

- power generation and sale:
  - nuclear power plants in Belgium,
  - thermal power plants, mainly in Belgium, the Netherlands, Italy, Spain, Portugal, Australia, Singapore, Brazil, Puerto Rico, Chile, Mexico, Peru and the Middle East,
  - renewable power generation plants, mainly in Belgium, the Netherlands, Italy, Spain, Portugal, Germany, the United Kingdom, Brazil, Chile and Mexico;
- natural gas and power generation in Belgium, the Netherlands, Italy, the United Kingdom, Australia and Singapore;
- management and optimization of portfolios of physical and contractual assets.

4.3 Net values

In millions of euros	Gross values	Impairment	Net value at Dec. 31, 2022	Net value at Dec. 31, 2021
Equity investments	**73,039**	**(12,785)**	**60,254**	**63,360**
Consolidated equity investments	72,644	(12,473)	60,171	63,088
Consolidated equity investments – technical loss (1)	32	(31)	1	1
Non-consolidated equity investments	363	(281)	82	271
Other financial fixed assets	**153**	**(76)**	**77**	**109**
Other long-term investments	40	(7)	33	25
Amounts receivable from equity investments	72	(69)	3	42
Loans	16	-	16	14
Other financial fixed assets	25	-	25	29
TOTAL	**73,192**	**(12,861)**	**60,331**	**63,469**

(1) Technical loss arising on the 2008 merger of SUEZ with Gaz de France, mainly involving Electrabel shares.

4.4 Subsidiaries and investments

Some of the data in the table are unaudited.

In millions of euros	Share capital	Other equity	% capital held	Book value of shares held		Loans and advances granted	Sureties and endorse-ments	Revenues	Net income/ (loss)	Dividends received in 2022	Year-end
				Gross	Provisions						
Name											
A - Detailed information concerning subsidiaries and investments whose gross value exceeds 1% of ENGIE SA capital (*i.e.*, €24,352,850)											
1. Subsidiaries (more than 50%-owned by ENGIE SA)											
Aguas Provinciales de Santa Fe	-	(180)	64.19%	39	(39)	-	-	-	(12)	-	Dec. 2020
Celizan	-	-	100.00%	31	(31)	-	-	-	-	-	Dec. 2022
COGAC	1,717	(124)	100.00%	3,430	-	-	-	-	(154)	-	Dec. 2022
Electrabel	5,790	9,948	99.13%	34,148	(9,692)	-	-	21,852	(1,714)	1,233	Dec. 2022
ENGIE France Renouvelable	507	524	100.00%	1,641	-	-	-	60	519	-	Dec. 2022
ENGIE Alliance	100	(47)	64.00%	62	-	-	1,000	-	(47)	-	Dec. 2022
ENGIE China Invest Company	43	(34)	100.00%	123	(98)	-	-	-	(17)	-	Dec. 2022
ENGIE Energy Services	699	1,338	100.00%	2,933	-	-	-	3,108	1,357	-	Dec. 2022
ENGIE Energy Services International	1,571	1,510	100.00%	3,908	(426)	-	-	-	1,513	-	Dec. 2022
ENGIE Finance	5,460	233	100.00%	5,567	-	3,345	-	2	112	160	Dec. 2022
ENGIE IT	105	(273)	100.00%	228	(228)	-	-	326	(106)	-	Dec. 2022
ENGIE Management Company	63	(183)	100.00%	115	(115)	-	-	168	(53)	-	Dec. 2022
ENGIE New Business	364	(200)	100.00%	367	(203)	-	-	-	(172)	-	Dec. 2022
ENGIE New Ventures	69	(48)	100.00%	92	(50)	-	-	-	-	-	Dec. 2022
ENGIE Rassembleur d'Energies	50	(22)	100.00%	50	(8)	-	-	-	(1)	-	Dec. 2022
GDF International	3,972	92	100.00%	3,972	-	-	-	16	(331)	242	Dec. 2022
GENFINA	100	436	100.00%	2,627	(1,351)	-	-	-	13	-	Dec. 2022
GRDF	1,801	1,412	100.00%	8,405	-	-	-	3,370	17	519	Dec. 2022
GRT Gaz	640	4,306	60.79%	1,901	-	-	-	2,082	524	261	Dec. 2022
SFIG	2	5	100.00%	94	(84)	-	-	11	(4)	-	Dec. 2022
Sopranor	-	3	100.00%	245	(241)	-	-	-	-	-	Dec. 2022
Storengy SAS	2,733	152	100.00%	2,733	-	-	-	68	133	107	Dec. 2022
50FIVE	-	6	100.00%	34	(34)	-	-	23	(2)	-	Dec. 2022
2. Equity investments (less than 50%-owned by ENGIE SA)											
Aguas Argentinas	1	(8)	48.20%	145	(145)	-	-	-	-	-	Dec. 2020
Reservoir Sun	12	(10)	50.00%	56	(6)	-	-	35	(5)	-	Dec. 2021

In millions of euros	Share capital	Other equity	% capital held	Book value of shares held		Loans and advances granted	Sureties and endorse-ments	Revenues	Net income/ (loss)	Dividends received in 2021	Year-end
				Gross	Provisions						
Name											
B - Information concerning other subsidiaries and investments											
1. Subsidiaries not included in section A											
French companies	-	-	-	50	(27)	-				10	
Foreign companies (data in local operating currency)	-	-	-	9	-	-				-	
2. Equity investments not included in section A											
French companies	-	-	-	14	(7)	-				-	
Foreign companies (data in local operating currency)	-	-	-	24	-						
3. Other long-term investments not included in section A											
French companies	-	-	-	37	(7)	-				21	
Foreign companies (data in local operating currency)	-	-	-	-	-	-	-	-	-	-	
TOTAL				**73,080**	**(12,792)**					**2,553**	

NOTE 5 Inventories

Changes in the gross value of these assets can be analyzed as follows:

In millions of euros	Gross values Dec. 31, 2021	Increases	Decreases	Gross values Dec. 31, 2022
Natural gas (including butane/propane)	1,167	5,227	(2,720)	3,675
Energy savings certificates	435	1,080	(1,024)	492
Capacity guarantees	539	306	(121)	724
Guarantees of origin	2	1		3
TOTAL	**2,143**	**6,614**	**(3,864)**	**4,894**

Inventory impairment can be analyzed as follows:

In millions of euros	Dec. 31, 2021	Additions	Reversals	Dec. 31, 2022
Natural gas (including butane/propane)	-	-	-	-
Energy savings certificates	-	-	-	-
Capacity guarantees	-	-	-	-
Guarantees of origin	-	-	-	-
TOTAL	-	-	-	-

The net value of inventories breaks down as follows:

In millions of euros	Gross values	Impairment	Net value at Dec. 31, 2022	Net value at Dec. 31, 2021
Natural gas (including butane/propane)	3,675	-	3,675	1,167
Energy savings certificates	492	-	492	435
Capacity guarantees	724	-	724	539
Guarantees of origin	3	-	3	2
TOTAL	**4,894**	-	**4,894**	**2,143**

5.1 Natural gas reserves

Gas reserves at end-December 2022 were €2,508 million higher than at end-December 2021, mainly due to higher prices for quantities purchased following the war in Ukraine.

5.2 Energy savings certificates

Energy Savings Certificates require certain suppliers of energy to meet energy savings targets imposed upon them by public authorities. The level of obligation is defined by savings obligation period and allocated between energy types. The suppliers concerned fulfill their obligation by obtaining Energy Savings Certificates equivalent to the number of TWh of cumac that must be saved.

The fifth energy savings period, which runs from January 1, 2022 to December 31, 2025, has seen several regulatory changes:

- Decree No. 2021-712 of June 3, 2021, which:
  - introduced a gradual change in the thresholds for electricity and gas over the period to extend the obligation to more suppliers and avoid any distortion due to competition between suppliers,
  - set an initial overall target for the fifth period of 2,500 TWh, *i.e.*, 1,770 TWh of cumac for the "traditional" obligation, and 730 TWh of cumac for the "fuel poverty" obligation, an increase of 37%,
  - refocuses the "fuel poverty" ESC obligation on the most vulnerable households,
  - changed the calculation of the obligation amount for each type of energy (Articles R.221-4 and R.221-4-1 of the Energy Code): the amount of obligations expressed in discounted cumulative kilowatt-hours is divided by the volume of energy sold or released for consumption;
- rounded out by Decree No. 2022-1368 of October 27, 2022, which increased ESC obligations for 2023 to 2025 by 25%, respectively, *i.e.*, 200 TWh of cumac for the "traditional" obligation and 400 TWh of cumac for the "fuel poverty" obligation:
  - increase in "traditional" energy savings obligations coefficients provided for under Article R.221-4 of the French Energy Code,
  - increase in the "fuel poverty" energy savings obligations coefficients provided for under Article R.221-4-1 of the same Code.

The overall target for the fifth period has therefore increased from 2,500 to 3,100 TWh (it was 2,133 TWh for the fourth period).

Pursuant to Decree No. 2022-1368, ENGIE SA's annual "traditional" Energy Savings Certificate (ESC) obligation is determined by applying the following coefficients to its sales:

- 0.422 kWh cumac/kWh sold for natural gas in 2022 and 0.485 for the following years;
- 0.416 kWh cumac/kWh sold for electricity in 2022 and 0.478 for the following years.

In addition to the "traditional" obligation, the "fuel poverty" obligation is calculated by applying a proportionality coefficient to the "traditional" obligation, equal to 0.412 in 2022 and 0.620 in subsequent years.

5.3 Capacity remuneration mechanism

Capacity obligations depend on electricity sales volumes.

In 2022, ENGIE SA's electricity sales continued to grow and its CRM inventories therefore increased accordingly to cover its obligations.

NOTE 6 Receivables

6.1 Maturity of receivables

In millions of euros	Gross amount at Dec. 31, 2022	Due		
		End-2023	Between 2024 and 2027	2028 and beyond
Non-current assets	**153**	**9**	**9**	**135**
Amounts receivable from equity investments	72	7	-	65
Loans	16	2	-	14
Liquidity agreements	-	-	-	-
Other financial fixed assets	65	-	9	56
Current assets	**35,408**	**34,958**	**330**	**120**
Trade and other receivables (1)	17,639	17,569	70	-
Current accounts with subsidiaries	10,105	10,105	-	-
Other operating receivables	1,483	1,483	-	-
Other receivables (2)	6,087	5,708	260	120
Advances and downpayments made on orders	93	93	-	-
TOTAL	**35,561**	**34,968**	**339**	**255**

(1) Sales of energy in the meter net of advances from customers billed on a monthly basis totaled €1,166 million including tax at December 31, 2022 (€753 million at December 31, 2021).

(2) €246 million in subsidies receivable in respect of compensation for public service charges arising from the price freeze on electricity sales, and €2,110 million in subsidies receivable in respect of the compensation for public service charges arising from the price freeze on gas sales made at regulated natural gas tariffs or indexed to such tariffs (€1,395 million of these receivables were factored during the year).

6.2 Impairment of receivables

In millions of euros	Dec. 31, 2021	Additions	Reversals	Other	Dec. 31, 2022
Amounts receivable from equity investments	65	5	-	-	69
Loans	-	-	-	-	-
Trade and other receivables (3)	389	872	(275)	-	986
Other miscellaneous receivables	1	1	-	-	2
TOTAL	**455**	**878**	**(275)**	**-**	**1,058**

NOTE 7 Marketable securities

In millions of euros	Gross values	Impairment	Net value at Dec. 31, 2022	Net value at Dec. 31, 2021
Treasury shares held to cover bonus share plans	189	-	189	199
Money-market funds	4,402	-	4,402	1,830
Term deposits	1,471	-	1,471	1,479
TOTAL	**6,062**	**-**	**6,062**	**3,508**

The gross value of treasury shares at December 31, 2022 was €189 million and no impairment provisions had been recognized. Their aggregate par value was €189 million.

All treasury shares held are allocated to a plan. These shares are measured at their price on the date of the Board of Directors' decision to set up the plan to which they are allocated. They are held at their carrying amount until delivery and impairment provisions are recognized in liabilities *(see Note 10.1.2)*.

NOTE 8 Accruals (assets) and unrealized foreign exchange losses

In millions of euros	Dec. 31, 2021	Increases	Decreases	Dec. 31, 2022
Loan redemption premiums	164	10	(29)	145
Deferred loan issuance costs	53	2	(12)	43
Options contracts	2,083	1,151	-	3,234
Financial instruments	3,373	2,310	(86)	5,597
ACCRUALS (ASSETS)	**5,673**	**3,473**	**(127)**	**9,019**
UNREALIZED FOREIGN EXCHANGE LOSSES	**272**	**118**	**(98)**	**292**

Accruals

Accruals related to financial instruments comprise:

- premiums and issue costs to be amortized on ENGIE SA bonds;
- premiums on options intended to hedge commodity and/or interest rate and currency risk on debt;
- measurement at fair value of interest rate, currency and commodity derivatives not qualifying as hedges, and the currency portion of derivatives hedging the risk on debt denominated in foreign currencies.

Unrealized foreign exchange losses

Unrealized foreign exchange losses arise upon the translation at the year-end exchange rate of payables and receivables denominated in a currency other than the euro and upon the currency portion of derivatives hedging debt denominated in foreign currencies and/or commodity purchases and sales.

NOTE 9 Shareholders' equity

9.1 Share capital – shares issued and outstanding

The share capital is fully paid up. Each €1 share carries a single voting right.

Share capital	
Shares comprising the share capital at January 1, 2022	2,435,285,011
Total number of shares comprising the share capital	**2,435,285,011**

In 2022, a total of 14,713,176 shares were purchased and 14,713,176 shares were sold under the liquidity agreement, generating a net capital gain of €220,208.50. At December 31, 2022, ENGIE SA no longer held any treasury shares under the liquidity agreement.

At December 31, 2022, ENGIE SA held 14,530,427 shares in connection with bonus share awards *(see Note 9.3)*.

9.2 Change In Shareholders' Equity

Shareholders' equity at December 31, 2021	**31,211**
Dividends and interim dividends paid and other	(2,093)
Revaluation adjustments	
Tax-driven provisions and investment subsidies	300
Income	1,697
Shareholders' equity at December 31, 2022	**31,117**

In 2022, ENGIE SA paid:

- a dividend of €0.85 per share in respect of 2021, representing a total amount of €2,060.04 million, less the treasury shares held at the dividend payment date (€9.96 million);
- a loyalty dividend of €0.085 per share, representing a total payout of €23.06 million.

9.3 Employee Bonus Share Awards And Stock Option Plans

Bonus share policy and stock option policy

Bonus share awards are intended to involve all employees more closely in the Group's growth and performance. They are awarded to employees upon a decision of the Board of Directors, in accordance with decisions taken by the Shareholders' Meeting, subject to a minimum seniority of two years and a number of performance conditions.

In 2022, ENGIE SA awarded 5,033,529 bonus shares to certain ENGIE group employees.

In 2022, ENGIE SA delivered 3,444,136 shares to Group employees.

Based on all existing share plans, the number of beneficiaries and staff turnover assumptions, at December 31, 2022 ENGIE SA considered that it had an obligation to deliver 19,959,029 shares.

In view of the shares delivered in 2022, the Company holds 14,530,427 shares to cover its bonus share obligations at December 31, 2022, representing a total amount of €189 million net of provisions. The market value was €195 million at December 31, 2022.

Details of bonus share and stock option plans in force	Number of shares awarded	Number of shares delivered	Per share value	Expense *(In millions of euros)* 2022	2021
Bonus shares awarded					
ENGIE Plan of December 14, 2016	-	-	-	-	(1.37)
ENGIE Plan of December 13, 2017	113,715	63,665	14.700	1.59	(65.44)
ENGIE Plan of March 7, 2018	-	-	-	-	(0.74)
Link Abondement Plan of August 2, 2018	279,557	-	13.440	(0.75)	0.75
ENGIE Plan of December 11, 2018	4,629,656	3,185,625	12.260	51.64	17.32
ENGIE Plan of February 27, 2019	86,917	67,949	13.900	1.13	(0.72)
ENGIE Plan of December 17, 2019	4,773,593	-	14.730	(21.54)	21.54
ENGIE Plan of February 26, 2020	262,203	126,897	15.640	1.14	2.91
ENGIE Plan of December 17, 2020	4,693,623	-	12.670	(17.83)	17.86
ENGIE Plan of February 25, 2021	283,065	-	12.605	(1.46)	1.24
ENGIE Plan of December 16, 2021	4,652,505	-	13.000	(16.60)	0.76
ENGIE Plan of February 14, 2022	420,305	-	14.298	(1.99)	
ENGIE Plan of December 8, 2022	4,384,289	-	14.292	(1.12)	
Link Abondement Plan of December 22, 2022	228,935	-	13.614	(0.02)	
TOTAL	**24,808,363**	**3,444,136**		**(5.81)**	**(5.89)**

NOTE 10 Provisions

10.1 Provisions for contingencies and losses

In millions of euros	Dec. 31, 2021	Additions	Reversals (used provisions)	Reversals (surplus provisions)	Dec. 31, 2022
Provisions for site rehabilitation (Note 10.1.1)	17	208	-		225
Provisions relating to employees (Note 10.1.2)	233	64	(67)	(16)	214
Provisions for taxes (Note 10.1.3)	21				21
Provisions for tax consolidation (Note 10.1.4)	1,035	133	(154)	(76)	938
Risks arising on subsidiaries (Note 10.1.5)	127	161	-		288
Other provisions for contingencies and losses (Note 10.1.5)	1,535	1,262	(1,355)	-	1,441
TOTAL	**2,968**	**1,828**	**(1,576)**	**(92)**	**3,127**

10.1.1 Provisions for site rehabilitation

Provisions for site rehabilitation totaled €225 million at December 31, 2022 *versus* €17 million at end-2021, broken down as follows:

In millions of euros	Dec. 31, 2021	Additions	Reversals (used provisions)	Matching entry to dismantling assets	Dec. 31, 2022
Provisions for site rehabilitation (excluding PNC assets)	12	208		-	220
Provisions for site rehabilitation (PNC assets)	5	-	-	-	5
TOTAL	**17**	**208**	-	-	**225**

The €220 million provision for site rehabilitation (excluding PNC assets) at December 31, 2022, covers the La Défense and Saint Denis (Landy) sites for an amount of €12 million, as well as the costs of rehabilitating land on which former gas production plants were located for an amount of €208 million, broken down as follows:

- a provision for soil decontamination at former long-term gas production plants for €136 million;
- a provision for soil decontamination at former gas production plants held for sale for €42 million;
- a provision for litigation at former gas production plants for €30 million.

10.1.2 Provisions relating to employees

Provisions for employee benefits

At December 31, 2022, pension obligations amounted to €4.2 million. Pension obligations are covered by insurance funds.

Other post-employment benefits amounted to €9.9 million.

