2020 MANAGEMENT REPORT AND ANNUAL CONSOLIDATED FINANCIAL STATEMENTS

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01 MANAGEMENT REPORT

1 ENGIE 2020 RESULTS

ENGIE 2020 financial results

Progress at pace on new strategic direction towards accelerating the energy transition
Strong recovery from Q2 levels, with H2 organic performance similar to 2019

Business Highlights

- Major capital projects delivered with €4.0 billion growth Capex [(1)]
- Strong growth in Renewables with 3 GW commissioned and 2 GW acquired
- Sale of 29.9% shareholding in SUEZ completed
- Client Solutions and further strategic reviews launched towards Group simplification
- Employee consultation launched for potential creation of new leader in multi-technical services
- New ExCom announced
- Continued ESG progress, with commitment to finalize coal exit in Europe by 2025 and globally by 2027
- Decision to stop preparation works that would allow for the 20-year extension of two nuclear units beyond 2025
- Update on new strategic direction alongside Q1 results, on 18 May 2021

Financial performance

- 2020 NRIgs in line with guidance, EBITDA and COI [(2)] above expectations
- Significant impact of COVID-19 in 2020 mainly on Client Solutions and Supply, with c. €1.2 billion total Group impact at COI level
- Negative FX impact of €0.3 billion at COI level, mainly due to BRL depreciation
- Net financial debt at €22.5 billion, down €3.5 billion versus last year, strong liquidity and strong investment grade rating maintained
- Impairment of nuclear assets, partially offset by capital gains on disposals, leading to NIgs of €-1.5 billion
- 2020 proposed dividend of €0.53 per share
- 2021 guidance [(3)]: NRIgs expected in the range of €2.3-2.5 billion

1.1 Key Financial figures at December 31, 2020

In billions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis) [(1)]
Revenues	55.8	60.1	-7.2%	-5.7%
EBITDA	9.3	10.4	-10.5%	-6.5%
CURRENT OPERATING INCOME (COI)	4.6	5.8	-21.3%	-16.4%
Net recurring income Group share	1.7	2.7	-36.5%	-34.3%
Net income, Group share	(1.5)	1.0	-	
CAPEX	7.7	10.0	-	
Cash Flow From Operations (CFFO) [(2)]	7.1	7.6	-	
Net financial debt	22.5	25.9	-3.5 vs Dec. 31, 2019	

(1) Organic variation: gross variation without scope and foreign exchange effect
(2) Cash flow from operations = Free cash flow before maintenance Capex.

(1) Net of DBSO (Develop, Build, Share and Operate) and of US tax equity proceeds
(2) New Current Operating Income (COI) definition excludes the non-recurring share in net income of equity method entities
(3) Main assumptions for these targets and indications: average weather in France for 2021, full pass through of supply costs in French regulated gas tariffs, no major regulatory or macro-economic changes, no change in Group accounting policies, market commodity prices as of 12/31/2020, average forex for 2021: €/$: 1.23; €/BRL: 6.27, up to 100 M€ dilution effect at the COI level from disposals not yet signed corresponding to approximately €2 billion reduction in net debt. Projections based on absence of stringent additional lockdown considered and gradual return to normal over 2021.

1.2 Financial targets

The forecasts for the financial year ended December 31, 2021, 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 registration of the management 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) No 2019/980 supplementing Regulation (EU) No 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 to the consolidated financial statements at December 31, 2020; 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.

1.2.1. Assumptions

- strategy: confirmation and deepening of the Group ambition to establish ENGIE as a leading force in the energy and climate transition. The Group will focus on completing the strategic reviews underway to create value and re-allocate capital towards growth, particularly in Renewables, Networks, and Asset-based Client Solutions;
- sanitary conditions in line with those of Q4 2020, no stringent additional lockdown considered and gradual return to normal over 2021;
- disposals: COI dilution up to €100 million on top of impacts from already announced / closed disposals, corresponding to a € 2 billion net financial debt reduction;
- foreign exchange rates: 2021 average annual €/US Dollar and €/Brazilian real foreign exchange rates at 1.23 and 6.27 respectively;
- regulated tariffs in France Infrastructures:
  - distribution, transport and storage: tariffs as published by the CRE in January 2020,
  - regasification: tariffs as published by the CRE in January 2021;
- regulated gas and power tariffs in France: full pass through of supply costs;
- commodity prices: based on market conditions as of December, 2020 (80% of European outright power is hedged – captured prices: 46€/MWh);
- climate: normalized conditions in France (gas distribution and energy supply + normalized hydro production);
- recurring effective tax rate: 25%;
- employee benefit provisions discount rates: based on market conditions as of December 31, 2020, as disclosed in Note 20 to the consolidated financial statements at December;
- no significant accounting changes compared to 2020;
- no major regulatory and macro-economic changes compared to 2020.

1.2.2. 2021 Guidance

Overall financial performance in 2021 is expected to improve significantly after a COVID-19 impacted 2020, assuming no additional stringent lockdowns and a gradual easing of restrictions over 2021.

For 2021, ENGIE anticipates a Net Recurring Income group share in the range of €2.3 to 2.5 billion. This guidance is based on an indicative EBITDA range of €9.9 to 10.3 billion and a COI range of €5.2 to 5.6 billion.

Expectation by business line:

	Expected drivers for 2021 COI
Renewables	Growth in the US and France should benefit financial performance, partly offset by a lower contribution from rulings in Brazil relating to the recovery of past energy costs and a weaker BRL
Networks	Networks are expected to remain stable with the impact of the new, lower RAB remuneration rates in France offset by reversal of the warm temperature effect of 2020 and growth in Latin America
Client Solutions	Overall Client Solutions should demonstrate strong recovery from COVID-19, albeit with a relatively slower recovery for asset light activities, and benefit from y-o-y accretion from SUEZ and EV-Box disposals
Thermal	Expect normalization after a particularly strong 2020 performance in Europe
Supply	Expect strong recovery from COVID-19 and the reversal of the 2020 warm temperature effect. .
Nuclear	Much improved performance expected driven by better availability following LTO completions and higher achieved prices

Included within this guidance is an estimated impact that follows the extreme cold weather in Texas earlier this month. ENGIE is assessing the situation, which mainly affects Renewables and Supply activities. Overall ENGIE currently estimates a potential net negative impact at the Group COI and Net Recurring Income Group share levels of between €80 to 120 million.

Regarding disposals, ENGIE remains focused on executing at pace to simplify the Group; crystallize value and re-allocate capital towards strategic priorities. This guidance assumes disposals of around €2 billion with a related COI dilution of up to €0.1 billion, in addition to previously signed transactions such as the disposal of EVBox. With respect to investment, ENGIE expects to invest between €5.5 to 6.0 billion growth Capex, with over 90% in Renewables, Networks and Asset-based Client Solutions and €4.0 billion in maintenance including the funding of Belgian nuclear provisions Capex.

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 over the long-term.

ENGIE will update the market on the implementation plan for its new strategic orientation and provide medium-term guidance on 18 May 2021.

1.3 Dividend proposed at top-end of payout ratio

The Board has reaffirmed the Group's dividend policy of NRIgs payout ratio in the range of 65 to 75%.

For 2020, the Board has proposed a payout ratio of 75%, at the top end of the policy range. This translates to a dividend of €0.53 per share, which will be proposed for shareholder approval at AGM on the 20th of May.

1.4 Update on Belgian Nuclear Assets

Following the announcements of the Belgium government in Q4 2020, it has been decided to stop all the preparation works that would allow a 20-year extension of half of two units beyond 2025, as it seems unlikely that such an extension can take place given the technical and regulatory constraints. This change in lifetime assumption as well as changes in the commodity price scenario have led to an impairment of €2.9 billion for nuclear assets, which have been accounted as non-recurring items in the 2020 P&L.

ENGIE remains committed to Belgium and to contributing to the country's security of supply. Alongside renewables, the Group is also developing projects of up to 3 GW of gas-fired power plants. These projects could participate in the Belgian Capacity Remuneration Market through auctions in the second half of this year, once approved by the European authorities

1.5 Progress at pace on new strategic orientation

Following the announcement in July of a new strategic orientation to simplify the Group and accelerate growth in Renewables and Infrastructure assets, ENGIE has delivered progress at pace despite the challenging backdrop.

Progress on Group simplification and sharper strategic focus with disposal of SUEZ, launch of strategic reviews and rationalization

The disposal of 29.9% shareholding in SUEZ for €3.4 billion was completed in October, and ENGIE launched strategic reviews of a significant part of Client Solutions activities, GTT and ENGIE EPS.

In addition, ENGIE also progressed on geographic rationalization and strengthening its position in key countries. An example of this is the acquisition of an additional 7% shareholding in ENGIE Energia Chile, thereby reducing the level of minority holdings.

A strategic review of part of Client Solutions was launched towards the potential creation of a new leader in multi-technical services, which would benefit from scale and strong growth prospects. In February 2021, the employee consultation related to the proposed organization design for the new entity was launched. This consultation is expected to conclude by the end of the second quarter of 2021. The Group will consider next steps and review future ownership options for the potential new entity, in the second half of this year. ENGIE will consider all options to maximize value and will act in the interests of all stakeholders.

A new Executive Committee and simplified business organization

In January, the appointment of new Executive Committee (ExCom) was announced reflecting the intention to implement a simplified business organization focused on four businesses: Renewables, Networks, Client Solutions and Thermal & Supply. Along with the ExCom members responsible for functional activities and specific projects, the new leadership team is engaged in executing ENGIE's new strategic direction and enhancing the Group's performance culture.

1.6 Continued operational delivery and €4 billion growth investment, despite challenging backdrop

Operationally, the Group continuously adapted processes to ensure delivery of essential services, while maintaining high health and safety standards. Overall Capex amounted to €7.7 billion in 2020, including €4.0 billion of growth investments, €2.4 billion of maintenance Capex and €1.3 billion of nuclear funding.

See section 4 "Change in net financial debt" of this management report for more details.

1.7 Delivering on ESG goals, commitment to exit coal in Europe by 2025 and globally by 2027

Carbon neutrality is at the heart of ENGIE's purpose and central to its strategic direction.

In 2020, greenhouse gas emissions were reduced by 9% to 68 million tons from power generation benefitting mainly from the disposal of coal plants in Western Europe. ENGIE has today announced the commitment to exit all coal assets in Europe by 2025 and globally by 2027 including coal generation for DHC networks.
As a reminder, coal represents 4 GW of ENGIE's 101 GW centralized power generation portfolio.
ENGIE also increased the share of renewables in its portfolio to 31% in 2020 from 28% at the end of 2019 with the addition of 5 GW of renewables.
On gender diversity, there was a small increase in the number of women in the management and ENGIE had 24% women in management at the end of 2020.

1.8 Operational and financial overview

The Group's activities across Renewables, Networks, Thermal, Nuclear and Other activities demonstrated resilience, however, primarily due to the impacts experienced in H1, ENGIE's results for 2020 were down significantly with an estimated COI impact of c. €1.2 billion from COVID-19. More than 75% of this effect related to Client Solutions and Supply. In addition, warm temperature in France impacted Networks and Supply with a total negative COI impact of €160 million.
The impact of foreign exchange was a total negative effect of €293 million, mainly driven by the depreciation of the Brazilian Real (with an average EUR/BRL rate of 5.90 in 2020 vs. 4.42 in 2019, representing a 34% depreciation). Net negative scope effect of €76 million mainly reflects the disposals of Glow in March 2019 and 29.9% shareholding in SUEZ in October 2020, partly offset by the acquisition, alongside with Caisse de Dépôt et Placement du Québec, of 90% of TAG in June 2019 and the remaining 10% in July 2020, together with various acquisitions in Renewables (like Renvico in Italy and in France) as well as in Client Solution (mainly Conti in the US and Powerlines in Europe).

Net recurring income Group share was at the lower end of the guidance range mainly due to higher contributions from entities with minorities (particularly in Latin America) and higher financial costs notably due to inflation and foreign exchange. These results also reflect negative tax effects and the fourth quarter dilution following the disposal of 29.9% shareholding in SUEZ.

1.8.1. COI contribution by reportable segment

COI contribution by reportable segment is presented hereunder and detailed in section 2 "Business trends" of this management report.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
France	2,229	2,862	-22.1%	-22.2%
France excluding Infrastructures	*620*	*905*	*-31.5%*	*-32.0%*
France Infrastructures	*1,609*	*1,957*	*-17.8%*	*-17.8%*
Rest of Europe	648	707	-8.3%	-9.9%
Latin America	1,542	1,696	-9.0%	+2.9%
USA & Canada	124	155	-20.3%	-6.3%
Middle East, Asia & Africa	518	619	-16.4%	+0.2%
Others	(483)	(221)		
TOTAL	**4,578**	**5,819**	**-21.3%**	**-16.4%**

1.8.2. COI contribution by Business line

COI contribution by Business line is as follows:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Client Solutions	459	1,082	-57.5%	-57.6%
Networks	2,063	2,344	-12.0%	-14.0%
Renewables	1,070	1,195	-10.4%	+10.8%
Thermal	1,209	1,320	-8.4%	+1.4%
Nuclear	(111)	(314)	+64.7%	+64.7%
Supply	112	345	-67.7%	-65.5%
Others	(224)	(154)	-45.8%	-37.5%
TOTAL	**4,578**	**5,819**	**-21.3%**	**-16.4%**

Estimated COVID-19 impacts by Business Lines are as follows:

In billions of euros	Estimates at COI level	Nature
Client Solutions	(0.60)	Loss of revenues / contracts, bad debts, specific purchases
Networks	(0.07)	Lower volumes, lower capitalized costs, specific purchases
Renewables	(0.05)	Lower volumes dispatched
Thermal	(0.04)	Lower demand
Nuclear	(0.06)	Adjusted maintenance operations
Supply	(0.29)	Lower demand, unwinding of hedges, bad debts, lower B2C services
Others	(0.07)	Credit losses
TOTAL	**(1.18)**	**Net of savings / action plans**

These estimates have been prepared in accordance with a standard guidance applied across businesses under a dedicated oversight process (losses of revenues being inherently subject to more judgement than the identification of specific costs incurred), considering operating items only and are presented net of savings and mitigating management action plans. By definition these estimates exclude foreign exchange and commodity price effects incurred in the Group's various businesses, whether positive or negative.

1.8.2.1. Renewables

Renewables delivered +11% organic growth.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
EBITDA	1,559	1,724	-9.6%	+8.7%
COI	1,070	1,195	-10.4%	+10.8%
CAPEX	1,633	2,475	-34.0%	-
DBSO margins (COI contribution) (1)	101.0	189.0	-46.6%	-
Operational KPIs				
Commissioning (GW at 100%)	3.0	3.0	-	-

Renewable COI amounted to €1,070 million, up 11% on an organic basis. This organic growth was driven by: the positive effect from the "GFOM" ruling in Brazil (corresponding to the recovery of past energy costs, following the agreement on renegotiation of hydrological risk, which was finalised at the end of 2020) for approximately €165 million; improved prices for hydro power production in France; higher wind production mainly due to commissioning of new projects and the first effects of the tax equity financing signed in the US in Spring 2020. This organic growth was partly offset by lower DBSO margins and unfavourable energy allocation for hydro in Brazil.

Despite a challenging backdrop, ENGIE repeated the strong operational growth performance achieved in 2019 with the commissioning of 3 GW of renewable capacity in 2020. In addition, the Group also acquired 2 GW of operating assets in Europe: 1.7 GW hydro in Portugal, together with Crédit Agricole Assurances and Mirova, and 0.3 GW wind in Italy and France.

In the last two years, ENGIE's renewable capacity at 100% grew by 32%, mainly thanks to 6.0 GW of capacity commissioned and 2.1 GW acquired, reaching 31.1 GW at the end of 2020. Through renewable energy development, ENGIE provides its public and private customers with renewable energy supply under optimized contractual and financial arrangements, benefitting from the Group's long-term expertise in energy trading. The Group has further strengthened its positioning in the rapidly growing market of long-term corporate renewable power purchase agreements ("Green Corporate PPAs") with more than 1.5 GW of contracts signed in 2020.

With a relatively young portfolio of wind and solar assets (average age of 5 years) benefitting from long-term contracts (average residual duration of 15 years) that provide visibility of earnings, Renewables represent a key long-term growth engine for the Group.

3 GW of Renewables are currently under construction for commissioning in 2021 and ENGIE is on track to achieve its 2019 target of adding 9 GW of new capacity in three years by the end of 2021.

ENGIE and EDP Renováveis finalized the creation of Ocean Winds, a joint venture in the floating and fixed offshore wind energy sector equally. Ocean Winds will act as the exclusive investment vehicle of each partner to capture offshore wind opportunities around the world and aims to become a top five offshore global operator by combining the development potential of both partners. Since its creation, the company already commissioned the first 0.2 GW tranche of a fixed offshore wind farm in Belgium and WindFloat Atlantic, a 25 MW floating wind farm in Portugal. The latter is the world's first semi-submersible floating wind farm and constitutes an important achievement for the sector as floating wind technology contributes to the diversification of energy sources and provides access to untapped marine areas.

ENGIE announced the signing of an agreement to sell 49% of its equity interest in a 2.3 GW US renewables portfolio to Hannon Armstrong, a leading investor in climate change solutions. ENGIE will retain a controlling share in the portfolio and continue to manage the assets. When commissioned, this 2.3 GW portfolio, will comprise 1.8 GW onshore wind and 0.5 GW solar photovoltaic projects. ENGIE has secured nearly USD 2 billion of tax equity commitments for this portfolio. Tax equity financing is the traditional structure used in the US to support the development of renewable projects. This tax equity financing – the largest ever in the US – demonstrates ENGIE's successful development in this market.

ENGIE is also developing projects to drive the long-term energy transition: in early January 2021, ENGIE and Total signed a partnership to develop France's largest site for the production of green hydrogen from 100% renewable electricity. This partnership is one of many green hydrogen projects ENGIE is currently developing.

1.8.2.2. Networks

Networks mainly impacted by warmer temperature and higher D&A in France; international COI up significantly.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
EBITDA	3,850	4,026	+4.4%	-5.3%
COI	2,063	2,344	+12.0%	-14.0%
CAPEX	2,502	344	+27.4%	-
Operational KPIs				
Temperature effect (COI in millions of euros)	(135)	(36)	-99	-
Smart meters (m)	6.9	4.9	-	-
COVID-19 impacts (COI in billion of euros)	0.07	-	-	-

Networks COI at €2,063 million was down 14% on an organic basis. In France, performance was impacted by unusually mild temperature in H1 and by the negative effect of COVID-19 on distributed volumes, partly offset by lower levels of expenditure during lockdown. Higher D&A due to accelerated amortization of some gas distribution assets in France, which is value neutral over time as it is integrated in the regulated revenue, the non-reiteration of a positive internal Q4 2019 one-off as well as the first effects of the lower Regulated Asset Base (RAB) remuneration rate also contributed to the lower COI for French Networks. Of these impacts, negative volume effects will be recovered in the medium-term under the clawback accounts mechanism.

In Latin America, performance benefitted from higher contributions from TAG and from the two power transmission lines currently under construction in Brazil. In Europe (excluding France) and Asia, Networks faced some headwinds related to price and temperature effects.

Overall, the COVID-19 impact was limited and mainly focused on distribution activities, especially on French Networks.

With a RAB of just over €28 billion, ENGIE is one of the largest gas network operators in Europe, and has a growing networks business in Latin America. ENGIE maintained strong operational performance in 2020 with high levels of network safety and reliability in France and achieved high customer satisfaction rates of 91% for French gas distribution. Also in France, in line with the pick-up in activity levels, gas smart meter installation resumed with the installation of 2.0 million units in 2020 resulting in a total of 6.9 million meters installed at the end of 2020.

The development of renewable gases is a major area of focus for ENGIE. The Group sees a critical role of gas in enabling an affordable and smooth energy transition through the continued use of natural gas, and progressive increase in the use of renewable gases such as biomethane and hydrogen. For example, last year 91 additional biomethane production units were connected to French gas grids, and over 85% of these were connected to GRDF. Altogether these units can contribute to a yearly production of up to 3.9TWh, equating to the annual gas consumption for heating approximately 1 million new-build homes in France. ENGIE has also started to adapt the existing gas transport networks by commissioning three ‘reverse-flow’ installations in 2020, that allow biomethane to travel from the distribution grid to gas storage units.

In Latin America, following the acquisition of 90% of TAG in June 2019, ENGIE successfully acquired the remaining 10% in July 2020 with its partner Caisse de Dépôt et Placement du Québec. In addition, ENGIE is also constructing two major electricity transmission lines in Brazil: 1,000 kilometres Gralha Azul project and the 1,800 kilometres Novo Estado project. Both projects include the construction of new substations and upgrades to existing substations and are expected to be commissioned in the second half of 2021.

1.8.2.3. Client Solutions

Client Solutions showed a strong recovery in H2 after a COVID-19 impacted H1.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	20,101	20,957	-4.1%	-6.4%
COI	459	1,082	-57.6%	-57.6%
CAPEX	992	1,624	-38.8%	-
Operational KPIs				
Projects backlog (in billion of euros)	12	11	+5.4%	-
DHC - Net installed capacity (GW)	15.2	13.9	+9.4%	-
COVID-19 impacts (COI in billion of euros)	0.60	-	-	-

Client Solutions had a relatively lower impact at the revenue level compared to COI, which was down significantly, mainly as a result of the COVID-19 crisis with a total estimated impact of c. €600 million for 2020.

A strong impact of COVID-19 was experienced in the Asset-light business model primarily in Europe and the US, mostly driven by loss of revenues and specific additional purchases. Cost-cutting and variabilising measures resulted in total Opex reduction of c. €0.3 billion.

COVID-19 impacted SUEZ results, and the results also reflect the sale of 29.9% shareholding in SUEZ at the beginning of October 2020.

Despite unfavourable temperature, District Heating and Cooling (DHC) and on-site generation activities remained resilient.

Notably, performance in H2 2020 showed a recovery with results similar to H2 2019 excluding the scope-out effect of SUEZ in Q4 2020. The impact of the COVID-19 restrictions was much lower in the second half, as restrictions were eased in France and activity levels were higher. In addition, activities also continued to benefit from cost actions launched in Q2.

Operationally, project backlog in Asset-light activities is higher than end of 2019 with postponed work remaining in the order book and benefitting also from the contribution of acquisitions. This positive KPI evolution provides visibility for 2021 however subject to COVID-19 restrictions.

Driven by decarbonization targets and growth in energy efficiency solutions, ENGIE sees a strong growth potential for heating and cooling networks, on-site generation and green mobility among other Asset-based Client Solutions. The Group already has leadership positions in all of these activities. In DHC networks, ENGIE is an international leader with 100 cooling networks with total installed capacity of 6.1 GW, and 300 heating networks of various size that distribute 19TWh per year.

ENGIE is also growing fast in green mobility with more than 50,000 EV charging points operated.

ENGIE announced in December 2020, that EVBox Group, a start-up acquired in 2017 and now a leading global provider of smart charging solutions for electric vehicles, would be listed on the NYSE in the coming weeks following close of a SPAC (Special Purpose Acquisition Company) transaction. This transaction would combine cash and equity. ENGIE would retain more than 40% ownership of EVBox. ENGIE expects that the transaction will result in a net debt decrease of ca €0.2 billion and EVBox no longer being consolidated in its accounts, with ENGIE's remaining shareholding accounted by the equity method.

1.8.2.4. Thermal

Thermal delivered 1% organic growth despite material positive one-offs in 2019.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
EBITDA	1,646	1,763	-6.6%	+2.3%
COI	1,209	1,320	-8.4%	+1.4%

Thermal COI amounted to €1,209 million, up 1% organically despite the non-repeat of favourable operational one-offs in 2019, mainly liquidated damages received in Brazil and Chile. Thermal COI saw limited COVID-19 impact of c. €-40 million, mainly through lower demand in Chile and Peru. These negative impacts were more than offset by a better performance of the European merchant gas fleet driven by the higher contribution of ancillaries, mainly in Italy, as well as to higher spreads captured throughout Europe. Thermal COI also benefitted from the higher performance of the contracted generation activities in the Middle East, from the full-year impact of the commissioning of Pampa Sul in Brazil in June 2019 and from higher volumes dispatched at higher margins in Brazil.

Overall, the Thermal business showed strong resilience, as a result of its highly contracted portfolio outside Europe and the optionality value of its merchant fleet in Europe.

In August and November 2020, the de-mothballing of two CCGT units in the Netherlands for 0.7 GW showed the Thermal fleet's flexibility to take advantage of market opportunities.

In June 2020, the sale of a minority stake in New York's Astoria Energy merchant gas facilities was finalized.

In March 2020, the commissioning of Fadhili's 1.5 GW contracted gas power plant, a cogeneration plant in Saudi Arabia in which ENGIE has a 40% equity ownership, reaffirmed ENGIE's leading position as an independent power producer in the Middle East.

1.8.2.5. Supply

Supply performance impacted by COVID-19 and warm temperature.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
EBITDA	439	638	-31.2%	-
COI	112	345	+67.7%	+65.5%
French temperature effect (COI in million of euros)	(84)	(24)	(61.0)	-
COVID-19 impacts (COI in billion of euros)	0.29	-	-	-

Supply COI significantly decreased by €-233 million to €112 million. Financial performance was highly affected by COVID-19 (net c. €290 million) in Europe and in the US due to lower gas and electricity consumption during the lockdown periods (primarily B2B). The sharp and unexpected reduction in demand led to a negative volume effect, as related margins had not been booked, together with a negative price effect as power and gas hedged positions had to be unwound in a lower price environment. B2C services provided were also lower during the lockdowns and, as a result of the economic context, level of bad debts increased. Warm temperature in France and Benelux also contributed to the strong decrease.

These effects were only partially offset by various one-offs, dedicated COVID-19 related mitigation actions, better results in Romania and higher B2C gas margins in France.

Operationally, B2C power supply contract base grew by 186,000 in 2020, which contributed to the stability of the global B2C contract base at the level of 24.4 million contracts.

1.8.2.6. Nuclear

Nuclear – improved COI contribution mainly driven by better prices.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
EBITDA	415	192	+111.6%	+111.6%
COI	(111)	(314)	+64.7%	+64.7%
CAPEX	1,740.0	636.0	-	-
Operational KPIs				
Output (Belgium + France, @ share, TWh)	36.5	41.7	-5,2 TWh	-
Availability (Belgium at 100%)	+62,6%	+79,4%	-1680 bps	-

Nuclear COI reached €-111 million, up 65% organically benefitting mainly from a positive price effect and from lower operational expenditures. These positive effects were partly offset by lower volumes due to the last planned lifetime extension outages of Doel 1, Doel 2 and Tihange 1, and by higher depreciation. Nuclear COI saw COVID-19 impact of c. €-60 million.

1.8.2.7. Others

Others COI of €-224 million was €-70 million lower than in 2019. Year-on-year comparison was negatively impacted by the positive effect of the partial sale of a gas supply contract in 2019 and by the COVID-19 impact due to credit losses for GEM (Global Energy Management). These headwinds were partially offset by GEM's good performance in a context of high market volatility mainly in H1 and by the higher contribution of GTT thanks to a strong past order intake.

1.9 Strong Financial Position and Liquidity

ENGIE has maintained a strong liquidity position with €23.0 billion of liquidity (net cash + undrawn credit facilities – outstanding commercial paper) including €13.3 billion of cash, as of end of December 2020.

ENGIE has strengthened its leadership position in the green bond market having issued having issued €2.4 billion green bonds in 2020, for a total of €12 billion green bonds issued since 2014. With dynamic management of hybrids, ENGIE has an average outstanding amount of €3.9 billion and a current total coupon of €100 million per year, which is down c. -28% since 2017.

Net financial debt is presented in section 4 "Change in net financial debt" of this management report for more details.

Rating

ENGIE maintained a strong investment grade rating:

- On November 9th Moody's lowered its long-term rating to Baa1 with a stable outlook.
- On September 24th Fitch affirmed its long-term rating of A and changed the outlook from stable to negative.
- On April 24th S&P lowered its long-term rating to BBB+ and its short-term rating to A-2.

2 BUSINESS TRENDS

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	55,751	60,058	-7.2%	-5.7%
EBITDA	9,276	10,366	-10.5%	-6.5%
Net depreciation and amortization/Other	(4,698)	(4,547)		
CURRENT OPERATING INCOME (COI)	4,578	5,819	-21.3%	-16.4%

REVENUE TRENDS

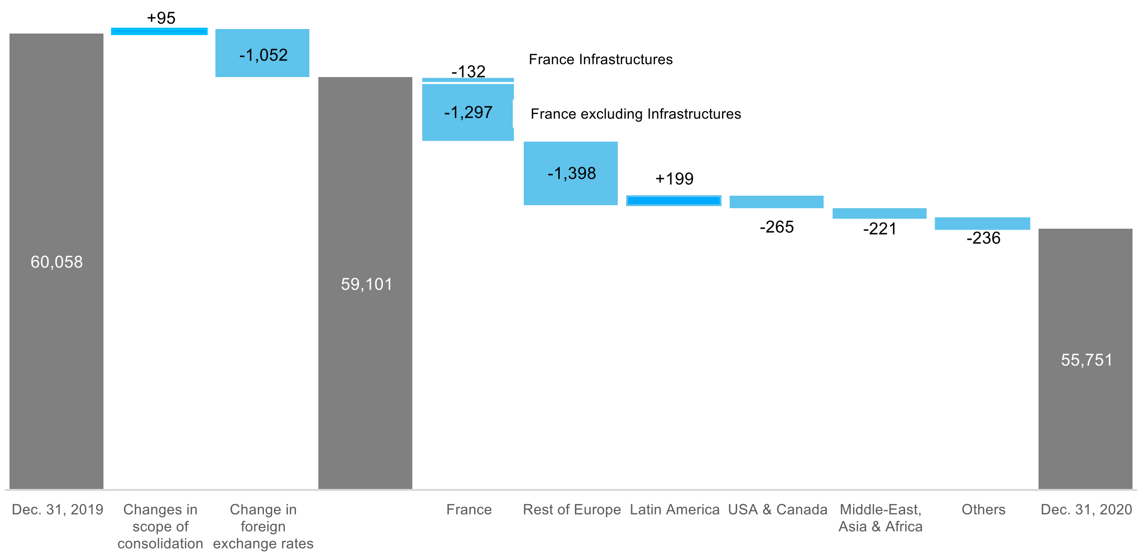
Revenues amounted to €55.8 billion, down 7.2% on a gross basis and 5.7% on an organic basis.

The reported revenue decrease includes a negative foreign exchange effect, mainly due to the depreciation of the Brazilian real against the euro and to a lesser extent to the depreciation of the US dollar, Mexican peso and Argentinian peso against the euro only partly offset by an aggregate positive scope effect. Changes in the scope of consolidation included various acquisitions in Client Solutions, primarily in Europe with Powerlines and in the US with Conti, partly offset by the disposals of the stake in Glow in Thailand in March 2019, the B2C Supply activities in the UK at the beginning of 2020 and the coal assets in Germany and the Netherlands.

The organic revenue decrease was primarily driven by the COVID-19 crisis impacting mainly Supply and Client Solutions activities across all geographies. Mild temperature also weighed on revenues from Supply across Europe and in Australia, from French gas distribution and to a lesser extent from Client Solutions' Asset-based activities.

These impacts were only partly offset by higher revenues in Brazil thanks to construction revenues for the Gralha Azul and Novo Estado power transmission lines and the first full year of operation of the Pampa Sul thermal plant. In France, volume and price effects on power sales also partly offset the decrease in revenues.

In millions of euros



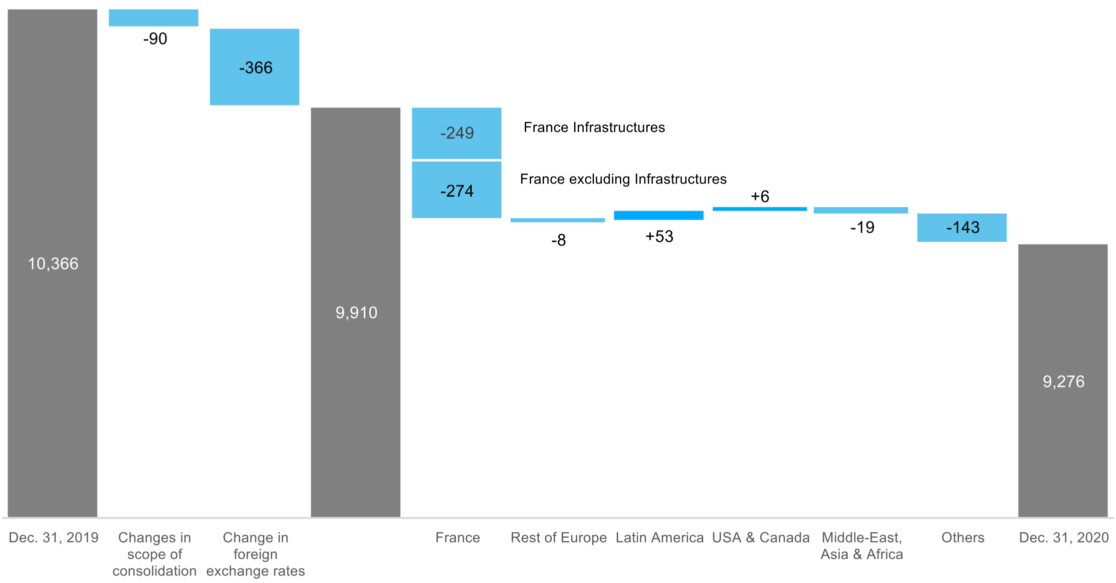
EBITDA TRENDS

EBITDA came in at €9.3 billion, down 10.5% on a gross basis and 6.5% on an organic basis.

These gross and organic changes are overall in line with the decrease in current operating income, except for the increase in depreciation/amortization attributable to (i) the increase in nuclear dismantling assets resulting from the triennial review of Belgian nuclear provisions that took place in late 2019, (ii) LTO works of Belgian first generation reactors and (iii) the amortization certain gas distribution assets in France, none of which are taken into account at EBITDA level.

In addition, the Lean 2021 plan continued to deliver results at EBITDA and COI levels, and is currently slightly exceeding objectives.

In millions of euros



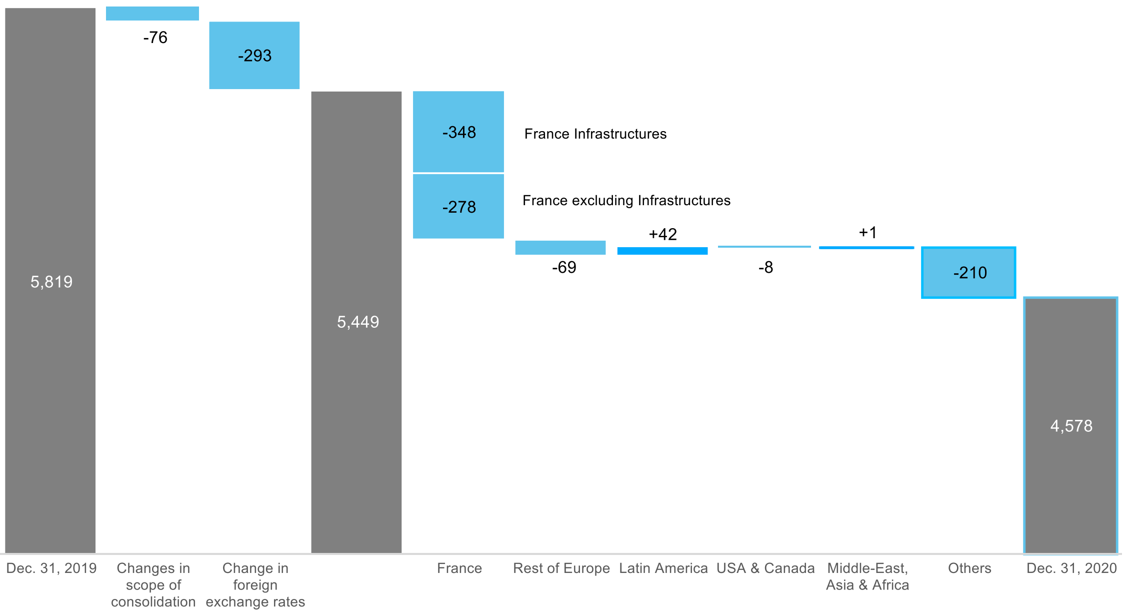
Geography/Business Line matrix

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	Dec. 31, 2020
France	750	3,291	389	-	-	250	-	**4,680**
Rest of Europe	361	114	140	531	415	190	-	**1,750**
Latin America	17	445	897	600	-	54	-	**2,014**
USA & Canada	59	2	97	46	-	39	1	**245**
Middle East, Asia & Africa	59	4	75	472	-	(10)	-	**600**
Others	(38)	(6)	(41)	(3)	-	(84)	159	**(14)**
TOTAL EBITDA	**1,208**	**3,850**	**1,559**	**1,646**	**415**	**439**	**159**	**9,276**

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	Dec. 31, 2019
France	959	3,537	422	-	-	294	-	**5,212**
Rest of Europe	578	137	151	443	192	255	-	**1,757**
Latin America	35	341	1,035	748	-	62	-	**2,221**
USA & Canada	42	1	70	32	-	63	61	**269**
Middle East, Asia & Africa	44	16	94	564	-	6	-	**725**
Others	178	(8)	(48)	(23)	-	(42)	125	**182**
TOTAL EBITDA	**1,836**	**4,026**	**1,724**	**1,763**	**192**	**638**	**186**	**10,366**

CURRENT OPERATING INCOME (COI) TRENDS

In millions of euros



Geography/Business Line matrix

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	Dec. 31, 2020
France	363	1,610	150	-	-	106	-	**2,229**
Rest of Europe	131	71	87	370	(111)	100	-	**648**
Latin America	(3)	384	750	359	-	53	-	**1,542**
USA & Canada	24	2	62	43	-	(8)	1	**124**
Middle East, Asia & Africa	41	3	65	441	-	(32)	-	**518**
Others	(97)	(6)	(43)	(3)	-	(109)	(225)	**(483)**
TOTAL COI	**459**	**2,063**	**1,070**	**1,209**	**(111)**	**112**	**(224)**	**4,578**

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	Dec. 31, 2019
France	575	1,957	182	-	-	149	-	**2,862**
Rest of Europe	347	96	96	293	(314)	189	-	**707**
Latin America	(1)	284	851	501	-	61	-	**1,696**
USA & Canada	8	1	47	26	-	25	49	**155**
Middle East, Asia & Africa	25	14	70	523	-	(13)	-	**619**
Others	129	(8)	(50)	(23)	-	(65)	(203)	**(221)**
TOTAL COI	**1,082**	**2,344**	**1,195**	**1,320**	**(314)**	**345**	**(154)**	**5,819**

2.1 France

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	20,295	21,423	-5.3%	-6.7%
Total revenues (incl. intra-group transactions)	**21,580**	**22,736**	**-5.1%**	
EBITDA	4,680	5,212	-10.2%	-10.1%
Net depreciation and amortization/Other	(2,451)	(2,350)		
CURRENT OPERATING INCOME (COI)	2,229	2,862	-22.1%	-22.2%

2.1.1. France excluding Infrastructures

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	14,856	15,854	-6.3%	-8.2%
EBITDA	1,391	1,673	-16.9%	-16.9%
Net depreciation and amortization/Other	(771)	(768)		
CURRENT OPERATING INCOME (COI)	620	905	-31.5%	-32.0%

Volumes sold

In TWh	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)
Gas sales	74.4	83.2	-10.6%
Electricity sales	39.6	38.8	+2.1%

France climatic adjustment

In TWh	Dec. 31, 2020	Dec. 31, 2019	Total change in TWh
Climate adjustment volumes (negative figure = warm climate, positive figure = cold climate)	(6.7)	(1.9)	(4.8)

Revenues for the France excluding Infrastructures segment amounted to €14,856 million, down 6.3% on a reported basis and 8.2% on an organic basis. The organic drop was driven by Client Solutions, which was affected by the COVID-19 crisis, climate and prices, and by Supply, with negative volume and price effects on gas sales, which were impacted by warm temperatures in the first half of the year. This decrease was only partially offset by positive volume and price effects on power sales. However, 2019 year-end acquisitions in Client Solutions (in particular Powerlines and Pierre Guerin), and the good performance of Renewables partly offset the organic decrease.

Gas sale volumes in the BtoC segment decreased by 8.8 TWh compared to 2019, of which 4.8 TWh related to a negative temperature effect and the remaining decrease due to the end of the commercialization of regulated tariff contracts. The BtoC power portfolio recorded a sales increase of +0.9 TWh in line with growth in the client portfolio. Power volumes sold by France Renewables also increased by +0,1 TWh.

Current operating income came in at €620 million, down 31.5% on a reported basis and 32.0% on an organic basis. The organic decrease was driven by the COVID-19 crisis, lower sell down margins in Renewables, and a warm temperature effect in the Supply and Client Solutions businesses. These decreases were partly offset by higher wind and higher hydro prices.

2.1.2. France Infrastructures

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	5,439	5,569	-2.3%	-2.4%
Total revenues (incl. intra-group transactions)	**6,359**	**6,548**	**-2.9%**	
EBITDA	3,290	3,539	-7.0%	-7.0%
Net depreciation and amortization/Other	(1,681)	(1,582)		
CURRENT OPERATING INCOME (COI)	1,609	1,957	-17.8%	-17.8%

Revenues for the France Infrastructures segment amounted to €5,439 million, down 2.3% on a reported basis. The decrease was driven by distribution activities, which were mainly impacted by record high winter temperatures, the adverse impact of the COVID-19 crisis on volumes and civil works revenues, as well as by lower revenues in storage activities impacted by the new ATS2 tariff since April 1 in France. These adverse impacts were partly offset by tariff changes in transmission and distribution activities in 2019 and 2020, and by higher volumes in regasification.

Current operating income for the period came in at €1,609 million, down 17.8% on a reported basis. Besides the decrease in revenues mentioned above, the change in Infrastructures COI was impacted by accelerated amortization in distribution and 2019 year-end positive one-offs. These adverse impacts were partly offset by lower energy expenses.

2.2 Rest of Europe

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	15,655	17,267	-9.3%	-8.2%
EBITDA	1,750	1,757	-0.4%	-0.5%
Net depreciation and amortization/Other	(1,102)	(1,050)		
CURRENT OPERATING INCOME (COI)	648	707	-8.3%	-9.9%

Revenues for the Rest of Europe segment amounted to €15,655 million, down 9.3% on a reported basis. This decrease was mainly driven by Supply, Client Solutions and Thermal. Taking into account the negative impact arising from the disposal of the BtoC supply business in the United Kingdom at the beginning of the year and of coal assets in Germany and in the Netherlands, revenues were down organically by 8.2%.

Supply activities decreased organically, impacted by the negative volume effects due to unfavorable climatic conditions and lower consumption related to the COVID-19 crisis. Client Solutions' asset-light activities were significantly affected by the business contraction resulting from the COVID-19 crisis, in particular during the first half of the year, with the main impacts being felt in Belgium and the United Kingdom.

Current operating income amounted to €648 million. The reported decrease of €59 million was mainly driven by Client Solutions and Supply, partly offset by Nuclear and Thermal activities.

Client Solutions reported a significant decrease in the contribution from asset-light activities notably in the UK, Benelux and Italy, mainly as a result of the COVID-19 crisis. **Supply** activities were negatively impacted by the warm climate and the impact of the COVID-19 crisis which entailed a drop in consumption by BtoB and BtoC professionals clients, partly offset by a better performance by Supply in Romania. The **Networks'** contribution decreased in Romania with the negative climate effect, the impact of the COVID-19 crisis on volumes and a reduction in the distribution tariff. On the other hand, **Nuclear** activities benefited from a higher energy margin – mainly thanks to a positive price effect and a higher contribution from French Nuke, partly offset by lower volumes due to planned lifetime extension outages of Doel 1 and Doel 2 – , and from lower operating expenses, these impacts being partly offset by higher depreciation and amortization. **Thermal** activities were also up compared to 2019, despite the disposal of coal activities in 2019, thanks to a good performance in Italy and to higher spreads and ancillaries. **Renewable** activities also recorded good performances mainly driven by the contribution from the Renvico wind portfolio in Italy acquired at the beginning of the year.

2.3 Latin America

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	4,774	5,341	-10.6%	+4.4%
EBITDA	2,014	2,221	-9.3%	+2.8%
Net depreciation and amortization/Other	(472)	(525)		
CURRENT OPERATING INCOME (COI)	1,542	1,696	-9.0%	+2.9%

Revenues for the Latin America segment totaled €4,774 million, down 10.6% on a reported basis and up +4.4% organically. The reported decrease includes the negative foreign exchange effects in Brazil with the Brazilian Real depreciating against the Euro by 29%, and negative foreign exchange effects in the rest of Latin America (depreciation of the USD, ARS and MXN). In Brazil, revenues grew organically thanks to the construction ramp up of the Gralha Azul and Novo Estado Power Transmission Lines (Networks) and thanks to Pampa Sul's first full year of operation (Thermal). In Latin America, revenues increased organically, mainly due to lower activity following the impact of the COVID-19 crisis in Thermal and in Asset Light services in all countries. Revenues were also negatively impacted by lower commodities prices in Thermal in Chile, lower PPA prices in Peru and lower prices in BtoB gas supply (with no impact on COI) in Mexico.

Current operating income totaled €1,542 million, down 9.0% on a reported basis and up 2.9% on an organic basis. The reported decrease includes the strong negative foreign exchange impact in Brazil and to a lesser extent in Latin America, partially offset by the positive scope impact of the acquisition of our gas transportation network in Brazil (TAG) in June 2019. Organically, Brazil reported a significant increase (+28.9%), mainly thanks to Renewables with the contribution of the "GFOM" compensation gain (compensation for hydro generation relocation costs), and Networks, which benefited from a better performance by TAG and from the construction margin on Power Transmission Lines. Thermal was relatively stable in Brazil, 2019 one-offs (Pampa Sul Liquidated Damages) being offset by higher coal generation and Pampa Sul (first full year of operation). Besides Brazil, the organic decrease was mainly due to Chile, with a positive one-off in 2019 (IEM plant delay Liquidated Damages) offsetting higher 2020 volumes, to lower power demand and PPA prices in Peru, and to lower gas volumes distributed in Argentina and Mexico

2.4 USA & Canada

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	4,229	4,457	-5.1%	-6.2%
EBITDA	245	269	-8.8%	+2.8%
Net depreciation and amortization/Other	(121)	(113)		
CURRENT OPERATING INCOME (COI)	124	155	-20.3%	-6.3%

Revenues for the USA & Canada segment reached €4,229 million, down 5.1% on a reported basis and 6.2% organically. The reported decrease was mainly driven by the expiration of a legacy LNG contract in 2019, the COVID-19 crisis impacting Client Solutions and Supply activities, and negative foreign exchange effects. This drop was partly offset by higher revenues from US universities and Renewable projects which are accelerating and by the positive scope-in effects in 2020 relating to recent acquisitions in Client Solutions, in particular Conti.

Current operating income amounted to €124 million, down 20.3% on a reported basis and 6.3% on an organic basis. The reported decrease was mainly due to the impact of the COVID-19 crisis, in particular in Supply activities and the end of the LNG contract mentioned above. These effects were partly offset by the contributions of several Renewables projects commissioned since last year, net of the 2019 DBSO disposal and an improvement in Thermal activities.

2.5 Middle East, Asia & Africa

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	2,382	2,937	-18.9%	-8.6%
EBITDA	600	725	-17.2%	-3.0%
Net depreciation and amortization/Other	(82)	(106)		
CURRENT OPERATING INCOME (COI)	518	619	-16.4%	+0.2%

Revenues for the Middle East, Africa & Asia segment totaled €2,382 million, down 18.9% on a reported basis and 8.6% organically. This reported decrease was mainly due to the disposal of Glow (Thailand) in March 2019, negative foreign exchange effects, and an organic decrease. Organically, Thermal decreased mainly due to the mothballing of the Baymina power plant in Turkey and price effects in Asia-Pacific. Client Solutions and Supply were both impacted by the COVID-19 crisis in Australia in addition to mild weather negatively affecting Supply.

Electricity sales decreased from 16.6 TWh to 14.7 TWh with the reduced volumes mostly due to the mothballing of Baymina power plant.

Current operating income totaled €518 million, down 16.4% on a reported basis and up 0.2% organically. The reported decrease included the negative impact of the disposal of Glow. COI remained stable organically thanks to Client Solutions (especially Tabreed, district heating and cooling supplier in the Middle East). This positive effect was offset by Supply activities in Africa and Australia (facing the COVID-19 crisis) and lower results in Networks in Thailand in relation to the oil price decrease. The stable overall performance of Thermal activities, with a downturn in Asia-Pacific, mainly at Pelican Point (lower prices and provisions), was fully offset by the good performance of our Gulf thermal portfolio in the Middle East.

2.6 Others

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)	% change (organic basis)
Revenues	8,417	8,633	-2.5%	-2.7%
EBITDA	(14)	182	-107.5%	-107.2%
Net depreciation and amortization/Other	(469)	(404)		
CURRENT OPERATING INCOME/(LOSS) (COI)	(483)	(221)	-118.4%	-78.2%

The Others reportable segment includes (i) GEM, (ii) Entreprises & Collectivités (E&C) (iii) Tractebel, (iv) GTT, (v) new businesses, as well as (vi) the Group's holding and corporate activities, which include the entities centralizing the Group's financing requirements and the contribution of SUEZ (until early October 2020) and Touat B.V. (associates).

Revenues for the Others reportable segment amounted to €8,417 million. The 2.5% reported decrease compared to last year was mainly driven by GEM with the reduction in gas prices in market operations as well as the positive one-off in 2019 following the partial sale of a gas supply contract to Shell. Lower sales in E&C due to the COVID-19 crisis and to a mild climate were offset to a large extent by the growth of the portfolio. These impacts were partly offset by higher revenues from GTT resulting from historic growth in the order book intake.

Current operating loss amounted to €483 million, representing a €262 million decrease compared to 2019. This decrease was mainly due the COVID-19 crisis impacting SUEZ and E&C, which was also impacted by a mild climate. GEM was impacted by the COVID-19 crisis, the impact being partly offset by the strong performance of market activities in the context of sharp volatility during the year (mainly in the first half). COI was also down for New Businesses and Tractebel. These negative impacts were partly offset by a stronger contribution from GTT.

3 OTHER INCOME STATEMENT ITEMS

The reconciliation between Current operating income (COI) and Net income/(loss) is presented below:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	% change (reported basis)
CURRENT OPERATING INCOME (COI)	**4,578**	**5,819**	**-21.3%**
(+) Mark-to-Market on commodity contracts other than trading instruments	199	(426)	
(+) Non-recurring share in net income of equity method entities	(137)	(93)	
Current operating income including operating MtM and share in net income of equity method entities	**4,640**	**5,300**	**-12.4%**
Impairment losses	(3,551)	(1,770)	
Restructuring costs	(343)	(218)	
Changes in scope of consolidation	1,640	1,604	
Other non-recurring items	(886)	(1,240)	
Income/(loss) from operating activities	**1,501**	**3,676**	**-59.2%**
Net financial income/(loss)	(1,678)	(1,387)	
Income tax benefit/(expense)	(715)	(640)	
NET INCOME/(LOSS)	**(893)**	**1,649**	**-154.1%**
Net recurring income/(loss) Group share	**1,703**	**2,683**	
Net income/(loss) Group share	**(1,536)**	**984**	
Non-controlling interests	**644**	**664**	

The reconciliation between Net recurring income/(loss) Group share and Net income/(loss) Group share is presented below:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Net recurring income/(loss) Group share	**1,703**	**2,683**
Impairment & Others	(4,736)	(2,659)
Restructuring costs	(343)	(218)
Changes in scope of consolidation	1,640	1,604
Mark-to-Market on commodity contracts other than trading instruments	199	(426)
Net income/(loss) Group share	**(1,536)**	**984**

Income from operating activities amounted to €1,501 million, representing a decrease compared with 2019, mainly due to (i) greater impairment losses, (ii) a deterioration in operating income, (iii) partially offset by lower other non-recurring items.

Income from operating activities was affected by:

- net impairment losses of €3,551 million (compared with €1,770 million in 2019), mainly relating to Belgian nuclear power assets (€2,860 million) due to the operating life of certain power plants not being extended beyond 2025 and updated price scenarios (*see Note 9.1*);
- restructuring costs of €343 million (compared with €218 million in 2019) (*see Note 9.2*);
- positive scope effects of €1,640 million, mainly relating to the disposal of 29.9% of ENGIE's interest in SUEZ (*see Note 9.3*);
- other non-recurring items for a negative €886 million, mainly relating to the initial one-off accounting impact of extending the trading management method launched by the GEM BU in 2017 to the rest of the Group's gas positions in Europe for a negative €726 million, as well as to the impacts of the review of the industrial site dismantling and rehabilitation provisions (*see Note 9.4*).

The **net financial loss** amounted to €1,678 million in 2020, compared with €1,387 million the previous year (*see Note 10)* despite a stable average cost of gross debt, due to a lower return on cash and unfavorable exchange rate effects.

The **income tax expense** for 2020 amounted to €715 million (versus €640 million in 2019). Adjusted for non-recurring items, the effective recurring tax rate was 32.5% in 2020, up on the 2019 rate of 28.2% mainly due to the revision of certain deferred tax positions following the updates to taxable income forecasts and regulatory developments in certain geographies. The overall effective tax rate decreased sharply in 2020 (a negative 98.1% versus a positive 35.8% in 2019), also impacted by the non-deductibility of most of the impairment losses recorded over the period and changes in tax risk provisions.

Net recurring income Group share amounted to €1.7 billion compared to €2.7 billion at 31 December 2019. This decrease was mainly due to the decline in current operating income and the increase of recurring financial charges as well as to the increase in the recurring effective tax rate from 28.2% to 32.5%.

Net income Group share amounted to a negative €1.5 billion, down €2.5 billion as a result of the decrease in net recurring income Group share, higher net impairment losses (of €3.6 billion in total) mainly relating to change in lifetime assumption for Belgian nuclear reactors and changes in the commodity price scenario for nuclear assets (€2.9 billion), and the extension of fair value accounting to an European gas contract and its related assets (€0.5 billion).

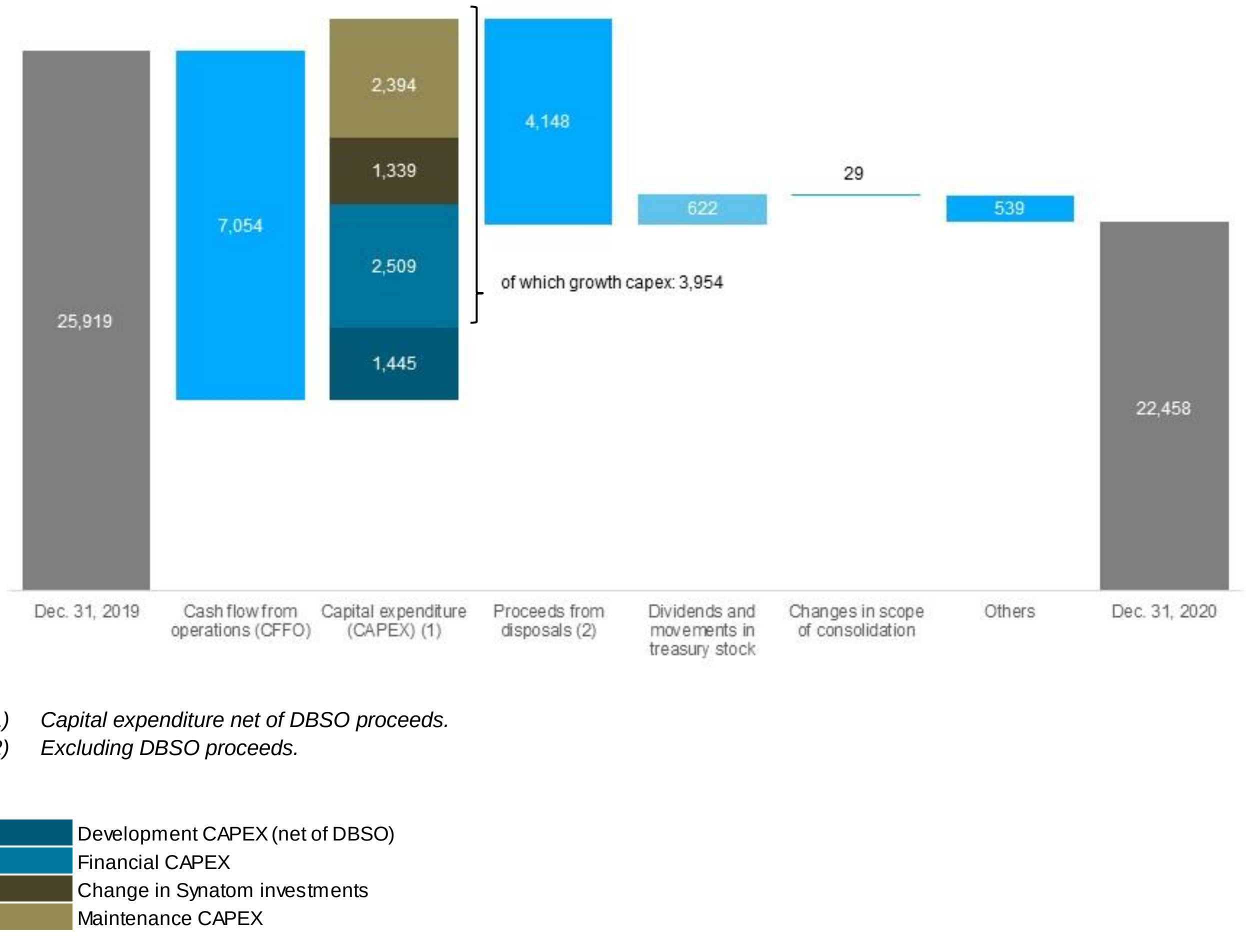
Net income relating non-controlling interests amounted to €644 million, (compared to €664 million in 2019) despite the sharp decrease in net income Group share, due to the relatively good performance of companies with non-controlling interests, particularly in South America.

4 CHANGES IN NET FINANCIAL DEBT

Net financial debt stood at €22.5 billion, down €3.5 billion compared with December 31, 2019. This decrease is mainly attributable to (i) cash flow from operations (€7.1 billion), (ii) the impacts of disposals during the period (€4.2 billion, primarily corresponding to the sale of part of the Group's interest in SUEZ SA for €3.4 billion, and of interests in Astoria 1 and 2 in the United States for €0.4 billion) and (iii) other items (€0.5 billion, mainly related to foreign exchange rates, partially offset by new leased right-of-use assets). These items were partially offset by (i) capital expenditure over the period (€7.7 billion[1]), and (ii) dividends paid to non-controlling interests and movements in treasury stock (€0.6 billion). In 2020, ENGIE's dividend payment for the 2019 financial year (i.e. €1.9 billion) was cancelled.

Changes in net financial debt break down as follows:

In millions of euros



(1) Capital expenditure net of DBSO proceeds.
(2) Excluding DBSO proceeds.

At the end of December 2020, the net financial debt to EBITDA ratio amounted to 2.42, decreasing by 0.1x compared to the end of 2019. The average cost of gross debt was 2.38%, down 32bps compared to the end of 2019. This decrease is mainly explained by the positive effect induced by the deterioration of the exchange rate in Brazil and the lower debt

(1) Net of DBSO proceeds.

exposure in India, having led to a positive mix effect: the share of average centralised debt, which has a lower rate than the local debts, in the total average debt has increased.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Net financial debt	22,458	25,919
EBITDA	9,276	10,366
NET DEBT/EBITDA RATIO	**2.42**	**2.50**

At the end of December 2020, the net economic debt [1] to EBITDA ratio stood at 4.03, stable compared to the end of 2019.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Economic net debt	37,420	41,078
EBITDA	9,276	10,366
ECONOMIC NET DEBT/EBITDA RATIO	**4.03**	**3.96**

4.1 Cash flow from operations (CFFO)

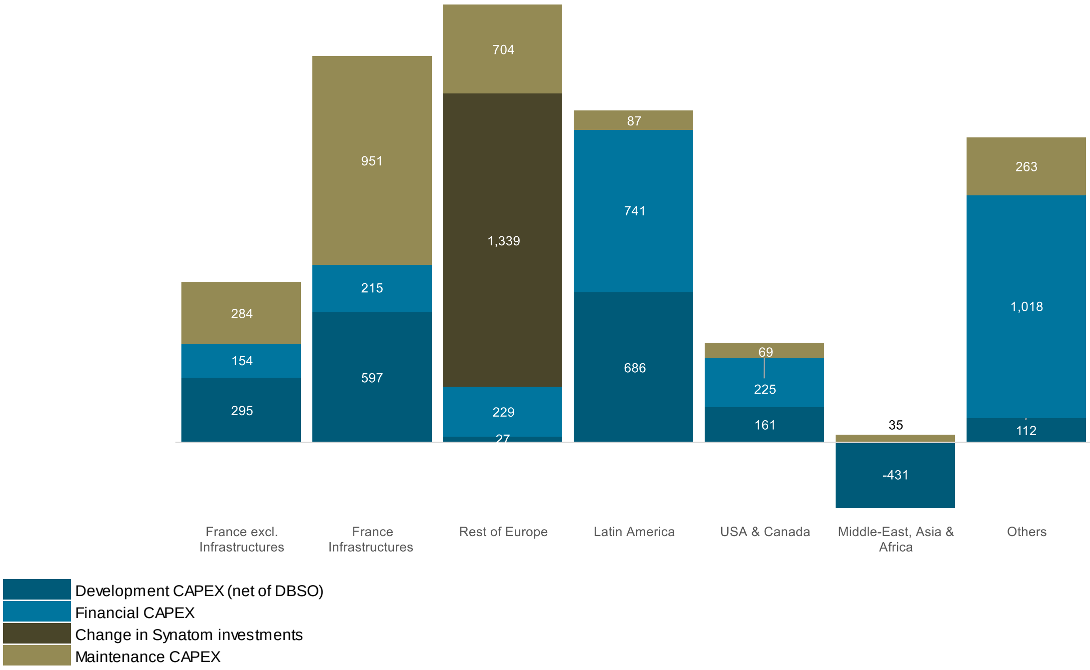
Cash flow from operations amounted to €7.1 billion, down €0.5 billion. This evolution resulted from the €-1.1 billion decrease in operating cash flow, partly offset by a positive variation in change in working capital requirements of €0.5 billion and by slightly lower net interests and tax paid. The positive variation in working capital requirements was mainly due to the variance in commodity related margin calls and financial derivatives for €0.9 billion, partly offset by a €-0.4 billion deterioration in operating working capital change notably due to an increase in Supply inventory partly compensated by a decrease in receivables.

(1) Economic net debt amounted to €37.4 billion at the end of December 2020, down €3.7 billion compared with the level at end of December 2019; it includes, in particular, nuclear provisions and post-employment benefits.

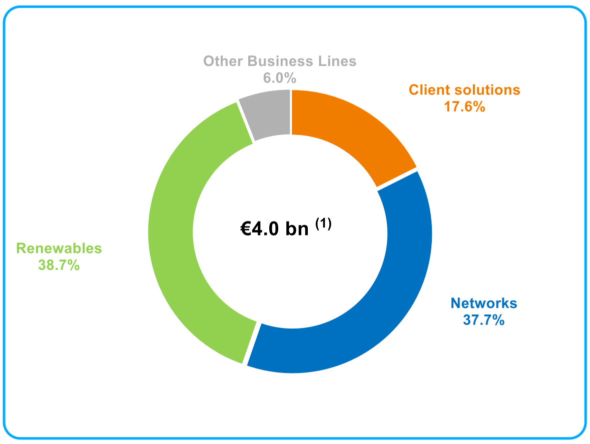
4.2 Net investments

Capital expenditure (CAPEX) amounted to €7,687 million, breaking down as follows by segment.

In millions of euros



Growth capital expenditure amounted to €4,0 billion, breaking down as follows by Business Line. Over 90% of growth investment was dedicated to Renewables, Networks and Asset-based Client Solutions activities in line with the new strategic direction announced in July.



Main projects (€bn)

Client Solutions ~ **0.7**

Mainly in asset-based activities with the continued development of University partnerships in the US, DHC development in France and solar on-site generation development in the US.

Networks ~ **1.5**

In Brazil, construction of the 2 power transmission lines projects and acquisition of the remaining 10% in TAG, gas smart meters roll-out and distribution network development in France.

Renewables ~ **1.5**

Acquisition of hydro assets in Portugal, development of offshore wind and construction of new wind and solar capacity mainly in Latin America incl. Brazil, France and North America.

(1) *Net of disposals under DBSO operations, excluding Corporate, and Synatom reallocated to maintenance expenditure.*

The **geography/Business Line matrix** for capital expenditure is presented hereunder:

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	Dec. 31, 2020
France	384	1,743	247	-	-	123	-	**2,496**
Rest of Europe	178	83	75	118	1,740	104	-	**2,298**
Latin America	23	672	649	166	-	4	-	**1,514**
USA & Canada	268	-	137	1	-	49	-	**455**
Middle East, Asia & Africa	25	4	(452)	(99)	-	51	-	**(470)**
Others	112	-	980	1	-	27	272	**1,393**
TOTAL CAPEX	**992**	**2,502**	**1,637**	**187**	**1,740**	**357**	**272**	**7,687**

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	Dec. 31, 2019
France	423	1,709	481	-	-	151	-	**2,764**
Rest of Europe	416	77	35	174	636	95	-	**1,433**
Latin America	46	1,651	541	254	-	7	-	**2,499**
USA & Canada	301	1	968	8	-	73	-	**1,351**
Middle East, Asia & Africa	80	9	267	-	-	93	-	**449**
Others	355	-	183	81	-	38	889	**1,547**
TOTAL CAPEX	**1,621**	**3,446**	**2,475**	**517**	**636**	**458**	**889**	**10,042**

Net investments amounted to €4,093 million and include:

- growth capital expenditure for €3,954 million (*see above*);
- gross maintenance capital expenditure amounting to €2,394 million;
- the €1,339 million increase in Synatom investments;
- new leased right-of-use assets recognized over the period (€584 million);
- changes in the scope of consolidation for the period relating to acquisitions and disposals of subsidiaries for €29 million; and
- proceeds from disposals representing an inflow of €4,148 million, mainly relating to the disposal of part of the Group's interest in SUEZ SA and of its interests in Astoria 1 and 2 in the United States.

4.3 Dividends and movements in treasury stock

Dividends and movements in treasury stock during the period amounted to €622 million (versus €2,522 million in 2019). This change is explained in particular by the cancellation of ENGIE's dividend payment for the 2019 fiscal year for €1.9 billion. Dividends and movements in treasury stock in 2020 include dividends paid by various subsidiaries to their non-controlling interests in an amount of €425 million and the payment of interest on hybrid debt for €187 million.

4.4 Net financial debt at December 31, 2020

Excluding amortized cost but including the impact of foreign currency derivatives, at December 31, 2020 a total of 81% of net financial debt was denominated in euros, 12% in US dollars and 9% in Brazilian real.

Including the impact of financial instruments, 98% of net financial debt is at fixed rates.

The average maturity of the Group's net financial debt is 12.0 years.

At December 31, 2020, the Group had total undrawn confirmed credit lines of €13.7 billion.