Provisions have been set aside for the full amount of disability benefits, allowances for occupational accidents, illnesses of active employees at year-end, long-service awards and asbestos, representing a total amount of €66.3 million.

These provisions represented a total amount of €80.8 million at December 31, 2022. Note 18.4 analyzes changes in these provisions in the periods presented.

The full amount of end-of-career indemnities is partially covered by insurance funds; the shortfall amounted to €25 million at December 31, 2022.

Provisions for employee bonus share awards

At December 31, 2022, provisions for employee bonus share awards amounted to €132 million (end-2021: €126 million). The provision for employer contributions related to the bonus share awards amounted to €1.8 million (no change from end 2021).

In 2022, ENGIE SA set aside a further €62 million to this provision to cover rights vested by employees. It also wrote back €56 million of the provision following the expiration of certain bonus share plans.

In addition to presence in the Group at the vesting date, eligibility for certain bonus share and performance share plans is subject to an internal performance condition. When this condition is not fully met, the number of bonus shares granted to employees is reduced in accordance with the plans' regulations.

10.1.3 Provisions for taxes

ENGIE SA has set aside several tax risk provisions to cover various tax audits performed by the tax authorities.

The provision for income taxes amounted to €21 million at December 31, 2022 (end-2021: €21 million). It is chiefly related to the transfer price of LNG.

10.1.4 Provisions for tax consolidation

ENGIE SA has chosen to file consolidated tax returns. As a result, it sets aside a provision reflecting its obligation to transfer back to subsidiaries any tax losses utilized. In 2022, ENGIE SA recognized a provision charge of €132 million and a reversal of €169 million, bringing the total provision to €605 million at the year-end.

At December 31, 2007, GRDF was part of the tax consolidation group and the capital gain on the disposal of the gas distribution activity therefore had no tax impact. Since 2008, the subsidiary's statutory financial statements show tax savings relating to the amortizable component of the capital gain arising on the disposal of the gas distribution business.

This excess amortization is canceled out at the level of the tax consolidation group. In accordance with the tax consolidation agreements signed with its subsidiaries, ENGIE SA recognized a provision for tax consolidation with respect to GRDF for a definitive amount of €1,938 million, based on the amortizable component. In 2022, the Company wrote back an amount of €61 million (€69.5 million in 2021), corresponding to the neutralization of the excess amortization on the amortizable component arising in the year.

Provisions for tax consolidation amounted to €938 million at end-2022, including €333 million relating to the amortizable component of GRDF's intangible assets.

10.1.5 Other provisions for contingencies and losses

Other provisions for contingencies and losses mainly include provisions for contingencies arising on other third parties, provisions for commercial litigation and claims, and provisions for currency and interest rate risk.

Movements in these provisions chiefly impact non-recurring and financial items.

Provisions for other contingencies and losses totaled €1,441 million at December 31, 2022 *versus* €1,535 million at end 2021, broken down as follows:

- provisions for onerous contracts: €1,207 million:
  - €395 million for long-term gas supply contracts, transmission and storage capacity contracts and an electricity swap contract that meet the accounting definition of onerous contracts. These contracts are no longer required for the Group's industrial needs and the unavoidable costs of meeting the obligations under the contracts exceed the expected economic benefits to be received under them,
  - €657 million for the CCTG Cartagena tolling contract (Spain) signed in 2011 and valid until 2028, which is considered as structurally and sustainably onerous given conditions in the Spanish electricity market and the terms of the new CRM expected in 2023,
  - €155 million related to two real estate contracts which have also met the criteria for onerous contracts since 2020;
- provisions for other risks: €26 million, mainly comprising the provision for negative fair value adjustments to financial instruments (€22 million);
- provisions for interest-rate risk: €17 million;
- provisions for litigation: €43 million;
- provisions for restructuring: €112 million;
- provisions for foreign exchange losses: €29 million;
- provisions for miscellaneous expenses: €7 million, most of which concern the provision for Yellow.

The provision for subsidiaries' risk amounted to €288 million at December 31, 2022 (€127 million at December 31, 2021).

10.2 Tax-driven provisions and investment subsidies

In millions of euros	Dec. 31, 2021	Additions	Reversals	Transfer	Dec. 31, 2022
Tax-driven provisions	**710**	**647**	**(345)**	-	**1,012**
Accelerated depreciation and amortization	590	323	(345)	-	568
Provision for price increases	120	324	-	-	444
Provision for investments	-		-		-
Investment subsidies	**25**	-	**(1)**	-	**24**
TOTAL	**735**	**647**	**(346)**	-	**1,036**

NOTE 11 Borrowings and debt

11.1 Summary of borrowings and debt

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Borrowings	**31,864**	**33,015**
Hybrid bonds	3,393	3,767
Bonds	20,464	23,154
Other loans	8,007	6,094
Amounts payable to equity investments	**4,850**	**4,850**
Current accounts with subsidiaries	**3,551**	**1,150**
Other borrowings and debt	**620**	**346**
Deposits received from customers	74	25
Deposits received on derivatives	-	-
Tax consolidation	208	-
Current portion of interest due	269	280
Bank overdrafts	36	7
Miscellaneous	33	34
TOTAL	**40,885**	**39,361**

The €1,524 million increase in borrowings and debt is mainly due to:

- a €1,913 million increase in other borrowings and debt (*i.e.*, a €2,168 million increase in Negotiable European Commercial Paper (NEU CP), a €256 million increase in United States Commercial Paper (USCP), and repayment of a short-term bank loan of €500 million);
- a €2,401 million increase in credit balances on current accounts with subsidiaries;
- a €208 million increase in the tax consolidation current account;
- a €374 million decrease in hybrid bonds (partial redemptions);
- a €3,340 million decrease in bonds (including €1,125 million in partial redemptions) offset by a new €650 million issue.

11.2 Maturities of borrowings, debt and payables

		Due		
In millions of euros	Dec. 31, 2022	End-2023	Between 2024 and 2027	2028 and beyond
Borrowings and debt	**40,885**	**13,869**	**12,239**	**14,778**
Hybrid bonds	3,393	-	1,838	1,555
Bonds	20,464	1,461	6,074	12,929
Other loans	8,007	7,386	327	294
Amounts payable to equity investments	4,850	850	4,000	-
Current accounts with subsidiaries	3,551	3,551	-	-
Other borrowings and debt	620	620	-	-
Trade and other payables	**19,543**	**19,543**	-	-
Tax and employee-related liabilities	**1,806**	**1,806**	-	-
Other liabilities	**9,438**	**9,438**	-	-
Advances from customers	1,046	1,046	-	-
Other	8,392	8,392	-	-
Advances and downpayments received on orders	**5**	**5**	-	-
TOTAL	**71,678**	**44,661**	**12,239**	**14,778**

11.2.1 Breakdown of hybrid bonds

	Dec. 31, 2022	Issue date	Interest repricing date	Interest	Listing
Public issues					
In millions of euros	338	06/2014	06/2024	3.875%	Paris
In millions of euros	1,000	01/2019	02/2025	3.250%	Paris
In millions of euros	500	07/2019	07/2025	1.625%	Dublin
In millions of euros	850	11/2020	11/2028	1.500%	Paris
In millions of euros	705	07/2021	07/2031	1.875%	Paris

11.2.2 Breakdown of bonds

	Dec. 31, 2022	Issue date	Maturity date	Interest	Listing
Public issues					
In millions of euros	300	03/2011	03/2111	5.950%	Paris
In millions of euros	742	06/2012	02/2023	3.000%	Paris
In millions of euros	1,246	05/2014	05/2026	2.375%	Paris
In millions of euros	750	03/2015	03/2026	1.000%	Paris
In millions of euros	500	03/2015	03/2035	1.500%	Paris
In millions of euros	480	03/2017	03/2024	0.875%	Paris
In millions of euros	800	03/2017	03/2028	1.500%	Paris
In millions of euros	500	09/2017	02/2023	0.375%	Paris
In millions of euros	750	09/2017	02/2029	1.375%	Paris
In millions of euros	750	09/2017	09/2037	2.000%	Paris
In millions of euros	750	06/2018	06/2028	1.375%	Paris
In millions of euros	343	09/2018	09/2025	0.875%	Paris
In millions of euros	500	09/2018	09/2033	1.875%	Paris
In millions of euros	750	06/2019	06/2027	0.375%	Paris
In millions of euros	750	06/2019	06/2039	1.375%	Paris
In millions of euros	627	09/2019	03/2027	0.000%	Paris
In millions of euros	900	10/2019	10/2030	0.500%	Paris
In millions of euros	600	10/2019	10/2041	1.250%	Paris
In millions of euros	604	03/2020	03/2025	1.375%	Paris
In millions of euros	750	03/2020	03/2028	1.750%	Paris
In millions of euros	750	03/2020	03/2032	2.125%	Paris
In millions of euros	575	06/2020	06/2027	0.375%	Paris
In millions of euros	750	10/2021	10/2029	0.375%	Paris
In millions of euros	650	09/2022	09/2029	3.500%	Paris
In millions of euros	750	10/2021	10/2036	1.000%	Paris
In millions of pounds sterling	500	10/2008	10/2028	7.000%	Luxembourg
In millions of pounds sterling	700	10/2010	10/2060	5.000%	Paris
In millions of pounds sterling	400	11/2011	10/2060	5.000%	Paris
In millions of Swiss francs	175	10/2012	10/2024	1.625%	Zurich

	Dec. 31, 2022	Issue date	Maturity date	Interest	Listing
Private placements					
In millions of euros	100	10/2011	10/2023	CMS10YR+0.505%	Paris
In millions of euros	100	03/2013	03/2033	3.375%	None
In millions of euros	81	04/2013	04/2038	3.703%	None
In millions of euros	50	10/2015	10/2027	1.764%	Paris
In millions of euros	50	10/2015	10/2027	1.764%	Paris
In millions of euros	100	11/2015	11/2045	2.750%	Paris
In millions of euros	50	11/2015	11/2045	2.750%	Paris
In millions of euros	100	06/2017	06/2032	1.625%	Paris
In millions of euros	100	10/2017	09/2037	2.000%	Paris
In millions of euros	50	07/2018	07/2027	1.157%	Paris
In millions of euros	75	07/2018	07/2038	CMS	Paris
In millions of euros	12	06/2021	06/2024	0.000%	Paris
In millions of Norwegian krone	500	04/2013	04/2024	4.020%	Paris
In millions of yen	15,000	12/2008	12/2023	3.180%	None
In millions of yen	20,000	09/2015	01/2024	0.535%	Paris
In millions of Hong Kong dollars	1,400	10/2017	09/2032	2.650%	Paris
In millions of Hong Kong dollars	900	10/2017	10/2027	2.630%	Paris
In millions of US dollars	50	01/2019	12/2029	3.593%	None
In millions of Australian dollars	115	11/2015	11/2025	4.235%	Paris
In millions of Australian dollars	85	07/2018	07/2033	3.780%	Paris

11.2.3 Other borrowings and amounts payable to equity investments

At December 31, 2022, other borrowings mainly comprised negotiable commercial paper denominated in euros: €6,175 million of Negotiable European Commercial Paper (NEU CP) (including €5,375 million at floating rates before financial instruments) and €1,211 million (equivalent to USD 1,291 million) of fixed-rate United States Commercial Paper (USCP). These borrowings all fall due in less than one year.

ENGIE SA has credit lines on which €618 million was drawn at the year-end.

Borrowings from ENGIE Finance and ENGIE Alliance were stable at €4,000 million and €850 million, respectively, at the reporting date.

11.2.4 Other borrowings and debt

Other borrowings and debt (accrued interest on borrowings and debt, current accounts with a credit balance, deposits received from customers, bank overdrafts, bank facilities, etc.) are chiefly denominated in euros.

11.3 Analysis of borrowings and debt by currency and interest rate

11.3.1 Analysis by interest rate

	After hedging		Before hedging	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Floating rate				
Bonds	7,473	5,353	175	175
Amounts payable to equity investments	4,850	4,850	4,850	4,850
Other loans	6,188	4,023	5,389	616
Current accounts with subsidiaries	3,551	1,150	3,551	1,150
Other borrowings and debt	49		9	-
Fixed rate				
Hybrid bonds	3,393	3,767	3,393	3,767
Bonds	12,991	17,801	20,289	22,979
Amounts payable to equity investments	-	-	-	-
Other loans	1,819	2,071	2,619	5,478
Other borrowings and debt	571	346	610	346
TOTAL	**40,885**	**39,361**	**40,885**	**39,361**

11.3.2 Analysis by currency

	After hedging		Before hedging	
In millions of euros	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
In euros				
Hybrid bonds	3,393	3,767	3,393	3,767
Bonds	20,464	23,154	17,735	19,590
Amounts payable to equity investments	4,850	4,850	4,850	4,850
Other loans	8,008	6,094	6,797	5,139
Current accounts with subsidiaries	2,535	172	2,535	172
Other borrowings and debt	619	345	594	311
In foreign currency				
Hybrid bonds	-	-		
Bonds	-	-	2,729	3,564
Amounts payable to equity investments	-	-		
Other loans	-	-	1,211	955
Current accounts with subsidiaries	1,016	978	1,016	978
Other borrowings and debt	-	1	25	35
TOTAL	**40,885**	**39,361**	**40,885**	**39,361**

NOTE 12 Accruals (liabilities) and unrealized foreign exchange gains

In millions of euros	Dec. 31, 2021	Increases	Decreases	Dec. 31, 2022
Options contracts	3,165	2,638	-	5,803
Financial instruments	2,189	2,331	(86)	4,434
ACCRUALS (LIABILITIES)	**5,354**	**4,969**	**(86)**	**10,237**
UNREALIZED FOREIGN EXCHANGE GAINS	**244**	**208**	**-**	**452**

Accruals

Accruals related to financial instruments comprise:

- premiums on options intended to hedge commodity and/or interest rate and currency risk on debt;
- measurement at fair value of interest rate, currency and commodity derivatives not qualifying as hedges, and the currency portion of derivatives hedging the risk on debt denominated in foreign currencies;
- a contingency and loss provision is recognized in respect of unrealized foreign exchange losses on contracts that do not qualify for hedge accounting *(see Note 10.1.5)*.

Unrealized foreign exchange gains

Unrealized foreign exchange gains arise upon the translation at the year-end exchange rate of payables and receivables denominated in a currency other than the euro and upon the currency portion of derivative financial instruments intended to hedge currency risk on debt and/or commodity purchases and sales.

NOTE 13 Net operating income/(loss)

13.1 Breakdown of revenues

Revenues by region

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Energy sales		
• France	22,282	15,910
• International	41,453	16,136
Works, research and services provided	3,871	3,273
Revenues from non-core activities and other	894	905
TOTAL	**68,500**	**36,224**

The sharp increase in revenues was due to growth in sales to other gas operators, driven by a favorable price effect.

Revenues by business activity

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Energy sales		
• Natural gas	48,097	24,194
• Electricity	15,639	7,852
Other production sold		
• Works, research and services provided	3,871	3,273
• Revenues from non-core activities and other	894	905
TOTAL	**68,500**	**36,224**

At December 31, 2022, unbilled, un-metered revenues (energy in the meter) amounted to €2,092 million excluding tax.

13.2 Personnel costs

Change in headcount by category

In number of employees	Dec. 31, 2021	Change	Dec. 31, 2022
Operating staff	174	-	174
Senior technicians and supervisory staff	1,501	(79)	1,422
Managerial-grade staff	2,618	(79)	2,539
TOTAL	**4,293**	**(158)**	**4,135**

The average number of employees was 4,135 in 2022 and 4,293 in 2021.

Personnel costs break down as follows:

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Wages and salaries	(292)	(277)
Payroll expenses	(159)	(143)
Profit sharing	(17)	(22)
Other	(34)	(64)
TOTAL	**(503)**	**(507)**

Employee profit sharing

An employee profit-sharing agreement based on performance criteria was set up in compliance with the legal conditions prescribed by Order 86-1134 of October 21, 1986.

These profit-sharing mechanisms are treated as personnel costs.

13.3 Net additions to provisions

In millions of euros	Dec. 31, 2022	Dec. 31, 2021
Provision for capital renewal and replacement liabilities regarding concessions	-	-
Provision for site rehabilitation	208	(3)
Other provisions for losses	(23)	28
Other provisions for contingencies	(51)	(182)
TOTAL	**134**	**(158)**

Other contingency and loss provisions mainly comprised:

- net reversal of provisions for onerous contracts (€35.1 million);
- net addition to provisions for employee disputes (€1.7 million);
- net addition to provisions for contingencies (€8.8 million), mainly negative fair value adjustments to swaps (€9.9 million);
- net reversal of provisions for commercial litigation (€25 million);
- net reversal of provisions for tax reassessments (€1.3 million);
- net addition to provisions for site rehabilitation (€208 million);
- net reversal of provisions for miscellaneous expenses (€22.7 million).

13.4 Operating expense transfers

Expense transfers are included in other operating income and amounted to €5 million in 2022 and €2 million in 2021.

13.5 Operating subsidies

Operating subsidies include the compensation for public service charges to be received as a result of the price freeze on regulated tariffs for gas and electricity sales at regulated tariffs over the year.

NOTE 14 Net financial income/(loss)

In millions of euros	Expenses	Income	Total Dec. 31, 2022	Total Dec. 31, 2021
Other interest income and expenses	(1,118)	574	(544)	(520)
Income from amounts receivable from equity investments	-	8	8	8
Foreign exchange gains/(losses)	(2,090)	1,809	(281)	(146)
Dividends received	-	2,552	2,552	1,044
Movements in provisions for financial items	(37)	89	52	(4)
TOTAL	**(3,245)**	**5,031**	**1,786**	**381**

NOTE 15 Net non-recurring income/(loss)

In millions of euros	Expenses	Income	Total Dec. 31, 2022	Total Dec. 31, 2021
Disposals of property, plant and equipment, and intangible assets	(82)	45	(37)	(14)
Disposals of financial fixed assets	(5,729)	6,748	1,018	1,003
Provision for price increases	(324)	-	(324)	(89)
Accelerated depreciation and amortization	(323)	345	22	(23)
Movements in provisions relating to equity investments	(1,916)	281	(1,635)	791
Other	(704)	199	(505)	103
TOTAL	**(9,078)**	**7,617**	**(1,461)**	**1,771**

"Other" mainly includes miscellaneous transactions such as the one-off Nord Stream 2 payment, scrapping of software, and rebilling to subsidiaries of losses on the issuance of bonus shares.

NOTE 16 Tax position

16.1 Tax consolidation

The current option to file consolidated tax returns is automatically renewed every five years.

16.2 Income tax benefit/(expense)

The income tax rate in 2022 was 25.82%, including the 3.3% social contribution.