5 OTHER ITEMS IN THE STATEMENT OF FINANCIAL POSITION

In millions of euros	Dec. 31, 2020	Dec. 31, 2019	Net change
Non-current assets	**93,095**	**99,297**	**(6,201)**
Of which goodwill	*15,943*	*18,665*	*(2,722)*
Of which property, plant and equipment and intangible assets, net	*57,085*	*58,996*	*(1,911)*
Of which investments in equity method entities	*6,760*	*9,216*	*(2,456)*
Current assets	**60,087**	**60,496**	**(409)**
Of which assets classified as held for sale	*1,292*	*468*	*823*
Total equity	**33,856**	**38,037**	**(4,181)**
Provisions	27,073	25,115	1,958
Borrowings	37,939	38,544	(606)
Other liabilities	54,315	58,097	(3,781)
Of which liabilities directly associated with assets classified as held for sale	*488*	*92*	*396*

The carrying amount of **property, plant and equipment and intangible assets** was €57.1 billion, down €1.9 billion compared with December 31, 2019. This decrease was primarily the result of depreciation and amortization charges (€4.6 billion negative impact), translation adjustments (€2.2 billion negative impact, primarily attributed to the strong depreciation of the Brazilian real and the US dollar), impairment losses (€1.3 billion negative impact, primarily attributed to Belgian nuclear power assets), and the classification of renewable energy assets in India under "Assets classified as held for sale" (€0.6 billion negative impact), partially offset by acquisitions and development capital expenditure (€7.0 billion positive impact).

Goodwill decreased by €2.7 billion to €15.9 billion, mainly due to the recognition of impairment losses on Belgian nuclear power assets (*see Note 13*).

Investments in equity method entities decreased by €2.5 billion, primarily due to the disposal of a 29.9% stake in SUEZ.

Total equity amounted to €33.9 billion, a decrease of €4.2 billion compared with December 31, 2019. The decrease stemmed mainly from other comprehensive income (€3.0 billion negative impact, including a negative €2.1 billion of translation adjustments primarily attributed to the strong depreciation of the Brazilian real, a negative €1.6 billion of actuarial gains and losses, and a negative €0.4 billion corresponding to a decrease in the share of equity method entities in recyclable items, net of tax) and from net income for the period (€0.9 billion negative impact).

Provisions increased by €2.0 billion compared with December 31, 2019 to €27.1 billion. This increase stemmed mainly from actuarial losses on provisions for post-employment benefits and other long-term benefits (which added €1.5 billion to the provision amount) owing to the fall in discount rates over the period (*see Note 20*).

At December 31, 2020, assets and liabilities classified under "**Assets classified as held for sale**" and "**Liabilities directly associated with assets classified as held for sale**" mainly comprised renewable energy assets in India and Mexico and the Group's interest in EV Charged BV (EVBox).

6 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 2020 totaled €19,272 million, an increase compared to 2019 (€17,282 million), both on the gas and electricity markets.

The net operating loss amounted to €1,640 million in 2020, a deterioration of €709 million compared with a loss of €931 million in 2019. Energy margin increased by €205 million, thanks to lower supply costs and continued growth in the electricity business.

Net financial income amounted to €1,440 million, an increase of €248 million compared to 2019 due to higher dividends received and a decrease in the cost of net debt.

Non-recurring items represented a loss of €4,260 million, mainly comprising impairment of equity investments of which €5,186 million in impairment losses on Electrabel shares given the non-extension of the nuclear power plants in Belgium assumption of and unfavorable foreign exchange impact.

The income tax benefit amounted to €532 million versus an income tax benefit of €377 million in 2019, including a tax consolidation benefit of €461 million.

The net loss for the year came out at €3,928 million.

Shareholders' equity amounted to €30,702 million at end-2020 compared with €34,594 million at end-2019. The €3,892 million decrease was mainly due to the 2020 net loss of €3,928 million, since no dividend payment was made during the period.

At December 31, 2020, borrowings and debt stood at €38,158 million, and cash and cash equivalents totaled €11,615 million (of which €8,135 million relating to subsidiaries' current accounts).

Information relating to payment terms

Pursuant to Article D.441-4 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 Article D.441-4 of the French Commercial Code

	Article D. 441 I.- 1°: Invoices received, unpaid and overdue at the reporting date						Article D. 441 I.- 2°: Invoices issued, unpaid and overdue at the reporting date					
In millions of euros	0 days (indicative)	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day or more)	0 days (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	-					24,855	-					5,865,476
Aggregate invoice amount (incl. VAT)	-	22.9	0.5	0.1	107.3	130.9	-	412.0	36.8	29.9	575.8	1,045.5
Percentage of total amount of purchases (incl. VAT) for the period	-	0.10%	0.00%	0.00%	0.46%	0.57%						
Percentage of total revenues (incl. VAT) for the period							-	1.81%	0.16%	0.13%	2.53%	4.64%
(B) Invoices excluded from (A) relating to disputed or unrecognized receivables and payables												
Number of excluded invoices	180						1,316					
Aggregate amount of excluded invoices	5.4						57.6					
(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					

02 CONSOLIDATED FINANCIAL STATEMENTS

INCOME STATEMENT

In millions of euros	Notes	Dec. 31, 2020	Dec. 31, 2019
REVENUES	**6.2 & 7**	**55,751**	**60,058**
Purchases and operating derivatives	8.1	(34,967)	(39,404)
Personnel costs	8.2	(11,759)	(11,478)
Depreciation, amortization and provisions	8.3	(4,778)	(4,393)
Taxes		(1,265)	(1,654)
Other operating income		1,105	1,670
Current operating income including operating MtM		**4,087**	**4,800**
Share in net income of equity method entities	6.2	552	500
Current operating income including operating MtM and share in net income of equity method entities		**4,640**	**5,300**
Impairment losses	9.1	(3,551)	(1,770)
Restructuring costs	9.2	(343)	(218)
Changes in scope of consolidation	9.3	1,640	1,604
Other non-recurring items	9.4	(886)	(1,240)
INCOME/(LOSS) FROM OPERATING ACTIVITIES	**9**	**1,501**	**3,676**
Financial expenses		(2,232)	(2,300)
Financial income		553	913
NET FINANCIAL INCOME/(LOSS)	**10**	**(1,678)**	**(1,387)**
Income tax benefit/(expense)	11	(715)	(640)
NET INCOME/(LOSS)		**(893)**	**1,649**
Net income/(loss) Group share		**(1,536)**	**984**
Non-controlling interests		**644**	**664**
BASIC EARNINGS/(LOSS) PER SHARE (EUROS)	**12**	**(0.71)**	**0.34**
DILUTED EARNINGS/(LOSS) PER SHARE (EUROS)	**12**	**(0.71)**	**0.34**

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, 2020	Dec. 31, 2019
NET INCOME/(LOSS)		**(893)**	**1,649**
Debt instruments	16.1	(46)	48
Net investment hedges	17	128	29
Cash flow hedges (excl. commodity instruments)	17	(249)	(229)
Commodity cash flow hedges	17	872	(744)
Deferred tax on items above		(137)	240
Share of equity method entities in recyclable items, net of tax		(387)	(250)
Translation adjustments		(2,098)	(45)
TOTAL RECYCLABLE ITEMS		**(1,916)**	**(953)**
Equity instruments	16.1	43	103
Actuarial gains and losses		(1,569)	(1,128)
Deferred tax on items above		377	255
Share of equity method entities in actuarial gains and losses, net of tax		75	(31)
TOTAL NON-RECYCLABLE ITEMS		**(1,073)**	**(801)**
TOTAL RECYCLABLE ITEMS AND NON-RECYCLABLE ITEMS		**(2,990)**	**(1,754)**
TOTAL COMPREHENSIVE INCOME/(LOSS)		**(3,882)**	**(105)**
Of which owners of the parent		*(4,046)*	*(660)*
Of which non-controlling interests		*163*	*555*

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, 2020	Dec. 31, 2019
Non-current assets			
Goodwill	13	15,943	18,665
Intangible assets, net	14	7,196	7,038
Property, plant and equipment, net	15	49,889	51,958
Other financial assets	16	9,009	7,022
Derivative instruments	16	2,996	4,137
Assets from contracts with customers	7	26	15
Investments in equity method entities	3	6,760	9,216
Other non-current assets	24	396	384
Deferred tax assets	11	880	860
TOTAL NON-CURRENT ASSETS		**93,095**	**99,297**
Current assets			
Other financial assets	16	2,583	2,546
Derivative instruments	16	8,069	10,134
Trade and other receivables, net	7	14,295	15,180
Assets from contracts with customers	7	7,738	7,816
Inventories	24	4,140	3,617
Other current assets	24	8,990	10,216
Cash and cash equivalents	16	12,980	10,519
Assets classified as held for sale	4.2	1,292	468
TOTAL CURRENT ASSETS		**60,087**	**60,496**
TOTAL ASSETS		**153,182**	**159,793**

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, 2020	Dec. 31, 2019
Shareholders' equity		28,945	33,087
Non-controlling interests	2	4,911	4,950
TOTAL EQUITY	**18**	**33,856**	**38,037**
Non-current liabilities			
Provisions	19	24,876	22,817
Long-term borrowings	16	30,092	30,002
Derivative instruments	16	3,789	5,129
Other financial liabilities	16	77	38
Liabilities from contracts with customers	7	39	45
Other non-current liabilities	24	2,004	1,222
Deferred tax liabilities	11	4,416	4,631
TOTAL NON-CURRENT LIABILITIES		**65,293**	**63,882**
Current liabilities			
Provisions	19	2,197	2,298
Short-term borrowings	16	7,846	8,543
Derivative instruments	16	9,336	10,446
Trade and other payables	16	17,307	19,109
Liabilities from contracts with customers	7	4,315	4,286
Other current liabilities	24	12,545	13,101
Liabilities directly associated with assets classified as held for sale	4.2	488	92
TOTAL CURRENT LIABILITIES		**54,034**	**57,874**
TOTAL EQUITY AND LIABILITIES		**153,182**	**159,793**

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, 2018 [1]	**2,435**	**32,565**	**(590)**	**3,750**	**(1,019)**	**(1,130)**	**(460)**	**35,551**	**5,391**	**40,941**
Normative changes [2]	-	-	(7)	-	-	-	-	(7)	(4)	(11)
EQUITY AT JANUARY 1, 2019	**2,435**	**32,565**	**(597)**	**3,750**	**(1,019)**	**(1,130)**	**(460)**	**35,544**	**5,386**	**40,930**
Net income/(loss)			984					984	664	1,649
Other comprehensive income/(loss)			(735)		(942)	32		(1,645)	(109)	(1,754)
TOTAL COMPREHENSIVE INCOME/(LOSS)			**250**		**(942)**	**32**		**(660)**	**555**	**(105)**
Share-based payment	-	-	50					50	-	50
Dividends paid in cash [3]		(1,096)	(738)					(1,833)	(453)	(2,286)
Purchase/disposal of treasury stock			(157)				157	-	-	-
Operations on deeply-subordinated perpetual notes [3]			(172)	163				(9)		(9)
Transactions between owners			36					36	4	40
Transactions with impact on non-controlling interests [4]			-					-	(515)	(515)
Share capital increases and decreases								-	(28)	(28)
Normative changes [5]			(35)					(35)		(35)
Other changes			(6)		-			(6)	1	(5)
EQUITY AT DECEMBER 31, 2019	**2,435**	**31,470**	**(1,369)**	**3,913**	**(1,961)**	**(1,098)**	**(303)**	**33,087**	**4,950**	**38,037**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements" to the consolidated financial statements for the year ended December 31, 2019).

(2) Normative changes related to the impact of IFRS 16 (see Note 1 " Accounting framework and basis for preparing the consolidated financial statements " to the consolidated financial statements for the year ended December 31, 2019).

(3) Transactions of the period are listed in Note 18 "Equity".

(4) Mainly relates to the deconsolidation of GLOW following its disposal (see Note 4.1 "Disposals carried out in 2019" to the consolidated financial statements for the year ended December 31,2019).

(5) Normative changes related to the application of IFRIC23 at SUEZ.

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, 2019	**2,435**	**31,470**	**(1,369)**	**3,913**	**(1,961)**	**(1,098)**	**(303)**	**33,087**	**4,950**	**38,037**
Net income/(loss)			(1,536)					(1,536)	644	(893)
Other comprehensive income/(loss)			(999)		242	(1,752)		(2,509)	(480)	(2,990)
TOTAL COMPREHENSIVE INCOME/(LOSS)			**(2,535)**	**-**	**242**	**(1,752)**	**-**	**(4,046)**	**163**	**(3,882)**
Share-based payment			52					52	2	54
Dividends paid in cash [(1)]		-	-					-	(425)	(425)
Purchase/disposal of treasury stock			(52)				52	-	-	-
Operations on deeply-subordinated perpetual notes [(2)]			(193)					(193)	-	(193)
Transactions between owners			25					25	35	59
Transactions with impact on non-controlling interests			-					-	7	7
Share capital increases and decreases								-	178	178
Other changes		(178)	199					21	1	21
EQUITY AT DECEMBER 31, 2020	**2,435**	**31,291**	**(3,874)**	**3,913**	**(1,719)**	**(2,850)**	**(251)**	**28,945**	**4,911**	**33,856**

(1) The Shareholders' Meeting of May 14, 2020 approved the resolution relating to the cancellation of the dividend payment in respect of 2019 proposed by the Group in the current context of the COVID-19 crisis (see Note 17.3 "Liquidity risk").

(2) Transactions of the period are listed in Note 18 "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.

STATEMENT OF CASH FLOWS

In millions of euros	Notes	Dec. 31, 2020	Dec. 31, 2019
NET INCOME/(LOSS)		**(893)**	**1,649**
- Share in net income of equity method entities		(552)	(500)
+ Dividends received from equity method entities		740	773
- Net depreciation, amortization, impairment and provisions		8,760	7,083
- Impact of changes in scope of consolidation and other non-recurring items		(1,573)	(1,579)
- Mark-to-market on commodity contracts other than trading instruments		(199)	426
- Other items with no cash impact		111	(18)
- Income tax expense	11	715	640
- Net financial income/(loss)	10	1,678	1,387
Cash generated from operations before income tax and working capital requirements		**8,788**	**9,863**
+ Tax paid		(599)	(575)
Change in working capital requirements	**24.1**	**(600)**	**(1,110)**
CASH FLOW FROM OPERATING ACTIVITIES		**7,589**	**8,178**
Acquisitions of property, plant and equipment and intangible assets	14 & 15	(5,115)	(6,524)
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	4 & 16	(417)	(864)
Acquisitions of investments in equity method entities and joint operations	4 & 16	(1,067)	(1,746)
Acquisitions of equity and debt instruments	16	(1,622)	(595)
Disposals of property, plant and equipment, and intangible assets	14 & 15	154	134
Loss of controlling interests in entities, net of cash and cash equivalents sold	4 & 16	456	2,676
Disposals of investments in equity method entities and joint operations	4 & 16	3,841	14
Disposals of equity and debt instruments	16	21	148
Interest received on financial assets		21	28
Dividends received on equity instruments		57	67
Change in loans and receivables originated by the Group and other	5.6	(374)	(532)
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES		**(4,046)**	**(7,193)**
Dividends paid (1) (2)		(622)	(2,522)
Repayment of borrowings and debt		(6,179)	(3,035)
Change in financial assets held for investment and financing purposes		(608)	(135)
Interest paid		(665)	(780)
Interest received on cash and cash equivalents		53	82
Cash flow on derivatives qualifying as net investment hedges and compensation payments on derivatives and on early buyback of borrowings		25	(114)
Increase in borrowings		7,231	6,622
Increase/decrease in capital		181	107
Purchase and/or sale of treasury stock		-	-
Changes in ownership interests in controlled entities	5.6	23	(12)
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES		**(562)**	**212**
Effects of changes in exchange rates and other		(520)	623
TOTAL CASH FLOW FOR THE PERIOD		**2,461**	**1,819**
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD		**10,519**	**8,700**
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**12,980**	**10,519**

(1) *The Shareholders' Meeting of May 14, 2020 approved the resolution relating to the cancellation of the dividend payment in respect of 2019 proposed by the Group in the current context of the COVID-19 crisis (see Note 17.3 "Liquidity risk").*

(2) *The line "Dividends paid" includes the coupons paid to owners of the deeply-subordinated perpetual notes (see Note 18 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.*

03 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 de 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 25, 2021, the Group's Board of Directors approved and authorized for issue the consolidated financial statements of the Group for the year ended December 31, 2020.

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, 2019 and 2020). 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, 2020 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, 2020 are consistent with the policies used to prepare the consolidated financial statements for the year ended December 31, 2019, except for those described below.

1.1.1 IFRS Standards, amendments or IFRIC Interpretations applicable in 2020

- Amendments to IFRS 3 – *Business Combinations:* Definition of a Business;
- Amendments to IAS 1 – *Presentation of Financial Statements* and IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors:* Definition of Material*;*
- Amendments to IFRS 9 – *Financial Instruments*; IAS 39 – *Financial Instruments: recognition and measurement*; IFRS 7 **–** *Financial Instruments:* Disclosures – Interest Rate Benchmark Reform*;*
- Amendments to IFRS 16 – Leases: COVID-19-related rent concessions.

These amendments have no significant impact on the Group's consolidated financial statements.

(1) Available on the European Commission's website: http://eur-lex.europa.eu/legal-content/FR/TXT/?uri=CELEX:02002R1606-20080410.

1.1.2 IFRS Standards, amendments or IFRIC Interpretations effective in 2021 and that the Group has elected to early adopt

- Amendments to IFRS 9 – *Financial Instruments*; IAS 39 – *Financial Instruments:* recognition and measurement; IFRS 7 – *Financial Instruments:* Disclosures; IFRS 4 – *Insurance contracts* and IFRS 16 – *Leases*: Interest Rate Benchmark Reform (Phase 2).

These amendments relating to the interest rate benchmark reform (*see Note 17*) have no significant impact on the Group's consolidated financial statements.

1.1.3 IFRS Standards, amendments or IFRIC Interpretations effective in 2021 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 (1)
- Amendments to IAS 16 – *Property, Plant and Equipment:* Proceeds before Intended Use (1);
- Amendments to IAS37 – *Provisions, Contingent Liabilities and Contingent Assets*: Onerous Contracts – Cost of Fulfilling a Contract (1);
- Annual Improvements to IFRSs 2018-2020 Cycle (1);
- IFRS 17 – *Insurance Contracts* (including amendments) (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 that 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) As these standards and amendments have not yet been adopted by the European Union, this is a free translation.

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 judgments

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 COVID-19, have prompted the Group to step up its risk oversight procedures, mainly in measuring financial instruments and performing impairment tests. The estimates used by the Group, among other things, to test for impairment and to measure provisions, 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-term economic prospects.

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*), intangible assets (*see Note 14*), property, plant and equipment (*see Note 15*), and, in the context of COVID-19, factoring the uncertainty in measuring these recoverable amounts and their sensitivity to potential changes in key assumptions;
- measurement of the fair value of financial assets and liabilities, and, in the context of COVID-19, factoring the uncertainty surrounding the key assumptions used, mainly as regards the estimation of future cash flows (*see Notes 16 and 17*);
- measurement of provisions, particularly for the back-end of the nuclear fuel cycle, dismantling obligations, disputes, and pensions and other employee benefits (*see Notes 19 and 20*);
- 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 (*see Note 7*);
- measurement of recognized tax loss carry-forwards, taking into account, where applicable, in the context of COVID-19, 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*);
- identifying "own use contracts" as defined by IFRS 9 within non-financial purchase and sale contracts (electricity, gas, etc.) (*see Note 16*);
- determining whether arrangements are or contain a lease (*see Notes 15 and 16*);

- grouping operating segments together for the presentation of reportable segments (*see Note 6*).

In the context of the COVID-19 crisis, the Group also exercised its judgment in assessing:

- the existence of a trigger event potentially leading to the impairment of goodwill, property, plant and equipment and/or intangible assets (*see Notes 9, 13, 14 and 15*);
- expected credit losses, mainly in order to update probabilities of default and other inputs in an uncertain context (*see Note 17*);
- the impacts on risks related to financial instruments, mainly liquidity risk and trends in interest rate, commodities and exchange rate markets (*see Note 17*);
- the consequences of hedging, particularly with regard to maintaining the highly probable nature of the hedged item (*see Note 17*);
- the application of enforceable rights and obligations associated with customer contracts, mainly with regard to future payment receipt probabilities and the measurement of the revenue recognized using the percentage of completion method (*see Note 7*).

1.3.3 Impacts of the COVID-19 crisis on the Group's position at December 31, 2020

The impacts of the COVID-19 crisis on the Group's operational and financial performance are presented in the management report.

In the context of the health crisis, the Group has taken special care in determining the accounting treatments applicable to the main issues and impacts of the crisis, for which IFRS accounting principles have been applied consistently with those previously used, particularly in relation to:

- **Impairment losses on non-financial assets**

  The potential impairment of non-financial assets, particularly goodwill and investments consolidated using the equity method of accounting, was examined, particularly for those activities most affected by the COVID-19 crisis. In accordance with IAS 36 - *Impairment of Assets*, the Group performed an impairment test on goodwill, as well as on other non-financial assets for which indicators of potential impairment losses existed (*see Note 9.1 "Impairment losses" and Note 13 "Goodwill"*).

- **Impairment losses on financial assets: counterparty risk and expected credit losses**

  The COVID-19 crisis gives rise to a potentially increased credit risk and may therefore affect the amount of impairment losses to be recognized in respect of expected credit losses. The Group is therefore monitoring payment receipts and counterparty risk more closely (*see Note 17 "Risks arising from financial instruments"*).

- **Financial assets and liabilities: measurement at fair value**

  Faced with the crisis, the financial markets are very volatile, which affects the instruments held by the Group and measured at fair value. The fair value of these instruments incorporates data that reflect the way in which market participants would take into account the impacts of COVID-19, including the uncertainties inherent to the situation generated by the crisis (*see Note 16 "Financial instruments"*).

- **Liquidity risk and market risk**

  Liquidity risk and trends in the interest rate, commodities and exchange rate markets were monitored carefully and the related information has been updated based on data available at December 31, 2020 (*see Note 17 "Risks arising from financial instruments"*).

- **Deferred tax assets**

  ENGIE's deferred tax asset positions were reviewed in order to ensure their recoverability through future taxable income. The Group also monitored changes to legislation, revisions to income tax rates and other tax measures taken in response to the crisis (*see Note 11 "Income tax expense"*).

- **Provisions**

  As certain activities were more impacted by COVID-19 than others, the Group decided to review whether any current obligations were likely to give rise to the recognition of provisions, particularly for onerous contracts (*see Note 19 "Provisions"*).

- **Performance indicators and presentation of COVID-19 impacts in the income statement**

  The Group has neither adjusted its performance indicators, nor included new indicators to describe the impacts of COVID-19 (*see Note 5 "Financial indicators used in financial communication"*). Expenses directly related to the crisis are all classified, according to their nature, in current operating income, in accordance with the recommendations given in relation to the crisis, which mainly impacts revenues, irrespective of the Group's practice of items of an unusual, irregular or non-recurring nature below current operating income.

NOTE 2 MAIN SUBSIDIARIES AT DECEMBER 31, 2020

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, 2020

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), shell companies 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 16.1.1.1)* 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 Energie 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.

France excluding Infrastructures

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
ENGIE SA *	Energy sales	France	100.0	100.0
ENGIE Energie Services SA *	Energy services/Networks	France	100.0	100.0
Axima Concept	Systems, facilities and maintenance	France	100.0	100.0
Endel Group	Systems, facilities and maintenance	France	100.0	100.0
INEO Group	Systems, facilities and maintenance	France	100.0	100.0
Compagnie Nationale du Rhône	Electricity distribution and generation	France	50.0	50.0
ENGIE Green	Electricity distribution and generation	France	100.0	100.0
CPCU	Urban heating networks	France	66.5	66.5

France Infrastructures

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
GRDF	Natural gas distribution	France	100.0	100.0
GRTgaz Group (excluding Elengy)	Natural gas transportation	France, Germany	74.6	74.6
Elengy	Natural gas, LNG	France	61.3	74.6
Fosmax LNG	Natural gas, LNG	France	61.3	54.1
Storengy France	Underground natural gas storage	France	100.0	100.0
Storengy Deutschland GmbH	Underground natural gas storage	Germany	100.0	100.0

Rest of Europe

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
ENGIE Thermique France	Electricity generation	France	100.0	100.0
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
Cofely Fabricom SA	Systems, facilities and maintenance	Belgium	100.0	100.0
ENGIE Energie Nederland N.V.	Electricity generation, Energy sales	Netherlands	100.0	100.0
ENGIE Services Nederland N.V.	Energy services	Netherlands	100.0	100.0
ENGIE Deutschland GmbH	Energy services	Germany	100.0	100.0
ENGIE Deutschland AG *	Electricity generation	Germany	100.0	100.0
ENGIE Supply Holding UK Limited	Energy sales	United Kingdom	100.0	100.0
First Hydro Holdings Company	Electricity generation	United Kingdom	75.0	75.0
Engie Regeneration	Energy services	United Kingdom	100.0	100.0
ENGIE Services Holding UK Ltd	Energy services	United Kingdom	100.0	100.0
ENGIE Services Limited	Energy services	United Kingdom	100.0	100.0
ENGIE Cartagena	Electricity generation	Spain	100.0	100.0
ENGIE Italia S.p.A *	Energy sales	Italy	100.0	100.0
Engie Servizi S.p.A	Energy services	Italy	100.0	100.0
ENGIE Romania	Natural gas distribution, Energy sales	Romania	51.0	51.0

Latin America

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
ENGIE Energía Chile Group	Electricity distribution and generation	Chile	60.0	52.8
ENGIE Energía Perú	Electricity distribution and generation	Peru	61.8	61.8
ENGIE Brasil Energia Group	Electricity distribution and generation	Brazil	68.7	68.7

USA & Canada

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
ENGIE North America	Electricity distribution and generation, Natural gas, LNG, Energy services	United States	100.0	100.0
ENGIE Holding Inc.	Holding - parent company	United States	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
Jupiter Projects	Electricity distribution and generation	United States	51.0	100.0
Conti Service LLC	Energy services	United States	100.0	100.0

Middle East, Asia & Africa

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
UCH Power Limited	Electricity generation	Pakistan	100.0	100.0
Pelican Point Power Limited	Electricity generation	Australia	72.0	72.0
Simply Energy	Energy sales	Australia	72.0	72.0
Cofely Besix	Systems, facilities and maintenance	UEA	100.0	100.0

Others

Company name	Activity	Country	% interest Dec. 31, 2020	Dec. 31, 2019
ENGIE SA *	Holding - parent company, Energy management trading, Energy sales	France	100.0	100.0
ENGIE Energie Services SA *	Holding	France	100.0	100.0
ENGIE FINANCE SA	Financial subsidiaries	France	100.0	100.0
ENGIE Solar	Solar EPC	France	100.0	100.0
Gaztransport & Technigaz (GTT)	Engineering	France	40.4	40.4
Electrabel SA *	Holding, Electricity generation, Energy management trading	France/Belgium	100.0	100.0
ENGIE Italia S.p.A *	Holding, Energy management trading	Italy	100.0	100.0
ENGIE Deutschland AG *	Holding, Energy management trading	Germany	100.0	100.0
ENGIE Energie Nederland Holding B.V.	Holding, Energy management trading	Netherlands	100.0	100.0
ENGIE Global Markets	Energy management trading	France, Belgium, Singapore	100.0	100.0
ENGIE Energy Management *	Energy management trading	France, Belgium, Italy, United Kingdom	100.0	100.0
ENGIE CC	Financial subsidiaries, Central functions	Belgium	100.0	100.0
Tractebel Engineering	Engineering	Belgium	100.0	100.0
International Power Limited	Holding	United Kingdom	100.0	100.0
ENGIE Energy Management Holding	Holding	Switzerland	100.0	100.0

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): 74.6%

In addition to the analysis of the shareholder agreement with Société d'Infrastructures Gazières, a subsidiary of *Caisse des Dépôts et Consignations* (CDC), which owns 24.8% of the share capital of GRTgaz, the Group also assessed 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 concerns 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) in view of its current 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 a 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 entities in which the Group does not have the majority of the voting rights are Compagnie Nationale du Rhône (49.98%) and Gaztransport & Technigaz (40.4%).

Compagnie Nationale du Rhône ("CNR" – France excluding Infrastructures): 49.98%

The Group holds 49.98% of the share capital of CNR, with CDC holding 33.2%, and the balance (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.

Gaztransport & Technigaz ("GTT" – Others): 40.4%

Since GTT's initial public offering in February 2014, ENGIE has been the largest shareholder in the company with a 40.4% stake, the free float representing around 59% of the share capital. The Group holds the majority of the seats on the Board of Directors and the majority of the voting rights exercised at shareholders' meetings in view of the widely dispersed shareholding structure and the absence of evidence of minority shareholders acting in concert. The Group therefore considers that it exercises *de facto* control over GTT, based on an IFRS 10 criteria.

2.3 Subsidiaries with material non-controlling interests

The following table shows the non-controlling interests in Group entities that are deemed to be material, the respective contributions to equity and net income at December 31, 2020 and December 31, 2019, as well as the dividends paid to non-controlling interests of these significant subsidiaries:

Corporate name	Activity	Percentage interest of non-controlling interests		Net income/(loss) of non-controlling interests		Equity of non-controlling interests		Dividends paid to non-controlling interests	
In millions of euros		Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019 (1)	Dec. 31, 2020	Dec. 31, 2019
GRTgaz Group (France Infrastructures, France)	Regulated gas transportation activities and management of LNG terminals	25.4	25.4	95	89	1,029	1,076	80	120
ENGIE Energía Chile Group (Latin America, Chile) (1)	Electricity distribution and generation - thermal power plants	40.0	47.2	67	54	716	926	24	52
ENGIE Romania Group (Rest of Europe, Romania)	Distribution of natural gas, Energy sales	49.0	49.0	49	47	563	533	10	14
ENGIE Brasil Energia Group (Latin America, Brazil) (1)	Electricity distribution and generation	31.3	31.3	144	177	411	520	87	94
ENGIE Energía Perú (Latin America, Peru) (1)	Electricity distribution and generation - thermal and hydroelectric power plants	38.2	38.2	29	36	368	393	20	22
ENGIE Jupiter Group (North America, United States)	Electricity distribution and generation	49.0	-	51	-	394	-	-	-
Gaztransport & Technigaz (Other, France) (1)	Naval engineering, cryogenic membrane containment systems for LNG transportation	59.6	59.6	93	75	343	343	94	73
Other subsidiaries with non-controlling interests				115	186	1,087	1,159	109	78
TOTAL				**644**	**664**	**4,911**	**4,950**	**425**	**453**

(1) Engie Energia Chile, Engie Brasil Energia, Gaztransport & Technigaz and Engie Energia Perú are listed in their respective countries.

2.3.1 Condensed financial information on subsidiaries with material 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, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Income statement						
Revenues	2,275	2,275	1,107	1,180	1,545	1,436
Net income/(loss)	343	274	142	103	100	95
Net income/(loss) Group share	247	236	75	49	51	49
Other comprehensive income/(loss) – Owners of the parent	(91)	(77)	(88)	9	(10)	(13)
TOTAL COMPREHENSIVE INCOME/(LOSS) – OWNERS OF THE PARENT	**157**	**159**	**(14)**	**59**	**41**	**36**
Statement of financial position						
Current assets	826	689	498	546	520	613
Non-current assets	10,167	10,403	2,677	2,707	843	809
Current liabilities	(1,044)	(1,016)	(252)	(322)	(156)	(277)
Non-current liabilities	(6,113)	(6,097)	(1,146)	(1,025)	(67)	(65)
TOTAL EQUITY	**3,836**	**3,979**	**1,776**	**1,907**	**1,140**	**1,080**
TOTAL NON-CONTROLLING INTERESTS	**1,029**	**1,076**	**716**	**926**	**563**	**533**
Statement of cash flows						
Cash flow from operating activities	1,082	967	308	467	181	71
Cash flow from (used in) investing activities	(410)	(495)	(230)	(144)	(88)	(77)
Cash flow from (used in) financing activities	(673)	(480)	(81)	(171)	(59)	(34)
TOTAL CASH FLOW FOR THE PERIOD (1)	**(1)**	**(8)**	**(2)**	**152**	**34**	**(40)**

(1) Excluding effects of changes in exchange rates and other.

	ENGIE Brasil Energia Group		ENGIE Energía Perú		Gaztransport & Technigaz		Engie Jupiter Group (North America, United States)	
In millions of euros	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Income statement								
Revenues	2,065	2,207	424	479	395	289	20	3
Net income/(loss)	550	623	76	94	156	126	(51)	82
Net income/(loss) Group share	405	446	47	58	63	51	(101)	82
Other comprehensive income/(loss) – Owners of the parent	(687)	(93)	(53)	12	-	(1)	(74)	(1)
TOTAL COMPREHENSIVE INCOME/(LOSS) – OWNERS OF THE PARENT	**(282)**	**353**	**(6)**	**70**	**63**	**51**	**(175)**	**81**
Statement of financial position								
Current assets	1,262	1,533	267	295	326	343	314	81
Non-current assets	4,627	5,792	1,550	1,714	428	452	2,663	534
Current liabilities	(859)	(1,345)	(149)	(177)	(140)	(174)	(287)	(42)
Non-current liabilities	(3,434)	(3,757)	(703)	(802)	(39)	(46)	(1,358)	(293)
TOTAL EQUITY	**1,596**	**2,224**	**965**	**1,029**	**575**	**575**	**1,332**	**279**
TOTAL NON-CONTROLLING INTERESTS	**411**	**520**	**368**	**393**	**343**	**343**	**394**	**-**
Statement of cash flows								
Cash flow from operating activities	869	1,045	197	237	152	139	186	13
Cash flow from (used in) investing activities	(758)	(1,136)	(17)	(22)	(21)	(10)	(151)	(30)
Cash flow from (used in) financing	2	436	(171)	(199)	(158)	(122)	49	88
TOTAL CASH FLOW FOR THE PERIOD (1)	**113**	**345**	**9**	**16**	**(27)**	**7**	**83**	**72**

(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, 2020 and December 31, 2019 are as follows:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Statement of financial position		
Investments in associates	3,017	4,646
Investments in joint ventures	3,743	4,570
INVESTMENTS IN EQUITY METHOD ENTITIES	**6,760**	**9,216**
Income statement		
Share in net income/(loss) of associates	184	255
Share in net income/(loss) of joint ventures	369	245
SHARE IN NET INCOME/(LOSS) OF EQUITY METHOD ENTITIES	**552**	**500**
Statement of comprehensive income		
Share of associates in "Other comprehensive income/(loss)"	(28)	(123)
Share of joint ventures in "Other comprehensive income/(loss)"	(284)	(158)
SHARE OF EQUITY METHOD ENTITIES IN "OTHER COMPREHENSIVE INCOME/(LOSS)"	**(312)**	**(281)**

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 rights' analysis 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

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.

SUEZ Group

The Group exercised significant influence over SUEZ Group until October 6, 2020, when the Group sold a 29.9% stake in SUEZ (*see Note 4.1 "Disposals carried out in 2020*").

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 S.A. ("TAG" - Latin America): 65.0% holding interest (directly and indirectly) representing a net interest in 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 a majority vote requiring the agreement of ENGIE and CDPQ. 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, 2020.

3.1 Investments in associates

3.1.1 Contribution of material associates and of associates that are not material to the Group 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.

Corporate name	Activity	Capacity	Percentage interest 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	
In millions of euros			Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
SUEZ Group (Other) (1)	Water and waste processing		-	32.06	-	1,953	-	113	-	(37)	-	129
Project management entities in the Middle East (Middle-East, Asia & Africa, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman, Kuwait) (2)	Gas-fired power plants and seawater desalination facilities		-		803	950	184	79	(60)	(96)	107	77
Hydroelectric portfolio in Portugal	Hydro power plant	1688 MW	40.00		516		(6)		(11)		-	
Energia Sustentável Do Brasil (Latin America, Brazil)	Hydro power plant	3 750 MW	40.00	40.00	475	659	(17)	(49)	-	-	-	-
GASAG (Rest of Europe, Germany)	Gas and heat networks		31.57	31.57	239	233	12	16	15	(17)	16	9
Other investments in associates that are not material taken individually					984	852	9	96	27	27	145	61
INVESTMENTS IN ASSOCIATES					**3,017**	**4,646**	**184**	**255**	**(28)**	**(123)**	**268**	**277**

(1) *On October 6, 2020, the Group sold 29.9% of its interest in the SUEZ Group (see Note 4.1 "Disposals carried out in 2020"). Following this disposal, the Group's residual stake in the SUEZ Group is presented in equity instruments.*

(2) *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 includes around 40 associates operating thermal power plants with a total installed capacity of 27,494 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 as property, plant and equipment or as financial receivables whenever substantially all of the risks and rewards associated with the assets are transferred to the buyer of the output. This treatment complies with IFRIC 4 and IFRS 16. 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%.

The share in net income/(loss) of associates includes a net non-recurring loss for a total amount of €131 million in 2020 (compared to a net non-recurring loss of €79 million in 2019), mainly including changes in the fair value of derivative instruments and disposal gains and losses, net of tax *(see Note 5.3 "Net recurring income Group share")*.

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 items 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/(loss)	Total compre-hensive income/(loss)	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Total equity	% interest of Group	Total equity attributable to ENGIE
AT DECEMBER 31, 2020											
Project management entities in the Middle East	4,082	769	(255)	514	2,885	18,321	3,925	14,338	2,944	-	803
Energia Sustentável Do Brasil	454	(41)	-	(41)	153	2,897	1,863	(2)	1,189	40.00	475
Hydroelectric portfolio in Portugal	-	(14)	(26)	(41)	37	2,202	16	934	1,289	40.00	516
GASAG	1,205	40	47	87	921	1,944	1,872	234	758	31.57	239
AT DECEMBER 31, 2019											
SUEZ Group	18,015	352	(58)	294	11,481	24,153	12,098	14,248	9,288	32.06	1,953
Project management entities in the Middle East	3,778	390	(409)	(19)	2,851	21,053	3,543	16,644	3,717	-	950
Energia Sustentável Do Brasil	578	(123)	-	(123)	204	4,137	304	2,388	1,648	40.00	659
GASAG	1,251	51	(54)	(2)	850	1,847	1,757	203	736	31.57	233

(1) *The SUEZ group was sold on October 6, 2020 to VEOLIA.*

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 2020 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	(1)	178	(1)	33	114	2	-
Contassur (1)	-	-	-	187	2	-	-
Energia Sustentável Do Brasil	109	-	-	-	-	8	-
Hydroelectric portfolio in Portugal	-	3	-	1	120	-	-
Other	-	24	16	27	180	12	32
AT DECEMBER 31, 2020	**108**	**205**	**15**	**248**	**416**	**21**	**32**

(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 €187 million at December 31, 2020 (€161 million at December 31, 2019).*

3.2 Investments in joint ventures

3.2.1 Contribution of material joint ventures and of joint ventures that are not material to the Group taken individually

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.

Corporate name	Activity	Capacity	Percentage interest of investments in joint ventures		Carrying amount of investments in joint ventures		Share in net income/(loss) of joint ventures		Other comprehensive income/(loss) of joint ventures		Dividends received from joint ventures	
In millions of euros			Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31,	Dec. 31, 2020	Dec. 31, 2019
Transportadora Associada de Gás S.A. (TAG) (Latin America, Brazil)	Gas transmission network		65.00	58.50	803	1,364	177	44	(233)	(71)	231	159
National Central Cooling Company "Tabreed" (Middle-East, Asia & Africa, Abu Dhabi)	District cooling networks		40.00	40.00	702	740	52	42	-	-	27	24
EcoÉlectrica (USA & Canada, Puerto Rico)	Combined-cycle gas-fired power plant and LNG terminal	530 MW	50.00	50.00	329	395	35	25	-	-	70	59
Portfolio of power generation assets in Portugal (Rest of Europe, Portugal)	Electricity generation	2 918 MW	50.00	50.00	278	312	34	39	-	(2)	69	50
WSW Energie und Wasser AG (Rest of Europe, Germany)	Electricity distribution and generation	142 MW	33.10	33.10	206	207	6	(4)	-	-	7	4
Iowa University partnership (USA & Canada)	Services		33.10	-	190		2		(1)		-	
Tihama Power Generation Co (Middle-East, Asia & Africa, Saudi Arabia)	Electricity generation	1 599 MW	60.00	60.00	93	108	19	32	(4)	(5)	21	86
Ohio State Energy Partners (USA & Canada)	Services		50.00	50.00	76	114	6	2	(24)	(10)	12	9
Megal GmbH (France Infrastructures, Germany)	Gas transmission network		49.00	49.00	71	79	2	2	-	-	10	14
Transmisora Eléctrica del Norte (Latin America, Chile)	Electricity transmission line		50.00	50.00	67	80	5	7	(13)	(10)	-	-
Other investments in joint ventures that are not material taken individually					929	1,171	32	55	(9)	(61)	15	35
INVESTMENTS IN JOINT VENTURES					**3,743**	**4,570**	**369**	**245**	**(284)**	**(158)**	**461**	**439**

The share in net income/(loss) of joint ventures includes non-recurring loss of €6 million in 2020 (non-recurring loss of €14 million in 2019), 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")*.

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.

Information on the income statement and statement of comprehensive income

In millions of euros	Revenues	Depreciation and amortization on intangible assets and property, plant and equipment	Net financial income/(loss)	Income tax expense	Net income/(loss)	Other comprehensive income/(loss)	Total comprehensive income/(loss)
AT DECEMBER 31, 2020							
Transportadora Associada de Gás S.A.	1,018	(260)	(245)	(99)	272	(346)	(74)
National Central Cooling Company "Tabreed"	417	(46)	(38)	-	130	-	130
EcoÉlectrica	274	(42)	-	(2)	70	-	70
Portfolio of power generation assets in Portugal	307	(65)	(25)	(30)	79	(1)	78
WSW Energie und Wasser AG	703	(13)	(2)	(14)	18	1	19
Iowa University partnership	24	-	(17)	-	5	(3)	3
Tihama Power Generation Co	113	(5)	(16)	(6)	31	(6)	25
Ohio State Energy Partners	165	-	(43)	-	12	(49)	(37)
Megal GmbH	123	(69)	(4)	2	3	-	3
Transmisora Eléctrica del Norte	65	-	(26)	(4)	10	(27)	(18)
AT DECEMBER 31, 2019							
Transportadora Associada de Gás S.A.	655	(191)	(191)	(52)	88	(121)	(34)
National Central Cooling Company "Tabreed"	370	(41)	(44)	-	105	-	105
EcoÉlectrica	308	(69)	-	(2)	50	-	50
Portfolio of power generation assets in Portugal	426	(67)	(29)	(36)	93	(7)	86
WSW Energie und Wasser AG	729	(12)	(2)	6	(11)	-	(11)
Tihama Power Generation Co	42	(5)	(23)	(8)	54	(8)	46
Ohio State Energy Partners	121	-	(44)	-	4	(20)	(15)
Megal GmbH	123	(69)	(4)	3	4	-	4
Transmisora Eléctrica del Norte	76	-	(30)	(5)	15	(21)	(6)

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	% interest of Group	Total equity attributable to ENGIE
AT DECEMBER 31, 2020										
Transportadora Associada de Gás S.A.	69	277	5,737	514	88	3,524	720	1,235	58.50	803
National Central Cooling Company "Tabreed"	87	131	2,408	-	169	702	-	1,754	40.00	702
EcoÉlectrica	26	60	598	(6)	17	-	16	657	50.00	329
Portfolio of power generation assets in Portugal	203	601	891	174	160	635	76	650	50.00	278
WSW Energie und Wasser AG	14	51	812	40	55	87	90	606	33.10	206
Iowa University partnership	5	7	960	1	4	492	3	473	39.10	185
Tihama Power Generation Co	61	129	333	67	45	246	10	155	60.00	93
Ohio State Energy Partners	8	56	1,074	341	20	575	49	153	50.00	76
Megal GmbH	1	5	730	230	43	262	56	145	49.00	71
Transmisora Eléctrica del Norte	42	28	698	28	4	602	-	133	50.00	67
AT DECEMBER 31, 2019										
Transportadora Associada de	86	329	7,844	595	86	4,616	629	2,331	58.50	1,364
National Central Cooling Company "Tabreed"	-	143	2,671	13	184	765	-	1,851	40.00	740
EcoÉlectrica	34	97	701	(7)	29	-	21	789	50.00	395
Portfolio of power generation assets in Portugal	232	635	1,039	176	139	770	92	728	50.00	312
WSW Energie und Wasser AG	19	59	805	37	54	94	92	606	33.10	207
Tihama Power Generation Co	56	124	432	69	26	325	13	179	60.00	108
Ohio State Energy Partners	19	1,055	89	343	25	522	43	229	50.00	114
Megal GmbH	6	2	729	210	41	262	62	162	49.00	79
Transmisora Eléctrica del Norte	43	34	774	42	4	645	-	160	50.00	80

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 2020 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	-	48	-	-	-	-	-
Portfolio of power generation assets in Portugal	-	-	-	1	-	-	-
WSW Energie und Wasser AG	-	8	-	1	-	1	-
Megal GmbH	65	-	-	-	51	-	-
Futures Energies Investissements Holding	8	18	4	9	208	3	-
Ocean Winds	-	-	4	-	398	-	-
Other	25	152	16	30	227	3	34
AT DECEMBER 31, 2020	**98**	**227**	**24**	**41**	**884**	**7**	**34**

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

€114 million in 2020 (€113 million in 2019). This decrease resulted from (i) unrecognized income for the year 2019 amounting to €0.2 million and (ii) changes in other comprehensive income.

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 & Asia reportable segment 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, 2020, 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 4,398 million (€690 million).
  At December 31, 2020, 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 10,680 million (€1,675 million). Each partner stands as guarantor for this debt to the extent of its ownership interest in the consortium;
- TAG for performance bonds and other guarantees for an amount of €172 million;
- The project management entities in the Middle East and Africa, for an aggregate amount of €851 million.

  Commitments and guarantees given by the Group in respect of these project management entities chiefly correspond to:
  - an equity contribution commitment (capital/subordinated debt) for €89 million. These commitments only concern entities acting as holding companies for projects in the construction phase,
  - letters of credit to guarantee debt service reserve accounts for an aggregate amount of €198 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. 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 €244 million,
  - performance bonds and other guarantees for an amount of €320 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 the 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.

Furthermore, assets or group 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 2020

4.1.1 Impact of the main disposals and sale agreements in 2020

The table below shows the impact of the main disposals and sale agreements of 2020 on the Group's net debt, excluding partial disposals with respect to DBSO [1] activities:

In millions of euros	**Disposal price**	**Reduction in net debt**
Disposal of a share of ENGIE's interest in SUEZ – France	3,348	3,348
Disposal of ENGIE's interest in Astoria 1 and Astoria 2 - United States	375	375
Other disposals that are not material taken individually	425	423
TOTAL	**4,148**	**4,146**

Additional disposals in the process of completion at December 31, 2020 are described in Note 4.2 "Assets held for sale" and other significant strategic reviews underway are described in Note 4.3 "Other planned transactions".

4.1.2 Disposal of a portion of ENGIE's interest in SUEZ SA

On October 5, 2020, the Group accepted an offer from the Veolia group to acquire a 29.9% interest in SUEZ SA. After the transaction, which was completed on October 6, 2020, the Group still held a non-consolidated interest of 1.8% in SUEZ SA.

This transaction reduced the Group's net financial debt by €3,348 million. The disposal gain before tax, combined with the revaluation gain on the remaining interest, amounted to €1,735 million in 2020.

4.1.3 Disposal of ENGIE's interests in Astoria 1 and 2 (United States)

On June 18, 2020, the Group completed the sale of its respective 44.8% and 27.5% interests in the Astoria 1 and Astoria 2 gas-fired power plants to a consortium.

([1]) *Develop, Build, Share and Operate, a model used in renewable energies based on continuous rotation of capital employed.*

The effects of the transaction have reduced the Group's net financial debt by €375 million. The disposal gain before tax amounted to €95 million in 2020.

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 €1,292 million and €488 million, respectively, at December 31, 2020.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Property, plant and equipment, net and intangible assets	992	378
Other assets	299	90
TOTAL ASSETS CLASSIFIED AS HELD FOR SALE	**1,292**	**468**
Borrowings and debt	297	26
Other liabilities	190	65
TOTAL LIABILITIES DIRECTLY ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE	**488**	**92**

The assets related to green gas production in France recorded as "Assets classified as held for sale" at December 31, 2019 were sold in 2020 (see Note 4.1 "Disposals carried out in 2020").

"Assets classified as held for sale" at December 31, 2020 corresponds to renewable energy assets in India and Mexico (the sale of which is highly probable but remains subject to various approvals being obtained), as well as the Group's interest in EV Charged BV (EVBox), for which the plan to sell the majority of the Group's shares was announced in December 2020. These transactions are expected to be completed in 2021. Given the expected capital gains from the disposals, no significant value adjustment has been recorded.

4.3 Other planned transactions

On July 31, 2020, the Group announced a significant increase to its asset portfolio rotation program which, in the medium term, could more than double the previously announced target of around €4 billion.

In this context, the Group has begun a strategic review of its Client Solutions assets with a view to maximizing their value and strengthening their leadership positions to seize future growth opportunities thanks to a consistent scope and appropriate organization, taking into account three main criteria: business model, business type and potential for development in each geographical area. This strategic review will result in: (i) the preservation of Client Solutions businesses focused on the production of low-carbon energy, energy infrastructure and related services providing sophisticated, integrated and large-scale solutions for cities, communities and industries, and (ii) for the other Client Solutions businesses, the creation of a new entity with a leadership position in asset-light businesses and related services, aimed at eventually becoming independent from ENGIE. The entity will specialize in two business models: design and construction projects and recurring operating/maintenance services.

On November 13, 2020, ENGIE also announced that it was beginning a strategic review of its interest in GTT, in which it holds a 40.4% interest. ENGIE will consider selling all or part of its interest, either by way of a formal process of sale to a third party or on the markets.

Given the status of these strategic reviews at December 31, 2020, the conditions for reclassifying the assets in question as "Assets classified as held for sale" have not been met.

4.4 Acquisitions carried out in 2020

In total, acquisitions carried out in 2020 had an impact of €2.5 billion on net financial debt, including in particular:

- ENGIE and Meridiam, its 50/50 partner, finalized the transaction allowing them to operate a 50-year concession with the University of Iowa (UI) relating to energy efficiency, water management and, more generally, sustainability. The company, whose control is shared between the partners, has also issued preference shares held by Hannon

Armstrong. ENGIE has accounted for this investment using the equity method. The impact of the transaction on the Group's net debt was approximately €204 million.

- ENGIE and its partner, Caisse de dépôt et placement du Québec (CDPQ), finalized their acquisition of the remaining 10% stake in Transportadora Associada de Gás S.A. (TAG), previously held by PETROBRAS. This acquisition brought ENGIE's total interest in TAG to 65% (of which half is held by ENGIE Brasil Energia), while CDPQ holds the remaining 35%. Following the transaction, ENGIE retains joint control with CDPQ over the investment, which is still accounted for using the equity method. The impact of the transaction on the Group's net debt was approximately €112 million.
- In addition, with its consortium partners Crédit Agricole Assurances and Mirova (a subsidiary of Natixis Investment Managers), the Group finalized the acquisition of Portugal's second largest hydroelectric portfolio from EDP. ENGIE owns 40% of the consortium, while Crédit Agricole Assurances and Mirova, through managed funds, own 35% and 25%, respectively. The impact of the transaction on ENGIE's net debt was approximately €652 million. This investment is accounted for using the equity method.

The Group carried out various other acquisitions in 2020 which together account for the rest of the €2.5 billion impact, mainly of non-controlling interests in the Fos Cavaou LNG terminal in France, in Renvico in France and Italy, and in a concession in electric power transportation in Brazil.

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, 2020	Dec 31, 2019
Current operating income including operating MtM and share in net income of equity method entities	**4,640**	**5,300**
Mark-to-market on commodity contracts other than trading instruments	(199)	426
Net depreciation and amortization/Other	4,648	4,497
Share-based payments (IFRS 2)	50	51
Non-recurring share in net income of equity method entities	137	93
EBITDA	**9,276**	**10,366**

5.2 Current operating income (COI)

From January 1, 2020, in order to be consistent with the definitions of EBITDA and net recurring income Group share, in line with ENGIE's accounting policies, the Group has revised its definition of the performance management indicator "current operating income Recurring" (COI) by excluding from it the non-recurring share of net income of equity method entities.

The reconciliation between the old and the new definition of current operating income (COI) as of December 31, 2019 is presented below:

In millions of euros	Dec 31, 2019 published	Non-recurring share in net income of equity method entities	Dec 31, 2019 restated
CURRENT OPERATING INCOME (COI)	**5,726**	**93**	**5,819**

The reconciliation between current operating income (COI) 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, 2020	Dec 31, 2019
Current operating income including operating MtM and share in net income of equity method entities	**4,640**	**5,300**
(-) Mark-to-market on commodity contracts other than trading instruments	(199)	426
(-) Non-recurring share in net income of equity method entities	137	93
CURRENT OPERATING INCOME (COI)	**4,578**	**5,819**

5.3 Net recurring income Group share

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 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, 2020	Dec 31, 2019
NET INCOME/(LOSS) GROUP SHARE		**(1,536)**	**984**
Net income attributable to non-controlling interests		644	664
NET INCOME/(LOSS)		**(893)**	**1,649**
Reconciliation items between "Current operating income including operating MtM and share in net income of equity method entities" and "Income/(loss) from operating activities"		**3,139**	**1,623**
Impairment losses	*9.1*	*3,551*	*1,770*
Restructuring costs	*9.2*	*343*	*218*
Changes in scope of consolidation	*9.3*	*(1,640)*	*(1,604)*
Other non-recurring items	*9.4*	*886*	*1,240*
Other adjusted items		**109**	**154**
Mark-to-market on commodity contracts other than trading instruments	*8.1*	*(199)*	*426*
Ineffective portion of derivatives qualified as fair value hedges	*10*	*-*	*3*
Gains/(losses) on debt restructuring and early unwinding of derivative financial instruments	*10*	*29*	*(6)*
Change in fair value of derivatives not qualified as hedges and ineffective portion of derivatives qualified as cash flow hedges	*10*	*158*	*223*
Non-recurring income/(loss) from debt instruments and equity instruments	*10*	*69*	*(115)*
Other adjusted tax impacts		*(85)*	*(470)*
Non-recurring income/(loss) included in share in net income of equity method entities		*137*	*93*
NET RECURRING INCOME		**2,355**	**3,426**
Net recurring income attributable to non-controlling interests		652	743
NET RECURRING INCOME GROUP SHARE		**1,703**	**2,683**

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, 2020	Dec. 31, 2019
(+)		Property, plant and equipment and intangible assets, net	57,085	58,996
(+)		Goodwill	15,943	18,665
	(-)	*Goodwill Gaz de France - SUEZ and International Power (1)*	*(7,472)*	*(7,650)*
(+)		IFRIC 4, IFRS 16 and IFRIC 12 receivables	1,827	1,737
(+)		Investments in equity method entities	6,760	9,216
	(-)	*Goodwill arising on the International Power combination (1)*	*(141)*	*(154)*
(+)		Trade and other receivables, net	14,295	15,180
	(-)	*Margin calls (1) (2)*	*(1,585)*	*(2,023)*
(+)		Inventories	4,140	3,617
(+)		Assets from contracts with customers	7,764	7,831
(+)		Other current and non-current assets	9,386	10,601
(+)		Deferred tax	(3,536)	(3,771)
	(+)	*Cancellation of deferred tax on other recyclable items (1) (2)*	*(543)*	*(571)*
(-)		Provisions	(27,073)	(25,115)
	(+)	*Actuarial gains and losses in shareholders' equity (net of deferred tax) (1)*	*4,553*	*3,507*
(-)		Trade and other payables	(17,307)	(19,109)
	(+)	*Margin calls (1) (2)*	*982*	*1,996*
(-)		Liabilities from contracts with customers	(4,354)	(4,330)
(-)		Other current and non-current liabilities	(14,579)	(14,298)
INDUSTRIAL CAPITAL EMPLOYED			**46,146**	**54,325**

(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.

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, 2020	Dec 31, 2019
Cash generated from operations before income tax and working capital requirements	8,788	9,863
Tax paid	(599)	(575)
Change in working capital requirements	(600)	(1,110)
Interest received on financial assets	21	28
Dividends received on equity investments	57	67
Interest paid	(665)	(780)
Interest received on cash and cash equivalents	53	82
CASH FLOW FROM OPERATIONS (CFFO)	**7,054**	**7,574**

5.6 Capital expenditure (CAPEX)

The reconciliation of capital expenditure (CAPEX) with items in the statement of cash flows is as follows:

In millions of euros	Dec. 31, 2020	Dec 31, 2019
Acquisitions of property, plant and equipment and intangible assets	5,115	6,524
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	417	864
(+) Cash and cash equivalents acquired	*60*	*229*
Acquisitions of investments in equity method entities and joint operations	1,067	1,746
Acquisitions of equity and debt instruments	1,622	595
Change in loans and receivables originated by the Group and other	374	532
(+) Other	*(5)*	*8*
Change in ownership interests in controlled entities	312	12
(-) Disposal impacts relating to DBSO [(1)] activities	(1,276)	(468)
TOTAL CAPITAL EXPENDITURE (CAPEX)	**7,687**	**10,042**

(1) Develop, Build, Share & Operate; including Tax equity financing received (see Note 24 "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, 2020	Dec. 31, 2019
(+) Long-term borrowings	16.2 & 16.3	30,092	30,002
(+) Short-term borrowings	16.2 & 16.3	7,846	8,543
(+) Derivative instruments - carried in liabilities	16.4	13,115	15,575
(-) Derivative instruments hedging commodities and other items		*(12,762)*	*(15,350)*
(-) Other financial assets	16.1	(11,599)	(9,568)
(+) Loans and receivables at amortized cost not included in net financial debt		*4,710*	*4,870*
(+) Equity instruments at fair value		*1,668*	*1,297*
(+) Debt instruments at fair value not included in net financial debt		*3,134*	*1,899*
(-) Cash and cash equivalents	16.1	(12,980)	(10,519)
(-) Derivative instruments - carried in assets	16.4	(11,065)	(14,272)
(+) Derivative instruments hedging commodities and other items		*10,299*	*13,443*
NET FINANCIAL DEBT		**22,458**	**25,919**

5.8 Economic net debt

Economic net debt is as follows:

In millions of euros	Notes	Dec. 31, 2020	Dec. 31, 2019
NET DEBT	16	**22,458**	**25,919**
Provisions for back-end of the nuclear fuel cycle	19	7,948	7,611
Provisions for dismantling of plant and equipment	19	7,604	7,329
Provisions for site rehabilitation	19	238	237
Post-employment benefit – Pension	20	3,174	2,427
(-) Infrastructures regulated companies		*(351)*	*(93)*
Post-employment benefit - Reimbursement rights	20	(187)	(160)
Post-employment benefit - Other benefits	20	5,732	5,001
(-) Infrastructures regulated companies		*(3,602)*	*(3,080)*
Deferred tax assets for pension and related obligations	11	(2,061)	(1,635)
(-) Infrastructures regulated companies		*947*	*759*
Plan assets relating to nuclear provisions, inventories of uranium, related derivative financial instruments and a receivable of Electrabel towards EDF Belgium	16 & 24	(4,479)	(3,236)
ECONOMIC NET DEBT		**37,420**	**41,078**

NOTE 6 SEGMENT INFORMATION

As of December 31, 2020, ENGIE was organized into 25 Business Units (BUs) or operating segments , which are essentially geographical, in order to remain close to its customers and foster initiative.

Since 2019, the Group has strengthened this structure by creating four new Global Business Lines (GBLs): Client Solutions, Networks, Renewables and Thermal which are designed to support the local teams and encourage cross-cutting performance by proposing an inter-BU strategy for their business, contributing to decisions on the allocation of resources between BUs, identifying and managing the key cross-cutting digital and excellence programs, identifying and implementing worldwide partnerships, and supporting, measuring and presenting the global performance of their business activities. These GBLs plus the Supply and Nuclear business activities form the Group’s six core Business Lines (BLs).

The Group now operates on a matrix structure with the BUs forming the primary axis and the BLs the secondary axis.

In accordance with IFRS 8, these operating segments are grouped into seven reportable segments to present the Group's segment information. These are unchanged as of December 31, 2020: France excluding Infrastructures, France Infrastructures, Rest of Europe, Latin America, USA & Canada, Middle East, Asia & Africa and Others. The data presented as of December 31, 2019 take into account minor changes resulting from internal reorganizations (reallocation of ENGIE Impact and offshore wind projects to the Others segment).

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.

6.1 Information by reportable segment

6.1.1 Definition of reportable segments

Each BU corresponds to an “operating segment” whose operational and financial performance is regularly reviewed by the Group’s Executive Committee, which remains the Group’s “chief operating decision maker” within the meaning of IFRS 8. The 25 BUs have now been regrouped into seven reportable segments reflecting the geographic areas where the Group operates:

- one reportable segment corresponding to the USA & Canada operating segment;
- five reportable segments corresponding to groups of operating segments;

Operating segments	Reportable segments
NORTH AMERICA	USA & CANADA
ENGIE SOLUTIONS - Cities & Communities ENGIE SOLUTIONS - Services & Proximity ENGIE SOLUTIONS – Industries FRANCE BtoC FRANCE RENEWABLES	FRANCE EXCLUDING INFRASTRUCTURES
GRDF GRTgaz ELENGY STORENGY	FRANCE INFRASTRUCTURES
BENELUX NUCLEAR GENERATION EUROPE UNITED KINGDOM NORTH, SOUTH AND EASTERN EUROPE	REST OF EUROPE
LATIN AMERICA BRAZIL	LATIN AMERICA
ASIA PACIFIC CHINA AFRICA MIDDLE EAST, SOUTH AND CENTRAL ASIA AND TURKEY	MIDDLE EAST, ASIA, & AFRICA

- furthermore “Others” comprises the Group’s holding and corporate activities as well as operating segments that cannot be grouped together (Global Energy Management, Tractebel, GTT, Hydrogen) as well as the activities of *Entreprises & Collectivités (E&C)* due to the specific nature of their businesses and markets or due to their particular risk profile.

In order to determine how to group together the operating segments, as set out above, the Group exercised its judgment to decide whether two or more operating segments could be grouped together in the same reportable segment. The following key factors were examined to assess the similarity of the operating segments’ economic characteristics:

- nature of business and services;
- regulatory environment;
- economic environment in which the relevant activities operate (market maturity, growth prospects, political risks, etc.);
- risk profiles of the activities;
- how the activities fit into the Group’s strategy and business model.

The Group decided to organize the operating segments within the reportable segments for the following reasons:

- the ENGIE Solutions (divided into 3 customer segments: Cities and Communities, Services and Proximity and Industries), the France BtoC, and France Renewables operating segments have been grouped together within the **France excluding Infrastructures** reportable segment, which encompasses all the French downstream energy businesses (energy services and gas and electricity sales and distribution to BtoB, BtoT and BtoC customers), and the increasingly decentralized renewable energy generation activities. These are complementary unregulated businesses that are supported by a well-developed local network and primarily aim to develop a combined offering for local customers: energy services, decentralized production resources and combined gas and electricity supply contracts. These BUs also operate within an environment driven by the “energy transition for green growth” law (LTECV);
- the GRDF, GRTgaz, Storengy and Elengy operating segments, which comprise the gas infrastructure businesses mainly in France (distribution, transport, storage and LNG terminals), have been grouped together within the **France Infrastructures** reportable segment, as they are all regulated businesses with similar risk profiles and margins;
- the Benelux, Nuclear, Generation Europe, United Kingdom and North, South and Eastern Europe operating segments have been grouped together within the **Rest of Europe** reportable segment as these BUs, which comprise all of the Group’s European energy activities excluding France, have a similar business mix (energy production, supply, sale and services), operate in mature energy markets, and are undergoing transformation as part of the energy transition, with rapid development in renewable energy and client solutions;
- the Latin America and Brazil operating segments have been grouped together within the **Latin America** reportable segment, as these segments share similar growth prospects with a substantial proportion of their revenue generated by electricity sales under long-term agreements;
- the Asia-Pacific, China, Africa and Middle East, Southern and Central Asia and Turkey operating segments have been grouped together within the **Middle East, Asia & Africa** reportable segment, as all these regions have high power generation requirements and consequently represent significant growth prospects for the Group in the energy and energy services businesses. They operate in markets driven by the energy transition, with rapid development in renewable energy and client solutions.

6.1.2 Description of reportable segments

- **France excluding Infrastructures**: encompasses the activities of the following BUs: (i) ENGIE Solutions: energy sales and services for buildings and industry, cities and regions and major infrastructures and which designs, finances, builds and operates decentralized energy production and distribution facilities (heating and cooling networks) (ii) France BtoC: sales of energy and related services to individual and professional customers, (iii) France Renewables: development, construction, financing, operation and maintenance of all renewable power generation assets in France.
- **France Infrastructures**: encompasses the GRDF, GRTgaz, Elengy and Storengy BUs, which operate natural gas transportation, storage and distribution networks and facilities, and LNG terminals, mainly in France. They also sell access rights to these terminals.
- **Rest of Europe**: encompasses the activities of the following BUs: (i) Nuclear (electricity generation at nuclear power plants), (ii) Benelux (the Group’s business in Belgium, the Netherlands and Luxembourg: renewable electricity generation, sales of natural gas and electricity and energy services activities), (iii) Generation Europe, which comprises the Group’s thermal electricity generation activities in Europe, (iv) United Kingdom (management of renewable energy generation assets and the portfolio of distribution assets, supply of energy services and solutions, etc.) and (v) North, South and Eastern Europe (sales of natural gas and electricity and related energy services and solutions, operation of renewable energy generation assets, management of distribution networks).
- **Latin America**: encompasses the activities of (i) the Brazil BU and (ii) the Latin America BU (Argentina, Chile, Mexico and Peru). The subsidiaries concerned are involved in centralized power generation, including renewable energy, gas chain activities (including infrastructure), and energy services.
- **USA & Canada**: encompasses power generation, energy services and natural gas and electricity sales activities in the United States, Canada and Puerto Rico.
- **Middle East, Asia & Africa**: encompasses the activities of the following BUs: (i) Asia-Pacific (Australia, New Zealand, Thailand, Singapore and Indonesia), (ii) China, (iii) Africa (mainly Morocco and South Africa) and (iv) the Middle East, South and Central Asia and Turkey (including India and Pakistan). In all of these regions, the

Group is active in electricity generation and sales, gas distribution and sales, energy services and seawater desalination in the Arabian Peninsula.

- **Others**: encompasses the activities of (i) GEM, whose role is to manage and optimize, on behalf of the BUs that hold power generation assets, the Group's physical and contractual asset portfolios (excluding gas infrastructure), particularly in the European market, to sell energy to major pan-European and national industrial companies, and to provide solutions related to its expertise in the financial energy markets to third parties, (ii) Tractebel (engineering companies specialized in energy, hydraulics and infrastructure), (iii) GTT (specialized in the design of cryogenic membrane confinement systems for sea transportation and storage of LNG, both onshore and offshore), (iv) Hydrogen (design of renewable hydrogen-based zero carbon energy solutions), as well as (v) the Group's holding and corporate activities which include the entities centralizing the Group's financing requirements, *Entreprises & Collectivités* (E&C) and the contribution of the associate SUEZ until the sale of ENGIE's stake in October 2020.