In millions of euros	2022 Income before tax	2022 Income tax*	2022 Net income/(loss)	2021 Income before tax	2021 Income tax*	2021 Net income/(loss)
Income tax due by ENGIE SA for the period (excluding tax consolidation group)						
• on recurring income	2,838		2,838	(465)		(465)
• on non-recurring income	(1,461)		(1,461)	1,771		1,771
Income tax expense (income tax payable by subsidiaries/provision for transfer of tax savings to entities in the tax consolidation group)		**321**	**321**	-	**474**	**474**
• income tax relating to subsidiaries within the tax consolidation group	204				408	
• net change in provisions for income tax	97				26	
• other (mainly adjustments to research and CICE tax credits held in 2021/2022)	20				40	
TOTAL	**1,377**	**321**	**1,698**	**1,306**	**474**	**1,780**

* *A positive figure signifies a tax benefit.*

In 2022, unlike in 2021, ENGIE SA generated an income tax benefit on an individual company level. Dividends received from subsidiaries are eligible for "parent/subsidiary" tax treatment and are therefore exempt, subject to adding back a share of expenses equal to 1% or 5%, as applicable.

The income tax benefit amounted to €320.6 million *versus* an income tax benefit of €474.3 million in 2021, chiefly reflecting:

- savings of €252.9 million resulting from tax consolidation as of December 31, 2022: €204 million of this amount was recognized as a research tax credit and €48.9 million had already been recognized as tax income in previous years (a receivable arising in prior years and not yet offset against tax losses), compared with €407.8 million in 2021. This tax consolidation gain arises from the difference between:
  - the €338.6 million contribution to Group income tax due in 2022 to ENGIE SA by subsidiaries reporting a profit (€406.7 million in 2021),
  - income tax due by the tax consolidation group amounting to €195.9 million before the allocation of tax credits, *versus* an income tax benefit of €1 million in 2021. Tax credits were applied for an amount of €110.3 million, including €47.4 million for patronage, €1.3 million for other tax credits and €61.6 million for research tax credits (including €48.9 million and €12.7 million, respectively for research tax credits in prior-years and in the current year), representing an income tax expense of €134.6 million,
  - a net reversal of €97 million from the income tax provision in 2022 compared with a reversal of €25.8 million in 2021, chiefly reflecting:
    - a €36.2 million net reversal in respect of the utilization of tax losses by consolidated subsidiaries of ENGIE SA *versus* €43.7 million in net additions in 2021,
    - no reversal for tax risks, as in 2021,
    - €60.8 million in reversals of provisions relating to the excess amortization during the period of the amortizable component of the capital gain generated on the sale of gas distribution activities in 2007;
- other miscellaneous items representing a net tax credit of €19.6 million in 2022, mainly due to the internal contribution of subsidiaries included within the tax consolidation group in Y-1 for an amount of €21.2 million.

16.3 Deferred tax

The deferred tax position shown in the table below results from temporary differences between the treatment of income and expenses for tax and accounting purposes.

	2022	2021
In millions of euros	25.82%	25.82%
Year of reversal	2023 and beyond	2022 and beyond
Deferred tax liabilities		
• Unrecognized deductible expenses	293	272
• Untaxed income recognized	84	109
Deferred tax assets		
• Temporary non-deductible expenses recognized	1,872	1,448
• Unrecognized taxable income	497	283
Net deferred tax base	**1,994**	**1,350**
• Theoretical impact of deferred tax	515	349

NOTE 17 Off-balance sheet commitments (excluding employee benefit obligations)

17.1 Financial commitments

The ENGIE group's Finance Division is responsible for managing all financial risks (interest rate, currency, liquidity and credit risks).

17.1.1 Liquidity risk

The Group's financing policy is based on:

- centralizing external financing;
- diversifying sources of financing between credit institutions and capital markets;
- achieving a balanced debt repayment profile.

The centralization of financing needs and cash flow surpluses for the Group is provided by its financing vehicles (long-term and short-term), as is automated cash centralization *via* its cash pooling vehicles.

Short-term cash requirements and cash surpluses for Europe are managed by dedicated financial vehicles in France (ENGIE Finance) and Luxembourg (ENGIE Treasury Management). These vehicles centralize virtually all of the cash requirements and surpluses of companies controlled by the Group, ensuring that counterparty risk and the investment strategy are managed consistently.

The Group seeks to diversify its long-term sources of financing by carrying out public or private bond issues within the scope of its Euro Medium Term Notes program. It also issues NEU CP (Negotiable European Commercial Paper) in France as well as USCP (United States Commercial Paper) in the United States.

Long-term capital markets are accessed chiefly by ENGIE SA in connection with the Group's new bond issues, and in connection with commercial paper.

As commercial paper is relatively inexpensive and highly liquid, it is used by the Group in a cyclical or structural fashion to finance its short-term cash requirements. However, all outstanding commercial paper is backed by confirmed bank lines of credit so that the Group could continue to finance its activities if access to this financing source were to dry up.

The Group's liquidity is based on maintaining cash and cash equivalents and access to confirmed credit facilities. ENGIE SA can therefore access facilities readily convertible into cash, enabling it to meet its cash requirements in the ordinary course of business or to serve as a bridge to finance external growth operations:

- ENGIE SA has credit facilities with various banks under which €11,035 million remains undrawn. These facilities include two syndicated credit lines, respectively for €5,000 million and €4,000 million, maturing in December 2025 and December 2027. At December 31, 2022, ENGIE SA had drawn down €618 million on these facilities. These facilities are not subject to any covenants or credit rating requirements;
- ENGIE SA also has access to short-term debt markets through short-term debt issues: USCP for USD 1,291 million (€1,210 million) and NEU CP for €6,175 million at December 31, 2022.

17.1.2 Counterparty risk

ENGIE SA is exposed to counterparty risk arising on its operating and financing activities.

To manage counterparty risk arising on operating activities, the Group has put in place monitoring procedures adapted to the characteristics of the counterparties concerned (private corporations, individuals, and public authorities). Customers representing a major counterparty for the Company are covered by procedures applicable to the financial activities described below, thereby providing broad-ranging oversight of the corresponding counterparty risk.

For its financing activities, ENGIE SA has put in place procedures for managing and monitoring risk based on:

- accreditation of counterparties according to external credit ratings;
- objective market data (credit default swaps, market capitalization);
- their financial strength; and
- risk exposure limits put in place.

ENGIE SA also draws on a structured legal framework based on master agreements (including netting clauses) and collateralization contracts (margin calls) to reduce its exposure to counterparty risk. The oversight procedure for managing counterparty risk arising from financing activities is managed by a middle office reporting to the Finance Division.

17.1.3 Interest rate risk

ENGIE SA has adopted a policy for optimizing the cost of its net debt using a combination of financial instruments (interest swaps and options) according to market conditions.

ENGIE SA takes care to ensure that the difference between its floating-rate debt and its cash surpluses invested at a floating rate has a low degree of exposure to adverse changes in short-term interest rates.

Positions are managed centrally and are reviewed each quarter or whenever any new financing is raised. Management must approve in advance any transaction that causes the interest rate mix to change significantly.

	Notional amount at Dec. 31, 2022						
In millions of euros	Due in 1 year or less	Due in 1 to 5 years	Due in 6 to 10 years	Due after 10 years	Total	Fair value including accrued interest	Notional amount at Dec. 31, 2021
Interest rate swap							
Fixed-rate borrower/floating-rate lender	1,100	2,972	1,438	6,706	12,216	1,383	8,653
Floating-rate borrower/fixed-rate lender	2,298	7,397	2,938	5,431	18,064	(1,516)	16,590
Swaptions							
Floating-rate borrower/fixed-rate lender		500	500		1,000	(40)	-
TOTAL EUR	**3,398**	**10,869**	**4,876**	**12,137**	**31,280**	**(173)**	**25,243**
Interest rate swap							
Fixed-rate borrower/floating-rate lender	1,552	1,249			2,801	51	1,461
Floating-rate borrower/fixed-rate lender					-		-
TOTAL USD	**1,552**	**1,249**	**-**	**-**	**2,801**	**51**	**1,461**
TOTAL	**4,950**	**12,118**	**4,876**	**12,137**	**34,081**	**(122)**	**26,704**

In millions of euros	Notional amount at Dec. 31, 2022						
	Due in 1 year or less	Due in 1 to 5 years	Due in 6 to 10 years	Due after 10 years	Total	Fair value including accrued interest	Notional amount at Dec. 31, 2021
Currency swap							
Fixed-rate borrower/fixed-rate lender			638	1,291	1,929	(329)	1,929
Fixed-rate borrower/floating-rate lender					-		-
TOTAL GBP	-	-	638	1,291	1,929	(329)	1,929
Currency swap							
Floating-rate borrower/fixed-rate lender	128	-			128	(21)	229
Fixed-rate borrower/fixed-rate lender		149			149	(5)	149
TOTAL JPY	128	149	-	-	277	(26)	378
Currency swap							
Fixed-rate borrower/fixed-rate lender	-	-	-	-	-	-	-
Floating-rate borrower/fixed-rate lender		144			144	31	144
TOTAL CHF	-	144	-	-	144	31	144
Currency swap							
Fixed-rate borrower/fixed-rate lender			44		44	6	44
Fixed-rate borrower/floating-rate lender					-		-
Floating-rate borrower/floating-rate lender					-		-
Floating-rate borrower/fixed-rate lender	-				-	-	580
TOTAL USD	-	-	44	-	44	6	624
Currency swap							
Fixed-rate borrower/fixed-rate lender	-	67	-	-	67	(18)	67
TOTAL NOK	-	67	-	-	67	(18)	67
Currency swap							
Fixed-rate borrower/fixed-rate lender	-	75		54	129	4	129
TOTAL AUD	-	75	-	54	129	4	129
Currency swap							
Fixed-rate borrower/fixed-rate lender	-	98	153	-	251	35	251
TOTAL HKD	-	98	153	-	251	35	251
Currency swap							
Floating-rate borrower/floating-rate lender	-	-	-	-	-	-	-
TOTAL MXN	-	-	-	-	-	-	-
TOTAL	128	533	835	1,345	2,841	(297)	3,522

Interest rate hedges outstanding at December 31, 2022 are described below:

- ENGIE SA entered into short-term swaps (maturing in less than six months) to hedge the interest rate risk on its short term cash management transactions (NEU CP issues). These are floating-rate borrower (Ester)/fixed-rate lender swaps with a notional amount of €798 million;
- in line with the Group's interest rate risk policy and with due reference to market conditions, interest rate risk is managed centrally through the use of interest rate swaps and options within the framework of an annual risk mandate;
- as part of the Group's interest rate risk management policy, since 2009 ENGIE SA has set up interest rate hedges indexed to the dollar rate fixing the interest rate on the Group's USD debt for a nominal amount of USD 1,655 million at end 2022 (€1,552 million equivalent value);
- ENGIE SA has a portfolio of 2027 and 2028 forward interest rate pre-hedges with 20-year maturities to protect the refinancing interest rate on a portion of its debt at the Group level.

17.1.4 Currency risk

Foreign currency exchange risk (or "FX" risk) is reported and managed based on a Group-wide approach, reflected in a dedicated Group policy that is approved by Group Management. At ENGIE SA level, there are three main sources of currency risk:

- regular transaction risk

  This risk arises on commercial transactions involving the purchase and sale of natural gas in a currency other than the euro. Gas purchase and sale contracts are often indexed to the price of oil-based products, mostly listed in US dollars.
- financial transaction risk

  All significant exposures related to cash, financial debt, etc. are systematically hedged.
- translation risk

  This risk involves consolidated entities that do not have the euro as their functional currency. The main exposures to translation risk correspond to assets in USD, BRL and GBP.

The exposure to currency risk on these transactions is managed and monitored as follows:

- pass-through mechanisms are applied in determining (i) sale prices for eligible customers, and (ii) regulated rates;
- the margin on fixed-price sale contracts or contracts indexed by financial swaps is hedged;
- translation risk is managed centrally, with a focus on securing the net asset value.

There is a time lag between the impact of fluctuations in the US dollar on procurement costs and their repercussion on sales prices, reflecting mainly the effect of rolling averages and the inventory cycle.

To manage its exposure to fluctuations in exchange rates, ENGIE SA mainly uses forward currency purchase or sale contracts and currency swaps to hedge its gas purchases and its financing activities.

To limit the impact of translation risk on certain amounts receivable from equity investments and on future foreign currency purchases, and to hedge the net asset risk arising on consolidation, ENGIE SA has taken new positions or reinforced existing positions in forward currency transactions that allow it to cancel out or minimize translation adjustments on these deposits and loans or other future operations.

At December 31, 2022, commitments corresponding to translation and financial risk were as follows:

	Fixed portion of commitments at Dec. 31, 2022					
In millions of euros	Maturity					
Forward contracts	**2023**	**2024**	**2025 and beyond**	**Euro equivalent at Dec. 31, 2022**	**Exchange rate fluctuations at Dec. 31, 2022**	**Fixed portion of commitments at Dec. 31, 2021**
Long positions						
AUD	97	35	67	199	8	130
CAD	1	-	-	1	-	4
CHF	19	-	-	19	-	-
CNH	26	-	-	26	1	23
GBP	149	1	-	150	-	528
NZD	-	-		-	-	9
PLN	-	-	-	-	-	-
USD	1,362	-	-	1,362	(35)	1,061
Short positions						
AUD	-	-	-	-	-	3
CAD	20	-		20	(1)	4
CHF	19	-	-	19	-	-
CNH	26	-	-	26	1	23
GBP	94	2	-	96	(2)	266
NZD	-	-		-	-	9
PLN	1	-	-	1	-	-
USD	3,427	-	769	4,196	(99)	1,973

17.1.5 Other financial commitments given

In millions of euros	Total at Dec. 31, 2022	Maturity End-2023	Maturity Between 2024 and 2027	Maturity 2028 and beyond
Market-related commitments				
Performance and other guarantees	323	107	214	2
Performance and other guarantees given on behalf of subsidiaries	13,488	8,004	1,949	3,535
Financing commitments				
Personal sureties given	7	7		
Guarantees and endorsements given to subsidiaries	7,404	1,347	764	5,293
Collateral given	-			
Credit lines	-			
Other commitments given				
Contractual guarantees for sales of businesses	3,923		3,756	167
Operating lease commitments	865	63	289	513
Finance lease commitments	-			
Commitments relating to LNG tankers	-			

Market-related commitments totaling €13,811 million at end-2022 comprise performance and other guarantees given by ENGIE SA with respect to operating contracts, both on its own behalf and on behalf of its subsidiaries.

Financing commitments totaling €7,411 million comprise payment guarantees granted by ENGIE SA to third parties on behalf of its subsidiaries (€7,404 million) and to personal sureties (€7 million).

Contractual guarantees for sales of businesses totaling €3,923 million relate mainly to commitments given on the disposals of:

- GRTgaz to Société d'Infrastructures Gazières (SIG). ENGIE SA has given SIG a 20-year warranty against any losses incurred by SIG due to inaccurate representations regarding the non-pollution of the land owned or exploited by GRTgaz and the cost of the resulting clean-up work payable by GRTgaz not covered by the tariffs. The amount of the warranty is €167 million and is proportional to the percentage interest in GRTgaz (25%) acquired by SIG in July 2011;
- ENGIE Exploration & Production (EPI), following the sale of the 30% minority interest to Fullbloom Investment Corporation (FIC), a wholly-owned subsidiary of China Investment Corporation (CIC) in 2011, for an amount of up to €2,953 million expiring in 2026;
- 10% of train 1 of the Atlantic LNG facility in Trinidad and Tobago, for an amount of up to €797 million expiring in 2026;
- Culturespaces on January 14, 2022, expiring on March 30, 2026, for a total amount of €6 million.

Operating lease commitments totaling €865 million relate to the present value of lease payments outstanding through to maturity of the property leases within the scope of ENGIE SA's operations. Commitments for the Campus and Urban Garden projects remain stable at €578 million and €40 million respectively. As certain property lease expenses are rebilled to Group subsidiaries, the corresponding commitments are shown in commitments received.

Other commitments have been given in respect of performance and completion guarantees:

- to the Hong Kong authorities, in respect of contracts awarded to Sita (which became SUEZ Environnement and then SUEZ), which counter-guaranteed ENGIE SA for the same amounts. These contracts relate to:
  - the operation of the Nent landfill in partnership with the Newworld and Guandong groups until 2063,
  - the operation of various landfill sites, including Went and NWNT until 2033 and Pillar Point until 2036, initially in partnership with Swire Pacific Ltd. When Swire Pacific sold its interest in the Swire SITA Waste Services joint venture to its partner SUEZ Environnement in December 2009, these guarantees were reissued by ENGIE SA. However, if a guarantee is called in respect of the period during which the subsidiary was under joint control, the Swire Group has agreed in principle to share the ultimate liability equally between the two groups;
- to the Lord Mayor, Aldermen and Burgesses of Cork, in respect of a contract for the construction and operation until 2024 of the Cork City wastewater purification plant awarded to a consortium comprising two ENGIE SA subsidiaries, Vinci Group subsidiary Dumez GTM, PJ Hegarty & Sons and Electrical & Pump Services. Each consortium member and Vinci agreed to counter-guarantee ENGIE SA;
- in 2008, SUEZ Environnement (which became SUEZ in 2016) undertook to counter-guarantee all of the guarantees given by ENGIE SA for the Environment Division entities for which SUEZ was not yet counter-guaranteed;
- as part of the spin-off of water and wastewater activities in 2000, a performance guarantee expiring in 2028 was granted by ENGIE SA in the context of its transfer of local public service franchise contracts to Lyonnaise des Eaux. There were 19 such contracts at end-2022. The new entity, SUEZ, pledged an indemnity to ENGIE in respect of these contracts in 2022, that counter-guarantees ENGIE's commitment.

Following Veolia's takeover bid for SUEZ, ENGIE SA informed Veolia of the commitments and performance guarantees for certain contracts granted by ENGIE SA to SUEZ and its subsidiaries. Veolia undertook, as soon as it had obtained control of SUEZ – which is now the case – to use best efforts to take ENGIE's place in those commitments and guarantees and to counter-guarantee, either directly or through a subsidiary, all of ENGIE's obligations thereunder. Veolia has also undertaken to do its utmost to ensure the full and proper performance by SUEZ or its subsidiaries of the contracts covered by these commitments and guarantees.

17.1.6 Other financial commitments received

		Maturity		
In millions of euros	Total at Dec. 31, 2022	End-2023	Between 2024 and 2027	2028 and beyond
Market-related commitments				
Performance and other guarantees	392	-	392	-
Financing commitments				
Undrawn credit facilities	11,047	750	10,159	138
Personal sureties received	5		5	
Other financing commitments received	-	-	-	-
Other financing commitments received in relation to subsidiaries	-	-	-	-
Other commitments received				
Counter-guarantees for personal sureties	1,030	1,030		
Counter-guarantees for trading commitments	-	-	-	-
Operating lease commitments	339	94	202	43
Finance lease commitments	-	-	-	-
Commitments relating to LNG tankers	-	-	-	-

ENGIE SA secured a €5,000 million syndicated credit line in April 2014. It was initially due to mature in 2019 but has been extended to December 2025. A new €4,000 million syndicated credit line was secured in December 2021 maturing December 2026, however in 2022 it was extended through December 2027.