The main commercial relationships between the reportable segments are as follows:

- relationships between the "France Infrastructures" reportable segment and the users of those infrastructures, i.e. the "France excluding Infrastructures" and "Others" (GEM and E&C) reportable segments: services relating to the use of the Group's gas infrastructures in France are billed based on regulated rates (or revenues) applicable to all users. Revenue and margins related to the GRDF business continue to fall within the scope of "France Infrastructures";
- relationships between the "Others" (GEM) reportable segment and the "France excluding Infrastructures" and "Rest of Europe" reportable segments: GEM manages the Group's natural gas supply contracts and sells gas at market prices to commercial companies within the "France excluding Infrastructures" and "Rest of Europe" reportable segments. As regards electricity, GEM manages and optimizes the power stations and sales portfolios on behalf of entities that hold power generation assets and deducts a percentage of the energy margin in return for providing these services. The revenue and margins related to power generation activities (minus the percentage deducted by GEM) are reported by the segments that hold power generation assets ("France excluding Infrastructures" and "Rest of Europe");
- relationships between the "Generation Europe" operating segment, which is part of the "Rest of Europe" reportable segment, and the commercial entities in the "France excluding Infrastructures" reportable segment: a portion of the power generated by thermal assets within the "Generation Europe" BU is sold to commercial entities from these segments at market prices.

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.

6.1.3 Key indicators by reportable segment

REVENUES

	Dec. 31, 2020			Dec. 31, 2019		
In millions of euros	External revenues	Intra-Group Revenues	Total	External revenues	Intra-Group Revenues	Total
France excluding Infrastructures	14,856	366	15,222	15,854	334	16,188
France Infrastructures	5,439	920	6,359	5,569	979	6,548
Total France	*20,295*	*1,286*	*21,580*	*21,423*	*1,313*	*22,736*
Rest of Europe	15,655	1,960	17,615	17,267	1,488	18,756
Latin America	4,774	2	4,776	5,341	1	5,342
USA & Canada	4,229	36	4,264	4,457	1	4,458
Middle East, Asia & Africa	2,382	-	2,382	2,937	-	2,938
Others	8,417	4,661	13,078	8,633	5,995	14,627
Elimination of internal transactions	-	(7,945)	(7,945)	-	(8,798)	(8,798)
TOTAL REVENUES	**55,751**	**-**	**55,751**	**60,058**	**-**	**60,058**

EBITDA

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
France excluding Infrastructures	1,391	1,673
France Infrastructures	3,290	3,539
Total France	4,680	5,212
Rest of Europe	1,750	1,757
Latin America	2,014	2,221
USA & Canada	245	269
Middle East, Asia & Africa	600	725
Others	(14)	182
TOTAL EBITDA	**9,276**	**10,366**

DEPRECIATION AND AMORTIZATION

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
France excluding Infrastructures	(769)	(761)
France Infrastructures	(1,681)	(1,581)
Total France	(2,450)	(2,343)
Rest of Europe	(1,097)	(1,041)
Latin America	(471)	(523)
USA & Canada	(121)	(112)
Middle East, Asia & Africa	(81)	(102)
Others	(428)	(377)
TOTAL DEPRECIATION AND AMORTIZATION	**(4,648)**	**(4,497)**

SHARE IN NET INCOME OF EQUITY METHOD ENTITIES

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
France excluding Infrastructures	10	18
France Infrastructures	3	3
Total France	13	21
Rest of Europe	128	62
Latin America	165	8
USA & Canada	85	60
Middle East, Asia & Africa	326	246
Others	(165)	103
Of which share in net income of SUEZ	*(148)*	*113*
TOTAL SHARE IN NET INCOME OF EQUITY METHOD ENTITIES	**552**	**500**

Associates and joint ventures accounted for €184 million and €369 million respectively of share in net income of equity method entities at December 31, 2020, compared to €255 million and €245 million in 2019.

CURRENT OPERATING INCOME (COI)

In millions of euros	Dec. 31, 2020	Dec. 31, 2019 (1)
France excluding Infrastructures	620	905
France Infrastructures	1,609	1,957
Total France	2,229	2,862
Rest of Europe	648	707
Latin America	1,542	1,696
USA & Canada	124	155
Middle East, Asia & Africa	518	619
Others	(483)	(221)
TOTAL CURRENT OPERATING INCOME (COI)	**4,578**	**5,819**

(1) Published data at December 31, 2019 have been restated due to the change in the definition of COI, which now excludes the non-recurring share in net income of equity method entities (see Note 5.2 "Current operating income (COI)").

INDUSTRIAL CAPITAL EMPLOYED

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
France excluding Infrastructures	7,326	7,157
France Infrastructures	19,891	20,172
Total France	27,218	27,329
Rest of Europe	(1,530)	1,805
Latin America	9,494	11,462
USA & Canada	3,500	3,550
Middle East, Asia & Africa	2,818	3,636
Others	4,647	6,542
Of which SUEZ equity value	-	*2,027*
TOTAL INDUSTRIAL CAPITAL EMPLOYED	**46,146**	**54,325**

CAPITAL EXPENDITURE (CAPEX)

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
France excluding Infrastructures	734	1,019
France Infrastructures	1,763	1,745
Total France	2,496	2,764
Rest of Europe	2,298	1,433
Latin America	1,514	2,499
USA & Canada	455	1,351
Middle East, Asia & Africa	(470)	449
Others	1,393	1,547
TOTAL CAPITAL EXPENDITURE (CAPEX)	**7,687**	**10,042**

6.2 Key indicators by Business Line

6.2.1 Definition of Business Lines

- **Client Solutions** (excluding BtoC clients): encompasses services and service packages such as design, engineering, works, operation, installation, maintenance and facility management, as well as asset management activities such as heating and cooling networks, dedicated energy generation assets (decentralized energy delivered directly to the client). It also includes the Group's interest in the SUEZ group, partially sold on October 6, 2020 to VEOLIA (see Note 4 "Main changes in Group structure").
- **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 in Europe and Latin America and natural gas distribution networks in Europe, Asia and the American continent, (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, geothermal projects, energy as a service, etc.).
- **Renewables**: comprises all centralized renewable energy generation activities, including financing, construction and operation of renewable energy facilities, using various energy sources such as hydroelectric, onshore wind, photovoltaic solar, biomass, offshore wind, geothermal and biogas. The energy produced is fed into the grid and sold either on the open or regulated market or through electricity sale agreements.
- **Thermal**: encompasses all the Group's centralized energy generation activities using thermal assets, whether contracted or not. It includes the operation of power plants fueled mainly by gas and 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 through electricity sale agreements. It includes the financing, construction and operation of desalination plants, whether or not connected to power plants.
- **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.

- **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.

Others encompasses (i) energy management and optimization activities, (ii) the GTT BU, and (iii) corporate and holding activities.

6.2.2 Key indicators by Business Line

EBITDA

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Client Solutions	1,208	1,836
Networks	3,850	4,026
Renewables	1,559	1,724
Thermal	1,646	1,763
Nuclear	415	192
Supply	439	638
Others	159	186
TOTAL EBITDA	**9,276**	**10,366**

CURRENT OPERATING INCOME (COI)

In millions of euros	Dec. 31, 2020	Dec. 31, 2019 (1)
Client Solutions	459	1,082
Networks	2,063	2,344
Renewables	1,070	1,195
Thermal	1,209	1,320
Nuclear	(111)	(314)
Supply	112	345
Others	(224)	(154)
TOTAL CURRENT OPERATING INCOME (COI)	**4,578**	**5,819**

(1) Published data at December 31, 2019 have been restated due to the change in the definition of COI, which now excludes the non-recurring share in net income of equity method entities (see Note 5.2 "Current operating income (COI)").

CAPITAL EXPENDITURE (CAPEX)

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Client Solutions	992	1,621
Networks	2,502	3,446
Renewables	1,637	2,475
Thermal	187	517
Nuclear	1,740	636
Supply	357	457
Others	272	889
TOTAL CAPITAL EXPENDITURE (CAPEX)	**7,687**	**10,042**

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, 2020	Dec. 31, 2019 (1)	Dec. 31, 2020	Dec. 31, 2019 (1)
France	22,440	24,223	30,569	31,831
Belgium	5,185	5,894	(9,638)	(6,026)
Other EU countries	9,960	10,428	5,867	8,363
Other European countries	4,420	5,192	2,847	490
North America	5,471	5,273	4,272	4,419
Asia, Middle East & Oceania	3,686	3,867	2,501	3,355
South America	4,201	4,759	8,918	10,920
Africa	387	422	810	971
TOTAL	**55,751**	**60,058**	**46,146**	**54,325**

(1) Comparative data presented for 2019 have been reclassified following the ratification of the Agreement on the withdrawal of the United Kingdom from the European Union on January 31, 2020.

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), facility management (FM) and other services**
  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.
  FM generally involves managing and integrating a large number of different services, outsourced by customers. The consideration due to FM suppliers can either be fixed or variable depending on the number of hours or based on another indicator, irrespective of the nature of the services provided. Hence, the related revenues are recognized according to the percentage of completion on the basis of the costs incurred or of the number of hours performed.

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 lease or concession income, as well as any financial component of operating services.

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, O&M, FM and other services	Others	Dec. 31, 2020
France excluding Infrastructures	2,537	4,130	170	8,014	4	**14,856**
France Infrastructures	25	-	5,210	192	12	**5,439**
Total France	*2,563*	*4,131*	*5,380*	*8,206*	*16*	***20,295***
Rest of Europe	2,728	5,651	312	6,918	46	**15,655**
Latin America	433	3,204	281	715	141	**4,774**
USA & Canada	166	2,506	1	1,553	2	**4,229**
Middle East, Asia & Africa	351	936	23	978	94	**2,382**
Others	2,938	3,473	110	1,257	639	**8,417**
TOTAL REVENUES	**9,178**	**19,901**	**6,108**	**19,626**	**937**	**55,751**

In millions of euros	Sales of gas	Sales of electricity and other energies	Sales of services linked to infrastructures	Constructions, installations, O&M, FM and other services	Others	Dec. 31, 2019
France excluding Infrastructures	3,207	4,160	144	8,338	5	**15,854**
France Infrastructures	64	1	5,265	218	22	**5,569**
Total France	*3,271*	*4,160*	*5,409*	*8,556*	*27*	***21,423***
Rest of Europe	3,147	6,403	331	7,321	66	**17,267**
Latin America	559	3,840	351	457	134	**5,341**
USA & Canada	465	2,734	2	1,254	3	**4,457**
Middle East, Asia & Africa	446	1,293	44	1,053	101	**2,937**
Others	3,464	3,303	106	1,141	619	**8,633**
TOTAL REVENUES	**11,351**	**21,732**	**6,244**	**19,781**	**949**	**60,058**

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 17 "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, 2020	Dec. 31, 2019
Trade and other receivables, net	14,295	15,180
Of which IFRS 15	*6,897*	*7,385*
Of which non-IFRS15	*7,398*	*7,795*
Assets from contracts with customers	7,764	7,831
Accrued income and unbilled revenues	*6,754*	*6,783*
Energy in the meter [(1)]	*1,010*	*1,048*

(1) Net of advance payments.

In 2020, the segments reporting the greatest amounts of assets from contracts were France excluding Infrastructures (€2,817 million, mainly ENGIE Solutions and BtoC), Rest of Europe (€2,501 million, mainly in Benelux, Germany and the United Kingdom) and Others (€1,086 million mainly the GEM BU).

	Dec. 31, 2020			Dec. 31, 2019		
In millions of euros	Gross	Allowances and expected credit losses	Net	Gross	Allowances and expected credit losses	Net
Trade and other receivables, net	15,568	(1,273)	14,295	16,277	(1,097)	15,180
Assets from contracts with customers	7,784	(20)	7,764	7,848	(17)	7,831
TOTAL	**23,351**	**(1,292)**	**22,059**	**24,125**	**(1,114)**	**23,011**

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 €3,079 million at December 31, 2020 (€3,275 million at December 31, 2019).

7.2.2 Liabilities from contracts with customers

	Dec. 31, 2020			Dec. 31, 2019		
In millions of euros	**Non-current**	**Current**	**Total**	**Non-current**	**Current**	**Total**
Liabilities from contracts with customers	39	4,315	4,354	45	4,286	4,330
Advances and downpayments received	*15*	*2,123*	*2,138*	*11*	*2,190*	*2,201*
Deferred revenues	*25*	*2,192*	*2,217*	*34*	*2,096*	*2,129*

In 2020, the segments reporting the greatest amounts of revenues recognized over time due to the time lag between the payments and the performance of the services, are France excluding Infrastructures (€2,332 million, mainly in France BtoB and BtoC) and Rest of Europe (€1,455 million, mainly in Benelux and in Germany).

7.3 Revenues relating to performance obligations not yet satisfied

Revenues relating to performance obligations only partially satisfied at December 31, 2020 amounted to €15,883 million. They mainly concern the United Kingdom (€7,337 million) and ENGIE Solutions (€5,250 million) BUs. These BUs handle a large number of construction, installation, maintenance and facility management contracts under which revenues are recognized over time. The Benelux, Tractebel Engineering and North, South and Eastern Europe BUs will also be recognizing revenues over the next three years for performance obligations satisfied 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 or leases with a low underlying asset value), concession expenses, etc.;
- personnel costs;
- depreciation, amortization, and provisions; and
- taxes.

8.1 Purchases and operating derivatives

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Purchases and other income and expenses on operating derivatives other than trading [(1)]	(24,078)	(28,795)
Service and other purchases [(2)]	(10,889)	(10,609)
PURCHASES AND OPERATING DERIVATIVES	**(34,967)**	**(39,404)**

(1) Of which net income of €199 million in 2020 relating to MtM on commodity contracts other than trading (compared to a net expense of €426 million in 2019).

(2) Of which €175 million in lease expenses, relating to short-term lease contracts and leases with a low underlying asset value in 2020 (compared to €258 million in lease expenses in 2019).

8.2 Personnel costs

In millions of euros	Notes	Dec. 31, 2020	Dec. 31, 2019
Short-term benefits		(11,191)	(10,933)
Share-based payments	21	(53)	(56)
Costs related to defined benefit plans	20.3.4	(267)	(368)
Costs related to defined contribution plans	20.4	(248)	(121)
PERSONNEL COSTS		**(11,759)**	**(11,478)**

8.3 Depreciation, amortization and provisions

In millions of euros	Notes	Dec. 31, 2020	Dec. 31, 2019
Depreciation and amortization	14 & 15	(4,648)	(4,497)
Net change in write-downs of inventories, trade receivables and other assets		(239)	(104)
Net change in provisions	19	110	208
DEPRECIATION, AMORTIZATION AND PROVISIONS		**(4,778)**	**(4,393)**

At December 31, 2020, depreciation and amortization mainly break down as €995 million for intangible assets and €3,655 million for property, plant and equipment.

NOTE 9 OTHER ITEMS OF INCOME/(LOSS) FROM OPERATING ACTIVITIES

Accounting standards

Other items of 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 of accounting;
- “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 inhabited, abnormal or infrequent nature..

9.1 Impairment losses

In millions of euros	Notes	Dec. 31, 2020	Dec. 31, 2019
Impairment losses:			
Goodwill	13.1	(2,145)	(116)
Property, plant and equipment and other intangible assets	14 & 15	(1,257)	(1,735)
Investments in equity method entities and related provisions		(237)	-
TOTAL IMPAIRMENT LOSSES		**(3,639)**	**(1,851)**
Reversal of impairment losses:			
Property, plant and equipment and other intangible assets		88	61
Investments in equity method entities and related provisions		-	20
TOTAL REVERSALS OF IMPAIRMENT LOSSES		**88**	**81**
TOTAL		**(3,551)**	**(1,770)**

Net impairment losses amounted to €3,551 million in 2020, relating mainly to goodwill, property, plant and equipment and intangible assets. After taking into account the deferred tax effects and the share of impairment losses attributable to non-controlling interests, the impact of these impairment losses on net income Group share for 2020 amounted to €3,420 million.

Impairment tests are performed in accordance with the conditions described in Note 13.3.

9.1.1 Impairment losses recognized in 2020

Net impairment losses amounted to €3,551 million in 2020 and mainly concerned:

- **Goodwill for the Nuclear CGU** (€2,145 million) and **Belgian nuclear reactors** (€715 million)

  Following the announcements made by the Belgian government in Autumn 2020 and the talks held since then, the Group considered that it could no longer justify the assumption that the operating life of half of its second-generation reactors could be extended for 20 years beyond 2025.

  The impairment losses over the year take into consideration this major assumption change, the level of forward prices observed in the second half of 2020 and the update of the Group's long-term pricing scenario in light of the latest forecasts for demand, the price of CO_2 and the change in the energy mix.

- Other impairment losses

  Other impairment losses recognized by the Group mainly concerned:

  - an investment in a gas production asset in Algeria (€123 million);
  - thermal power generation assets in the Middle East (€115 million);
  - other thermal and renewable power generation assets in Mexico (€70 million), North America (€69 million) and Brazil (€64 million).

9.1.2 Impairment losses recognized in 2019

Net impairment losses amounted to €1,770 million in 2019, and mainly concerned:

- the Belgian nuclear facilities whose operating life may no longer be extended (€1,023 million) following the triennial review of nuclear provisions and the resulting increase in the carrying amount of the related dismantling assets in a context of falling prices;
- other impairment losses relating to thermal power generation assets in Latin America (€165 million) and the Middle East (€135 million), the intangible asset corresponding to the France BtoC client portfolio value (€111 million) and the value adjustments of several coal-fired power plants in Germany and the Netherlands in connection with their disposal (€148 million).

After taking into account the deferred tax effects and the share of impairment losses attributable to non-controlling interests, the impact of these impairment losses on net income Group share for 2019 amounted to €1,579 million.

9.2 Restructuring costs

In 2020, restructuring costs totaled €343 million (versus €218 million in 2019). Restructuring costs in both years mainly included costs related to staff reduction plans and measures to adapt to economic situations, as well as the shutdown or sale of operations, the closure or restructuring of certain facilities and other miscellaneous restructuring costs.

9.3 Changes in scope of consolidation

At December 31, 2020, the impact of changes in the scope of consolidation was a positive €1,640 million and mainly comprised (i) the positive impact of the disposal of the majority of ENGIE's interest in SUEZ for €1,735 million, (ii) the positive impact of the disposal of the Group's interests in Astoria 1 and 2 in the United States for €95 million, partially offset by (iii) a negative impact of €62 million relating to the disposal of MultiTech in Canada and (iv) a negative €51 million change in the earn-out from the disposal of LNG activities to TOTAL in 2018.

At December 31, 2019, the impact of changes in the scope of consolidation was a positive €1,604 million and mainly comprised the positive impact of the sale of Glow for €1,580 million, including €143 million in respect of items of other comprehensive income recycled to the income statement.

9.4 Other non-recurring items

Other non-recurring items at December 31, 2020 totaled a negative €886 million and mainly included, in addition to the impacts of the adjustment to provisions for the dismantling and rehabilitation of industrial sites, the effects of extending the trading management method launched by the GEM BU in 2017 to the rest of the Group's gas positions in Europe:

The management framework for the Group's gas positions in Europe changed in 2017 for the majority of the long-term contracts managed by the GEM BU, shifting to an individual approach per contract based on market conditions rather than as part of a portfolio. In 2020, ENGIE decided to extend this trading management model to the rest of its gas positions, thereby taking full account of the consequences of contractual changes and an expected increase in the volumes available in this area now under the trading business model. The implementation of the new management method to this extended scope has been made possible thanks to the rollout of tools that allow for a better economic vision of the positions. To this end, a new organization was put in place in December 2020.

As a result of this change in management framework, the Group extended fair value accounting to the assets in question, leading to an initial accounting impact of fair value measurement of a negative €726 million. From then on, the Group's results take into account the realized and unrealized gains and losses relating to these gas positions through the trading net margin presented in revenues and current operating income.

At December 31, 2019, other non-recurring items totaling a negative €1,240 million mainly included the non-recurring impact of the nuclear provision review (back-end of the cycle) and other miscellaneous expenses for a negative €1,166 million.

NOTE 10 NET FINANCIAL INCOME/(LOSS)

In millions of euros	Expense	Income	Dec. 31, 2020	Expense	Income	Dec. 31, 2019
Interest expense on gross debt and hedges	*(901)*	*-*	*(901)*	*(894)*	*-*	*(894)*
Foreign exchange gains/losses on borrowings and hedges	*(21)*	*-*	*(21)*	*-*	*30*	*30*
Ineffective portion of derivatives qualified as fair value hedges	*-*	*-*	*-*	*(3)*	*-*	*(3)*
Gains and losses on cash and cash equivalents and liquid debt instruments held for cash investment purposes	*-*	*47*	*47*	*-*	*84*	*84*
Capitalized borrowing costs	*103*	*-*	*103*	*106*	*-*	*106*
Cost of net debt	**(819)**	**47**	**(772)**	**(790)**	**114**	**(676)**
Cost of lease liabilities	**(47)**	**-**	**(47)**	**(48)**	**-**	**(48)**
Cash payments made on the unwinding of swaps	*(44)*	*-*	*(44)*	*(62)*	*-*	*(62)*
Reversal of the negative fair value of these early unwound derivative financial instruments	*-*	*31*	*31*	*-*	*62*	*62*
Expenses on debt restructuring transactions	*(16)*	*-*	*(16)*	*-*	*6*	*6*
Gains/(losses) on debt restructuring and early unwinding of derivative financial instruments	**(60)**	**31**	**(29)**	**(62)**	**68**	**6**
Net interest expense on post-employment benefits and other long-term benefits	*(89)*	*-*	*(89)*	*(121)*	*-*	*(121)*
Unwinding of discounting adjustments to other long-term provisions	*(614)*	*-*	*(614)*	*(566)*	*-*	*(566)*
Change in fair value of derivatives not qualified as hedges and ineffective portion of derivatives qualified as cash flow hedges	*(158)*	*-*	*(158)*	*(223)*	*-*	*(223)*
Income/(loss) from debt instruments and equity instruments	*(97)*	*73*	*(24)*	*(34)*	*212*	*179*
Interest income on loans and receivables at amortized cost	*-*	*178*	*178*	*-*	*169*	*169*
Other	*(346)*	*225*	*(122)*	*(457)*	*350*	*(107)*
Other financial income and expenses	**(1,306)**	**475**	**(830)**	**(1,400)**	**731**	**(669)**
NET FINANCIAL INCOME/(LOSS)	**(2,232)**	**553**	**(1,678)**	**(2,300)**	**913**	**(1,387)**

The cost of net debt is higher compared to December 31, 2019, due to the drop in cash remuneration and a more unfavorable foreign exchange result.

Losses from debt and equity instruments amounted to €24 million. This amount includes the negative change in fair value of money market funds held by Synatom for a negative amount of €66 million (*see Note 16.1.1.2 "Debt instruments at fair value").*

At December 31, 2020, the average cost of debt after hedging came out at 2.38% compared with 2.70% at December 31, 2019.

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 expense recognized in the income statement for 2020 amounts to €715 million (€640 million income tax expense in 2019). It breaks down as follows:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Current income taxes	(801)	(761)
Deferred taxes	85	121
TOTAL INCOME TAX BENEFIT/(EXPENSE) RECOGNIZED IN INCOME	**(715)**	**(640)**

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, 2020	Dec. 31, 2019
Net income/(loss)	**(893)**	**1,649**
Share in net income of equity method entities	552	500
Income tax expense	(715)	(640)
Income/(loss) before income tax expense and share in net income of associates (A)	**(730)**	**1,790**
Of which French companies	*1,559*	*285*
Of which companies outside France	*(2,288)*	*1,505*
Statutory income tax rate of the parent company (B)	32.0%	34.4%
THEORETICAL INCOME TAX EXPENSE (C) = (A) X (B)	**234**	**(616)**
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	(183)	215
Permanent differences (1)	(627)	(23)
Income taxed at a reduced rate or tax-exempt (2)	571	533
Additional tax expense (3)	(392)	(123)
Effect of unrecognized deferred tax assets on tax loss carry-forwards and other tax-deductible temporary differences (4)	(638)	(867)
Recognition or utilization of tax income on previously unrecognized tax loss carry-forwards and other tax-deductible temporary differences (5)	266	212
Impact of changes in tax rates (6)	(106)	(55)
Tax credits and other tax reductions (7)	112	101
Other (8)	47	(16)
INCOME TAX BENEFIT/(EXPENSE) RECOGNIZED IN INCOME	**(715)**	**(640)**

(1) *Mainly includes disallowable impairment losses on goodwill, disallowable 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.*

(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 France, the United Kingdom for 2020 and Luxembourg for 2019.*

(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.*

The Group reviewed the net deferred tax positions based on projections of future taxable income, including the expected effects of the COVID-19 crisis and the legal changes approved in 2020. The effects were limited to a few countries.

11.1.3 Analysis of the deferred tax income/(expense) recognized in the income statement, by type of temporary difference

In millions of euros	Impact in the income statement Dec. 31, 2020	Impact in the income statement Dec. 31, 2019
Deferred tax assets:		
Tax loss carry-forwards and tax credits	(203)	572
Pension and related obligations	(78)	28
Non-deductible provisions	222	(137)
Difference between the carrying amount of PP&E and intangible assets and their tax bases	276	(93)
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	488	(1,360)
Other	(40)	(36)
TOTAL	**666**	**(1,028)**
Deferred tax liabilities:		
Difference between the carrying amount of PP&E and intangible assets and their tax bases	2	(239)
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	(437)	1,661
Other	(146)	(273)
TOTAL	**(581)**	**1,149**
DEFERRED TAX INCOME/(EXPENSE)	**85**	**121**

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, 2020	Dec. 31, 2019
Equity and debt instruments	(10)	(2)
Actuarial gains and losses	399	256
Net investment hedges	(27)	12
Cash flow hedges on other items	(128)	218
Cash flow hedges on net debt	17	10
TOTAL EXCLUDING SHARE OF EQUITY METHOD ENTITIES	**253**	**494**
Share of equity method entities	116	81
TOTAL	**369**	**575**

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, 2019	**860**	**(4,631)**	**(3,771)**
Impact on net income for the year	666	(580)	85
Impact on other comprehensive income items	504	(245)	259
Impact of changes in scope of consolidation	(9)	(19)	(29)
Impact of translation adjustments	(90)	213	122
Transfers to assets and liabilities classified as held for sale	(39)	29	(10)
Other	(723)	530	(193)
Impact of netting by tax entity	(288)	288	-
AT DECEMBER 31, 2020	**880**	**(4,416)**	**(3,536)**

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, 2020	Dec. 31, 2019
Deferred tax assets:		
Tax loss carry-forwards and tax credits	1,771	2,118
Pension obligations	2,061	1,635
Non-deductible provisions	434	268
Difference between the carrying amount of PP&E and intangible assets and their tax bases	953	763
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	2,148	2,199
Other	444	518
TOTAL	**7,810**	**7,502**
Deferred tax liabilities:		
Difference between the carrying amount of PP&E and intangible assets and their tax bases	(8,531)	(8,953)
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	(2,067)	(1,700)
Other	(748)	(620)
TOTAL	**(11,346)**	**(11,273)**
NET DEFERRED TAX ASSETS/(LIABILITIES)	**(3,536)**	**(3,772)**

11.4 Unrecognized deferred taxes

At December 31, 2020, 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 €4,061 million (€3,836 million at December 31, 2019). Most of these unrecognized tax losses relate to companies based in countries which allow losses to be carried forward indefinitely (mainly Belgium, Luxembourg and the Netherlands). These tax loss carry-forwards did not give fully or partially rise to the recognition of deferred tax 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 €823 million at end-December 2020 versus €929 million at end-December 2019.

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 18.2.1 "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.

	Dec. 31, 2020	Dec. 31, 2019
Numerator (in millions of euros)		
Net income/(loss) Group share	**(1,536)**	**984**
Interest from deeply-subordinated perpetual notes	(187)	(165)
Net income/(loss)used to calculate earnings per share	**(1,723)**	**820**
Impact of dilutive instruments	-	-
Diluted net income/(loss) Group share	**(1,723)**	**820**
Denominator (in millions of shares)		
Average number of outstanding shares	**2,416**	**2,413**
Impact of dilutive instruments:		
Bonus share plans reserved for employees	11	12
Diluted average number of outstanding shares	**2,427**	**2,425**
Earnings per share (in euros)		
Basic earnings/(loss) per share	**(0.71)**	**0.34**
Diluted earnings/(loss) per share	**(0.71)**	**0.34**

NOTE 13 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".

Risk of impairment

Goodwill is not amortized but tested for impairment each year in accordance with IAS 36, or more frequently where an indication of impairment is identified. 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 to which the goodwill is allocated is greater than the recoverable amount of that CGU. The methods used to carry out these impairment tests are described in Note 13.3.

Impairment losses in relation to goodwill cannot be reversed and are shown as "Impairment losses" in the income statement.

Indicators of goodwill 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.

13.1 Movements in the carrying amount of goodwill

In millions of euros	**Net amount**
AT DECEMBER 31, 2019	**18,665**
Impairment losses	(2,145)
Changes in scope of consolidation and Other	(151)
Translation adjustments	(330)
AT DECEMBER 31, 2020	**15,943**

Changes during the period mainly comprise impairment of goodwill related to the Nuclear CGU, and the disposal of the Group's interests in Astoria 1 and 2, offset by various acquisitions made during the year (see Note 4 "Main changes in Group structure").

13.2 Goodwill CGUs

The table below shows "material" goodwill CGUs at December 31, 2020:

In millions of euros	**Operating segment**	**Dec. 31, 2020**
MATERIAL CGUs		
GRDF	France Infrastructures	4,009
Nuclear	Rest of Europe	797
Engie Solutions	France excl. Infrastructures	1,470
Benelux	Rest of Europe	1,242
France Renewable Energy	France excl. Infrastructures	1,178
United Kingdom	Rest of Europe	1,019
OTHER SIGNIFICANT CGUs		
France BtoC	France excl. Infrastructures	1,050
Northern, Southern and Central Europe	Rest of Europe	863
GRTgaz	France Infrastructures	614
North America	USA & Canada	538
Generation Europe	Rest of Europe	521
OTHER CGUs		2,642
TOTAL		**15,943**

During 2020, the Group made certain adjustments to its organization structure (*see Note 6 "Segment information"*):

- the France B2B and France Networks CGUs have been combined into a single CGU called ENGIE Solutions;
- the Benelux BU has been split into three separate CGUs: Nuclear, Renewables and Benelux (energy services, electricity sales and gas sales activities);
- ENGIE Impact's share of the goodwill related to the North America and Tractebel CGUs has been reallocated to the Impact CGU.

13.3 Impairment testing of goodwill CGUs

All goodwill CGUs were tested for impairment. In addition, intangible assets and property plant and equipment were tested at the level of the relevant group of assets, whenever there was an indication of impairment. The current environment, which has been affected by the COVID-19 crisis, has had consequences that are indications of potential impairment, in particular the fall in energy prices, decline in the BtoB sector and fall in the stock markets. The Group did not identify any increased risk of impairment due to the COVID-19 crisis, in particular for assets used in capital-light activities or with little exposure to short-term changes in market conditions. This is particularly the case for regulated infrastructures, the historical client solutions businesses and the energy sales business.

The impairment tests are based on data as of end-June, plus a review of events arisen in the second half of the year.

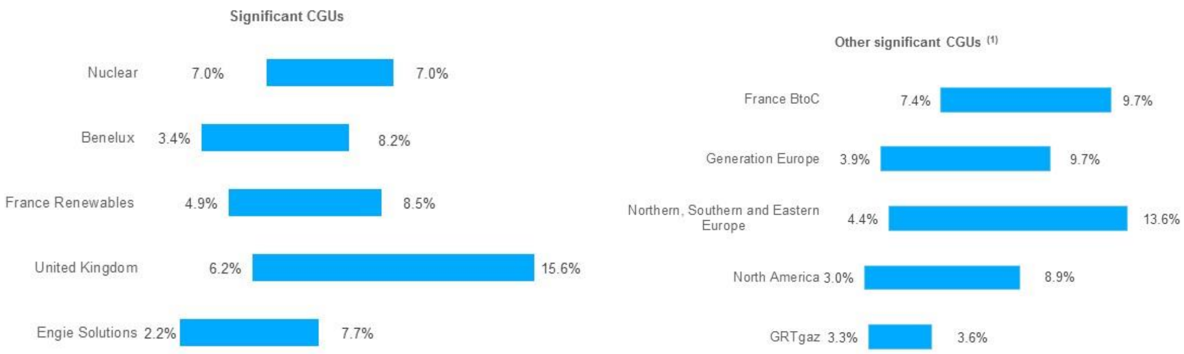
In most cases, the recoverable amount of CGUs is determined by reference to a value in use that is calculated using cash flow projections drawn up on the basis of the 2021 budget and the 2022-2023 medium-term business plan, as approved by the Executive Committee and the Board of Directors, and on extrapolated 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 2024-2040. The forecasts that feature in the reference scenario were approved by the Executive Committee in December 2020. 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;
- 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 2050 climate neutrality objectives set by the European Commission as part of the "European Green Deal" presented in December 2019. 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.

Discount rate

The discount rates used correspond to the weighted average cost of capital, which is adjusted in order to reflect the business, market, country and currency risk relating to each goodwill CGU reviewed. The discount rates used are consistent with available external information sources. The post-tax rates used in 2020 to measure the value in use of the goodwill CGUs for discounting future cash flows ranged between 2.2% and 15.6%, compared with a range of between 3.1% and 13.1% in 2019. The discount rates used for the main goodwill CGUs are shown below:



(1) The valuation methods used are the discounted cash flows (DCF) method and the discounted dividend model (DDM) method.

13.3.1 Material CGUs

This section presents the method for determining value in use, the key assumptions underlying the valuation, and the sensitivity analyses for the impairment tests on the Group's main goodwill CGUs at December 31, 2020.

13.3.1.1 GRDF CGU

The total amount of goodwill allocated to the GRDF CGU was €4,009 million at December 31, 2020. The GRDF CGU groups together the Group's regulated natural gas distribution activities in France.

The terminal value used to calculate the value in use corresponds to the expected Regulated Asset Base (RAB) with no premium at the end of 2026. The RAB is the value assigned by the French Energy Regulation Commission (CRE) to the assets operated by the distributor. It is the sum of the future pre-tax cash flows, discounted at the pre-tax rate of return guaranteed by the regulator.

The cash flow projections are drawn up based on the tariff for public natural gas distribution networks, known as the "ATRD 6 tariff", which entered into force for a period of four years on July 1, 2020, and on the overall level of investments agreed by the CRE as part of its decision on the "ATRD 6 tariff".

Given the regulated nature of the businesses grouped within the GRDF CGU, a reasonable change in any of the valuation inputs would not result in impairment losses.

13.3.1.2 Nuclear CGU

The goodwill allocated to the Nuclear CGU amounted to €797 million at December 31, 2020. The Group's Nuclear CGU encompasses the power generation activities from its 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 the Nuclear CGU are based on a large number of key assumptions, such as prices of fuel and CO2, 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 and the extension of drawing rights agreements for French nuclear plants). The key assumptions also include the discount rate used to calculate the value in use of this goodwill CGU.

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 (1)
Nuclear power generation in Belgium	For Doel 1, Doel 2 and Tihange 1, cash flow projection over the residual useful life of 50 years. For the second generation reactors Doel 3, Doel 4, Tihange 2 and Tihange 3, cash flow projection over the residual useful life of 40 years without any hypothesis of extension unlike previous years.
Drawing rights on Chooz B and Tricastin power plants	Cash flow projection over the remaining term of existing contract plus assumption that drawing rights will be extended for a further 10 years.

The most important assumptions concerning the Belgian regulatory environment relate to the operating life of existing nuclear reactors.

The impairment test took into account the 10-year extension (through 2025) of the operating life of Tihange 1, Doel 1 and Doel 2, annual royalties totaling €20 million in respect of the extension of Doel 1 and Doel 2, and the new conditions for determining the nuclear contribution that will apply to second-generation reactors (Doel 3 and 4, Tihange 2 and 3) through their 40th year of operation, as defined in the December 29, 2016 law and reviewed by the CREG in 2020.

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 the reactors 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 have been regularly reaffirmed since then in the law of June 18, 2015, the energy pact approved by the government on March 30, 2018, the governmental agreement of September 30, 2020, and the general policy memorandum of November 4, 2020. However, this principle remains combined with analysis mechanisms enabling this decision to be reassessed by end-2021 based on its impacts on the security of supply, the climate, energy prices and the security of power plants subject to a monitoring process. If this monitoring process reveals a potential supply security problem, the 2020 governmental agreement provides for the option of adjusting the phase-out schedule for capacity of up to 2 GW. However, in view of the Belgian government's announcements in Autumn 2020 and its talks with the Group since then, the Group considered that for the 2020 impairment test, unlike prior years, the operating conditions for carrying out pre-extension work were no longer met and therefore no longer justified the assumption that the life of half of its second generator reactors could be extended for 20 years beyond 2025.

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 therefore included an assumption that the operating life of the Tricastin and Chooz B nuclear plants would be extended for 10 years after their fourth 10-yearly inspection and that, therefore, so would the Group's drawing rights expiring on average in 2021 and 2039 respectively. This assumption had already been made in prior years, as the Group considered, in line with its reference scenario on developments in the French energy mix, that an extension of the operating life of those reactors was the most credible and most probable scenario.

Results of the impairment test

Given the material assumption change described above, the forward prices observed in the second half of 2020, and the Group's long-term pricing scenario updated based on the latest forecasts for demand, CO2 prices and developments in the energy mix, the Group recognized an impairment loss of €715 million against its nuclear assets in Belgium and €2,145 million against the goodwill allocated to the Nuclear CGU at December 31, 2020. The carrying amount of the residual goodwill was €797 million at December 31, 2020.

Sensitivity analyses

A decrease of €10/MWh in electricity prices for all nuclear power generation would lead to an additional impairment loss of around €1.7 billion. Conversely, an increase of €10/MWh in electricity prices would increase the recoverable amount of the CGU by around €1.5 billion.

An increase of 50 basis points in the discount rates would lead to an additional impairment loss of around €0.1 billion. A decrease of 50 basis points in the discount rates used would lead to an increase in the recoverable amount of the CGU of around €0.1 billion.

13.3.1.3 ENGIE Solutions CGU

The goodwill allocated to the ENGIE Solutions CGU amounted to €1,470 million at December 31, 2020. The ENGIE Solutions CGU encompasses the following activities in France: (i) energy services and sales for buildings and industry, cities and regions and major infrastructures, and (ii) design, financing, construction and operation of decentralized energy production and distribution facilities (heating and cooling networks).

The terminal value used to calculate the value in use of the services and energy sales businesses was determined by extrapolating the cash flows beyond the medium-term business plan period using a long-term growth rate of 1.85% per year.

The main assumptions and key estimates relate primarily to discount rates and changes in price beyond the liquidity period.

An increase of 50 basis points in the discount rates used would have a negative 25% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 27% impact on the calculation.

A decrease of 10% in the margin captured by power generation assets would have a negative 20% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. An increase of 10% in the margin captured would have a positive 23% impact on this calculation.

13.3.1.4 Benelux CGU

The total amount of goodwill allocated to the Benelux CGU was €1,242 million at December 31, 2020. The Benelux CGU encompasses (i) energy services, electricity and gas sales in Belgium and the Netherlands, and (ii) energy services in Luxembourg.

The terminal value used to calculate the value in use of the services and energy sales businesses was determined by extrapolating the cash flows beyond the medium-term business plan period using a long-term growth rate of 2% per year.

An increase of 50 basis points in the discount rates used would have a negative 21% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 24% impact on the calculation.

A decrease of 10% in the margin on gas and electricity sales activities would have a negative 15% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of 10% in the margin on gas and electricity sales activities would have a positive 15% impact on the calculation.

A decrease of 10% in the margin on service activities would have a negative 16% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of 10% in the margin on services activities would have a positive 16% impact on the calculation.

13.3.1.5 France Renewable Energy CGU

The goodwill allocated to the France Renewable Energy CGU amounted to €1,178 million at December 31, 2020. The France Renewable Energy CGU groups together the development, construction, financing, operation and maintenance of all of the renewable power generation assets in France (hydraulic, wind and photovoltaic).

For the hydraulics business, the terminal value was determined to calculate the value in use by extrapolating the cash flows beyond the medium-term business plan based on the reference scenario adopted by the Group.

The main assumptions and key estimates relate primarily to discount rates, assumptions on 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.

A decrease of €10/MWh in electricity prices for hydropower generation would have a negative 105% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. Conversely, an increase of €10/MWh in electricity prices would have a positive 102% impact on the calculation.

An increase of 50 basis points in the discount rates used would have a negative 80% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 97% impact on the calculation.

If the Compagnie Nationale du Rhône hydropower concession agreements are not renewed beyond 2023, this would have a strong adverse impact on the results of the test, with the recoverable amount falling significantly below the carrying amount. In this scenario, the impairment risk would represent around €1 billion.

13.3.1.6 United Kingdom CGU

The goodwill allocated to the United Kingdom CGU amounted to €1,019 million at December 31, 2020. The United Kingdom CGU includes activities in (i) renewable power generation (hydraulic, wind and solar), (ii) gas and electricity sales, and (iii) services to individual and professional customers in the United Kingdom.

The terminal value used to calculate the value in use of the services and energy sales businesses 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.

An increase of 50 basis points in the discount rates used would have a negative 24% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 27% impact on the calculation.

A decrease of 10% in the margin captured by power generation assets would have a negative 23% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. An increase of 10% in the margin captured would have a positive 23% impact on this calculation.

13.3.2 Other significant CGUs

13.3.2.1 North America CGU

The goodwill allocated to the North America CGU amounted to €538 million at December 31, 2020. The North America CGU mainly comprises:

- Canada, which includes activities in (i) renewable power generation, and ii) services to individual and professional customers;
- the United States, which includes activities in (i) gas and electricity sales and (ii) services to individual and professional customers;
- Puerto Rico, which includes an investment in EcoElectrica, a key energy industry player in Puerto Rico's economy (see Note 3.2 "Investments in joint ventures"). Despite the difficult financial environment in Puerto Rico, ENGIE does not have any information at December 31, 2020 on the basis of which the Group would modify its valuation assumptions, regarding its share in these assets.

The wind and solar energy production activities in the United States make up an independent goodwill CGU.

The value in use of these activities was calculated using the cash flow projections drawn up on the basis of the 2021 budget and the 2022-2023 medium-term business plan. A terminal value was calculated for the services and energy sales businesses using EBITDA multiples as a basis.

The main assumptions and key estimates relate primarily to discount rates and changes in price beyond the liquidity period.

An increase of 50 basis points in the discount rates used would have a negative 46% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 33% impact on the calculation.

A decrease of 10% in the margin on gas and electricity sales activities would have a negative 50% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of 10% in the margin on gas and electricity sales activities would have a positive 30% impact on the calculation.

A decrease of 10% in the margin on service activities would have a negative 35% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of 10% in the margin on services activities would have a positive 16% impact on the calculation.

13.3.2.2 Generation Europe CGU

The goodwill allocated to the Generation Europe CGU amounted to €521 million at December 31, 2020. The Generation Europe CGU groups together the thermal power generation activities in Europe.

The value in use of these activities was calculated using the cash flow projections drawn up on the basis of the 2021 budget and the 2022-2023 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.

Results of the impairment test

At December 31, 2020, the recoverable amount of the Generation Europe goodwill CGU was higher than its carrying amount.

Sensitivity analyses

An increase of 50 basis points in the discount rates used would have a negative 13% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 13% impact on the calculation.

A decrease of 10% in the margin captured by thermal power plants would have a negative 29% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. An increase of 10% in the margin captured would have a positive 29% impact on this calculation.

13.3.2.3 Other significant goodwill CGUs

For the other significant goodwill CGUs, there is a considerable difference between their recoverable amount and their carrying amount at December 31, 2020.

13.4 Goodwill segment information

The carrying amount of goodwill can be analyzed as follows by reportable segment:

In millions of euros	**Dec. 31, 2020**
France excluding Infrastructures	3,698
France Infrastructures	5,006
Rest of Europe	4,494
Latin America	706
USA & Canada	650
Middle East, Asia & Africa	667
Others	721
TOTAL	**15,943**

NOTE 14 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.

Risk of impairment

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.

Impairment indicators

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.

Main impairment indicators used by the Group are described in Note 13 “Goodwill”.

Impairment

Items of property, plant and equipment and intangible assets are tested for impairment at the level of the individual asset or 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.

Measurement of recoverable amount

In order to review the recoverable amount of property, plant and equipment and intangible assets, the assets are grouped, where appropriate, into CGUs and the carrying amount of each CGU is compared with its 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 costs of disposal. Where negotiations are ongoing, this value is determined based on the best estimate of their outcome as of the reporting date.

In the event of a decline in value, the impairment loss is recorded in the consolidated income statement under “Impairment losses”.

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 recognized.

14.1 Movements in intangible assets

In millions of euros	Intangible rights arising on concession contracts	Capacity entitlements	Others	Total
GROSS AMOUNT				
AT DECEMBER 31, 2019	**3,838**	**2,862**	**11,984**	**18,684**
Acquisitions	158	-	1,111	1,269
Disposals	(5)	(18)	(122)	(146)
Translation adjustments	(99)	-	(196)	(294)
Changes in scope of consolidation	13	-	97	109
Transfer to "Assets classified as held for sale"	-	-	(56)	(56)
Other	2	64	68	134
AT DECEMBER 31, 2020	**3,907**	**2,908**	**12,886**	**19,701**
ACCUMULATED AMORTIZATION AND IMPAIRMENT				
AT DECEMBER 31, 2019	**(1,656)**	**(2,135)**	**(7,855)**	**(11,646)**
Amortization	(113)	(75)	(806)	(995)
Impairment	(25)	-	(61)	(85)
Disposals	2	18	71	92
Translation adjustments	10	-	81	91
Changes in scope of consolidation	-	-	(4)	(4)
Transfer to "Assets classified as held for sale"	-	-	7	7
Other	-	-	36	36
AT DECEMBER 31, 2020	**(1,781)**	**(2,193)**	**(8,532)**	**(12,505)**
CARRYING AMOUNT				
AT DECEMBER 31, 2019	**2,182**	**727**	**4,129**	**7,038**
AT DECEMBER 31, 2020	**2,126**	**716**	**4,354**	**7,196**

In 2020, the net increase in “Intangible assets” was mainly attributable to the investments of the period for a total of €1,269 million and to changes in scope of consolidation of €105 million that relate mainly to the acquisition of Novo Estado Transmissora de Energia, which operates in the Brazilian infrastructure sector for €52 million and to three acquisitions in the Engie Solutions business in France and the UK for €25 million, partially offset by amortization for a total of €995 million and a negative foreign exchange impact of €203 million primarily due to the sharp depreciation of the Brazilian real (€132 million).

14.1.1 Impairment

The Group carried out a review of the assets, taking into account the fact that the COVID-19 crisis has consequences that are indications of potential impairment losses (in particular the drop in energy prices, BtoB activity and the stock market, see Note 13 “Goodwill”).

At December 31, 2020, the impairment losses allocated to the intangible assets for €85 million were recognized mainly on the ENGIE Solutions BU.

14.1.2 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.

14.1.3 Other

At December 31, 2020, this caption mainly relates to software and licenses for €1,388 million, as well as intangible assets in progress for €638 million and intangible assets (client portfolio) acquired as a result of business combinations and capitalized acquisition costs for customer contracts for €2,059 million.

14.2 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 costs, excluding technical assistance costs, totaled €190 million in 2020, of which €27 million in expenses related to in-house projects in the development phase that meet the criteria for recognition as an intangible asset as defined in IAS 38.

NOTE 15 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 24.2 "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
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.

Risk of impairment

See Note 14 “Intangible assets”.

Impairment indicators

See Note 13 “Goodwill”.

15.1 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, 2019	**698**	**5,490**	**81,857**	**467**	**3,496**	**4,172**	**3,882**	**1,417**	**101,478**
Acquisitions/Increases	8	23	291	50	-	4,625	584	112	5,693
Disposals	(8)	(56)	(352)	(36)	-	(20)	(78)	(48)	(597)
Translation adjustments	(28)	(109)	(2,557)	(8)	(26)	(258)	(152)	(46)	(3,183)
Changes in scope of consolidation	1	(1)	(294)	1	(1)	-	(12)	4	(302)
Transfer to "Assets classified as held for sale"	(4)	-	(629)	-	-	86	(62)	(12)	(620)
Other	(33)	99	3,640	14	124	(3,989)	(12)	15	(141)
AT DECEMBER 31, 2020	**633**	**5,447**	**81,958**	**488**	**3,593**	**4,616**	**4,151**	**1,442**	**102,327**
ACCUMULATED DEPRECIATION AND IMPAIRMENT									
AT DECEMBER 31, 2019	**(134)**	**(2,995)**	**(41,722)**	**(320)**	**(2,223)**	**(357)**	**(868)**	**(901)**	**(49,520)**
Depreciation	(5)	(152)	(2,674)	(49)	(177)	-	(487)	(111)	(3,655)
Impairment	(11)	(17)	(547)	-	(419)	(170)	(8)	-	(1,171)
Disposals	-	48	313	32	5	7	66	42	512
Translation adjustments	10	29	1,047	5	5	13	28	22	1,160
Changes in scope of consolidation	-	1	32	-	-	(1)	-	(3)	28
Transfer to "Assets classified as held for sale"	-	-	40	-	-	-	11	3	54
Other	41	(5)	68	(8)	(165)	198	3	20	153
AT DECEMBER 31, 2020	**(99)**	**(3,090)**	**(43,444)**	**(341)**	**(2,973)**	**(309)**	**(1,256)**	**(928)**	**(52,439)**
CARRYING AMOUNT									
AT DECEMBER 31, 2019	**564**	**2,495**	**40,135**	**147**	**1,273**	**3,815**	**3,014**	**515**	**51,958**
AT DECEMBER 31, 2020	**535**	**2,356**	**38,514**	**147**	**619**	**4,308**	**2,895**	**514**	**49,889**

In 2020, the net decrease in “Property, plant and equipment” essentially takes into account :

- depreciation for a total negative amount of €3,655 million
- impairment losses on property, plant and equipment amounting to €1,171 million mainly relating to:
  - nuclear assets in Belgium (€715 million),
  - renewable assets in Brazil, Mexico, Chile, France and the United States (€193 million),
  - gas-fired power plants in Spain and the United States (€51 million),
  - gas distribution assets in Argentina (€41 million),
  - coal-fired power plants in Brazil and the United Kingdom (€59 million),
- the classification under “Assets held for sale” for a negative €566 million, mainly relating to solar farms in India (€361 million), wind and solar farms in Mexico and Italy (€169 million) and to EV Box (€36 million);
- changes in the scope of consolidation amounting to a negative €274 million, primarily relating to disposals in renewable energies in Australia and France for a total negative amount of €273 million;
- negative foreign exchange effets of €2,023 million, mainly resulting from the sharp depreciation of the Brazilian real (negative impact of €1,063 million), fluctuations in the US dollar (negative impact of €728 million) and the pound sterling (negative impact of €96 million);

partly offset by :

- maintenance and development investments for a total amount of €5,109 million mainly related to the construction and the development of wind and solar farms in the United States, in Latin America and in France (€1,906 million), as well as the extension of the transportation and distribution networks in the France Infrastructure segment (€1,333 million),

15.2 Pledged and mortgaged assets

Items of property, plant and equipment pledged by the Group to guarantee borrowings and debt amounted to €1,749 million at December 31, 2020 compared to €2,261 million at December 31, 2019.

The net decrease mainly relates to :

- thermoelectric and wind assets in Brazil for a negative €416 million, due to the sharp depreciation of the Brazilian real (negative impact of €433 million);
- renewable assets in France for a negative €39 million;
- the entity FHH (Guernsey) Ltd. in the United Kingdom for a negative €42 million mainly due to the depreciation of the pound sterling (negative impact of €34 million).

15.3 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, property, 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 €2,212 million at December 31, 2020 compared to €1,384 million at December 31, 2019.

The net increase primarily relates to the construction of solar farms in India for an amount of €305 million.

15.4 Other information

Borrowing costs for 2020 included in the cost of property, plant and equipment amounted to €103 million at December 31, 2020 compared to €106 million at December 31, 2019.

NOTE 16 FINANCIAL INSTRUMENTS

16.1 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:

In millions of euros	Notes	Dec. 31, 2020			Dec. 31, 2019		
		Non-current	Current	Total	Non-current	Current	Total
Other financial assets	16.1	9,009	2,583	11,592	7,022	2,546	9,567
Equity instruments at fair value through other comprehensive income		*1,197*	*-*	*1,197*	*921*	*-*	*921*
Equity instruments at fair value through income		*471*	*-*	*471*	*377*	*-*	*377*
Debt instruments at fair value through other comprehensive income		*1,795*	*111*	*1,906*	*1,072*	*77*	*1,149*
Debt instruments at fair value through income		*1,404*	*432*	*1,836*	*871*	*397*	*1,268*
Loans and receivables at amortized cost		*4,141*	*2,041*	*6,182*	*3,782*	*2,072*	*5,854*
Trade and other receivables	7.2	-	14,295	14,295	-	15,180	15,180
Assets from contracts with customers	7.2	26	7,738	7,764	15	7,816	7,831
Cash and cash equivalents		-	12,980	12,980	-	10,519	10,519
Derivative instruments	16.4	2,996	8,069	11,065	4,137	10,134	14,272
TOTAL		**12,031**	**45,665**	**57,696**	**11,174**	**46,194**	**57,369**

16.1.1 Other financial assets

16.1.1.1 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, 2019	**921**	**377**	**1,297**
Increase/Reclassification	291	51	342
Decrease	(78)	(8)	(85)
Changes in fair value	46	3	49
Changes in scope of consolidation, translation adjustments and other	17	48	65
AT DECEMBER 31, 2020	**1,197**	**471**	**1,668**
Dividends	35	8	**43**

Equity instruments break down as €606 million of listed equity instruments and €1,062 million of unlisted equity instruments. This amount mainly includes shares held by the Group as a minority interest in Nord Stream AG for an amount of €552 million, as well as the Group's residual interest in SUEZ (previously accounted for using the equity method) for €185 million.

16.1.1.2 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:

- interest income using the effective interest method;
- 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, 2019	**1,138**	**11**	**761**	**507**	**2,417**
Increase	1,521	-	1,017	128	2,667
Decrease	(734)	(2)	(459)	(38)	(1,233)
Changes in fair value	(22)	-	(91)	-	(112)
Changes in scope of consolidation, translation adjustments and other	(8)	2	10	-	4
AT DECEMBER 31, 2020	**1,895**	**11**	**1,238**	**598**	**3,742**

Debt instruments at fair value at December 31, 2020 include bonds and money market funds held by Synatom for €3,086 million and liquid instruments deducted from net financial debt for €608 million (respectively €1,846 million and €518 million at December 31, 2019).

Developments regarding the Synatom portfolios

In 2020, in view of the current crisis in the financial markets, in order to limit risks and in accordance with the Group's policies, the various investment managers of the portfolios held by Synatom were required to sell part of the equity portfolio and the bond portfolio, with no material impact on income or equity.

Furthermore, money market funds recorded as debt instruments at fair value through income and equity instruments at fair value through other comprehensive income over the period generated a negative change in fair value of €134 million, respectively recognized in net non-recurring financial income for a negative €87 million, and in equity for a negative €47 million.

16.1.1.3 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 enters 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 17 "Risks arising from financial instruments" regarding the assessment of counterparty risk.

In millions of euros	Dec. 31, 2020 Non-current	Current	Total	Dec. 31, 2019 Non-current	Current	Total
Loans granted to affiliated companies	2,527	148	2,675	2,293	172	2,465
Other receivables at amortized cost	205	1,740	1,944	301	1,697	1,998
Amounts receivable under concession contracts	853	51	904	588	65	653
Amounts receivable under finance leases	557	101	658	599	138	738
TOTAL	**4,141**	**2,041**	**6,182**	**3,782**	**2,072**	**5,854**

Loans and receivables at amortized cost include the loan relating to the financing of the Nord Stream 2 pipeline project for a total amount of €948 million, including capitalized interest.

The €311 million loan granted to Neptune Energy as part of the sale of the exploration-production business was repaid in an amount of €222 million during the year.

Impairment and expected credit losses against loans and receivables at amortized cost stood at €204 million at December 31, 2020 (versus €139 million at December 31, 2019).

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, 2020	285	(48)	-
At December 31, 2019	233	(38)	4

No material expected credit losses were recognized against loans and receivables at amortized cost at December 31, 2020 and December 31, 2019.

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 concern (i) energy purchase and sale contracts where the contract conveys an exclusive right to use a production asset; and (ii) 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) and Lanxess (Electrabel - Belgium).

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Undiscounted future minimum lease payments	760	892
Unguaranteed residual value accruing to the lessor	11	8
TOTAL GROSS INVESTMENT IN THE LEASE	**771**	**900**
Unearned financial income	**62**	**94**
NET INVESTMENT IN THE LEASE (STATEMENT OF FINANCIAL POSITION)	**709**	**806**
Of which present value of future minimum lease payments	*700*	*801*
Of which present value of unguaranteed residual value	*9*	*6*

Undiscounted minimum lease payments receivable under finance leases can be analyzed as follows:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Year 1	130	118
Years 2 to 5 inclusive	379	470
Beyond year 5	251	304
TOTAL	**760**	**892**

16.1.2 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".

16.1.3 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 €12,980 million at December 31, 2020 (€10,519 million at December 31, 2019).

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, 2020, this amount also included €68 million in cash and cash equivalents subject to restrictions (€86 million at December 31, 2019), including €48 million of cash equivalents set aside to cover the repayment of borrowings and debt as part of project financing arrangements in certain subsidiaries.

Gains recognized in respect of "Cash and cash equivalents" amounted to €45 million at December 31, 2020 compared to €76 million at December 31, 2019.

16.1.4 Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material

As indicated in Note 19.2 "Obligations relating to nuclear power generation activities", the Belgian law of April 11, 2003, amended by the law of April 25, 2007, 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 radioactive fissile material.

Pursuant to the law, Synatom may lend up to 75% of these funds to nuclear power plant operators provided that certain credit quality criteria are met. The funds that cannot be lent to nuclear operators are invested in assets to cover the liabilities.

Since October 2019, Electrabel has not taken out any further loans in respect of provisions for the back-end of the nuclear fuel cycle and has undertaken to repay all of the loans taken out for that purpose by 2025. In 2020, Synatom therefore increased its investments in financial assets to cover the future costs of managing radioactive fissile material by nearly €1.3 billion.

The financial assets covering future costs of dismantling nuclear facilities and managing radioactive fissile material are either loans to legal entities that meet the credit quality criteria required by law or other external assets with sufficient diversification and spread to minimize the risk. The Commission for Nuclear Provisions issues an opinion on the asset classes in which Synatom may invest.

Loans to entities outside the Group and other cash investments are shown in the table below:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Loans to third parties	**11**	**467**
Loan to Eso/Elia	-	453
Loan to Sibelga	11	14
Others loans and receivables at amortized cost	**332**	**85**
Debt instruments - restricted cash	332	85
Equity and debt instruments at fair value	**3,492**	**2,054**
Equity instruments at fair value through other comprehensive income	406	207
Debt instruments at fair value through other comprehensive income	1,895	1,138
Debt instruments at fair value through income	1,191	709
TOTAL	**3,835**	**2,606**

Loans to legal entities outside the Group and the cash subject to restrictions held by money market funds are shown in the statement of financial position as “Loans and receivables at amortized cost”. Bonds and money market funds held by Synatom are shown as “Equity instruments at fair value through other comprehensive income”, “Debt instruments at fair value through other comprehensive income” or “Debt instruments at fair value through income” (*see Note 16.1 “Financial assets”*).

16.1.5 Transfer of financial assets

At December 31, 2020, the outstanding amount of transferred financial assets (as well as the risks to which the Group remains exposed following the transfer of those financial assets) as part of transactions leading to either (i) all or part of those assets being retained in the statement of financial position, or (ii) their full deconsolidation while retaining a continuing involvement in these financial assets, was not material in terms of the Group’s indicators.

In 2020, the Group carried out disposals without recourse to financial assets as part of transactions leading to full derecognition, for an outstanding amount of €1,257 million at December 31, 2020.

16.1.6 Financial assets and equity instruments pledged as collateral for borrowings and debt

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Financial assets and equity instruments pledged as collateral	3,716	4,471

This item mainly includes the carrying amount of equity instruments pledged as collateral for borrowings and debt.

16.2 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, 2020, broken down into current and non-current items:

		Dec. 31, 2020			Dec. 31, 2019		
In millions of euros	**Notes**	**Non-current**	**Current**	**Total**	**Non-current**	**Current**	**Total**
Borrowings and debt		30,092	7,846	37,939	30,002	8,543	38,544
Trade and other payables	16.2	-	17,307	17,307	-	19,109	19,109
Liabilities from contracts with customers	7.2	39	4,315	4,354	45	4,286	4,330
Derivative instruments	16.4	3,789	9,336	13,125	5,129	10,446	15,575
Other financial liabilities		77	-	77	38	-	38
TOTAL		**33,997**	**38,805**	**72,802**	**35,213**	**42,383**	**77,596**

16.2.1 Trade and other payables

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Trade payables	16,890	18,683
Payable on fixed assets	417	426
TOTAL	**17,307**	**19,109**

The carrying amount of these financial liabilities represents a reasonable estimate of their fair value.

16.2.2 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".

16.3 Net financial debt

16.3.1 Net financial debt by type

In millions of euros		Dec. 31, 2020 Non-current	Dec. 31, 2020 Current	Dec. 31, 2020 Total	Dec. 31, 2019 Non-current	Dec. 31, 2019 Current	Dec. 31, 2019 Total
Borrowings and debt	Bond issues	24,724	1,446	26,170	23,262	2,753	26,015
	Bank borrowings	3,136	986	4,123	4,229	1,063	5,292
	Negotiable commercial paper	-	4,024	4,024	-	3,233	3,233
	Lease liabilities	1,892	494	2,386	1,935	578	2,512
	Other borrowings [(1)]	340	594	935	576	668	1,244
	Bank overdrafts and current account	-	301	301	-	247	247
	BORROWINGS AND DEBT	**30,092**	**7,846**	**37,939**	**30,002**	**8,543**	**38,544**
Other financial assets	Other financial assets deducted from net financial debt [(2)]	**(210)**	**(1,878)**	**(2,088)**	**(213)**	**(1,289)**	**(1,502)**
Cash and cash equivalents	Cash and cash equivalents	**-**	**(12,980)**	**(12,980)**	**-**	**(10,519)**	**(10,519)**
Derivative instruments	Derivatives hedging borrowings [(3)]	**(306)**	**(107)**	**(413)**	**(521)**	**(83)**	**(604)**
NET FINANCIAL DEBT		**29,577**	**(7,119)**	**22,458**	**29,267**	**(3,348)**	**25,919**

(1) This item corresponds to the revaluation of the interest rate component of debt in a qualified fair value hedging relationship for €396 million, margin calls on debt hedging derivatives carried in liabilities for €262 million and the impact of amortized cost for €117 million (compared to, respectively, €353 million, €399 million and €224 million at December 31, 2019).

(2) This item notably corresponds to assets related to financing, liquid debt instruments held for cash investment purposes and margin calls on derivatives hedging borrowings - carried in assets.

(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 €39,036 million at December 31, 2020, compared with a carrying amount of €35,546 million.

Financial income and expenses related to borrowings and debt are presented in Note 10 “Net financial income/(loss)”.

16.3.2 Reconciliation between net financial debt and cash flow from (used in) financing activities

In millions of euros		Dec. 31, 2019	Cash flow from financing activities	Cash flow from operating and investing activities and variation of cash and cash equivalents	Change in fair value	Translation adjustments	Change in scope of consolidation and others	Dec. 31, 2020
Borrowings and debt	Bond issues	26,015	826	-	-	(705)	34	26,170
	Bank borrowings	5,292	(93)	-	-	(582)	(494)	4,123
	Negotiable commercial paper	3,233	859	-	-	(69)	-	4,024
	Lease liabilities [(1)]	2,512	(573)	-	-	(62)	509	2,386
	Other borrowings	1,244	(378)	-	193	(42)	(82)	935
	Bank overdrafts and current account	247	51	-	-	5	(2)	301
	BORROWINGS AND DEBT	**38,544**	**692**	**-**	**193**	**(1,455)**	**(35)**	**37,939**
Other financial	Other financial assets deducted from	**(1,502)**	**(608)**	**-**	**(2)**	**24**	**1**	**(2,088)**
Cash and cash	Cash and cash equivalents	**(10,519)**	**-**	**(2,952)**	**-**	**535**	**(44)**	**(12,980)**
Derivative	Derivatives hedging borrowings	**(604)**	**380**	**-**	**(10)**	**(182)**	**3**	**(413)**
NET FINANCIAL		**25,919**	**463**	**(2,952)**	**180**	**(1,078)**	**(75)**	**22,458**

(1) Lease liabilities: the negative amount of €573 million included in the “Cash flow from financing activities” column corresponds to lease payments, excluding interest (total cash outflow for leases amounted to €616 million, of which €43 million relating to interest).

16.3.3 Main events of the period

16.3.3.1 Impact of changes in the scope of consolidation and in exchange rates on net financial debt

In 2020, changes in exchange rates resulted in a €1,078 million decrease in net financial debt, including a €701 million decrease in relation to the Brazilian real and a €356 million decrease in relation to the US dollar.

Changes in the scope of consolidation (including the cash impact of acquisitions and disposals) led to a €1,925 million decrease in net financial debt, reflecting:

- disposals of assets over the period, which reduced net financial debt by €4,146 million, notably including the disposal of the ENGIE's interests in Astoria 1 and 2 in the United States, and the sale of part of ENGIE's interest in SUEZ to the VEOLIA group (*see Note 4.1 "Disposals carried out in 2020"*);

- the classification of renewable energy assets in India and Mexico, as well as the Group's interest in the EV Charged BV company under "Assets held for sale", which reduced net financial debt by €297 million (*see Note 4.2 "Assets held for sale"*);

- acquisitions carried out in 2020 which increased net financial debt by €2,518 million, mainly due to the creation, on a 50/50 basis with Meridiam, of the company that operates the concession granted by the University of Iowa in the United States, for energy efficiency and water management; the acquisition of the residual 10% stake in Transportadora Associada de Gás S. A. (TAG) and an electric power transmission concession in Brazil; the acquisition from EDP of the second largest hydroelectric portfolio in Portugal via a consortium 40%-owned by ENGIE; the acquisition of Renvico,which operates in the field of renewable energy in France and Italy; and the acquisition of minority interests in an LNG terminal in France (*see Note 4.4 "Acquisitions carried out in 2020"*).