Counter-guarantees given on personal sureties concern guarantees received from members of GIE ENGIE Alliance.

Operating lease commitments totaling €339 million correspond to the rebilling of rent for premises occupied by Group subsidiaries.

17.2 Commodity-related commitments

17.2.1 Natural gas and electricity commitments

Gas supplies in Europe are based partly on long-term contracts, including "take-or-pay" contracts. These long-term commitments make it possible to finance costly production and transmission infrastructures. The seller makes a long-term commitment to serve the buyer, subject to a commitment by the latter to buy minimum quantities regardless of whether or not it takes delivery thereof. These commitments are combined with backup measures (*force majeure*) and flexible volume arrangements, making it possible to manage any uncertainties affecting demand, primarily weather conditions, as well as any technical contingencies that may arise.

These types of contracts can run up to 25 years and are used by ENGIE SA to meet the demands of its customers for natural gas in the medium and long term.

The contracts provide for reciprocal commitments regarding specified quantities of gas:

- a commitment by ENGIE SA to purchase quantities of gas above a minimum threshold;
- a commitment by suppliers to provide these quantities at competitive prices.

The appeal of these contracts is provided by indexed price formulas and price adjustment mechanisms.

At December 31, 2022, ENGIE SA had commitments to purchase a minimum of 417 TWh within one year, 1,034 TWh between two and five years, and 756 TWh after five years.

ENGIE SA also entered into forward purchases and sales of natural gas, primarily at maturities of less than one year, as part of its trading activities. These consist of purchases and sales on short-term markets and offers featuring engineered prices for other operators.

At December 31, 2022, commitments given by ENGIE SA totaled 5 TWh under forward purchase contracts and 199 TWh under forward sale contracts.

To meet its commitments to take delivery of specified volumes, ENGIE SA has entered into long-term contracts to reserve land and sea transmission capacities.

At December 31, 2022, commitments given by ENGIE SA totaled 122 TWh under forward electricity purchase contracts and 41 TWh under forward electricity sale contracts.

17.2.2 Commodity derivatives

As part of its energy brokerage activities, ENGIE SA uses energy derivatives to adjust its exposure to fluctuations in prices of natural gas, electricity and oil products.

Commodity derivatives (natural gas, oil and electricity) consist mainly of swaps, futures and options set up to manage price risk within the scope of ENGIE SA's trading activities. These instruments are traded with third parties by the Company's specialized subsidiary, ENGIE Global Markets on organized or over-the-counter markets.

These derivatives are contracted to manage risks arising on:

- price engineering transactions designed to meet the growing demand among customers for tight controls on gas and electricity price risk. These products are primarily intended to guarantee a commercial margin regardless of trends in the commodity indexes included in the prices offered to customers, even when they differ from the commodity indexes to which ENGIE SA purchases are pegged. Options (calls and puts) are set up to guarantee maximum and minimum prices;
- measures taken to optimize procurement costs. Energy procurement costs, assets used in electricity production and reservations of available transmission and storage capacity not required to supply customers are systematically valued on the market.

The exposure to commodity price risk on these commercial transactions is managed and monitored as follows:

- pass-through mechanisms are applied in determining (i) sale prices for eligible customers, and (ii) regulated rates;
- the margin on fixed-price sale contracts or contracts indexed by financial swaps is hedged.

Depending on the nature of the hedged items, gains and losses on these transactions are recognized either in revenue or in energy purchase cost.

There is a time lag between the impact of changes in commodity prices on procurement costs and their repercussion on sales prices, reflecting mainly the effect of rolling averages and the inventory stocking/run-down cycle.

17.2.2.1 Instruments not recognized as hedges

	Notional amount at Dec. 31, 2022 – *In GWh by maturity*				Fair value at Dec. 31, 2022	Notional amount at Dec. 31, 2021
	x < 1 year	1 year < x < 2 years	x > 2 years	*In millions of euros*	*In millions of euros*	*In GWh*
SWAPS (long position)						
Natural gas	106,406	28,563	30,332	10,434	1,596	73,485
Oil-based products	13,428	5,407	25	1,375	279	27,511
Electricity	540	383	-	316	(118)	841
CER EUA – CO_2 (1)	-	-	-	-	-	-
SWAPS (short position)						
Natural gas	(90,143)	(18,485)	(24,006)	(7,569)	(580)	(70,753)
Oil-based products	(6,481)	(1,690)	(22)	(696)	(98)	(10,207)
Electricity	(1,058)	(493)	(325)	(542)	130	(1,157)
CER EUA – CO_2 (1)	-	-	-	-	-	-
OPTIONS (long position)						
Natural gas	20,065	-	-	47	6	779
Oil-based products	-	-	-	-	-	-
Electricity	-	-	-	-	-	-
OPTIONS (short position)						
Natural gas	(2,462)	(165)	(108)	(115)	(51)	(3,752)
Oil-based products	-	-	-	-	-	-
Electricity	-	-	-	-	-	-

(1) *In kg of CO_2 quotas.*

17.2.2.2 Instruments recognized as hedges

Hedge accounting is not used in ENGIE SA's parent company financial statements.

17.2.2.3 Physical delivery contracts

	Notional amount at Dec. 31, 2022 In GWh by maturity x < 1 year	1 year < x < 2 years	x > 2 years	In millions of euros	Fair value at Dec. 31, 2022 In millions of euros	Notional amount at Dec. 31, 2021 In GWh
Forwards (long position)						
Natural gas	873,728	234,824	59,482	81,789	(2,969)	1,268,292
Oil-based products	-	-	-	-	-	-
Electricity	48,839	15,005	5,084	19,518	(663)	46,725
CER EUA – CO_2 (1)	-	-	-	-	-	-
Forwards (short position)						
Natural gas	(899,417)	(238,706)	(51,859)	(89,984)	4,780	(1,220,034)
Oil-based products	-	-	-	-	-	-
Electricity	(34,885)	(10,164)	(11,101)	(13,029)	(1,282)	(33,085)
CER EUA – CO_2 (1)	-	-	-	-	-	-
Options (long position)						
Natural gas	1,396	-	-	507	582	-
Oil-based products	-	-	-	-	-	-
Electricity	2,957	3,320	112	250	876	17,275
Options (short position)	-	-	-	-	-	-
Natural gas	(864)	-	-	(1,541)	(1,517)	(2,978)
Oil-based products	-	-	-	(27)	(27)	-
Electricity	4,636	1,425	-	(334)	(855)	(27,506)

(1) In kg of CO_2 quotas.

17.3 Insurance of eligible risks

ENGIE SA systematically transfers all material risks based on an identification of risks eligible for insurance - particularly relating to Company assets and damages caused to third parties. Insurance policies offer extensive coverage in order to limit the financial impact of any claims on the Group's accounts.

To ensure a consistent approach, insurance policies are managed at Group level. As a result, new projects developed by subsidiaries can be incorporated within existing policies to enable the parent company to fully assume its role for its majority-owned subsidiaries.

NOTE 18 Pensions and other employee benefit obligations

Overview of obligations

In millions of euros	EGI sector plan		Non-EGI sector plan		Total	
	Dec. 31, 2022 (1)	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Pension benefits	**1,503**	**2,175**	**242**	**290**	**1,745**	**2,465**
Pension plan	1,503	2,175	242	290	1,745	2,465
End-of-career and other post-employment benefits	**139**	**225**	**18**	**24**	**158**	**248**
Reduced energy and water prices	63	102	3	4	66	106
End-of-career indemnities	31	48	-	-	31	48
Immediate bereavement benefits	34	60	-	-	34	60
Other (2)	11	15	15	20	26	34
Other employee benefits	**66**	**87**	**-**	**-**	**66**	**87**
Disability benefits and other	60	79	-	-	60	79
Long-service awards	6	8	-	-	6	8
TOTAL	**1,708**	**2,487**	**260**	**314**	**1,969**	**2,801**

(1) *Including €80 million covered by a provision in the parent company financial statements (see Note 18.4).*
(2) *Indemnities for the partial reimbursement of educational expenses, exceptional end-of-career vacation and the former SUEZ supplementary healthcare plan.*

Actuarial assumptions

The actuarial assumptions were determined together with independent actuaries. Weighted discount rates for the main actuarial assumptions are presented below:

	Pension benefit obligations		Other post-employment benefit obligations		Long-term benefit obligations		Total benefit obligations	
EGI sector plan	2022	2021	2022	2021	2022	2021	2022	2021
Discount rate	3.72%	1.31%	3.73%	1.31%	3.92%	1.06%	3.81%	1.25%
Inflation rate	2.13%	1.82%	2.13%	1.82%	2.13%	1.82%	2.13%	1.82%
Average remaining working years of participating employees	20 years	23 years	20 years	23 years	20 years	23 years	20 years	23 years

Non-EGI sector plan	Pension benefit obligations		Other post-employment benefit obligations		Long-term benefit obligations		Total benefit obligations	
Former SUEZ	2022	2021	2022	2021	2022	2021	2022	2021
Discount rate	3.15%	0.73%	-	-	-	-	3.15%	0.73%
Inflation rate	2.27%	1.80%	-	-	-	-	2.27%	1.80%
Average remaining working years of participating employees								

Non-EGI sector plan	Pension benefit obligations		Other post-employment benefit obligations		Long-term benefit obligations		Total benefit obligations	
Former Cie Financière	2022	2021	2022	2021	2022	2021	2022	2021
Discount rate	3.15%	0.73%	-	-	-	-	3.15%	0.73%
Inflation rate	2.27%	1.80%	-	-	-	-	2.27%	1.80%
Average remaining working years of participating employees								

According to the Group's estimates, a 1% increase or decrease in the discount rate would result in a change of 16% in the projected benefit obligation.

18.1 Pensions

The main defined-benefit plans operated by ENGIE SA comprise:

- pensions falling within the scope of the special plan for companies belonging to the electricity and gas industries sector ("EGI");
- pension plans taken over following the merger of SUEZ into ENGIE SA:
  - the 1953 supplementary pension plan, closed since December 31, 1988,
  - plans operated by the former Compagnie de SUEZ (annuity plans based on end-of-career salaries),
  - supplementary pension plans for senior managers operated by all water companies (annuity plans based on end-of-career salaries).

French government No. 2019-697 on top-up pension plans, which was published on July 4, 2019 pursuant to the European Directive of April 16, 2014, abolished the defined benefit pension plans governed by Article L137-11 of the French Social Security Code (known as "Article 39 plans"), froze the rights of existing members and closed the plans to any new members as of that date.

Following the plan's closure and crystallization of rights accrued in 2019, in 2020 the Group transferred the rights of beneficiaries, including Executive Committee members, to a defined contribution plan (known as an "Article 82" plan).

EGI sector pension plan

Salaried employees and retirees of EGI sector companies have been fully affiliated to the Caisse Nationale des Industries Électriques et Gazières (CNIEG) since January 1, 2005. The CNIEG is a private welfare body placed under the joint responsibility of the ministries in charge of social security and the budget. The conditions for calculating benefit entitlements under the EGI plan are set out in the national statute for EGI sector employees (Decree of June 22, 1946) and determined by the government. By law, companies cannot amend any of these conditions.

Unregulated past specific benefits (at December 31, 2004) are funded by EGI sector entities to the extent defined by Decree No. 2005-322 of April 5, 2005. For ENGIE SA, this funding obligation represents 3.25% of the past specific benefit obligations of all EGI sector companies.

The specific benefits vested under the plan since January 1, 2005 are wholly financed by EGI sector companies in proportion to their respective share of the electricity and gas market as measured in terms of total payroll costs.

Calculation of pension obligations

ENGIE SA's pension obligations are calculated using a yield-to-maturity method in line with ANC Recommendation 2013-02 of November 7, 2013. The method used is known as the projected unit credit method and is based on assumptions regarding end-of-career salaries, retirement ages, changes in the population of retired employees and payment of benefits to surviving spouses.

The obligations are calculated as follows:

- based on the rights vested at the measurement date, under both the EGI plan and statutory pension plans;
- for all active and retired employees in the EGI sector, and all employees and eligible beneficiaries for former SUEZ plans;
- actuarial gains and losses are recognized immediately.

18.2 Other employee benefit obligations

Benefits payable to active and retired employees of EGI sector companies (excluding pensions) are described below:

- post-employment benefits:
  - reduced energy prices,
  - end-of-career indemnities,
  - exceptional end-of-career vacation,
  - death in service benefits (*régime des capitaux décès*),
  - assistance with educational expenses;
- long-term benefits:
  - allowances for occupational accidents and illnesses,
  - temporary and permanent disability allowances,
  - long-service awards,
  - asbestos benefit.

Retired employees of former SUEZ are eligible for post employment benefits consisting of a cash contribution to the costs of their water supply and complementary healthcare insurance.

The obligation is calculated using the projected unit credit method.

The Group's main obligations are described below.

18.2.1 Reduced energy prices

Under Article 28 of the national statute for EGI sector personnel, all current and former employees are entitled to benefits in kind which take the form of energy. This benefit entitles employees to electricity and gas supplies at a reduced price.

The amount of the obligation regarding gas supplied to ENGIE SA and EDF employees corresponds to the likely present value of the power (kWh) supplied to the employees or their dependents during the retirement phase, assessed based on the unit cost of the energy. The amount of the obligation also takes account of the likely value of the price of the energy exchange agreement with EDF.

18.2.2 End-of-career indemnities

As of July 1, 2008, retiring employees (or their dependents in the event of death during active service) are entitled to end of-career indemnities which increase in line with the length of-service within the EGI sector, capped at 40 years.

18.2.3 Allowances for occupational accidents and illnesses

Like other employees under the standard pension plan, EGI sector employees are entitled to compensation for accidents at work and other occupational illnesses. These benefits cover all employees or the dependents of employees who die as a result of occupational accidents or illnesses, or injuries suffered on the way to work.

The amount of the obligation corresponds to the likely present value of the benefits to be paid to current beneficiaries, taking into account any reversionary annuities.

18.3 Change in present value of benefit obligations

	EGI sector plan						Non-EGI sector plan							
	Pension benefits		End-of-career and other post-employment benefits		Long-term benefits		Pension benefits		End-of-career and other post-employment benefits		Long-term benefits		Total	
In millions of euros	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Present value of benefit obligation at January 1	**2,174**	**2,480**	**224**	**286**	**87**	**94**	**290**	**297**	**24**	**27**	**-**	**-**	**2,799**	**3,184**
Impact of mergers and spin-offs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Past service cost: plan amendments	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Current service cost	27	35	8	10	9	12	-	-	-	-	-	-	44	57
Interest cost	26	17	3	2	1	-	3	1	-	-	-	-	33	21
Actuarial gains and losses due to financial assumption changes	(670)	(240)	(77)	(29)	(20)	(6)	(36)	(7)	(4)	(1)	-	-	(807)	(284)
Actuarial gains and losses due to demographic assumption changes	(29)	(7)	(9)	(6)	(4)	(1)	-	-	-	-	-	-	(42)	(13)
Actuarial gains and losses due to experience adjustments	48	(32)	(4)	(28)	1	(4)	-	14	-	-	-	-	45	(50)
Benefits paid under all plans (funded and unfunded) (1)	(73)	(79)	(7)	(6)	(7)	(8)	(15)	(15)	(2)	(2)	-	-	(104)	(110)
Other (2)	-	-	-	(5)	-	-	-	-	-	-	-	-	-	(5)
Present value of benefit obligation at December 31	**1,503**	**2,174**	**139**	**224**	**66**	**87**	**242**	**290**	**18**	**24**	**-**	**-**	**1,967**	**2,799**

(1) *The aggregate impact on income of benefits paid under all plans totaled €104 million in 2022 versus €110 million in 2021.*

(2) *Including the €4.5 million impact of the IFRIC interpretation on the recognition of rights under staged vesting plans, pursuant to ANC recommendation 2013-02 as amended on November 5, 2021.*

18.4 Provisions

At year-end, ENGIE SA sets aside provisions in respect of allowances for occupational accidents and illnesses, and temporary and permanent disability benefits for active employees, as well as for benefits due during employees' active working lives (long-service awards and exceptional end-of-career vacation). Provisions for pensions and other employee benefit obligations transferred by SUEZ at the time of the 2008 merger are also recognized by ENGIE SA in liabilities. These provisions are written back as and when the corresponding liabilities for which they were set aside at end2007 are extinguished. No further amounts are set aside to these provisions in respect of rights newly vested or the unwinding of discounting adjustments.

At December 31, 2022, ENGIE SA booked provisions of €80 million compared to €105 million at end-2021, representing an increase of €25 million in employee-related provisions.

Changes in provisions for employee benefit obligations

	EGI sector plan						Non-EGI sector plan							
	Pension benefits [(1)]		End-of-career and other post-employment benefits [(2)]		Long-term benefits [(3)]		Pension benefits [(1)]		End-of-career and other post-employment benefits [(2)]		Long-term benefits [(3)]		Total	
In millions of euros	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Present value of benefit obligation at January 1 (provisioned)	-	-	13	14	87	94	5	5	-	-	-	-	105	113
Impact of mergers and spin-offs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Current service cost	-	-	1	1	9	12	-	-	-	-	-	-	10	13
Interest cost	-	-	-	-	1	-	-	-	-	-	-	-	1	1
Actuarial gains and losses due to financial assumption changes	-	-	(3)	(1)	(20)	(6)	-	-	-	-	-	-	(23)	(7)
Actuarial gains and losses due to demographic assumption changes	-	-	-	-	(4)	(1)	-	-	-	-	-	-	(4)	(1)
Actuarial gains and losses due to experience adjustments	-	-	-	-	1	(4)	-	-	-	-	-	-	1	(4)
Benefits paid under all plans (funded and unfunded)	-	-	(1)	(1)	(7)	(8)	(1)	-	-	-	-	-	(9)	(9)
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Present value of benefit obligation at December 31 (provisioned)	-	-	10	13	66	87	4	5	-	-	-	-	80	105

(1) *Excluding EGI sector companies in both 2022 and 2021.*
(2) *Exceptional vacation (€10 million), complementary health insurance for retired former SUEZ employees (zero) and water bonus (zero) in 2022.*
(3) *Allowances for occupational accidents and illness (€34 million), temporary and permanent disability allowances (€24 million), asbestos (€2 million) and long-service awards (€6 million).*

18.5 Insurance contracts

ENGIE SA has taken out insurance contracts with several insurance firms to cover its obligations in respect of pensions and end-of-career indemnities. An amount of €63 million was paid to these insurance firms in 2022.