16.3.3.2 Financing and refinancing transactions

The Group carried out the following main transactions in 2020:

ENGIE SA

- on January 21, 2020 ENGIE SA redeemed €824 million worth of bonds:
  - a €400 million tranche matured with a 2.5% coupon,
  - a €424 million tranche matured with a 3.125% coupon;

- on March 27, 2020, ENGIE SA issued €2.5 billion worth of bonds:
  - a €1,000 million tranche, maturing in March 2025 with a 1.375% coupon,
  - a €750 million tranche, a green bond maturing in March 2028 with a 1.75% coupon,
  - a €750 million tranche, a green bond maturing in March 2032 with a 2.125% coupon;

- ENGIE SA drew down bilateral lines for a total amount of €885 million for a duration of one month:
  - on March 20, 2020 for €300 million,
  - on March 23, 2020 for €200 million,
  - on March 30, 2020 for €385 million;

- on April 16, 2020, ENGIE SA redeemed €200 million worth of bonds that matured with a floating EURIBOR 3M coupon plus a 0.58% mark-up;

- on May 19, 2020 ENGIE SA redeemed €1.2 billion worth of green bonds that matured with a 1.375% coupon;
- on June 11, 2020, ENGIE SA issued €750 million worth of bonds maturing in June 2027 with a 0.375% coupon;
- on October 9, 2020, ENGIE SA redeemed CHF 275 million (€255 million) worth of bonds with a 1.13% coupon at maturity;
- on December 23, 2020, ENGIE SA redeemed a USD 300 million bank loan (€246 million), with a floating US Libor 3 months coupon plus a 0.90% mark-up at maturity;

Other entities of the Group

- on January 28, 2020, ENGIE Energia Chile carried out the following refinancing transactions:
  - issue of USD 500 million (€453 million) worth of bonds, maturing in January 2030 with a 3.4% coupon,
  - redemption of USD 400 million (€363 million) worth of bonds, maturing in January 2021 with a 5.625% coupon,
  - redemption of two bank loans totaling USD 80 million (€72 million) maturing in June 2020;
- on August 1, 2020, ENGIE Brasil Energia took out thirteen bank loans for a total amount of BRL 1,167 million (€197 million) maturing in March 2044;
- on August 10, 2020, ENGIE Brasil Energia took out two bank loans for a total amount of BRL 742 million (€123 million) maturing in May 2044;
- on September 23, 2020, ENGIE Brasil Energia took out two bank loans for a total amount of BRL 340 million (€54 million) including a BRL 102 million loan maturing in April 2028 and a BRL 238 million loan maturing in October 2036;
- on November 15, 2020, ENGIE Brasil Energia took out two bank loans for a total amount of BRL 582 million (€91 million) including a BRL 150 million loan maturing in April 2028 and a BRL 432 million loan maturing in October 2036;
- on November 17, 2020, ENGIE Brasil Energia redeemed the outstanding amount of BRL 965 million (€149 million) worth of bonds at maturity;
- on December 17, 2020, ENGIE Brasil Energia took out eight bank loans for a total amount of BRL 272 million (€43 million) maturing in March 2044.

16.4 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 17 – 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.

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 17.1. 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 income. 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 income 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 income. 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 income.

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 income. 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 income 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).

Derivative instruments recognized in assets and liabilities are measured at fair value and broken down as follows:

	Dec. 31, 2020						Dec. 31, 2019					
	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	619	147	766	313	39	353	705	124	829	183	41	225
Derivatives hedging commodities	1,163	7,879	9,042	945	9,252	10,197	2,484	9,993	12,476	3,011	10,360	13,371
Derivatives hedging other items (1)	1,214	43	1,257	2,530	45	2,575	949	17	966	1,934	45	1,980
TOTAL	**2,996**	**8,069**	**11,065**	**3,789**	**9,336**	**13,125**	**4,137**	**10,134**	**14,272**	**5,129**	**10,446**	**15,575**

(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.

16.4.1 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, 2020				Dec. 31, 2019			
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	9,465	**9,042**	(5,198)	**3,844**	13,121	**12,476**	(7,704)	**4,772**
	Derivatives hedging borrowings and other items	2,023	**2,023**	(200)	**1,822**	1,795	**1,795**	(399)	**1,397**
Liabilities	Derivatives hedging commodities	(10,621)	**(10,197)**	6,307	**(3,890)**	(14,015)	**(13,371)**	9,872	**(3,499)**
	Derivatives hedging borrowings and other items	(2,928)	**(2,928)**	1,362	**(1,566)**	(2,204)	**(2,204)**	899	**(1,305)**

(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.

(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.

16.5 Fair value of financial instruments by level in the fair value hierarchy

16.5.1 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, 2020				Dec. 31, 2019			
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)	5,410	3,693	-	1,718	3,714	2,069	-	1,645
Equity instruments at fair value through other comprehensive income	*1,197*	*421*	*-*	*775*	*921*	*222*	*-*	*698*
Equity instruments at fair value through income	*471*	*185*	*-*	*286*	*377*	*-*	*-*	*377*
Debt instruments at fair value through other comprehensive income	*1,906*	*1,895*	*-*	*11*	*1,149*	*1,138*	*-*	*11*
Debt instruments at fair value through income	*1,836*	*1,191*	*-*	*645*	*1,268*	*709*	*-*	*559*
Derivative instruments	11,065	4	10,216	844	14,272	8	12,993	1,270
Derivatives hedging borrowings	*766*	*-*	*766*	*-*	*829*	*-*	*829*	*-*
Derivatives hedging commodities - relating to portfolio management activities (1)	*1,967*	*-*	*1,717*	*250*	*3,521*	*-*	*2,928*	*593*
Derivatives hedging commodities - relating to trading activities (1)	*7,075*	*4*	*6,477*	*594*	*8,955*	*8*	*8,271*	*677*
Derivatives hedging other items	*1,257*	*-*	*1,257*	*-*	*966*	*-*	*966*	*-*
TOTAL	**16,475**	**3,697**	**10,216**	**2,562**	**17,986**	**2,077**	**12,993**	**2,916**

(1) Derivative financial instruments relating to commodities classified in level 3 mainly include long-term gas supply contracts and a power contract that are measured at fair value and relate to trading activities.

A definition of these three levels is presented in Note 16.4 "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 DECEMBER 31, 2019	**698**	**11**	**377**	**559**	**1,645**
Acquisitions	25	-	51	134	211
Disposals	(7)	(2)	(8)	(39)	(55)
Changes in fair value	42	-	3	(4)	41
Changes in scope of consolidation, foreign currency translation and other changes (1)	17	2	(137)	(5)	(124)
AT DECEMBER 31, 2020	**775**	**11**	**286**	**645**	**1,718**
Gains/(losses) recorded in income relating to instruments held at the end of the period					46

Derivative instruments

Changes in level 3 commodities derivatives can be analyzed as follows:

In millions of euros	Net Asset/(Liability)
AT DECEMBER 31, 2019	**89**
Changes in fair value recorded in income [(1)]	(937)
Settlements	(37)
Transfer out of level 3 to levels 1 and 2	11
Net fair value recorded in income	**(874)**
Deferred Day-One gains/(losses)	38
AT DECEMBER 31, 2020	**(836)**

(1) *This amount includes the initial impact of the extension of the gas trading management model for gas positions used by the GEM BU for a negative loss of €725 million (see Note 9.4 "Other non-recurring items").*

16.5.2 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, 2020				Dec. 31, 2019			
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	4,812	-	4,812	-	6,510	-	6,510	-
Borrowings not used in designated fair value hedges	34,223	25,039	9,184	-	32,382	22,763	9,620	-
Derivative instruments	13,125	89	11,355	1,681	15,575	102	14,292	1,181
Derivatives hedging borrowings	*353*	-	*353*	-	*225*	-	*225*	-
Derivatives hedging commodities - relating to portfolio management activities [(1)]	*1,694*	*4*	*1,428*	*261*	*4,136*	-	*3,697*	*440*
Derivatives hedging commodities - relating to trading activities [(1)]	*8,503*	*85*	*6,999*	*1,419*	*9,234*	*102*	*8,391*	*741*
Derivatives hedging other items	*2,575*	-	*2,575*	-	*1,980*	-	*1,980*	-
TOTAL	**52,160**	**25,128**	**25,352**	**1,681**	**54,468**	**22,865**	**30,422**	**1,181**

(1) *Derivative financial instruments relating to commodities classified in level 3 mainly include long-term gas supply contracts and a power contract that are measured at fair value and relate to trading activities.*

A definition of these three levels is presented in Note 16.4 “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.

NOTE 17 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 the Universal Registration Document.

17.1 Market risks

17.1.1 Commodity risk

Commodity risk arises primarily from the following activities:

- portfolio management; and
- trading.

The Group has identified primarily 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.

17.1.1.1 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 as at December 31, 2020 are detailed in the table below. They 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.

Sensitivity analysis (1)

		Dec. 31, 2020		Dec. 31, 2019	
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	119	266	40	234
Natural gas	+€3/MWh	379	537	225	471
Electricity	+€5/MWh	(90)	(39)	82	(47)
Coal	+USD 10/ton	-	1	(2)	-
Greenhouse gas emission rights	+€2/ton	(116)	1	(89)	19
EUR/USD	+10%	37	-	(25)	(99)
EUR/GBP	+10%	(6)	7	33	-

(1) The sensitivities shown above apply solely to financial commodity derivatives used for hedging purposes as part of the portfolio management activities.

The COVID-19 crisis has significantly increased the volatility of financial markets. This volatility resulted in a decline in commodity prices, which contributed to significant changes in the fair value of our financial instruments, thereby impacting the income statement (*see Note 8.1* "*Purchases and operating derivatives*") as well as the Group's other comprehensive income (see "*Statement of comprehensive income*").

The COVID-19 crisis did not have a major impact on the sensitivity of other items of comprehensive income. No significant impact in terms of ineffectiveness or disqualification of certain hedges qualifying as cash flow hedges was recognized at the year-end.

17.1.1.2 Trading activities

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.

Revenues from trading activities totaled €629 million at December 31, 2020 (€684 million at December 31, 2019).

The use of Value at Risk (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 trading entities.

Value at Risk

In millions of euros	Dec. 31, 2020	2020 average (1)	2020 maximum (2)	2020 minimum (2)	2019 average (1)
Trading activities	7	10	19	3	14

(1) Average daily VaR.
(2) Maximum and minimum daily VaR observed in 2020.

17.1.2 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 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, 2020				Dec. 31, 2019			
	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	1,163	804	(945)	(749)	2,484	1,037	(3,011)	(1,125)
Cash flow hedges	*225*	*291*	*(250)*	*(205)*	*1,893*	*292*	*(1,953)*	*(557)*
Other derivative instruments	*938*	*514*	*(695)*	*(544)*	*591*	*746*	*(1,058)*	*(568)*
Derivative instruments relating to trading activities	-	7,075	-	(8,503)	-	8,955	-	(9,234)
TOTAL	**1,163**	**7,879**	**(945)**	**(9,252)**	**2,484**	**9,993**	**(3,011)**	**(10,360)**

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.

17.1.2.1 Cash flow hedges

The fair values of cash flow hedges by type of commodity are as follows:

	Dec. 31, 2020				Dec. 31, 2019			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Natural gas	168	236	(178)	(159)	1,814	235	(1,937)	(550)
Electricity	1	3	(3)	(5)	14	35	(9)	(5)
Coal	-	-	-	-	-	1	(1)	-
Oil	54	50	(68)	(41)	51	-	-	-
Other [1]	2	2	(1)	-	14	21	(6)	(2)
TOTAL	**225**	**291**	**(250)**	**(205)**	**1,893**	**292**	**(1,953)**	**(557)**

(1) Includes mainly foreign currency hedges on commodities.

Notional amounts (net) [1]

Notional amounts and maturities of cash flow hedges are as follows:

	Unit	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020
Natural gas	*GWh*	99,240	52,651	24,945	8,667	733	-	186,236
Electricity	*GWh*	(4,150)	(2,693)	(1,227)	7	-	-	(8,063)
Coal	*Thousands of tons*	52	23	-	-	-	-	75
Oil-based products	*Thousands of barrels*	(16,723)	(11,381)	(11,410)	(11,508)	-	-	(51,022)
Forex	*Millions of euros*	19	4	-	-	-	-	24
Greenhouse gas emission rights	*Thousands of tons*	188	117	73	12	-	-	390

(1) Long/(short) position.

Effects of hedge accounting on the Group's financial position and performance

	Dec. 31, 2020				Dec. 31, 2019	
	Fair Value			Nominal	Fair value	Nominal
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Cash flow hedges	515	(455)	61	126,189	(325)	4,967
TOTAL	**515**	**(455)**	**61**	**126,189**	**(325)**	**4,967**

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	126,189	61		154	-	698	Current operating income
	Hedged items			748				

(1) *Gains/(losses).*

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, 2020 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	2021	2022	2023	2024	2025	Beyond 5 years	Dec. 31, 2020	Dec. 31, 2019
Fair Value of derivatives by maturity	168	39	(40)	(33)	17	3	154	(325)

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, 2019	**(837)**
Effective portion recognized in equity	189
Amount reclassified from hedge reserve to profit or loss	704
Translation differences	-
Changes in scope of consolidation and other	(1)
At December 31, 2020	**54**

17.1.2.2 Other commodity derivatives

Other commodity derivatives include:

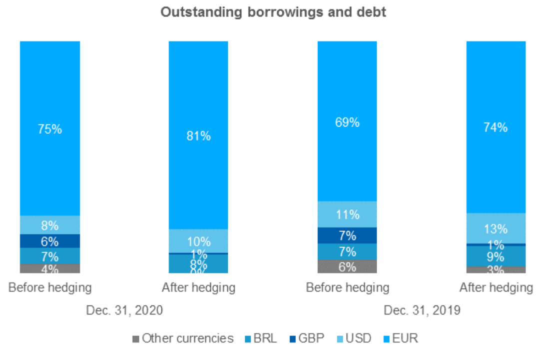
- commodity purchase and sale contracts that were not entered into or are no longer held for the purpose of the receipt or delivery of commodities in accordance with the Group's expected purchase, sale or usage requirements;
- embedded derivatives; and
- derivative financial instruments that are not eligible for hedge accounting in accordance with IFRS 9 or for which the Group has elected not to apply hedge accounting.

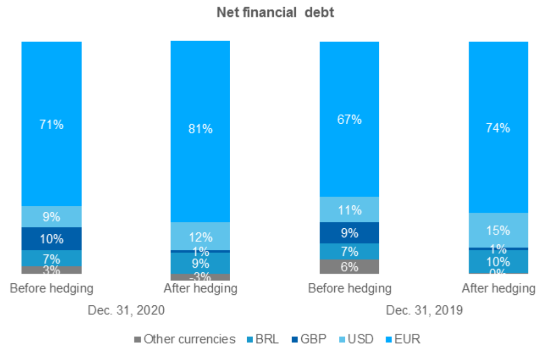
17.1.3 Currency risk

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, in order, to assets in US dollars, Brazilian real and pounds sterling.

17.1.3.1 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:





17.1.3.2 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, 2020			
	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)	4	(4)	NA	NA
Financial instruments (debt and derivatives) qualified as net investment hedges (3)	NA	NA	155	(155)

(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.

17.1.4 Interest rate risk

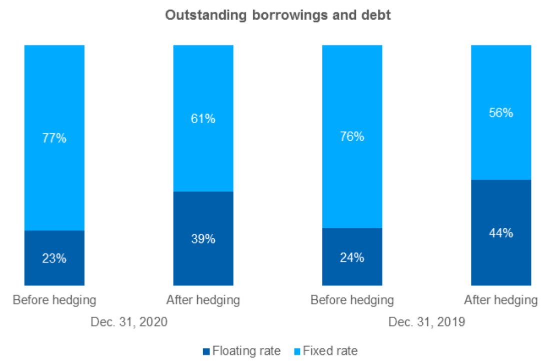
The Group seeks to manage its borrowing costs by limiting the impact of interest rate fluctuations on its income statement. The Group's policy is therefore to arbitrate between fixed rates, floating rates and capped floating rates for its net debt. The interest rate mix may shift within a range defined by Group Management in line with market trends.

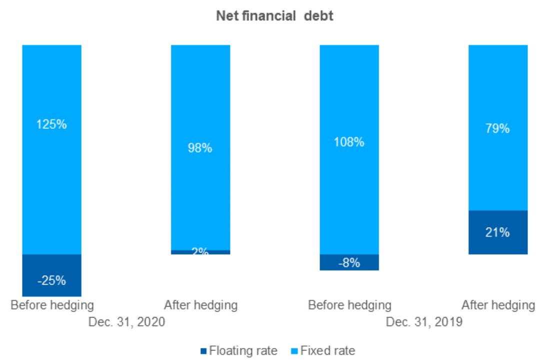
In order to manage the interest rate structure for its net debt, the Group uses hedging instruments, particularly interest rate swaps and options. At December 31, 2020, the Group had a portfolio of interest rate options (caps) protecting it from a rise in short-term interest rates for the euro.

The Group has a portfolio of 2021, 2023, 2024 and 2025 forward interest rate pre-hedges with respective 20/21-year and 10 year maturities on each of the volumes initiated in 2020 to protect the refinancing interest rate on a portion of its debt.

17.1.4.1 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:





17.1.4.2 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, 2020			
	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	(3)	2	NA	NA
Change in fair value of derivatives not qualifying as hedges	70	(139)	NA	NA
Change in fair value of derivatives qualifying as cash flow hedges	NA	NA	549	(711)

17.1.5 Currency and interest rate hedges

The COVID-19 crisis has not prompted the Group to review its foreign exchange and interest rate risk management policy described below

17.1.5.1 Currency risk management

Foreign currency exchange risk (or "FX" risk) is reported and managed based on a Group-wide approach, reflected in a dedicated Group policy that is 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.

17.1.5.2 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, LIBOR, etc., that do not include the borrower's credit spread.

As part of the interest rate benchmark reform, since 2019 the Group has applied, the transition reliefs permitted by the IASB which allow the uncertainties caused by the reform not to be taken into account in the "highly probable" requirement. In 2020, the Group decided to apply the "IBOR phase 2" amendments, which provide for the clarification of the accounting treatment of financial instruments concerned by the reform, in advance. These amendments, which mainly aim to address the issues relating to the valuation of financial instruments and hedging relationships, only apply to the changes required by the reform.

The approach adopted by the ENGIE Group, through an ad hoc working group, makes it possible to address the issue both at the level of central financing vehicles and external financing issued directly by the Business Units.

A Group-wide approach to interest rate risk management is reflected in a dedicated Group policy that is approved by Group Management. This policy distinguishes between the two following main sources of interest rate risk:

- **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 managed actively 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 likeliness 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, and
  - 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.

17.1.5.3 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, 2020				Dec. 31, 2019			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Derivatives hedging borrowings	619	147	(313)	(39)	705	124	(183)	(41)
Fair value hedges	*526*	*14*	*(48)*	*(3)*	*530*	*81*	*(54)*	*(1)*
Cash flow hedges	*8*	*7*	*(220)*	*(8)*	*55*	*-*	*(93)*	*(7)*
Derivative instruments not qualifying for hedge accounting	*85*	*126*	*(46)*	*(28)*	*120*	*43*	*(36)*	*(34)*
Derivatives hedging other items	1,214	43	(2,530)	(45)	949	17	(1,934)	(45)
Cash flow hedges	*30*	*3*	*(768)*	*(11)*	*25*	*-*	*(571)*	*(4)*
Net investment hedges	*55*	*-*	*(4)*	*-*	*33*	*-*	*(6)*	*-*
Derivative instruments not qualifying for hedge accounting	*1,130*	*40*	*(1,758)*	*(33)*	*891*	*17*	*(1,357)*	*(41)*
TOTAL	**1,833**	**189**	**(2,844)**	**(84)**	**1,654**	**142**	**(2,118)**	**(86)**

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, 2020 of the nominal amount of hedging instruments:

In millions of euros

Buy/Sell	Interest rate type	Derivative instrument type	Currency	Total	2021	2022	2023	2024	2025	Beyond 5 years
Buy	Fixed	CCS	EUR	**(486)**	(303)	(32)	(30)	(29)	(26)	(67)
			USD	**(2,205)**	(982)	(937)	(41)	(41)	(41)	(163)
			GBP	**(15,712)**	(2,031)	(1,780)	(1,780)	(1,780)	(1,780)	(6,563)
			HKD	**(1,987)**	(242)	(242)	(242)	(242)	(242)	(778)
			JPY	**(1,146)**	(356)	(356)	(277)	(158)	-	-
			PEN	**(1,334)**	(220)	(220)	(220)	(183)	(165)	(326)
			Other	**(1,682)**	(336)	(336)	(336)	(336)	(126)	(214)
Sell	Fixed	CCS	EUR	**21,194**	2,865	2,568	2,568	2,568	2,352	8,273
			USD	**1,472**	243	243	243	202	182	360
			GBP	**255**	255	-	-	-	-	-
			Other	**221**	36	32	31	29	26	67
	Floating	CCS	EUR	**2,323**	953	953	273	144	-	-
		CCS	BRL	**390**	195	195	-	-	-	-

In millions of euros Buy/Sell	Interest rate type	Derivative instrument type	Currency	Total	2021	2022	2023	2024	2025	Beyond 5 years
Buy	Fixed	CAP	EUR	**1,000**	1,000	-	-	-	-	-
			Other	**-**	-	-	-	-	-	-
		IRS	EUR	**70,376**	6,506	9,971	9,009	8,382	8,818	27,689
			USD	**4,180**	1,368	1,367	1,366	16	15	47
			BRL	**186**	93	93	-	-	-	-
			Other	**41**	8	7	6	5	5	10
	Floating	IRS	EUR	**72,713**	14,979	11,236	9,078	7,978	7,978	21,464
			BRL	**739**	308	308	123	-	-	-

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 17.1.3.2 “Currency risk sensitivity analysis” and the average cost of debt is 2.38% 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, 2020				Dec. 31, 2019	
	Fair value			Nominal amount	Fair value	Nominal amount
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Cash flow hedges	30	(657)	(628)	3,779	(305)	3,814
Net investment hedges	55	(4)	50	1,999	27	3,027
Derivative instruments not qualifying for hedge accounting	149	(76)	73	6,907	(6)	8,985
TOTAL	**233**	**(737)**	**(504)**	**12,686**	**(284)**	**15,827**

Interest rate derivatives

	Dec. 31, 2020				Dec. 31, 2019	
	Fair value			Nominal amount	Fair value	Nominal amount
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Fair value hedges	546	(51)	495	4,622	556	6,089
Cash flow hedges	1	(332)	(331)	2,497	(290)	3,649
Derivative instruments not qualifying for hedge accounting	1,232	(1,802)	(569)	17,910	(393)	21,487
TOTAL	**1,779**	**(2,184)**	**(405)**	**25,029**	**(126)**	**31,224**

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	4,622	495	495	NA	-	NA	Cost of net debt
	Hedged items (3) (4)	4,302	396	(1,698)	NA		NA	
Cash flow hedges	Hedging instruments	7,463	(958)	(860)	207	(5)	47	Other financial income and expenses / Current operating income including operating MtM
	Hedged items			854				
Net investment hedges	Hedging instruments	3,027	27	56	(119)	NA	(9)	Other financial income and expenses / Current operating income including operating MtM
	Hedged items			(56)				

(1) The adjustment of the fair value of hedged items is presented as long term and short-term borrowings and debt for an amount of €396 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 €98 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, 2020 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 31,2020.

Foreign currency and interest rate derivatives designated as cash flow hedges can be analyzed as follows by maturity

In millions of euros	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Fair value of derivatives by maturity	(44)	(38)	(41)	(34)	(29)	(774)	(958)	(594)

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, 2019	**45**	**(1,010)**	**14**	**(284)**
Effective portion recognized in equity	(202)		(6)	119
Amount reclassified from the hedge reserve to profit or loss	(47)		-	9
Translation differences	-	-	-	-
Changes in scope of consolidation and other	-	56	-	-
AT DECEMBER 31, 2020	**46**	**(1,203)**	**9**	**(156)**

(1) Cash flow hedges for given periods.
(2) Cash flow hedges for given transactions.
(3) Of which a negative €487 million of cash flow hedge reserves for which hedge accounting is no longer applied.
(4) All of the reserves relate to continuing hedging relationships.

17.2 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, goods delivery 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 standard IFRS 9, the Group has defined and applied a Group-wide methodology including the 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 different 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 supportable 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 counterparty at risk),
    - 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: 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 3 years overdue (5 years overdue for public counterparties).

As a result of the COVID-19 crisis, the Group has implemented a specific management system to secure its counterparty risk. It is based in particular on:

- an increased monitoring of exposures and cash inflow delays for individually monitored counterparties; and
- an enhanced monitoring of aging balances of the Group's various activities for counterparties monitored using a portfolio approach.

Since the beginning of the crisis, the Group has taken immediate action to limit its exposures such as:

- the closure of customer lines in the most affected sectors within the Energy Management activity;
- the reassignment, during the lockdown in the first half of 2020, of commercial resources to sales administration missions, within the supply and marketing activities, in order to limit the deterioration of aging balances. This increased monitoring of collection procedures throughout 2020 led to no significant change in outstandings (trade receivables, contract assets or receivables recognized at amortized cost) and a general improvement in the cash position of the business units concerned.

Furthermore, the Group has also implemented measures to support the most vulnerable households and microenterprises such as:

- the reimbursement of 2 months of electricity standing charges (April and May) for beneficiaries of an energy voucher or of the Housing Solidarity Fund (*Fonds de Solidarité Logement*);
- the implementation of a payment facility over 6 months with a postponement of the first due date until the end of the health crisis for companies with less than 10 employees.

From an accounting point of view, these various measures were accompanied by an adjustment of the provisioning rate in the customer segments most at risk, particularly in the aeronautical and hotel & catering sectors. These effects led to an increase in expected credit loss, the impact of which on the Group's net income amounted to €230 million at December 31, 2020.

17.2.1 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 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).

The Group’s Energy Market Risk Committee (CRME) consolidates and monitors the Group’s exposure to its main energy counterparties on a quarterly basis and ensures that the exposure limits set for these counterparties are respected.

17.2.1.1 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 €2,431 million at December 31, 2020 (compared to €2,898 million at December 31, 2019).

Individual approach

In millions of euros		Dec. 31, 2020 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
Trade and other receivables, net	Gross	**9,530**	8,329	893	308	**9,530**	7,854	1,676	**9,530**
	Expected credit losses	**(391)**	(103)	(46)	(242)	**(391)**	(188)	(203)	**(391)**
TOTAL		**9,139**	**8,226**	**846**	**66**	**9,139**	**7,666**	**1,473**	**9,139**
Assets from contracts with customers	Gross	**3,039**	2,714	318	8	**3,039**	2,076	963	**3,039**
	Expected credit losses	**(19)**	(18)	-	-	**(19)**	(14)	(5)	**(19)**
TOTAL		**3,021**	**2,696**	**318**	**7**	**3,021**	**2,062**	**959**	**3,021**

In millions of euros		Dec. 31, 2019 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
Trade and other receivables, net	Gross	**9,395**	8,300	802	294	**9,395**	7,814	1,581	**9,395**
	Expected credit losses	**(318)**	(64)	(66)	(187)	**(318)**	(172)	(146)	**(318)**
TOTAL		**9,077**	**8,235**	**735**	**107**	**9,077**	**7,642**	**1,436**	**9,077**
Assets from contracts with customers	Gross	**2,896**	2,672	196	28	**2,896**	1,782	1,115	**2,896**
	Expected credit losses	**(15)**	(13)	(1)	(1)	**(15)**	(10)	(6)	**(15)**
TOTAL		**2,881**	**2,659**	**195**	**27**	**2,881**	**1,772**	**1,109**	**2,881**

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's.

Collective approach

In millions of euros		Dec. 31 , 2020 Collective approach	0 to 6 months	6 to 12 months	Beyond	Total past due assets at Dec. 31, 2020
Trade and other receivables, net	Gross	3,625	593	235	300	1,128
	Expected credit losses	(865)	(20)	(22)	(211)	(253)
TOTAL		**2,761**	**574**	**213**	**88**	**875**
Assets from contracts with customers	Gross	4,748	487	1	3	491
	Expected credit losses	(1)	-	-	-	-
TOTAL		**4,747**	**487**	**1**	**3**	**491**

In millions of euros		Dec. 31, 2019 Collective approach	0 to 6 months	6 to 12 months	Beyond	Total past due assets at Dec. 31, 2019
Trade and other receivables, net	Gross	4,019	875	113	293	1,281
	Expected credit losses	(754)	(24)	(29)	(159)	(213)
TOTAL		**3,265**	**851**	**83**	**134**	**1,068**
Assets from contracts with customers	Gross	4,953	486	4	2	492
	Expected credit losses	(2)	-	-	-	-
TOTAL		**4,951**	**485**	**4**	**2**	**492**

17.2.1.2 Commodity derivatives

In the case of commodity derivatives, counterparty risk arises from positive fair value. Counterparty risk is taken into account when calculating the fair value of these derivative instruments.

In millions of euros	Dec. 31, 2020 Investment Grade [1]	Dec. 31, 2020 Total	Dec. 31, 2019 Investment Grade [1]	Dec. 31, 2019 Total
Gross exposure [2]	6,633	9,031	9,849	12,466
Net exposure [3]	2,817	3,750	3,501	4,422
% of credit exposure to "Investment Grade" counterparties	75.1%		79.2%	

(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.

The COVID-19 crisis has not affected the Group's exposure due to the credit quality of its counterparties, which has been maintained to date.

17.2.2 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.

17.2.2.1 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 €1,424 million at December 31, 2020 (compared to €899 million at December 31, 2019).

Dec. 31, 2020							
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	4,144	415	67	**4,626**	2,582	2,045	**4,626**
Expected credit losses	(57)	(34)	(110)	**(201)**	(127)	(74)	**(201)**
TOTAL	**4,087**	**381**	**(43)**	**4,425**	**2,455**	**1,970**	**4,425**

Dec. 31, 2019							
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	4,257	564	49	**4,870**	2,772	2,098	**4,870**
Expected credit losses	(53)	(56)	(30)	**(139)**	(36)	(104)	**(139)**
TOTAL	**4,204**	**508**	**19**	**4,731**	**2,736**	**1,995**	**4,731**

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's.

17.2.2.2 Counterparty risk arising from investing activities and the use of derivative financial instruments

The Group is exposed to counterparty risk arising from 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, 2020				Dec. 31, 2019			
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	13,174	84.4%	8.7%	6.9%	10,686	85.7%	4.7%	9.6%

(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, 2020, Crédit Agricole Corporate and Investment Bank (CACIB) is the main Group counterparty and represents 20% of cash surpluses. This relates mainly to a depositary risk.

17.3 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.

The Group has set up a weekly committee 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. 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 onslaught of successive 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, 77% of the cash pooled at December 31, 2020 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 (U.S. Commercial Paper). As negotiable 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, 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.

As a result of the COVID-19 crisis, the Group implemented specific management measures to secure its liquidity. These measures are based on, (i) increased monitoring of centralized cash management and central liquidity, which is regularly communicated to General Management and the Board of Directors, and (ii) stress tests to assess the Group's liquidity.

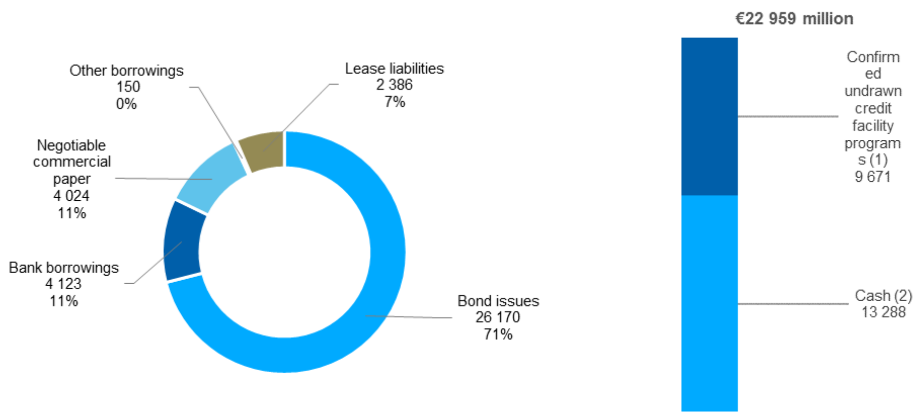
In this context, the Group has also taken several actions including:

- maintaining an outstanding amount of negotiable commercial papers in France and the United States of €4 billion on average over the year, benefiting from the measures offered by the ECB to combat the pandemic (PEPP [(1)] CSPP [(2)]) for €900 million in the first half of 2020;
- the drawdown on bilateral credit lines of €885 million in March for a period of one month to cover the decline in liquidity in the negotiable commercial papers market;
- a bond issue for a total amount of €2.5 billion on March 27, 2020;
- the signature on May 11, 2020 of a syndicated credit line for an amount of €2.5 billion with a 12-month term and renewable for two 6-month periods. At the end of 2020 and given the changes in the Group's liquidity, in particular following the sale of its stake in SUEZ, this line was cancelled entirely.

In addition to these actions, the Group decided to (i) propose the cancellation of the payment of the 2019 dividend – this resolution was approved by the Shareholders' Meeting on May 14, 2020, and (ii) revise the timetable of certain investment projects (adjustments, postponements, etc.).

The various actions carried out by the Group ensure a high and reinforced level of liquidity.

Diversifying sources of financing and liquidity
In millions of euros



(1) *Net amount of negotiable commercial paper.*
(2) *Cash corresponds to cash and cash equivalents, other financial assets deducted from net financial debt, net of bank overdrafts and current accounts, of which 78% was invested in the Eurozone.*

At December 31, 2020, all the entities of the Group 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.

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(1) Pandemic emergency purchase programme.
(2) Corporate sector purchase programme.

17.3.1 Undiscounted contractual payments relating to financial activities

Undiscounted contractual payments on outstanding borrowings and debt by maturity

In millions of euros	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Bond issues	1,446	2,623	2,546	1,183	2,015	16,356	**26,170**	26,015
Bank borrowings	986	537	371	265	371	1,594	**4,123**	5,292
Negotiable commercial paper	4,024	-	-	-	-	-	**4,024**	3,233
Lease liabilities	513	460	284	258	231	921	**2,386**	2,512
Other borrowings	34	38	15	13	7	43	**150**	261
Bank overdrafts and current accounts	301	-	-	-	-	-	**301**	247

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	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Undiscounted contractual interest flows on outstanding borrowings and debt	959	731	658	554	553	6,398	**9,853**	9,872

Undiscounted contractual payments on outstanding derivatives (excluding commodity instruments) by maturity

In millions of euros	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Derivatives (excluding commodity instruments)	(213)	(107)	55	19	31	532	**317**	(237)

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.