The value of these insurance contracts stood at €1,686 million at December 31, 2022 (€1,955 million at December 31, 2021).

18.6 Change in the fair value of plan assets

	EGI sector plan						Non-EGI sector plan							
	Pension benefits		End-of-career and other post-employment benefits		Long-term benefits		Pension benefits		End-of-career and other post-employment benefits		Long-term benefits		Total	
In millions of euros	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Fair value of plan assets at January 1	1,702	1,543	24	22	-	-	229	228	-	-	-	-	1,955	1,793
Impact of mergers and spin-offs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expected return on plan assets	21	11	-	-	-	-	2	1	-	-	-	-	24	12
Premiums net of handling fees	-	-	-	-	-	-	1	-	-	-	-	-	1	-
Actuarial gains and losses on plan assets	(232)	211	(3)	2	-	-	5	10	-	-	-	-	(231)	223
Benefits paid out of plan assets	(47)	(63)	(1)	-	-	-	(14)	(14)	-	-	-	-	(63)	(78)
Other	-	-	-	-	-	-		4	-	-	-	-	-	4
Fair value of plan assets at December 31	1,443	1,702	20	24	-	-	223	229	-	-	-	-	1,686	1,955

Return on plan assets

	EGI sector plan						Non-EGI sector plan					
	Pension benefits		End-of-career and other post-employment benefits		Long-term benefits		Pension benefits		End-of-career and other post-employment benefits		Long-term benefits	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Actual return on plan assets	-13.0%	13.4%	-13.0%	13.4%	-	-	1.8%	1.8%	-	-	-	-

The actual return on EGI sector plan assets was -13.01% in 2022.

The actual return on non-EGI sector plan assets was 1.76% in 2022.

The allocation of plan assets by principal asset category can be analyzed as follows:

	EGI sector plan		Non-EGI sector plan	
	2022	2021	2022	2021
Equities	31%	32%	9%	9%
Bonds	58%	49%	82%	83%
Other (including money market securities)	11%	19%	9%	9%
	100%	100%	100%	100%

Collective life insurance policies contracted with insurers to cover employee-related liabilities under the EGI sector plan are unit-linked. These contracts are available to ENGIE SA and to Group subsidiaries belonging to the "Group employee benefits management agreement". A small portion of these contracts may be invested in financial instruments issued by ENGIE SA, mainly equities.

Based on unit-linked contracts attributable to ENGIE SA, the portion of plan assets invested in financial instruments issued by ENGIE SA amounted to €0.5 million at December 31, 2022, representing less than 1% of the total value of the fund at that date. Plan assets are not invested in properties occupied by ENGIE SA or in other assets used by ENGIE SA.

18.7 Supplementary defined-contribution plan

Employees eligible for the EGI plan also benefit from an additional defined-contribution plan set up in 2009. Employer contributions paid in respect of this scheme remained stable in 2022 and 2021 at €4.9 million.

NOTE 19 Legal and anti-trust proceedings

19.1 Canvassing

EDF brought an action against ENGIE before the Nanterre Commercial Court on July 20, 2017, seeking €13.5 million in damages for alleged losses due to unfair competitive practices pursued by ENGIE mainly in its door-to-door canvassing campaigns. In its judgment of December 14, 2017, the court ordered ENGIE to pay EDF the sum of €150,000, concluding that ENGIE was guilty of unfair competition but acknowledging that there had been no disparagement of EDF and that ENGIE had set up training and control arrangements for its partners.

ENGIE appealed the judgment and EDF brought a cross-appeal seeking €94.7 million in damages for its alleged loss. The Versailles Court of Appeal delivered its judgment on March 12, 2019, ordering ENGIE to pay EDF €1 million. It also ordered ENGIE to cease and desist from all parasitic business practices and disparagement to the detriment of EDF, subject to a penalty of €10,000 per infringement for a period of one year.

On July 6, 2020, EDF asked the enforcement judge at the Nanterre Court to assess the penalty ordered by the Versailles Court of Appeal, seeking payment from ENGIE of the sum of €106.89 million and a final penalty of €50,000 per infringement for a period of one year. On December 11, 2020, the enforcement judge ordered ENGIE to pay EDF the sum of €230,000 and ordered a new provisional penalty of €15,000 per new infringement reported by EDF for a period of one year as of notification of the judgment.

On December 22, 2020, EDF appealed the enforcement judge's decision before the Versailles Court of Appeal. The Versailles Court of Appeal handed down its decision on July 1, 2021. It reduced ENGIE's fine to €190,000 and, considering that ENGIE had demonstrably implemented measures that were likely to be efficient and that the difficulties encountered stemmed for the most part from the behavior of service providers/partners and door-to-door salespeople, annulled the new provisional penalty and rejected EDF's request to impose a definitive penalty. EDF appealed this decision before the French Court of Cassation on July 29, 2021. The Court of Cassation rejected EDF's appeal in its ruling of October 6, 2022. The case is therefore closed.

19.2 Commissioning

Regarding the customer management services carried out on behalf of the grid manager in the electricity sector (in this case ERDF, now ENEDIS), following proceedings brought by ENGIE, in a decision of July 13, 2016, the *Conseil d'État* ruled that the principle whereby the grid manager pays compensation to the supplier should apply. In the same decision, the *Conseil d'État* denied the CRE the right to set a customer threshold beyond which the compensation would not be payable, which hitherto prevented ENGIE from receiving any compensation. In light of this decision, ENGIE brought an action against ENEDIS seeking payment for these customer management services. The legislature has adopted a decision that retroactively validates the agreements entered into with ENEDIS and precludes any request for compensation for unpaid customer management services. In a decision handed down on April 19, 2019, the Constitutional Court ruled that this provision was constitutional. On April 11, 2022, the Paris Commercial Court recorded the termination of the proceedings. The case against ENEDIS is therefore closed.

19.3 Withholding tax

In their tax deficiency notice dated December 22, 2008, the French tax authorities questioned the tax treatment of the non-recourse sale by SUEZ (now ENGIE) of a withholding tax (*précompte*) receivable in 2005 for an amount of €995 million (receivable relating to the *précompte* paid in respect of the 1999-2003 fiscal years). The Montreuil Administrative Court handed down a judgment in ENGIE's favor in April 2019, which led the French tax authorities to appeal the decision before the Versailles Court of Appeal, which overturned the prior Court's decision on December 22, 2021. While recognizing the fiscal nature of the receivable sold, the Court did not validate the exemption of the sale price because there was no text or principle to that effect, and because the sale was not authorized by the State.

Regarding the dispute over the *précompte* itself, on February 1, 2016, the *Conseil d'État* dismissed the appeal before the Court of Cassation seeking the repayment of the *précompte* in respect of the 1999, 2000 and 2001 fiscal years. On June 23, 2020, the Versailles Administrative Court of Appeal found in favor of ENGIE as regards the cases seeking repayment of the *précompte* in respect of the 2002 and 2003 fiscal years but rejected the case in respect of the 2004 fiscal year. As the *précompte* receivables for 2002/2003 have been assigned, the relevant amounts have been repaid to the assignee banks. The case has been referred to the *Conseil d'État* by the two parties. In parallel, following the decision of the Court of Justice of the European Union of May 12, 2022, interpreting the deduction of the *précompte* on the redistribution by a parent company of dividends received from subsidiaries established in the European Union as incompatible with Directive 90/435/EC of 1990, in June 2022, several ENGIE groups invited the *Conseil d'État* to submit a request for a priority ruling on an issue of constitutionality to the Constitutional Court to rule on the unconstitutionality of the *précompte* legislation. The *Conseil d'État* granted this request. In October 2022, the Constitutional Court rejected the request of ENGIE and the other groups. This decision will have no impact on ENGIE's financial statements and little impact on the other ongoing proceedings.

Furthermore, after ENGIE and several French groups lodged a complaint, on April 28, 2016, the European Commission issued a reasoned opinion to the French State as part of infringement proceedings, setting out its view that the *Conseil d'État* did not comply with European Union law when handing down decisions in disputes regarding the *précompte*, such as those involving ENGIE. On July 10, 2017, the European Commission referred the matter to the Court of Justice of the European Union on the grounds of France's failure to comply. On October 4, 2018, the Court of Justice of the European Union ruled partially in favor of the European Commission. Following this decision, France must revisit its methodology in order to determine the *précompte* repayment amounts in closed and pending court cases. No action has been initiated to date due to parallel litigation proceedings on the basis of Directive 90/435/EC.

NOTE 20 Information concerning related parties

All material transactions between ENGIE SA and related parties were carried out on an arm's length basis. Accordingly, no disclosures are required pursuant to the amending decree of Article R.123-198-11 of March 9, 2009.

Relations with the French State

The French State's interest in the Group at December 31, 2022 was unchanged from the previous year at 23.64%. This entitles it to three of the 15 seats on the Board of Directors (one Director representing the State appointed by decree, and two Directors appointed by the Shareholders' Meeting at the proposal of the French State).

The French State holds 33.56% of the theoretical voting rights (33.71% of exercisable voting rights) compared with 33.20% at end-2021.

On May 22, 2019, the PACTE Act ("Action plan for business growth and transformation") was enacted, enabling the French State to dispose of its ENGIE shares without restriction.

In addition, the French State holds a golden share aimed at protecting France's critical interests and ensuring the continuity and safeguarding of supplies in the energy sector. The golden share is granted to the French State indefinitely and entitles it to veto decisions taken by ENGIE if it considers they could harm France's interests.

Public service engagements in the energy sector are defined by the law of January 3, 2003.

Transmission rates on the GRTgaz transportation network and the gas distribution network in France, as well as rates for accessing the French LNG terminals and revenues from storage capacities, are all regulated.

The Law on Energy and Climate enacted on November 8, 2019 will put an end to regulated gas tariffs and will restrict regulated electricity tariffs for consumers and small businesses. The final date for the discontinuation of regulated gas tariffs is July 1, 2023.

Relations with EDF

Following the creation on July 1, 2004 of the French gas and electricity distribution network operator (EDF Gaz de France Distribution), Gaz de France SA and EDF entered into an agreement on April 18, 2005 setting out their relationship as regards the distribution business. The December 7, 2006 law on the energy sector reorganized the natural gas and electricity distribution networks. Enedis, a subsidiary of EDF SA, and GRDF SA, a subsidiary of ENGIE SA, were created on January 1, 2007 and December 31, 2007, respectively, and act in accordance with the agreement previously signed by the two incumbent operators. With the deployment of smart meters for both electricity and gas, the "common" businesses deployed by the two distributors are set to evolve significantly. The remaining "mixed" activities mainly concern inventory management, human resources, medical services, local IT services and bookkeeping. The scope of these common services will be further reduced in 2023 and limited to medical and employee-related services.

Relations with the CNIEG (Caisse Nationale des Industries Électriques et Gazières)

The Group's relations with the CNIEG, which manages all old age, death and disability benefits for active and retired employees of the Group who belong to the special EGI pension plan, employees of EDF and Non-Nationalized Companies (*entreprises non nationalisées* – ENN), are described in Note 18 "Post-employment benefits and other long-term benefits".

NOTE 21 Compensation due to members of the Board of Directors and Executive Committee

Total compensation (gross salary, bonuses, profit-sharing incentives and benefits in kind, including related employer contributions) paid to the Chief Executive, and members of the Executive Committee came to €32.7 million for 2022.

French government No. 2019-697 on top-up pension plans, which was published on July 4, 2019 pursuant to the European Directive of April 16, 2014, abolished the defined benefit pension plans governed by Article L.137-11 of the French Social Security Code (known as "Article 39 plans"), froze the rights of existing members and closed the plans to any new members as of that date.

Following the plan's closure and crystallization of rights accrued in 2019, in 2020, the Group transferred the rights of beneficiaries, including Executive Committee members, to a defined contribution plan (known as an "Article 82" plan).

Members of the Board of Directors elected by the Shareholders' Meeting, except for the corporate officers, the Directors from the public sector appointed on the proposal of the French State and the Director representing employees, received €0.9 million in attendance fees for 2022.

NOTE 22 Subsequent events

No significant subsequent events have occurred since the closing of the accounts at December 31, 2022.

6.4.3 TOTAL AND PARTIAL TRANSFERS OF ASSETS, SUBSIDIARIES, AND EQUITY INVESTMENTS REQUIRING STATUTORY DISCLOSURE

This Note discloses crossings of thresholds of 10% and 50%, which correspond to the percentage holdings above which an entity becomes, respectively, an equity investment and a subsidiary according to the French Commercial Code (*Code du commerce*).

Total and partial transfers of assets

	% at Dec. 31, 2021	% at Dec. 31, 2022	Reclassification within the Group	Sale outside the Group	Net book value of shares sold *(in euros)*	Business sector
Subsidiaries [(1)]						
EQUANS	100.00%	0.00%		X	5,273,540,000.00	Services
SPEED REHAB	100.00%	0.00%		X	2,810,520.00	Real estate
Culturespaces	86.14%	0.00%		X	2,632,065.18	Events
Equity investments [(2)]						
Gaz Transport et Technigaz	30.09%	5.43%		X	4,823,760.64	Engineering, and technical studies

(1) *More than 50%-owned by ENGIE SA.*
(2) *Less than 50%-owned by ENGIE SA.*

Total and partial purchases of assets

	% at Dec. 31, 2021	% at Dec. 31, 2022	Reclassification within the Group	Acquisition outside the Group	Net book value of shares held *(in euros)*	Business sector
Subsidiaries [(1)]						
	-	-	-	-		-
Equity investments [(2)]						
	-	-	-	-	-	-

(1) *More than 50%-owned by ENGIE SA.*
(2) *Less than 50%-owned by ENGIE SA.*

6.4.4 FIVE-YEAR FINANCIAL SUMMARY

	2022	2021	2020	2019	2018
Capital at year-end					
Share capital *(in euros)*	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011
Number of ordinary shares issued and outstanding	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011	2,435,285,011
Maximum number of shares to be issued:					
• by converting bonds	-	-	-	-	-
• by exercising stock options	-	-	-	-	-
Results of operations for the year *(€ millions)*					
Revenues, excluding VAT	68,500	36,224	19,272	17,282	27,833
Income before tax, employee profit-sharing, depreciation, amortization, provisions and transfer of concession termination amortization	4,148	659	1,444	378	2,960
Income tax (negative figures = benefit)	(321)	(474)	(532)	(377)	(549)
Employee profit-sharing and incentive payments for the year	-	-	-	-	-
Income after tax, employee profit-sharing, depreciation, amortization, provisions and transfer of concession termination amortization	1,697	1,780	(3,928)	(196)	1,102
Total dividends paid (including on treasury shares)	3,409	2,070	1,291	-	2,718
Earnings per share *(in euros)*					
Earnings per share after tax and employee profit-sharing, but before depreciation, amortization, provisions and transfer of concession termination amortization	1.84	0.47	0.81	0.31	1.44
Income after tax, employee profit-sharing, depreciation, amortization, provisions and transfer of concession termination amortization	0.70	0.73	(1.61)	(0.08)	0.45
Dividend per share [(1)]	1.40	0.85	0.53	-	1.12
Headcount					
Average number of employees during the year	4,135	4,294	4,477	4,534	4,400
Total payroll	292	277	283	273	289
Total employee benefit obligations paid (social security taxes and contributions to pension plans, welfare plans, etc.)	210	229	239	197	362

(1) *Subject to approval by the Board of Directors.*

Shareholders at the AGM held to approve the 2022 financial statements will be asked to approve a dividend of €1.40 per share, representing a total amount of €3,409 million, based on the number of outstanding shares at December 31, 2022. The dividend per share of €1.40 will be increased by 10% for all shares held by the same person for more than two years as of December 31, 2022 provided they are still held on the dividend payment date.

6.5 STATUTORY AUDITORS' REPORT ON THE FINANCIAL STATEMENTS

Year ended December 31, 2022

This is a free translation into English of the statutory auditors' report on the financial statements of the Company issued in French and it is provided solely for the convenience of English-speaking users.

This statutory auditors' report includes information required by European regulation and French law, such as information about the appointment of the statutory auditors or verification of the information concerning the Company presented in the management report.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the ENGIE Shareholders' Meeting,

Opinion

In compliance with the engagement entrusted to us by your Shareholders' Meeting, we have audited the accompanying financial statements of ENGIE for the year ended December 31, 2022.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as of December 31, 2022 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for Opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the "Statutory Auditors' Responsibilities for the Audit of the Financial Statements" section of our report.

Independence

We conducted our audit engagement in compliance with independence requirements of the French Commercial Code (*Code de commerce*) and the French Code of Ethics (*code de déontologie*) for statutory auditors, for the period from January 1, 2022 to the date of our report, and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No 537/2014.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L. 823-9 and R. 823-7 of the French Commercial Code (code de commerce) relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the financial statements.

Main estimates and judgments on revenue

[Notes 1 "Accounting principles", 6.1 "Debt maturity schedule" and 13.1 "Breakdown of revenue" to the financial statements]

Key Audit Matter	Our response
Your Company makes estimates and uses judgments to recognize (i) un-metered and unbilled delivered sales of electricity and gas ("energy in the meter") and, in the specific case of the year ended December 31, 2021, (ii) sales of gas in France under the French government's "tariff shield" mechanism. ***Revenue relating to un-metered and unbilled delivered sales of electricity and gas ("energy in the meter"):*** The measurement of revenue relating to sales of electricity and gas for customers which are only metered during the accounting period represents a material estimate at the year-end. As the meter readings are sometimes communicated by grid managers several months after the actual delivery date, your Company is required to estimate the energy delivered but not metered at the year-end. As of December 31, 2022, receivables relating to revenue in the meter (delivered gas and electricity that is unbilled and un-metered) totaled €2.1 billion. These receivables are determined on the basis of a method that takes into account an estimate of customers' consumption based on the previous bill, or the last metering not yet billed, in line with the volume of energy allocated by grid managers, using measurement and modeling tools developed by your Company. The volumes are measured at the average energy price, which takes account of the category of customers and the age of the energy in the meter. ***Compensation relating to sales of gas in France under the French government's "tariff shield" mechanism*** The high volatility observed in energy markets and the resulting significant rise in natural gas prices led the French government to cap, as of November 1, 2021 and temporarily until December 31, 2022 via the "tariff shield" mechanism introduced by the 2022 Finance Law (law no. 2021-1900 of December 30, 2021) and amended by the 2022 initial amending Finance Bill (law no. 2022-1157 of August 16, 2022), regulated gas sales tariffs at the level of October 1, 2021. The loss of revenue borne by your Company as of November 1, 2021 constitutes expenses attributable to public service obligations and is subject to guaranteed compensation by the State. In this context, your Company exercised its judgment to determine how to recognize the compensation receivable, the amount of which was estimated at €1.6 billion as of December 31, 2022. Considering the amount of revenue at stake and the sensitivity of the estimates to assumptions regarding average energy volumes and prices, and the judgments exercised, we have considered (i) the estimate of the portion of un-metered revenue delivered and (ii) the compensation receivable at the year-end under the tariff shield mechanism to be a key audit matter.	***Revenue relating to un-metered and unbilled delivered sales of electricity and gas ("energy in the meter")*** The procedures conducted on the estimate of un-metered revenue mainly consisted in: • considering the internal control procedures about the billing process, and the process enabling the reliability of the accounting estimates for the energy in the meter; • assessing the relevance of estimation models and reviewing the methods of calculating the estimated energy volumes by including a algorithm specialist in our audit team. We also: • compared the information about the volumes delivered and determined by your Company with the metering data provided by the grid operators; • examined that the methods used for the computation of the average price of the un-metered delivered power take account of its age in the meter and the different kinds of customers; • analyzed the consistency of the volumes committed in the employment operations (sales, injections and stocks) with the energy resources (purchases, withdrawals and stocks) on the networks; • assessed the regular clearance of the metered energy during the period; • assessed the age of the energy in the meter at the closing date. ***Compensation relating to sales of gas in France under the French government's "tariff shield" mechanism*** Regarding the impacts arising from the implementation of the tariff shield mechanism, our procedures mainly consisted in: • reviewing the legislation voted under the 2022 Finance Law; • analyzing the financial impacts for your Company of the application of the various tariff shield provisions, as well as the measurement of the loss for the period from January 1 to December 31, 2022; • assessing the accounting treatment and methods of presenting the income to be recognized in the income statement and the related receivable as of December 31, 2022. We also assessed the appropriateness of the disclosures in Notes 1, 6.1 and 13.1 to the financial statements.

Measurement of equity securities

(Notes 1 - Accounting principles and 4 - Financial fixed assets to the financial statements)

Key Audit Matter	Our response

Equity securities amounted to €73.0 billion as of December 31, 2022 (net value of €60.3 billion).
Newly-acquired equity investments are recognized at purchase price plus directly attributable transaction fees.
As indicated in the section "Financial fixed assets", Note 1 to the financial statements, equity investments which your Company intends to hold on a long-term basis are written down if their value in use has fallen below their book value, including the allocated technical losses.
Value in use is determined by reference to (i) the intrinsic value which corresponds to restated net assets plus unrealized gains for investment entities, (ii) the yield value which corresponds to the average of the last twenty stock market prices of the period for listed entities, or (iii) expected cash flows or dividends ("Discounted Cash Flow" or "Dividend Discount Model") of operating entities, and by taking into account any currency hedges.
As indicated in Note 4.2, expected cash flows are drawn from the 2023 budget and 2024-2025 medium-term business plan approved by the Executive Committee and the Board of Directors and beyond this period, extrapolated future cash flow projections are determined on the basis of macroeconomic assumptions and price projections featured in your Group's reference scenario for 2026-2050 approved by the Executive Committee.
As mentioned in Note 4.2, the net provision recognized in 2022 for €1.5 billion mainly covers the equity investments in Electrabel (€1.1 billion)
The measurement of equity investments is considered a key audit matter given their importance on the balance sheet (52% of total assets) and due to the judgments necessary to estimate their value in use, in a context which remains sensitive to changes in the energy markets and the consequences of which make it difficult to assess the medium-term economic outlook.
	We assessed Management's procedures for approving estimates of equity investments.
	We examined the main data and key assumptions used to determine the values in use, assessed the sensitivity of measurements to these assumptions and verified the calculations made by your company with the support of our valuation specialists.
	Our work mainly consisted in:
	• examining the measurement methods used to estimate values in use;
	• assessing the consistency of assumptions with your Group's long-term reference scenarios (electricity and gas prices and demand, price of CO_2, inflation) with external studies carried out by international organizations or energy experts;
	• assessing the consistency of the operational and regulatory assumptions used to prepare cash flow forecasts for each of the entities in the scope;
	• examining the discount rates for which we have verified the determination methods and the consistency with the underlying market assumptions;
	• Regarding the methods for determining cash flow forecasts, our work consisted in:
	  • assessing the consistency of the basic data with the budget, the medium-term business plan and beyond, the Group's long-term scenario,
	  • assessing the consistency with past performances and market outlook;
	• assessing the appropriateness of the disclosures in the notes to the financial statements.

Specific verifications

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law and regulations.

Information given in the management report and in the other documents addressed to the shareholders with respect to the financial position and the financial statements

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the management report of the Board of Directors and in the other documents addressed to shareholders with respect to the financial position and the financial statements.

We attest the fair presentation and consistency with the financial statements of the information relating to payment deadlines mentioned in Article D. 441-6 of the French Commercial Code (code de commerce).

Report on Corporate Governance

We attest that the Board of Directors' report on corporate governance contains the information required by Articles L.225-37-4, L.22-10-10 and L.22-10-9 of the French Commercial Code.

Concerning the information given in accordance with the requirements of Article L. 22-10-9 of the French Commercial Code (code de commerce) relating to remunerations and benefits received by or awarded to the directors and any other commitments made in their favor, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from controlled enterprises included in the scope of consolidation. Based on these procedures, we attest the accuracy and fair presentation of this information.

With respect to the information relating to items that your Company considered likely to have an impact in the event of a takeover bid or exchange offer, provided pursuant to Article L. 22-10-11 of the French Commercial Code (code de commerce), we have agreed this information to the source documents communicated to us. Based on these procedures, we have no observations to make on this information.

Other information

In accordance with French law, we have verified that the required information concerning the identity of shareholders and holders of voting rights has been properly disclosed in the management report.

Other Legal and Regulatory Verifications or Information

Format of presentation of the financial statements intended to be included in the annual financial report

We have also verified, in accordance with the professional standard applicable in France relating to the procedures performed by the statutory auditor relating to the annual and consolidated financial statements presented in the European single electronic format, that the presentation of the financial statements intended to be included in the annual financial report mentioned in Article L.451-1-2, I of the French Monetary and Financial Code (*Code monétaire et financier*), prepared under the responsibility of the Chief Executive Officer, complies with the single electronic format defined in the European Delegated Regulation No 2019/815 of December 17, 2018.

Based on the work we have performed, we conclude that the presentation of the financial statements intended to be included in the annual financial report complies, in all material respects, with the European single electronic format.

We have no responsibility to verify that the annual financial statements that will ultimately be included by your company in the annual financial report filed with the AMF are in agreement with those on which we have performed our work.

Appointment of the Statutory Auditors

We were appointed statutory auditors of ENGIE by your Shareholders' Meeting on May 19, 2008 for Ernst & Young et Autres and on July 16, 2008 for Deloitte & Associés.

As of December 31, 2022, our firms were in their fifteenth year of uninterrupted engagement.

Ernst & Young Audit was previously statutory auditor between 1995 and 2007.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with French accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems and, where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The financial statements were approved by the Board of Directors.

Statutory Auditors' Responsibilities for the Audit of the Financial Statements

Objectives and audit approach

Our role is to issue a report on the financial statements. Our objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As specified in Article L. 823-10-1 of the French Commercial Code (code de commerce), our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the financial statements;
- Assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein;
- Evaluates the overall presentation of the financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

Report to the Audit Committee

We submit a report to the Audit Committee which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration referred to in Article 6 of Regulation (EU) no. 537-/2014, confirming our independence pursuant to the rules applicable in France as defined in particular by Articles L.822-10 to L.822-14 of the French Commercial Code and in the French Code of ethics for statutory auditors. Where appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Paris-La Defense, March 7, 2023
The Statutory Auditors

ERNST & YOUNG et Autres		Deloitte & Associés	
Charles-Emmanuel CHOSSON	Guillaume ROUGER	Patrick E. SUISSA	Nadia LAADOULI

7

ADDITIONAL INFORMATION

7.1 GENERAL INFORMATION ON ENGIE AND ITS BYLAWS

7.1.1 COMPANY NAME AND TRADING NAME

The company name and trading name of the Company is: ENGIE.

7.1.2 REGISTRATION PLACE AND NUMBER AND LEI

ENGIE is registered in the Nanterre Trade and Companies Register under number 542 107 651.

Its APE (principal activity) code is 3523Z.

Its legal entity identifier (LEI) is: LAXUQCHT4FH58LRZDY46.

The name of the stock is ENGIE and its ticker symbol is “ENGI.”

7.1.3 DATE OF INCORPORATION AND TERM

The Company was incorporated as an EPIC (French public industrial and commercial enterprise) on April 8, 1946 and registered in the Trade and Companies Register on December 24, 1954. ENGIE is a French limited company since November 20, 2004.

The Company’s term is fixed at 99 years as of November 20, 2004, i.e. until November 17, 2103, unless it is dissolved early or the term is extended.

7.1.4 REGISTERED OFFICE, LEGAL FORM, LEGISLATION, ADDRESS AND WEBSITE

The registered office is located at: 1, place Samuel de Champlain 92400 Courbevoie, France.

Telephone number of registered office: +33 1 44 22 00 00

Website: www.engie.com

The information provided on the Company’s website does not form an integral part of this document, unless it is incorporated by reference.

ENGIE is a public limited company with a Board of Directors, governed by the legislative and regulatory provisions applicable to commercial limited companies, subject to specific laws governing the Company, and by its bylaws.

7.1.5 CORPORATE OBJECTIVE

Pursuant to Article 2.2 of the Articles of Association, ENGIE’s Objective is the management and development of its current and future tangible and intangible assets, in France and abroad, by all means and especially to:

- prospect, produce, process, import, export, purchase, transport, store, distribute, supply and market natural gas of any kind, in all its forms, and electricity, as well as other forms of energy;
- conduct trading in any energy, particularly natural gas and electricity;
- supply to any type of customer services related directly or indirectly to the aforementioned activities, including specific services to facilitate the energy transition;
- perform the public service missions assigned to it by the laws and regulations in force, particularly the Energy Code;
- study, design and implement all projects and all public or private work on behalf of any local authorities, companies and individuals; prepare and sign all treaties, public and private contracts relating to the execution of said projects and work;
- participate directly or indirectly in all operations or activities of any kind that may be related to one of the aforementioned purposes, or which could ensure the development of the corporate holdings, including research and engineering activities, via the formation of companies or new businesses, contribution, subscription or sales of securities or corporate rights, acquisitions of interests and stakes, in any form, in all existing or future businesses or companies, merger, association, or in any other manner;
- create, acquire, lease, take under lease-management all furnishings, buildings and businesses, lease, install and operate all establishments and businesses relating to one of the aforementioned purposes;
- register, acquire, operate, grant or sell all processes, patents and patent licenses relating to the activities connected with one of the aforementioned objects;
- obtain, acquire, rent and operate, mainly via subsidiaries and holdings, all concessions and undertakings relating to the supply of drinking water to towns or water to industry, the evacuation and purification of waste water, drainage and wastewater treatment operations, irrigation and transport, protection and pondage structures as well as all sales and service activities to public authorities and individuals in the development of towns and the management of the environment;
- and in general to carry out all industrial, commercial, financial, personal property or real estate operations and activities of any kind, including services, in particular insurance intermediation, acting as an agent or delegated agent in a complementary, independent or research position; these operations and activities being directly or indirectly related, in whole or in part, to any one of the aforementioned objects, to any similar, complementary or related objects and to those that may further the development of the Company’s business.

7.1.6 PURPOSE

Pursuant to Article 2.1 of the Articles of Association, the purpose of ENGIE is to act to accelerate the transition to a carbon-neutral economy, through low-energy solutions that are more respectful of the environment. This purpose brings together the company, its employees, customers and shareholders and reconciles economic performance and positive impact on people and the planet. ENGIE's action is assessed in its entirety and over time.

7.1.7 FISCAL YEAR

The Company's fiscal year lasts for 12 months, starting on January 1 and ending on December 31 of each year.

7.2 MATERIAL CONTRACTS

The Group's main contracts, other than contracts concluded in the ordinary course of business, are as follows:

7.2.1 CONTRACTS FINALIZED IN 2021

Contract for the sale of a stake in GRTgaz – see Note 5.1.2 Section 6.2.2 "Notes to consolidated financial statements" of the 2021 Universal Registration Document.

7.2.2 CONTRACTS IN PROGRESS AT THE END OF FISCAL YEAR 2021 AND FINALIZED IN 2022

Contract for the disposal of the activities of EQUANS – see Note 4.1.2 Section 6.2.2 "Notes to consolidated financial statements."

Contract to acquire a 97.33% interest in Eolia Renovables – see Note 4.3 Section 6.2.2 "Notes to consolidated financial statements."

7.2.3 CONTRACTS SIGNED POST-CLOSING 2021

None.

7.2.4 CONTRACTS FINALIZED IN 2022

None.

7.2.5 CONTRACTS IN PROGRESS AT THE END OF FISCAL YEAR 2022

None.

7.2.6 CONTRACTS SIGNED POST-CLOSING 2022

Not significant.

7.2.7 BORROWING AND FINANCING CONTRACTS

See Notes 14.2.3, 14.2.4 and 16.2 Section 6.2.2 "Notes to consolidated financial statements" and Notes 11.2.1 and 11.2.2 Section 6.4.2 "Notes to parent company financial statements."

7.3 LITIGATION AND ARBITRATION

In the course of its operations, the Group is engaged in a certain number of legal disputes and arbitration procedures and is also subject to investigations and procedures under competition law. The principal investigations and proceedings are described in Note 23 Section 6.2.2 "Notes to consolidated financial statements" and Note 19 Section 6.4.2 "Notes to parent company financial statements."

7.4 PUBLIC DOCUMENTS

The documents relating to ENGIE that must be made available to the public (bylaws, reports, historical financial information on ENGIE, as well as on the Group subsidiaries included or mentioned in this Universal Registration Document and those relating to each of the two fiscal years prior to the filing of this Universal Registration Document) may be consulted at ENGIE's corporate headquarters for as long as this Universal Registration Document remains valid.

These documents may also be obtained in electronic format from the ENGIE website (www.engie.com) and some of them may be obtained from the AMF website (www.amf-france.org).

The ENGIE Universal Registration Document is translated into English. In case of contradiction, the original French version shall prevail.

As well as this Universal Registration Document, which is filed with the AMF, the Group publishes an integrated report each year.

The documents published on the website are available free of charge from ENGIE, 1, place Samuel de Champlain – 92400 Courbevoie, France.

7.5 PARTY RESPONSIBLE FOR THE UNIVERSAL REGISTRATION DOCUMENT

Party responsible for the Universal Registration Document

Catherine MacGregor, Chief Executive Officer.

Declaration by the party responsible for the Universal Registration Document containing the Annual Financial Report

"I hereby certify that the information contained in this Universal Registration Document is, to my knowledge, in accordance with the facts and makes no omission likely to affect its import.

I hereby certify that, to the best of my knowledge, the financial statements have been prepared in accordance with the applicable accounting standards and give a true and fair view of the assets and liabilities, financial position and profit or loss of the Company and all the undertakings included in the consolidation, and that the management report, whose items are mentioned in Chapter 7 of this Universal Registration Document, presents a fair review of the development and performance of the business and financial position of the Company and all the undertakings included in the consolidation as well as a description of the main risks and uncertainties to which they are exposed."

Courbevoie, March 9, 2023
The Chief Executive Officer
Catherine MacGregor

7.6 CONVERSION TABLE

1 kWh	0.09 m^3 of natural gas (i.e. 1 m^3 of gas = 11 kWh)
1 GWh	91,000 m^3 of natural gas
1 TWh or 1 billion kWh	91 million m^3
1 billion m^3 of gas	6.2 million barrels of oil equivalent (Mboe)

The units of conversion mentioned above are those routinely used by professionals in the energy sector. In this document they are provided solely for information purposes.

7.7 UNITS OF MEASUREMENT

A	Ampere
Bar	Unit of measurement of fluid pressure, particularly for natural gas (1 bar = 105 Pascal)
BOE	Barrel of oil equivalent (1 barrel = 159 liters)
CO_2 eq.	Carbon dioxide equivalent
G	Giga (billion)
GBq	Giga becquerel
GW	Gigawatt (billion watts)
GWh	Gigawatt-hour (million kilowatt-hours)
GWheeq	GWh electric equivalent
J	Joule
k	Kilo (one thousand)
kW	Kilowatt (one thousand watts)
kWh	Kilowatt-hour (one thousand watt-hours)
m	Meter
m^2	Square meter
m^3	Cubic meter
M	Mega (million)
Mboe	Million barrels oil equivalent
Mtpa	Million metric tons per annum
MW	Megawatt (million watts)
MWp	Megawatt-peak (unit of measurement for the power of solar photovoltaic installations)
MWe	Megawatt electric
MWh	Megawatt-hour (thousand kilowatt-hours)
T	Tera (thousand billion)
TBq	Terabecquerel
t/h	Metric tons per hour
TWh	Terawatt-hour (billion kilowatt-hours)
V	Volt
W	Watt
Wh	Watt-hour

7.8 SHORT FORMS AND ACRONYMS

A

ACGC: Appointments, Compensation and Governance Committee

AGM: Assemblée Générale Mixte (Ordinary and Extraordinary Shareholders' Meeting)

AMF: Autorité des Marchés Financiers (French Financial Markets Authority)

B

BtoB: Business to Business

BtoC: Business to Consumer

BtoT: Business to Territories

C

CAPEX: Capital expenditure

CCGT: Combined Cycle Gas Turbine

CER: Certified Emission Reduction – see Glossary

CO_2: Carbon dioxide

COI: Current Operating Income

Covid-19: Coronavirus disease 2019

CPN: Commission des provisions nucléaires (Belgian Commission for Nuclear Provisions)

CRE: Commission de Régulation de l'Énergie (French energy regulator) – see Glossary

CRM: Capacity Remuneration Mechanism – see Glossary

CSR: Corporate Social Responsibility

D

DBOO: Design Build Own Operate

DBSO: Develop Build Share Operate

E

E&P: Exploration & Production of hydrocarbon

EBITDA: Earnings before Interest, Tax, Depreciation and Amortization – see Glossary

EESDC: Ethics, Environment ans Sustainable Development Committee

EGI: Electric and Gas Industries – see Glossary

EMAS: Eco Management and Audit Scheme – see Glossary

EMTN: Euro Medium Term Note (program)

ERM: Enterprise Risk Management

ESC: Energy Savings Certificates

EU: European Union

EUA: European Union Allowance

EWC: European Works Council

F

FC: Full Consolidation

FM: Facility management – see Glossary

G

GBU: Global Business Unit

GDPR: General Data Protection Regulation

GHG: Greenhouse gases – see Glossary

H

HR: Human Resources

I

IAS: International Accounting Standards, drawn up internationally by the IASB until 2002

IASB: International Accounting Standards Board

IFRS: International Financial Reporting Standards, drawn up internationally by the IASB since 2002

INCOME: Internal Control Management and Efficiency (ENGIE program)

IoT: Internet of Things

IPP: Independent Power Producer – see Glossary

IS: Information Systems

ISO: International Standards Organization – see Glossary

ISP: Investment Services Provider – see Glossary

K

KPI: Key Performance Indicator

L

LNG: Liquefied natural gas – see Glossary

LTO: Long Term Operation

N

NFS: Non-financial statement

NGO: Non-governmental organization

NGV: Natural gas vehicle – see Glossary

NO_x: Nitrogen oxide

NRE: New and renewable energy sources: wind, solar, hydro, etc.

O

OECD: Organization for Economic Cooperation and Development

ONDRAF: Organisme National des Déchets RAdioactifs et des matières Fissiles enrichies (Belgian National Agency for Radioactive Waste and enriched Fissile Material)

OPEX: Operating expenses

P

PC: Proportional consolidation

PEG: Plan d'Épargne Groupe, Group Employee Savings Plan

PPA: Power Purchase Agreement (often long-term)

PPE: Programmation Pluriannuelle de l'Energie (Multi-Year Energy Schedule)

PV: Photovoltaic

R

R&D: Research and Development

RES: Renewable Energy Source

ROCE: Return on capital employed

ROE: Return on equity

S

SBTi: Science-Based Targets initiative

SDG: Sustainable Development Goals

SEC: Social and Economic Committee

SITC: Strategy, Investment and Technology Committee

SO_2: Sulfur dioxide

SRV: Shuttle Regasification Vehicle – see Glossary

SSC: Shared Service Center

T

TCFD: Task Force on Climate-related Financial Disclosures

TMO: Taux Mensuel Obligataire (monthly bond yield)

TPA-d: Third party access to the distribution network – see Glossary

TSR: Total Shareholder Return – see Glossary

U

UCITS: Undertakings for Collective Investment in Transferable Securities (mutual funds)

V

VaR: Value at Risk – see Glossary

VPP: Virtual Power Plant – see Glossary

7.9 GLOSSARY

Afep-Medef Code

Code of corporate governance for listed companies (in France), in the version published by Afep-Medef in December 2022.

Balancing area

The set of entry points, delivery points and a Gas Exchange Point within which the consignor must achieve a balance.

Biogas

All gases, such as methane and carbon dioxide, resulting from the fermentation of organic waste in a depleted air environment such as landfills, wastewater treatment plants, etc. Such fermentation is the result of a natural or controlled bacterial activity. As such, biogas is classified as a renewable energy source.

Biomass

Mass of non-fossil organic matter of biological origin. A part of this deposit may be used as an energy source.

Branch

Transmission installation ensuring delivery between the transmission grid and one or more delivery points, and aimed exclusively or primarily at supplying a customer or a distribution network. Branches are components of the network.

Capacity Remuneration Mechanism (CRM)

Instrument intended to complement energy markets with a capacity market that ensures the availability of sufficient capacity to ensure the supply of electricity.

Certified Emission Reduction (CER)

Certificate issued to industries that have invested in developing countries to reduce greenhouse gas emissions there. CERs cannot be directly traded, but may be used in place of CO_2 quotas, with one CER equal to one quota.

Cogeneration

A technique that uses a single fuel, which may be natural gas, to simultaneously produce thermal energy (steam or overheated water or a mixture of air and combustion products) and electricity.

Combined steam cycle plant

A power plant comprising a gas turbine generator, the exhaust gases of which power a steam boiler. The steam produced in the boiler drives a turbo-generator.

Commission de Régulation de l'Électricité et du Gaz – Belgium – CREG (Belgian electricity and gas regulator)

Independent body, responsible for advising the public authorities on the organization and operation of the liberalized gas and electricity markets. Moreover, the CREG monitors and controls the application of laws and regulations. A General Council, composed of representatives of federal and regional governments, organizations representing workers, employers and the middle classes, environmental groups as well as producers, distributors and consumers, oversees its work.

Commission de Régulation de l'Énergie – CRE (French energy regulator)

The CRE is an independent administrative authority. It was created by the Act of February 10, 2000 to regulate electricity and its scope was extended to include the gas sector with the Act of January 3, 2003. Its main mission is to ensure the effective, transparent and non-discriminatory implementation of access to electricity and gas infrastructures.

More generally, its role is to ensure that the gas and electricity markets operate properly.

Compression station

Industrial facility that compre.sses natural gas to optimize the flow of fluids in the pipes.

Connection structures

All the structures that connect a consumption site or distribution network to the transmission grid. Connection structures are made up of one or more branches and one or more substations.

Corporate Power Purchase Agreement (Corporate PPA)

A corporate Power Purchase Agreement or corporate PPA is a long-term electricity supply agreement between an electricity producer and an electricity end-purchaser.

Cushion gas

Quantity of gas stored underground that cannot be fully retrieved after it has been injected.

Dark spread

Gross margin of a coal-fired power plant, equal to the difference between the sale price of electricity and the purchase price of the fuel needed to produce it. The dark spread must cover the aggregate of other costs (including operation, maintenance, cost of capital, financial charges, cost of CO_2, etc.).

Desalination

A process used to reduce the salt concentration of sea water in order to make it fit for human or animal consumption as well as for other uses, especially industrial uses.

Distribution

Distribution networks are groups of physical structures consisting mainly of medium or low-pressure pipes. They route natural gas to consumers who are not directly connected to the main network or to a regional transmission network.

EBITDA

EBITDA is often used to refer to the revenues of a business before the deduction of interest, taxes, depreciation, amortization and provisions.

EBITDA at Risk

EBITDA at Risk measures the potential loss of EBITDA, at a given probability, under the impact of various prices and volatilities over a given time horizon. This indicator is especially well-suited for measuring market risks for portfolio management activities.

If the time horizon provided is one calendar year, and the confidence interval is 95%, an EBITDA at Risk of €100 million indicates that there is a 5% probability of losing more than €100 million in EBITDA between January 1 and December 31 due to fluctuations in commodities prices.

Eco Management and Audit Scheme (EMAS)

Based on ISO 14001 certification and an environmental statement certified by European auditors accredited and published by the European Commission.

Electric and Gas Industries (EGI)

All the companies that produce, transmit or distribute electricity or gas in France and which meet the requirements of the Nationalization Act of April 8, 1946. The EGI sector includes all companies with employees that fall under the status of EGI employees.

Energy trading

The act of exchanging physical or financial contracts on the short-term energy markets (over-the-counter markets and stock markets)

Facilities Management (FM)

All the outsourced service and utility management services that accompany the supply of energy to an industrial customer. These services concern the management of the customer's environment. They include guard services, waste and hygiene, operation and maintenance of technical equipment, project management for construction work, management of safety equipment and telephone and reception services.

Gas Exchange Point

Virtual hub attached to a balancing area where a consignor can sell gas to another consignor.

Gas hub

Point of entry (connection point of a gas transmission network supplied from several sources. It enables operators to exchange gas physically between these sources and end users).

Gas pipeline

A pipeline that conveys fuel gas.

Green electricity

Certified electricity produced from renewable energy sources.

Greenhouse Gases (GHG)

Atmospheric gas that contributes to the retention of solar heat. Industries, automobiles, heating systems, livestock farming and other activities produce gases, some of which heighten the greenhouse effect. The greenhouse gas build-up produced by human activity is one of the causes of global warming and its impacts on the ecosystem.

Green Power Purchase Agreement (green PPA)

A green Power Purchase Agreement or green PPA is a long-term agreement for the supply of electricity produced from renewable energy sources between an electricity producer and an electricity purchaser.

Independent Power Producer (IPP)

An Independent Power Producer independent of State sector control.

IPPs are classified exclusively on the basis of the projects developed outside the country of origin.

International Standards Organization (ISO)

Organization that defines reference systems (industrial standards used as benchmarks).

ISO 14001

An international standard that verifies a company's organizational procedures and methods, as well as the effective implementation of environmental policy and objectives.

ISO 9001

An international standard establishing quality criteria for work procedures.

It applies to product design, control of the production and the manufacturing process and the quality control of the end product.

Investment Services Provider (ISP)

Investment services provider approved by the Committee of European Bank Supervisors to transmit and process market orders.

Joint venture

A term commonly used to describe a project in which two or more entities take part. For the consolidation principles and methods applicable to the different types of partnership under IFRS, please see Note 1 in Section 6.2 Consolidated financial statements.

Liquefied Natural Gas (LNG)

Natural gas put into the liquid phase by lowering its temperature to –162°C, which makes it possible to reduce its volume by a factor of 600.

Load-matching

Term referring to the discrepancy between the actual conditions of a customer's gas consumption and those corresponding to standard purchases over the year of their average daily consumption. Variations (daily, weekly or seasonal) in consumption are generally covered by underground storage, to which customers and their suppliers may have access, either directly (in countries where third-party access to the facilities – regulated or negotiated – is provided) or via a load-matching service (as in the US).

Main network

All the high-pressure and large-diameter structures for transmitting natural gas that link the interconnection points with neighboring transmission networks, storage facilities and LNG terminals.

These structures are connected to regional networks as well as certain industrial consumers and distribution networks

Marketer

Seller of energy to third parties (end customer, distributor, etc.).

Natural Gas for Vehicles (NGV)

Entirely composed of natural gas, NGV is primarily used in urban transportation and waste treatment vehicles.

Natural Gas liquefaction

Transformation of natural gas from gaseous form to liquid form to be transported by ship and / or stored.

Public-Private Partnership (PPP)

The PPP is a contractual arrangement whereby the public sector authority assigns certain tasks to a private operator and specifies objectives. The public sector partner defines the service objectives for the private operator, while retaining ownership of the infrastructure and regulatory control. Local authorities are increasingly resorting to PPP agreements in managing their water services.

Pumping station

Power plant or facility that operates by moving water between reservoirs at different elevations. When electricity prices are low, typically overnight, electricity from the grid system is used to pump water into a raised reservoir and then at times of peak demand, when electricity prices are higher, the water is released back into the lower reservoir through a turbine.

Qmax

A ship of Qmax size is 345 meters (1,132 feet) long, 53.8 meters (177 feet) wide and 34.7 meters (114 feet) high, with a draft of approximately 12 meters (39 feet).

It has an LNG capacity of 266,000 cubic meters (9,400,000 cubic feet), equal to 161,994,000 cubic meters (5.7208 ×109 cubic feet) of natural gas.

Regional network

All the high-pressure and large-diameter structures that link the interconnection points with neighboring transmission networks, storage facilities and LNG terminals.

Regional networks, distribution networks and certain industrial consumers are connected to them.

Regulated asset base (RAB)

The regulated asset base is the economic value, recognized by the regulator, of assets utilized by an operator of regulated infrastructures.

Rights in kind of licensor

The "Rights in kind of licensor" line item is an item specifically pertaining to companies that are utility operators. It offsets "fixed assets held under concession" on the balance sheet.

Its valuation expresses the operator's obligation at the end of the contract to assign to the licensor, at no cost, the fixed assets assigned to the licensed utilities, such that at the end of a given contract, the value of the "Rights in kind of licensor" is equal to the carrying amount of fixed assets that are to be returned to the licensor.

Shuttle Regasification Vehicle (SRV)

LNG carrier fitted with onboard regasifiers that can connect to an underwater buoy. This enables the regasified LNG to be directly injected into a pipeline network.

Smart energy

An economically efficient, durable and secure energy system in which production of renewable energy, infrastructure and consumption are integrated and coordinated locally through energy services, active users and digital technologies.

Spark spread

Gross margin of a natural gas plant, equal to the difference between the sale price of electricity and the purchase price of the fuel needed to produce it. The spark spread must cover all other costs (including operation, maintenance, cost of capital, financial costs, cost of CO_2, etc).

Spot market

A market for the short-term purchase and sale of energy (for the day or up to three years).

Storage

Facility that allows natural gas to be stored in the summer when consumption is at its lowest, and to take natural gas out of storage in winter when consumption is higher. Gas storage is an industrial facility, mainly underground, that enables natural gas suppliers to have a natural gas reserve.

Stress test

Test performed in order to assess resistance to a disaster scenario.

Take-or-Pay

Long-term contract where the producer guarantees the supply of gas to an operator and the operator guarantees payment, regardless of whether or not the operator takes delivery.

Thermal power plant

Facility in which the chemical energy contained in solid, liquid, or gaseous fossil fuel is transformed exclusively into electricity using boilers and steam turbines.

Third Party Access to the distribution network (TPA-d)

The recognized right of each user (eligible customer, distributor, producer) to access a transmission or distribution network in return for payment for access rights.

Tolling

Contract for the transformation of a fuel (e.g. natural gas) into electricity on behalf of a third party.

Total Shareholder Return (TSR)

Return of a share over a given period that includes dividends paid and capital gains realized.

Transmission

Transmission networks are groups of physical structures consisting of high-pressure pipelines. These route natural gas to industrial consumers who are directly connected and to distribution networks.

Transmission capacity

The highest permissible continuous load of the transmission equipment with respect to the stability of its operating parameters and voltage drop.

Treasury stock (in subsidiaries)

Shares of a company owned by subsidiaries controlled by the Company. These shares do not carry voting rights.

Treasury stock

Shares of the Company purchased by the latter, by virtue of authorization given by the General Shareholders' Meeting. These shares do not have voting rights attached

Underground storage

Use of porous geological formations, natural or artificial cavities (saline or aquifer) to store liquid or gaseous hydrocarbons.

Upstream PPAs

A Corporate Power Purchase Agreement or upstream PPA is a long-term electricity supply contract between two parties, generally an electricity producer and an electricity purchaser.

Value at Risk (VaR)

Value at Risk is a global indicator used to measure the exposure of a portfolio to the risks of price fluctuations and volatility. It measures the amount of potential losses that are expected to be exceeded only with a given probability over a given time horizon. This indicator is especially well suited for measuring market risks for trading activities.

For example, if the time horizon is one day and the confidence level 99%, VaR of €5 million indicates that the probability of losing more than €5 million each day is 1%, i.e., twice or three times per year.

Virtual Power Plant (VPP)

Virtual generation capacity. A system which involves providing a third party, in return for compensation, with a band of generation capacity without the third party owning a share in the asset and without it being the asset's operator.

Working volume

Gas available in underground storage and capable of being tapped.

7.10 THEMATIC INDEX

7.11 COMPARISON TABLE

Regulation (EU) 2017/1129 of June 14, 2017 (Prospectus) and Delegated Regulation (EU) 2019/980 of March 14, 2019

This comparison table enables the information required by Annex 1 (referred from Annex 2) of Delegated Regulation (EU) 2019/980 of March 14, 2019, supplementing Regulation (EU) 2017/1129 of the European Parliament and of the Council, according to the prospectus layout, to be identified and cross-referenced to the Sections of the 2022 Universal Registration Document:

Information provided for in annexes 1 and 2 of Delegated Regulation (EU) 2019/980	Chapter of the 2022 Universal Registration Document		Page
1. Parties responsible, information from third parties, expert reports and approval of competent authority			
1.1 Name and position of parties responsible	7.5	Party responsible for the Universal Registration Document	424
1.2 Declaration by the parties responsible	7.5	Party responsible for the Universal Registration Document	424
1.3 Declaration or report attributed to a person acting as an expert	NA		NA
1.4 Third party certification	NA		NA
1.5 Declaration without prior approval by the competent authority		AMF insert	1
2. Statutory Auditors			
2.1 Name and address of Statutory Auditors	4.5.7	Statutory Auditors	207
2.2 Resignation, dismissal or non-renewal of Statutory Auditors	NA		NA
3. Risk factors	2	Risk factors and control	43
4. Information about the issuer			
4.1 Company name and trading name	7.1.1	Company name and trading name	422
4.2 Registration place and number and LEI	7.1.2	Registration place and number and LEI	422
4.3 Date of incorporation and term of the issuer	1.1.2 7.1.3	History and evolution of the Company Date of incorporation and term	8 422
4.4 Registered office and legal form of the issuer, legislation governing its activities, country of origin, address and telephone number of registered office, website with disclaimer	1.1.1 7.1	Presentation General information on ENGIE and its bylaws	8 422
5. Business overview			
5.1 Principal activities	1.1.1 1.1.3 1.2 1.6	Presentation Organization of the Group Strategy and objectives Description of the Group's activities	8 8 12 21
5.2 Main markets	1.1.1 1.2 1.6	Presentation Strategy and objectives Description of the Group's activities	8 12 21
5.3 Significant events	1.6	Description of the Group's activities	21
5.4 Strategy and objectives	1.2	Strategy and objectives	12
5.5 Degree of dependence of the issuer on patents or licenses, business, commercial or financial contracts or new manufacturing processes	2.2	Risk factors	45
5.6 Declaration on competitive positioning	1.1.1	Presentation	8
5.7 Investments			
5.7.1 Principal investments	6.1.1.3.3	Net investments	240
5.7.2 Major investments in progress	1.2 1.6	Strategy and objectives Description of the Group's activities	12 21
5.7.3 Joint ventures and commitments for which the issuer holds a significant proportion of the share capital	6.2.2	Consolidated financial statements – Note 2 (Main subsidiaries at December 31, 2022) and Note 3 (Investments in entities accounted for using the equity method)	256 263

Information provided for in annexes 1 and 2 of Delegated Regulation (EU) 2019/980	Chapter of the 2022 Universal Registration Document		Page
5.7.4 Environmental issues potentially affecting the use of tangible fixed assets	3.5	Environmental information	118
6. Organizational structure			
6.1 Brief description of the Group	1.1.3	Organization of the Group	9
6.2 List of significant subsidiaries	6.2.2	Consolidated financial statements – Note 2 (Main subsidiaries at December 31, 2022)	256
7. Operating and financial review	6.1.1	Management report	226
7.1 Financial position	6.1.1.3 6.1.1.4	Changes in net financial debt Other items in the statement of financial position	238 242
7.1.1 Evolution of results and financial position including key performance indicators of a financial and, if applicable, non-financial nature	6.1.1	Management report	226
7.1.2 Forecasts of future development and research and development activities	1.3 6.2.2	Research, technology and innovation Consolidated financial statements – Note 13.2.4 (Information regarding research and development costs)	13 298
7.2 Operating results			
7.2.1 Important factors, unusual and infrequent events or new developments	6.1.1.1 6.1.1.2	ENGIE 2022 results Other income statement items	226 237
7.2.2 Reasons for major changes in net revenues or net income	6.1.1.1 6.1.1.2	ENGIE 2022 results Other income statement items	226 237
8. Capital resources			
8.1 Information on capital	6.1.1.4 6.2.2	Other items in the statement of financial position Consolidated financial statements – Note 14.3.1 (Net financial debt by type) Note 16 (Equity) Note 5.4 (Industrial capital employed)	242 312 337 276
8.2 Cash flow	6.1.1.3	Changes in net financial debt	238
8.3 Financing requirements and financing structure	6.1.2.1 5.2 6.2.2	Borrowing conditions and financial structure applicable to the issuer Non-equity securities Consolidated financial statements – Note 14 (Financial instruments)	244 212 306
8.4 Restrictions on the use of capital	6.1.2.2	Restrictions on the use of capital	244
8.5 Expected sources of financing	6.1.2.3	Expected sources of financing to honor commitments relating to investment decisions	244
9. Regulatory environment	1.6 2.2.1	Description of the Group's activities Political and regulatory risks	21 45
10. Information about trends			
10.1 Significant recent trends in production, sales and inventory, and costs and selling prices, any significant change in the Group's financial performance or provide appropriate negative declaration	1.2 6.1	Strategy and objectives Review of the financial position	12 226
10.2 Information that are reasonably likely to have a material effect on the issuer's prospects	6.1.1.1.2	2023-2025 outlook and guidance	227

Information provided for in annexes 1 and 2 of Delegated Regulation (EU) 2019/980	Chapter of the 2022 Universal Registration Document		Page
11. Earnings forecasts or estimates			
11.1 Earnings forecast or estimate	6.1.1.1.2	2023-2025 outlook and guidance	227
11.2 Statement setting out main assumptions	6.1.1.1.2	2023-2025 outlook and guidance	227
11.3 Statement relating to the bases for establishing and developing profit details and estimates	6.1.1.1.2	2023-2025 outlook and guidance	227
12. Administrative, management, and supervisory bodies and general management			
12.1 Information concerning the members of the corporate governance bodies and general management	4.1 4.3	Governing bodies General Management	148 182
12.2 Conflicts of interest	4.1.1.4	Absences of conflict of interest or conviction, service agreement and family ties	168
13. Compensation and benefits			
13.1 Amount of compensation paid and benefits in kind	4.4	Compensation and benefits paid to members of the administration and management bodies	183
13.2 Total amounts set aside or accrued to provide pension, retirement or similar benefits	4.4	Compensation and benefits paid to members of the administration and management bodies	183
14. Corporate governance and management bodies practices			
14.1 Expiration date of terms of office	4.1.1	Composition of the Board of Directors	148
14.2 Service contracts binding members of corporate governance bodies	4.5.3	Service contracts binding members of corporate governance bodies	203
14.3 Information on the Audit Committee and Compensation Committee	4.1.2.4	Committees	175
14.4 Compliance with applicable corporate governance regime	4.1.2 4.6	Functioning of the Board of Directors and its Committees Corporate Governance Code	171 207
14.5 Potential significant impacts on corporate governance	4.2.2	Shareholders' Meeting of April 26, 2023 – Composition of the Board of Directors	182
15. Employees			
15.1 Number of employees	3.4.1	Social data	100
15.2 Shareholding and stock options	4.1.1.1 4.4	Experience and expertise of the Directors in office Compensation and benefits of members of the administration and management bodies	151 183
15.3 Arrangements for involving employees in the capital of the issuer	3.4.4	Compensation, social protection, employee savings plans, and employee shareholding	112
16. Major shareholders			
16.1 Shareholders with more than 5% of the share capital or voting rights	5.1.1 5.4.3	Share capital and voting rights Disclosure thresholds	210 222
16.2 Existence of different voting rights	5.1.1.3 5.4.4	Voting rights Golden share	210 222
16.3 Control of the issuer	5.4.2 5.4.4	Breakdown of share capital Golden share	221 222
16.4 Agreements relating to change of control	5.4.4	Golden share	222
17. Related party transactions			
	4.5.2 4.7	Regulated agreements and related party agreements Statutory Auditors' special report on related party agreements	203 208

Information provided for in annexes 1 and 2 of Delegated Regulation (EU) 2019/980	Chapter of the 2022 Universal Registration Document		Page
18. Financial information concerning the issuer's assets and liabilities, financial position and profits and losses			
18.1 Historical financial information	6.2 6.3 6.4 6.5	Consolidated financial statements Statutory Auditors' report on the consolidated financial statements Parent company financial statements Statutory Auditors' report on the financial statements	245 362 369 416
18.2 Interim financial information	6.2	Consolidated financial statements	245
18.3 Auditing of historical annual financial information	6.3 6.5	Statutory Auditors' report on the consolidated financial statements Statutory Auditors' report on the financial statements	362 416
18.4 Pro forma financial information	NA		NA
18.5 Dividend distribution policy	5.4.5	Dividend distribution policy	223
18.6 Legal and arbitration proceedings	6.2.2 7.3	Consolidated financial statements – Note 23 (Legal and anti-trust proceedings) Litigation and arbitration	357 423
18.7 Significant change in the issuer's financial position	6.2.2	Consolidated financial statements – Note 24 (Subsequent events)	361
19. Additional information			
19.1 Share capital	5.1	Information on capital	210
19.1.1 Amount of subscribed capital, number of shares issued and fully paid up and nominal value per share, number of authorized shares	5.1.1 5.1.2 4.5.4	Share capital and voting rights Potential capital and share equivalents Authorizations relating to share capital and share equivalent and their utilization	210 210 203
19.1.2 Shares not representing capital	5.2	Non-equity securities	212
19.1.3 Number, book value and nominal value of shares held by the issuer	5.1.4.3	Book value and nominal value	212
19.1.4 Convertible securities, exchangeable securities or securities with warrants	NA		NA
19.1.5 Vesting rights and / or obligations attached to authorized but unissued capital or an undertaking to increase the capital	NA		NA
19.1.6 Options on the capital of members of the Group	5.4.4	Golden share	222
19.1.7 History of share capital	5.1.3	Five-year summary of changes in the share capital	211
19.2 Memorandum and Articles of Association			
19.2.1 Register and corporate Objective	7.1.2 7.1.5	Registration place and number and LEI Corporate Objective	422 422
19.2.2 Rights, privileges and restrictions attached to shares	5.4.4 4.5.5	Golden share Provisions in the bylaws on the participation of shareholders at Shareholders' Meetings	222 206
19.2.3 Provisions having an effect of delaying, deferring or preventing a change in control of the issuer	5.4.4 4.5.5	Golden share Provisions in the bylaws on the participation of shareholders at Shareholders' Meetings	222 206
20. Material contracts	7.2	Material contracts	423
21. Available documents	7.4	Public documents	424

Comparison table for the annual financial report

To facilitate the reading of this document, the comparison table below may be used to identify, in this Universal Registration Document, the information that constitutes the annual financial report which must be published by listed companies in accordance with Articles L.451-1-2 of the French Monetary and Financial Code and 222-3 of the General Regulations of the French Financial Markets Authority (AMF).

Items required	Chapter of the Universal Registration Document		Page
Annual financial statements	6.4	Parent company financial statements	369
Consolidated financial statements	6.2	Consolidated financial statements	245
Management report		See specific comparison table below	436
Declaration by the parties responsible for the Annual Financial Report	7.5	Party responsible for the Universal Registration Document	424
Statutory Auditors' report on the parent company financial statements	6.5	Statutory Auditors' report on the financial statements	416
Statutory Auditors' report on the consolidated financial statements	6.3	Statutory Auditors' report on the consolidated financial statements	362

Comparison table for the management report (to which the report on corporate governance and the extra-financial performance declaration are appended)

To facilitate the reading of this document, the comparison table below enables the identification of the information which should be included in the management report, in accordance with the provisions of the French Commercial Code applicable to public limited companies with a Board of Directors.

Items required	Chapter of the Universal Registration Document		Page
1. Group position and activity			
Company's position during the past fiscal year and an objective and comprehensive analysis of changes in business, results and the financial position of the Company and of the Group, in particular its level of debt with respect to the volume and complexity of business	6.1.1 6.1.1.2 6.1.1.1.2 6.1.2.1 6.2	Management report Other income statement items 2023-2025 outlook and guidance Borrowing conditions and financial structure applicable to the issuer Consolidated financial statements	226 237 227 244 245
Key financial performance indicators	1.4.3	2022 key financial figures	18
Key performance indicators of a non-financial nature relevant to the Company and the Group's specific activity, in particular information relating to environmental and employee matters	1.4.3	2022 key financial figures	18
Significant events, which have occurred between the end of the fiscal year and the date on which the Management Report was drawn up	6.2.2	Consolidated financial statements – Note 24 (Subsequent events)	361
Existing branches	NA	NA	
Significant equity stakes in companies with their head office in France	6.2.2	Consolidated financial statements – Note 4 (Main changes in Group structure)	270
Disposal of cross-shareholdings	NA	NA	
Expected Company and Group trends and outlook	6.1.1.1.2	2023-2025 outlook and guidance	227
Research and development activities	1.3 6.2.2	Research, technology and innovation Consolidated financial statements – Note 13.2.4 (Information regarding research and development costs)	13 298
Table showing the five-year financial summary	6.4.4	Five-year financial summary	415
Information on suppliers and customers payment terms	6.1.1.5	Parent company financial statements	243
Amount of intercompany loans granted and declaration of the Statutory Auditors	NA	NA	NA

Items required	Chapter of the Universal Registration Document		Page
2. Internal control and risk management			
Description of the main risks and uncertainties to which the Company is exposed	2.2 3.3.1 3.3.2 3.3.3 3.3.4	Risk factors Main environmental risks Main societal risks Main social risks Main governance risks	45 93 95 96 98
Indications regarding financial risks related to the effects of climate change and description of the measures taken by the Company to reduce them by implementing a low-carbon strategy in all areas of its business	2.2.2 3.3 3.3.1 3.5.4.1	Risks deriving from climate and environmental issues Analysis of main CSR risks and challenges Main environmental risks Climate change	48 88 93 121
Main features of the internal control and risk management procedures introduced, by the Company and by the Group, relating to the preparation and processing of accounting and financial information	2.1 2.3.3	Risk management process Internal control relating to financial information	43 62
Indicators regarding hedging targets and policies for each main category of transaction and exposure to price, credit, liquidity and cash flow risks, which includes the use of financial instruments	2 6.2.2	Risk factors and control Consolidated financial statements – Note 14 (Financial instruments) Note 15 (Risks arising from financial instruments)	41 306 320
Anti-corruption mechanism	3.8	Ethics and compliance	131
Vigilance plan and report on its effective implementation	3.9	Vigilance Plan	134
3. Report on corporate governance			
Information regarding compensation			
Compensation policy for corporate officers	4.4.1 4.4.2	Compensation of executive corporate officers Compensation of corporate officers for 2022	186 192
Compensation and benefits of any kind paid during the fiscal year or awarded for the fiscal year to each corporate officer	4.4.1.6 4.4.1.7	Summary of compensation of each corporate officer Overview of compensation of each corporate officer	186 186
Proportion in relation to the fixed and variable compensation	4.4.1	Compensation of executive corporate officers	186
Use of the possibility to request the restitution of variable compensation	NA	NA	NA
Commitments of any kind made by the Company in favor of its corporate officers that correspond to compensation, indemnities or benefits due, or which could be due, for assuming, ending or changing and office, or subsequent to the exercise of such an office	4.4.1.5	Employment contract, special retirement plans, severance pay and non-compete clause	185
Compensation paid or awarded by a Company include into the scope of consolidation as defined in Article L.233-16 of the French Commercial Code	NA	NA	NA
The ratios between the levels of compensation of each corporate officer and the average and median compensation of Company employees	4.4.1.9	Comparison tables of the level of compensation of corporate officers in relation to the compensation of employees – Annual changes in performance and compensation	190
Annual change in compensation, the Company's performance, the average compensation of Company employees and the above-mentioned ratios over the past five fiscal years	4.4.1.9	Comparison tables of the level of compensation of corporate officers in relation to the compensation of employees – Annual changes in performance and compensation	190

Items required	Chapter of the Universal Registration Document		Page
Explanation of the way the total compensation respects the compensation policy adopted, including the way in which it contributes to the long-term performance of the Company, and the way in which the performance criteria have been applied	4.4.2	Compensation of corporate officers for 2022	192
The way in which the vote of the last Ordinary Shareholders' Meeting set out in paragraph I of Article L.22-10-34 of the French Commercial Code was taken into consideration	NA	NA	
Divergence from the procedure to implement the compensation policy, and any exception	NA	NA	NA
Application of the provisions of the second paragraph of Article L.225-45 of the French Commercial Code (suspension of the payment of directors' compensation in the event of non-compliance with gender equality within the Board of Directors)	NA	NA	na
Allocation and retention of options by corporate officers	NA	NA	na
Allocation and retention of bonus shares to corporate officers	4.4.1.3	Long-term incentive compensation (Performance Units and Performance Shares)	184
	4.4.6	Information on the award of bonus shares or Performance Shares	197
Information on governance			
List of all positions and functions held in any company by each corporate officer during the fiscal year	4.1.1.1	Experience and expertise of the Directors in office	151
	4.1.1.6	Multiple Directorships	170
Agreements between an executive officer or a major shareholder and a subsidiary	4.5.1	Agreements relating to current operations concluded under normal conditions	203
	4.5.2	Regulated agreements and related party agreements	203
	4.7	Statutory Auditors' special report on related party agreements	208
Summary table of authorizations currently in force granted by the Shareholders' Meeting relating to a capital increase	4.5.4	Authorizations relating to share capital and share equivalent and their utilization	203
General Management procedures	4.3	General Management	182
Composition and conditions governing the preparation and organization of the work of the Board	4.1.1	Composition of the Board of Directors	148
	4.1.2	Functioning of the Board of Directors and its Committees	171
Diversity policy of the Board of Directors and application of the principle of equal representation of women and men within the Board of Directors	4.1.1.7	Diversity policy for members of the Board of Directors	170
Potential limitations applied by the Board to the powers exercised by the Chief Executive Officer	4	Governance	147
	4.1.2	Functioning of the Board of Directors	171
Reference to a corporate governance code and application of the “comply or explain” principle	4.6	Corporate Governance Code	206
Specific conditions governing the participation of shareholders in the Shareholders' Meeting	4.2.2	Shareholders' Meeting of April 26, 2023 – Composition of the Board of Directors	182
	4.5.5	Provisions in the bylaws on the participation of shareholders at Shareholders' Meetings	206
Assessment procedure for current agreements – Implementation	4.5.1	Agreements relating to current operations concluded under normal conditions	203
	4.5.2	Regulated agreements and related party agreements	203
	4.7	Statutory Auditors' special report on related party agreements	208
Information that may have an impact in the event of a public tender offer or exchange offer	4.5.6	Information on elements that could have an impact on Takeover Bids or Public Exchange Offers	207

Items required	Chapter of the Universal Registration Document		Page
4. Shareholding and share capital			
Structure, change in the Company's share capital and disclosure thresholds	5.4.2 5.4.3 5.4.4	Breakdown of share capital Disclosure thresholds Golden share	221 222 222
Purchase and disposal by the Company of its own shares	5.1.4 6.2.2	Stock repurchase Consolidated financial statements – Note 16 (Equity)	211 337
Employee stake in share capital on the last day of the fiscal year (share of the capital represented)	5.4.2 3.4.4	Breakdown of share capital Compensation, social protection, employee savings plans, and employee shareholding	221 112
Any adjustments for share equivalents in the event of share buybacks or financial transactions	NA	NA	NA
Information on transactions by directors and related parties involving the Company's shares	4.4.9	Summary of transactions disclosed by executive management and corporate officers in fiscal 2022	202
Amount of dividends distributed for the previous three fiscal years	5.4.5	Dividend distribution policy	223
5. Non-financial statement (NFS)			
Business model	3.2	Business model	86
Description of the main risks associated with the Company's or the Group's business, including, where relevant and proportionate, the risks created by business relationships, products or services	3.3	Analysis of main CSR risks and challenges	88
Information on the effects of the activity in terms of respect for human rights and the fight against corruption and tax avoidance, and how the Company or the Group take social and environmental consequences of their activity into account (description of the policies applied and the due diligence procedures implemented in order to prevent, identify and mitigate the main risks associated with Company or Group activity)	3.3	Analysis of main CSR risks and challenges	88
Results of the policies applied by the Company or the Group, including key performance indicators	3.1 3.1.2 3.1.5 3.3.1 3.3.2 3.3.3 3.3.4	Corporate Social Responsibility 2030 CSR objectives European taxonomy Main environmental risks Main societal risks Main social risks Main governance risks	66 66 68 93 95 96 98
Social information (employment, work organization, health and safety, employee relations, training, equal treatment)	3.4.3.1 3.4.3.2 3.4.3.4 3.4.2.3 3.4.4 3.4.5 3.4.7	Training and Development The talent policy Hiring and employer brand Diversity and inclusion Compensation, social protection, employee savings plans, and employee shareholding Social dialog Health and safety policy	103 106 108 109 112 114 115
Environmental information (general policy in terms of the environment, pollution, the circular economy, climate change)	2.2.2 2.2.5.2 2.2.7 3.5	Risks deriving from climate and environmental issues Risk of industrial accident Risks relating to nuclear activities Environmental information	48 54 57 118
Societal information (societal commitments in favor of sustainable development, subcontractors and suppliers, fair trade practices)	3.5.4.6 3.6 3.7	Waste Societal information procurement, subcontracting and suppliers	125 128 130
Information relating to the fight against corruption	3.3.4 3.8	Main governance risks – risk U Ethics and compliance	98 131

Items required	Chapter of the Universal Registration Document		Page
Information relating to measures in support of human rights	3.3.4 3.8.2 3.9.1	Main governance risks – risk X Risk assessment Identification and management of the risks of serious harm to individuals and the environment	98 132 135
Specific information: • technological risk prevention policy implemented by the Company; • the Company's ability to cover its civil liability toward property and people as a result of the operation of such facilities; • resources provided by the Company to ensure the management of victims' compensation in the event of a technological accident for which it is civilly liable.	2.2.2.2 3.3.1	Risks of adaptation of industrial assets Main environmental risks	48 93
Collective bargaining agreements concluded within the Company and their impact on the Company's economic performance and the working conditions of employees	3.4.7	Health and safety policy	115
Declaration by an independent third party body regarding the information included in the NFS	3.10	Independent third party's report on the consolidated non-financial statement presented in the management report	142
6. Additional information			
Additional tax information	6.2.2	Consolidated financial statements – Note 11 (Income tax expense)	290
Injunctions or financial sanctions for anti-trust practices	6.2.2 7.3	Consolidated financial statements – Note 23 (Legal and anti-trust proceedings) Litigation and arbitration	357 423

Photo credits: Shutterstock, Ocean Winds.

This document was printed in France by an Imprim'Vert certified printer on PEFC certified paper produced from sustainably controlled and managed resources.

Designed & published by LABRADOR +33 (0)1 53 06 30 80

A public limited company with a share capital of €2,435,285,011

Corporate headquarters: 1 place Samuel de Champlain
92400 Courbevoie – France
Tel.: +33 (0)1 44 22 00 00

Register of commerce: 542 107 651 RCS NANTERRE
VAT FR 13 542 107 651

engie.com