Group's undrawn credit facility programs

In millions of euros	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Confirmed undrawn credit facility programs	1,002	6,463	560	4,991	-	678	**13,695**	13,019

Of these undrawn programs, an amount of €4,024 million is allocated to covering commercial paper issues.

At December 31, 2020, no single counterparty represented more than 5% of the Group's confirmed undrawn credit lines.

17.3.2 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 statement of financial position 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	2021	2022	2023	2024	2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Derivative instruments carried in liabilities								
relating to portfolio management activities	*(744)*	*(509)*	*(181)*	*(76)*	*(40)*	*(149)*	*(1,699)*	*(4,428)*
relating to trading activities	*(8,483)*	-	-	-	-	-	*(8,483)*	*(9,238)*
Derivative instruments carried in assets								
relating to portfolio management activities	*802*	*671*	*204*	*101*	*29*	*166*	*1,975*	*3,363*
relating to trading activities	*7,059*	-	-	-	-	-	*7,059*	*8,954*
TOTAL	**(1,367)**	**162**	**23**	**25**	**(11)**	**18**	**(1,149)**	**(1,349)**

17.3.3 Commitments relating to commodity purchase and sale contracts entered into within 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 Others (GEM BU) and Latin America (expressed in TWh).

In TWh	2021	2022-2025	Beyond 5 years	Total at Dec. 31, 2020	Total at Dec. 31, 2019
Firm purchases	(309)	(586)	(934)	(1,829)	(2,498)
Firm sales	498	608	465	1,571	1,573

NOTE 18 EQUITY

18.1 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, 2019	**2,435,285,011**	**(22,153,694)**	**2,413,131,317**	**2,435**	**31,470**	**(303)**
Dividend paid in cash	-	-	-	-	-	-
Allocation of prior-year income	-	-	-	-	(178)	-
Purchase/disposal of treasury stock	-	-	-	-	-	47
Delivery of treasury stock (bonus)	-	3,689,060	3,689,060	-	-	-
Revaluation	-	-	-	-	-	-
AT DECEMBER 31, 2020	**2,435,285,011**	**(18,464,634)**	**2,416,820,377**	**2,435**	**31,291**	**(256)**

Changes in the number of outstanding shares in 2020 result solely from the disposal of 3.7 million treasury shares, as part of bonus share plans.

18.1.1 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 21 "Share-based payments" are covered by existing ENGIE SA shares.

18.1.2 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 May 17, 2020. 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, 2020, the Group held 18.5 million treasury shares. To date, all of 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.

18.2 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 €33,830 million at December 31, 2020, including €31,291 million in additional paid-in capital. Additional paid-in capital includes the allocation of ENGIE SA's net income for an amount of €178 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.

18.2.1 Issuance of deeply-subordinated perpetual notes

On November 19, 2020, ENGIE SA carried out an early refinancing of deeply-subordinated perpetual notes, resulting in:

- an issue of green deeply-subordinated perpetual notes for an amount of €850 million offering a coupon of 1.5% with an annual reimbursement option from November 2028, accounted for in equity for a net amount of €844 million;
- a partial early redemption of three tranches of deeply-subordinated perpetual notes for an amount of €850 million, broken down as follows :
  - A redemption of €50 million (4.750% coupon) on a residual nominal amount of €413 million. The first reimbursement option for this hybrid debt was planned for July 2021,
  - A redemption of green deeply-subordinated perpetual notes for €342 million (1.375% coupon) out of a nominal amount of €1 billion. The first reimbursement option for this hybrid debt was planned for April 2023,
  - A redemption of €458 million (3.875% coupon) on a residual nominal amount of €1 billion. The first reimbursement option for this hybrid debt was planned for June 2024.

In accordance with the provisions of IAS 32 – *Financial Instruments – Presentation*, and given their characteristics, these new instruments were accounted for in equity in the Group's consolidated financial statements.

At December 31, 2020 the nominal value of the deeply-subordinated notes amounted to €3,913 million.

In 2020, the Group paid €187 million to the owners of these notes, including €128 million relating to coupons and €59 million for early repayment compensation. This amount is accounted for as a deduction from equity in the Group's consolidated financial statements; the relating tax saving is accounted for in the income statement.

18.2.2 Distributable capacity of ENGIE SA

ENGIE SA's distributable capacity totaled €27,363 million at December 31, 2020 (compared with €31,290 million at December 31, 2019), including €31,291 million of additional paid-in capital.

18.2.3 Dividends

It was proposed, at the Shareholders' Meeting convened to approve the ENGIE Group financial statements for the year ended December 31, 2019, to pay a dividend of €0.80 per share, representing a total payout of €1,931 million based on the number of shares outstanding at December 31, 2019. It will be increased by 10% for all shares held for at least two years on December 31, 2019 and up to the 2019 dividend payment date. Based on the number of outstanding shares on December 31, 2019, this increase is valued at €17 million.

At the Shareholders' Meeting of May 14, 2020, the shareholders approved the Board's decision not to pay a dividend for the 2019 fiscal year in a spirit of responsibility and prudence in the exceptional context of the COVID-19 pandemic.

Proposed dividend in respect of 2020

At the Shareholders' Meeting convened to approve the ENGIE Group financial statements for the year ended December 31, 2020, the shareholders will be asked to approve a dividend of €0.53 per share, representing a total payout of €1,281 million based on the number of shares outstanding at December 31, 2020. It will be increased by 10% for all shares held for at least two years on December 31, 2020 and up to the 2020 dividend payment date. Based on the number of outstanding shares on December 31, 2020, this increase is valued at €10 million.

Subject to approval by the Shareholders' Meeting of May 20 2021, this dividend, net of the interim dividend paid will be detached on Monday May 24, 2021 and paid on Wednesday May 26, 2021. It is not recognized as a liability in the financial statements at December 31, 2020, since the financial statements at the end of 2020 were presented before the appropriation of earnings.

18.2.4 Other transactions

On February 5, 2020, Elengy acquired 27,5% of Total's shares in Fosmax LNG via its subsidiary Total Gaz Electricité Holding France (TGEHF). The acquisition of the shares excluding fees, amounting to €212 million, was financed mainly by an increase in Elengy's capital reserved for "Société d'Infrastructures Gazières (SIG)" in the amount of €185 million.

On July 2, 2020, ENGIE signed an agreement to sell a 49% stake in a 2.3 GW renewable energy portfolio in the United States to the American group Hannon Armstrong, a leader in investing in environmentally friendly solutions. This transaction resulted in the immediate sale of a 49% stake in 663 MW of wind projects in service, with the remaining projects (1.6 GW including 0.5 GW of solar projects), currently under construction, being transferred only upon commissioning. ENGIE will continue fully to consolidate, operate and manage these assets. This transaction resulted in a cash inflow of €406 million.

18.3 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, 2020 and December 31, 2019, which are recyclable to income in subsequent periods.

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Debt instruments	30	76
Net investment hedges (1)	(156)	(284)
Cash flow hedges (excl. commodity instruments) (1)	(1,214)	(958)
Commodity cash flow hedges (1)	76	(837)
Deferred taxes on the items above	358	505
Share of equity method entities accounted in recyclable items, net of tax (2)	(813)	(462)
TOTAL RECYCLABLE ITEMS BEFORE TRANSLATION ADJUSTMENTS	**(1,719)**	**(1,961)**
Translation adjustments (3)	(2,850)	(1,098)
TOTAL RECYCLABLE ITEMS	**(4,570)**	**(3,059)**

(1) See Note 17 "Risks arising from financial instruments".
(2) See Note 3 "Investments in equity method entities".
(3) The change in translation adjustments is mainly due to the strong depreciation of the Brazilian real (negative €1,038 million) and the change in the US dollar (negative €677 million).

18.4 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 18.1.2 "Treasury stock")*, issue new shares or deeply-subordinated notes, 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 net financial expense and taxes paid, and the denominator includes adjusted net financial debt. Net financial debt is mainly adjusted for nuclear provisions, provisions for pensions and deeply-subordinated notes.

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 19 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 and provisions for site restoration costs. 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 19.2)*;
- 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 19.2 and 19.3)*; 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	Dismantling of plant and equipment [(1)] and Site rehabilitation	Other contingencies	Total
AT DECEMBER 31, 2019	**7,481**	**7,611**	**7,566**	**2,458**	**25,115**
Additions	313	194	84	531	1,122
Utilizations	(412)	(107)	(86)	(626)	(1,232)
Reversals	(2)	-	(1)	(18)	(20)
Changes in scope of consolidation	6	-	(1)	5	10
Impact of unwinding discount adjustments	90	251	187	17	544
Translation adjustments	(31)	-	(23)	(24)	(78)
Other	1,497	-	116	-	1,613
AT DECEMBER 31, 2020	**8,941**	**7,948**	**7,841**	**2,343**	**27,073**
Non-current	8,810	7,849	7,816	400	**24,876**
Current	131	99	25	1,942	**2,197**

(1) Of which €6,207 million in provisions for dismantling nuclear facilities, managed by Synatom, compared to €6,060 million at December 31, 2019.

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 the interest income on plan assets.

The “Other” line mainly comprises actuarial gains and losses arising on post-employment benefit obligations in 2020, 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, 2020
Income/(loss) from operating activities	130
Other financial income and expenses	(544)
TOTAL	**(414)**

The different types of provisions and the calculation principles applied are described below.

19.1 Post-employment benefits and other long-term benefits

See Note 20 “Post-employment benefits and other long-term benefits”.

19.2 Obligations relating to nuclear power generation activities

In the context of its nuclear power generation activities, the Group assumes obligations relating to the management of the back-end nuclear fuel cycle and the dismantling of nuclear facilities.

19.2.1 Legal framework

The Belgian law of April 11, 2003 granted Group subsidiary Synatom responsibility for managing provisions set aside to cover the costs of dismantling nuclear power plants and managing spent nuclear fuel in those plants. 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.

To enable the Commission for Nuclear Provisions to carry out its work in accordance with the above-mentioned law, Synatom is required to submit a report every three years describing the core inputs used to measure these provisions. If any changes are observed from one triennial report to another that could materially impact the financial inputs used, i.e., the industrial scenario, estimated costs and timing, the Commission may revise its opinion, and the Group makes the necessary adjustments, if any, in the income statement.

Synatom submitted its triennial report to the Commission on September 12, 2019 and the Commission issued its opinion on December 12, 2019, which was taken into account in preparing the financial statements for the year ended December 31, 2019. The provisions recognized by the Group were determined taking into account the prevailing contractual and legal framework, which sets the operating life of the Tihange 1 reactor and the Doel 1 and 2 reactors at 50 years, and the other reactors at 40 years. These provisions have not changed significantly since that date, besides the impact of recurring factors such as the passage of time (unwinding) and utilizations of and additions to provisions for fuel spent during the year.

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 Group does not believe that it is aware of any developments that could materially impact the amount of the provisions with the exception of the ongoing studies conducted by ONDRAF to define a technical solution for the storage of category A, low- or medium- activity and short-lived waste.

The estimated provision amounts include margins for contingencies and other risks that may arise in connection with dismantling and radioactive spent fuel management procedures. The contingency margins relating to the disposal of waste are determined by ONDRAF and built into its fees. The Group also estimates appropriate margins for each cost category.

The Group considers that, to the best of its knowledge, the provisions approved by the Commission take into account all currently available information to manage the contingencies and other risks associated with processes such as dismantling nuclear facilities and managing radioactive spent fuel.

19.2.2 Provisions for the back-end of the nuclear fuel cycle

Accounting standards

Allocations to provisions for the back-end of the nuclear fuel cycle 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 nuclear fuel is removed from a reactor and temporarily stored on-site, it requires conditioning and potentially reprocessing to separate the most active radionuclides, before being consigned to long-term storage.

ONDRAF proposed on February 9, 2018 that geological storage be adopted as the national policy for managing high-level and/or long-lived radioactive waste. The proposal is subject to the approval of the Belgian government after obtaining the opinion of the Federal Agency for Nuclear Control (*Agence Fédérale de Contrôle Nucléaire* – AFCN).

In addition, ENGIE considers that the “mixed” scenario adopted by the Commission for Nuclear Provisions continues to apply, whereby the fuel containing the most active radionuclides is reprocessed, and the rest disposed of directly without reprocessing.

The provisions booked by the Group for nuclear fuel processing and storage cover all of the costs linked to the “mixed” scenario, including on-site storage, transportation, reprocessing, 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 purchasing containers;
- part of the radioactive spent fuel is transferred for reprocessing. The resulting plutonium and uranium is sold to a third party;
- 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 reprocessing residues and conditioned spent fuel are transferred to ONDRAF;

- the cost of burying fuel in deep geological repositories is estimated using the royalty rate established by ONDRAF based on a total disposal facility cost of €10.7 billion$_{2017}$. The estimated cost of the AFCN's preliminary recommendation as regards an additional well has also been included based on ONDRAF's recommendations.
- 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 is 3.25%. It takes into account (i) an analysis of trends in long-term benchmark rates and their historical and forecast averages, as well as (ii) the long life of the liabilities based on ONDRAF's scenario;
- an inflation rate assumption of 2.0% (actual rate of 1.25%).

The costs effectively incurred in the future may differ from the estimates in terms of their nature and timing of payment. In its opinion to the Commission for Nuclear Provisions, ONDRAF pointed out the uncertainty over some costs, which in principle are covered by the contingency margins, but for which the Commission set up a work and further analysis program as of 2020. The provisions may be subsequently adjusted in line with changes in the above-mentioned inputs and related cost estimates. Belgium's current legal framework does not permit partial reprocessing and has not yet confirmed the adoption of geological storage as the policy for managing medium and high level nuclear waste.

As regards the partial reprocessing scenario, following a resolution adopted by the House of Representatives in 1993, reprocessing contracts that had not already begun were suspended and then terminated in 1998. The scenario adopted is based on the assumption that the Belgian government will allow Synatom to reprocess spent fuel and that an agreement will be reached between Belgium and France designating Orano (formerly Areva) as responsible for these reprocessing operations. A scenario assuming the direct disposal of waste without reprocessing would lead to a decrease in the provision compared to the provision resulting from the "mixed" scenario currently used and approved by the Commission for Nuclear Provisions.

The Belgian government has not yet taken a decision as to whether the waste should be buried in a deep geological repository or stored over the long term. 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, on the grounds that Belgium had not adopted a national program for managing radioactive waste in compliance with various requirements set out in the directive on spent fuel and radioactive waste (Council Directive 2011/70/Euratom). Therefore, at this stage, there is only one national program for the safe storage of spent fuel pending reprocessing or long-term storage. The scenario adopted by the Commission for Nuclear Provisions 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.

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:

- a 10% increase in ONDRAF's fees above the royalty rate for the removal of high-level and/or long-lived waste would lead to an increase in provisions of approximately €175 million based on unchanged contingency margins;
- a five-year advance in ONDRAF's expenditure on temporary storage, conditioning and long-term storage for high-level and/or long-lived radioactive waste would lead to an increase in provisions of approximately €170 million. A five-year delay in the payment schedule for these various expenses would lead to a decrease of less than that amount;
- a change of 10 basis points in the discount rate used could lead to an adjustment of approximately €260 million in provisions for the back-end of the nuclear fuel cycle. A fall in discount rates would lead to an increase in outstanding provisions, while a rise in discount rates would reduce the provision amount.

These sensitivities are calculated on a purely financial basis and should therefore be interpreted with appropriate caution in view of the variety of other inputs – some of which may be interdependent – included in the evaluation.

19.2.3 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 decommissioning 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:

- 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;
- 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 royalty 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;
- for the various phases, margins for usual 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;
- a discount rate of 2.5% (including inflation of 2.0%) is applied to determine the present value (NPV) of the obligation. It is different from the rate used to calculate the provision for processing spent nuclear fuel due to the major differences in horizon of the two liabilities after taking into account ONDRAF's new scenario;
- the operating life is 50 years for Tihange 1 and Doel 1 and 2, and 40 years for the other facilities;
- 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 costs effectively incurred in the future may differ from the estimates in terms of their nature and timing of payment. In its opinion to the Commission for Nuclear Provisions, ONDRAF pointed out the uncertainty over some costs, which in principle are covered by the contingency margins, but for which the Commission set up a work and further analysis program in 2020. The provisions may be subsequently adjusted in line with changes in the above-mentioned inputs. However, these inputs and assumptions are based on information and estimates which the Group deems reasonable to date and which have been approved by the Commission for Nuclear Provisions.

The scenario adopted is based on a dismantling program and on timetables that have to be approved by the nuclear safety authorities.

Sensitivity

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 €62 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.

This sensitivity is calculated on a purely financial basis and should therefore be interpreted with appropriate caution in view of the variety of other inputs – some of which may be interdependent – included in the evaluation.

19.3 Dismantling of non-nuclear plant and equipment and site rehabilitation

19.3.1 Dismantling obligations arising on non-nuclear plant and equipment

Certain 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. This obligation is the result of prevailing environmental regulations in the countries concerned, contractual agreements, or an implicit Group commitment.

Based on estimates of proven and probable gas reserves through 2260 using current production levels, dismantling provisions for gas infrastructures in France have a present value near zero.

19.3.2 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 mine, which was previously fully consolidated and has been consolidated as a joint operation since September 2018.

At December 31, 2020, the Group's share (72%) of the provision covering the obligation to dismantle and rehabilitate the mine amounted to €277 million.

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 4.03%.

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.

19.4 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 20 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 income.

Net interest on the net defined benefit liability (asset) is presented in net financial income/(loss).

20.1 Description of the main pension plans

20.1.1 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 represents 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, 2020, the projected benefit obligation in respect of the special pension plan for EGI sector companies amounted to €4.3 billion.

The duration of the pension benefit obligation of the EGI pension plan is 24 years.

20.1.2 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 16% of total pension obligations and related liabilities at December 31, 2020. The average duration is 9 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 2020, the minimum rate of return stood at 1.75%.

An expense of €37 million was recognized in 2020 in respect of these defined contribution plans (€36 million in 2019).

20.1.3 Multi-employer plans

Employees of some Group companies are affiliated to multi-employer pension plans.

Under multi-employer plans, risks are pooled to the extent that the plan is funded by a single contribution rate determined for all affiliated companies and applicable to all employees.

Multi-employer plans are particularly common in the Netherlands, where employees are normally required to participate in a compulsory industry-wide plan. These plans cover a significant number of employers, thereby limiting the impact of potential default by an affiliated company. In the event of default, the vested rights are maintained in a special compartment and are not transferred to the other members. Refinancing plans may be set up to ensure the funds are balanced.

The ENGIE Group accounts for multi-employer plans as defined contribution plans.

The expense recognized in 2020 in respect of multi-employer pension plans was stable as compared to 2019 at €73 million.

20.1.4 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.

20.2 Description of other post-employment benefit obligations and other long-term benefits

20.2.1 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.

20.2.1.1 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 is measured as the difference between the energy sale price and the preferential rate granted.

The provision set aside in respect of reduced energy prices stood at €4.2 billion at December 31, 2020. The duration of the obligation is 25 years.

20.2.1.2 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.

20.2.1.3 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 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.

20.2.2 Other benefits granted to employees of the gas and electricity sector in Belgium

Electricity and gas sector companies also grant other 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.

20.2.3 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.

20.3 Defined benefit plans

20.3.1 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, 2019	**(7,481)**	**53**	**161**
Exchange rate differences	35	-	-
Changes in scope of consolidation and other	-	-	-
Actuarial gains and losses	(1,488)	(31)	(7)
Periodic pension cost	(438)	(3)	25
Asset ceiling	-	-	-
Contributions/benefits paid	431	17	9
AT December 31, 2020	**(8,941)**	**36**	**188**

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 €441 million in 2020 (€492 million in 2019). The components of this defined benefit cost in the period are set out in Note 20.3.3 “Components of the net periodic pension cost”.

The Eurozone represented 98% of the Group’s net obligation at December 31, 2020, 97% at December 31, 2019).

Cumulative actuarial gains and losses recognized in equity amounted to €6,037 million at December 31, 2020, compared to €-4,594 million at December 31, 2019.

Net actuarial differences arising in the period and presented on a separate line in the statement of comprehensive income represented a net actuarial loss of €1,519 million in 2020 and of €-1,149 million in 2019.

20.3.2 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, 2020				Dec. 31, 2019			
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		**(8,570)**	**(4,470)**	**(531)**	**(13,572)**	**(7,712)**	**(3,794)**	**(499)**	**(12,006)**
Service cost		(303)	(79)	(50)	(432)	(291)	(63)	(43)	(397)
Interest expense		(115)	(57)	(5)	(177)	(173)	(76)	(9)	(258)
Contributions paid		(16)	-	-	(16)	(16)	-	-	(16)
Amendments		(19)	4	(1)	(16)	(1)	-	-	(1)
Changes in scope of consolidation		-	-	-	-	172	(5)	(1)	166
Curtailments/settlements		125	1	1	127	75	-	1	76
Non-recurring items		-	-	-	-	-	-	-	-
Financial actuarial gains and losses		(789)	(678)	(31)	(1,498)	(887)	(698)	(5)	(1,590)
Demographic actuarial gains and losses		(56)	8	(6)	(55)	(120)	57	(14)	(76)
Benefits paid		405	104	57	566	373	108	39	521
Other (of which translation adjustments)		152	-	2	154	10	-	-	10
Projected benefit obligation at December 31	**A**	**(9,186)**	**(5,167)**	**(565)**	**(14,919)**	**(8,570)**	**(4,470)**	**(531)**	**(13,572)**
B - CHANGE IN FAIR VALUE OF PLAN ASSETS									
Fair value of plan assets at January 1		**6,169**	**-**	**-**	**6,169**	**5,767**	**-**	**-**	**5,767**
Interest income on plan assets		86	-	-	86	133	-	-	133
Financial actuarial gains and losses		(4)	-	-	(4)	497	-	-	497
Contributions received		206	-	-	206	197	-	-	197
Changes in scope of consolidation		-	-	-	-	(109)	-	-	(109)
Settlements		9	-	-	9	(28)	-	-	(28)
Benefits paid		(308)	-	-	(308)	(282)	-	-	(282)
Other (of which translation adjustments)		(124)	-	-	(124)	(7)	-	-	(7)
Fair value of plan assets at December 31	**B**	**6,034**	**-**	**-**	**6,034**	**6,169**	**-**	**-**	**6,169**
C - FUNDED STATUS	**A+B**	**(3,153)**	**(5,167)**	**(565)**	**(8,885)**	**(2,402)**	**(4,470)**	**(531)**	**(7,403)**
Asset ceiling		(21)	-	-	(21)	(25)	-	-	(25)
NET BENEFIT OBLIGATION		**(3,174)**	**(5,167)**	**(565)**	**(8,906)**	**(2,427)**	**(4,470)**	**(531)**	**(7,428)**
ACCRUED BENEFIT LIABILITY		**(3,210)**	**(5,137)**	**(595)**	**(8,941)**	**(2,480)**	**(4,470)**	**(531)**	**(7,481)**
PREPAID BENEFIT		**36**	**-**	**-**	**36**	**53**	**-**	**-**	**53**

(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.

20.3.3 Components of the net periodic pension cost

The net periodic cost recognized in respect of defined benefit obligations for the years ended December 31, 2020 and 2019 breaks down as follows:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Current service cost	432	397
Actuarial gains and losses (1)	37	19
Plan amendments	-	-
Gains or losses on pension plan curtailments, terminations and settlements	(120)	(48)
Non-recurring items	-	-
Total accounted for under current operating income including operating MtM and share in net income of equity method entities	**350**	**368**
Net interest expense	91	125
Total accounted for under net financial income/(loss)	**91**	**125**
TOTAL	**441**	**493**

(1) On the long-term benefit obligation.

20.3.4 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 are twofold: 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 at December 31 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	(7,671)	5,192	(21)	(2,500)
Overfunded plans	(606)	842	-	236
Unfunded plans	(6,641)	-	-	(6,641)
AT DECEMBER 31, 2020	**(14,918)**	**6,034**	**(21)**	**(8,905)**
Underfunded plans	(7,399)	5,616	(25)	(1,809)
Overfunded plans	(517)	553	-	36
Unfunded plans	(5,655)	-	-	(5,655)
AT DECEMBER 31, 2019	**(13,571)**	**6,169**	**(25)**	**(7,428)**

The allocation of plan assets by principal asset category can be analyzed as follows:

In %	Dec. 31, 2020	Dec. 31, 2019
Equity investments	26	27
Sovereign bond investments	23	26
Corporate bond investments	29	27
Money market securities	3	3
Real estate	2	2
Other assets	16	15
TOTAL	**100**	**100**

All plan assets were quoted on an active market at December 31, 2020.

The actual return on assets of EGI sector companies stood at a positive 1.4% in 2020.

In 2020, the actual return on plan assets of Belgian entities amounted to approximately 2.8% in Group insurance and a positive 0.8% 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	60	23	3	10	4	100
Sovereign bond investments	82	1	16	-	-	100
Corporate bond investments	74	20	1	4	2	100
Money market securities	96	-	3	1	-	100
Real estate	92	1	5	1	1	100
Other assets	46	23	3	4	24	100

20.3.5 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	
		2020	2019	2020	2019	2020	2019	2020	2019
Discount rate	Eurozone	0.6%	1.2%	0.6%	1.2%	0.6%	1.0%	0.6%	1.2%
	UK Zone	1.6%	1.7%	-	-	-	-	-	-
Inflation rate	Eurozone	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
	UK Zone	3.2%	3.4%	-	-	-	-	-	-

20.3.5.1 Discount and inflation rate

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 or decrease in the discount rate would result in a change of approximately 18% in the projected benefit obligation.

The inflation rates were determined for each monetary area. A 100-basis-point increase or decrease in the inflation rate (with an unchanged discount rate) would result in a change of approximately 17% in the projected benefit obligation.

20.3.5.2 Other assumptions

The increase in the rate of medical costs (including inflation) was estimated at 1%.

A 100-basis-point change in the assumed increase in medical costs would have the following impacts:

In millions of euros	100 basis point increase	100 basis point decrease
Impact on expenses	-	-
Impact on pension obligations	5	(5)

20.3.6 Estimated employer contributions payable in 2021 under defined benefit plans

The Group expects to pay around €214 million in contributions into its defined benefit plans in 2021, including €133 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.

20.4 Defined contribution plans

In 2020, the Group recorded a €248 million expense in respect of amounts paid into Group defined contribution plans (€121 million in 2019). These contributions are recorded under “Personnel costs” in the consolidated income statement.

NOTE 21 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, 2020	Dec. 31, 2019
Employee share issues (1)	(2)	(1)
Bonus/performance share plans (2)(3)	(45)	(48)
Other Group companies' plans	(3)	(2)
TOTAL	**(50)**	**(51)**

(1) Including Share Appreciation Rights set up within the scope of employee share issues in certain countries.
(2) Of which a reversal of €6 million in 2020 for failure to meet the performance conditions.
(3) Of which a reversal of €5 million in 2020 for failure to meet the condition of continuing employment within the Group (€2 million in 2019).

21.1 Performance shares

21.1.1 New awards in 2020

ENGIE Performance Share plan of December 17, 2020

On December 17, 2020, the Board of Directors approved the award of 4.9 million performance shares to members of the Group's executive and senior management, breaking down into three tranches:

- performance shares vesting on March 14, 2024, subject to a one-year lock-up period;
- performance shares vesting on March 14, 2024, without a lock-up period; and
- performance shares vesting on March 14, 2025, 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 three different conditions, excluding the first 150 performance shares granted to beneficiaries (excluding top management), which are exempt from performance conditions. The performance conditions, each of which accounts for one-third of the total grant, are as follows:

- a market performance condition relating to ENGIE’s Total Shareholder Return compared to that of a reference panel of nine companies, as assessed between November 2020 and January 2024;
- two internal performance conditions relating to net recurring income Group share and to Return On Capital Employed (ROCE) in 2022 and 2023.

Under this plan, performance shares without conditions were also awarded to the winners of the Innovation and Incubation programs (21,150 shares awarded).

21.1.2 Fair value of bonus share plans with or without performance conditions

The following assumptions were used to calculate the fair value of the new plans awarded by ENGIE in 2020:

Award date	Vesting date	End of the lock-up period	Price at the award date	Expected dividend	Financing cost for the employee	Non-transferability cost	Market-related performance condition	Fair value per unit
December 17, 2020	March 14, 2024	March 14, 2025	12.7	0,75	3.9%	0,36	yes	9,44
December 17, 2020	March 14, 2024	March 14, 2024	12.7	0,75	3.9%	0,36	yes	9,87
December 17, 2020	March 14, 2024	March 14, 2024	12.7	0,75	3.9%	0,47	no	10,67
December 17, 2020	March 14, 2025	March 14, 2025	12.7	0,75	3.9%	0,36	yes	9,16
Weighted average fair value of the December 17, 2020 plan								9,93

21.1.3 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.

The Group decided to adjust the effect of the COVID-19 crisis on the achievement of the internal performance conditions for the performance share plans awarded in December 2017 and December 2018 including 2020 as the year of reference. After applying the adjusted achievement rates, the Group recognized income of €6 million.

NOTE 22 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 23 “Executive compensation”.

Transactions with joint ventures and associates are described in Note 3 “Investments in equity method entities”.

Only material transactions are described below.

22.1 Relations with the French State and with entities owned or partly owned by the French State

22.1.1 Relations with the French State

The French State’s interest in the Group at December 31, 2020 was unchanged from the previous year at 23.64%. This entitles it to three seats of the 13 seats on the Board of Directors (one director representing the State appointed by decree, and directors appointed by the Shareholders’ Meeting at the proposal of the State).

The French State holds 33.19% of the theoretical voting rights (33.39% of exercisable voting rights) compared with 33.67% at end-2019.

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 confers the right to oppose ENGIE’s decision if it considers them contrary to the interest of France.

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.

22.1.2 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 (previously ERDF SA), a subsidiary of EDF SA, and GRDF SA, a subsidiary of ENGIE SA, were created on January 1, 2007 and January 1, 2008, respectively, and act in accordance with the agreement previously signed by the two incumbent operators.

22.2 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 20 "Post-employment benefits and other long-term benefits".

NOTE 23 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 ten members at December 31, 2020 (14 members at December 31, 2019).

Their compensation breaks down as follows:

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Short-term benefits	29	21
Post-employment benefits	-	10
Share-based payments	2	5
Termination benefits	7	-
TOTAL	**38**	**36**

Pursuant to the European Directive of April 16, 2014, French ordinance no. 2019-697 relating to supplementary pensions, published on July 4, 2019, terminated the existing L137-11 pension plan (referred to as “Article 39”) and prohibited the accrual of further rights and the entry of any new members as of that date.

Following the closure of the plan and the freezing of the random rights in 2019, in 2020 the Group transformed the random rights of beneficiaries, including the members of the Group’s Executive Committee, under a defined contribution plan referred to as “Article 82”.

NOTE 24 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 withdrawn 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 15 "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.

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-detemined 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 as a function of the tax credits allocated to the tax partner recognized in profit or loss.

24.1 Composition of change in working capital requirements

In millions of euros	Change in working capital requirements at Dec. 31, 2020	Change in working capital requirements at Dec. 31, 2019
Inventories	(492)	465
Trade and other receivables, net	107	802
Trade and other payables, net	(586)	(1,107)
Tax and employee-related receivables/payables	(58)	(36)
Margin calls and derivative instruments hedging commodities relating to trading activities	(109)	(981)
Other	539	(253)
TOTAL	**(600)**	**(1,110)**

24.2 Inventories

In millions of euros	Dec. 31, 2020	Dec. 31, 2019
Inventories of natural gas, net	1,146	1,104
Inventories of uranium [(1)]	530	538
CO_2 emissions allowances, green certificates and energy saving certificates, net	1,070	682
Inventories of commodities other than gas and other inventories, net	1,395	1,294
TOTAL	**4,140**	**3,617**

(1) Financial hedging instruments are backed by these uranium inventories and represented an amount of €18 million at December 31, 2020

24.3 Other assets and other liabilities

In millions of euros	Dec. 31, 2020				Dec. 31, 2019			
	Assets		Liabilities		Assets		Liabilities	
	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Other assets and liabilities	396	8,990	(2,004)	(12,545)	384	10,216	(1,222)	(13,101)
Tax receivables/payables	*-*	*6,274*	*-*	*(6,960)*	*-*	*6,986*	*-*	*(7,750)*
Employee receivables/payables	*222*	*51*	*(6)*	*(2,667)*	*214*	*39*	*(6)*	*(2,594)*
Dividend receivables/payables	*-*	*17*	*-*	*(76)*	*-*	*21*	*-*	*(104)*
Other	*174*	*2,649*	*(1,998)*	*(2,841)*	*171*	*3,170*	*(1,215)*	*(2,653)*

At December 31, 2020, other non-current assets also included a receivable towards EDF Belgium in respect of nuclear provisions amounting to €94 million (€92 million at December 31, 2019).

Other liabilities include €1,123 million in investments made by tax partners as part of the financing of renewable projects in the United States by tax equity (€228 million at December 31,2019).

NOTE 25 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.

25.1 France excluding Infrastructures

25.1.1 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 for each infringement.

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 for a period of one year as of notification of the judgment by EDF.

On December 22, 2020, EDF appealed the enforcement judge’s decision before the Versailles Court of Appeal.

25.2 France Infrastructures

25.2.1 Commissioning

Regarding the customer management services carried out on behalf of the grid manager in the gas sector, on June 30, 2020, two memorandums of understanding were signed by GRDF with Total Direct Energie and ENI respectively with a view to ending all ongoing disputes between GRDF, Total Direct Energie and ENI. The financial impact of these memorandums of understanding was fully taken into account in the financial statements for the six months ended June 30, 2020.

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 with the purpose of obtaining 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. The proceedings against ENEDIS are still underway.

25.2.2 Investigation into the regulation mechanism for natural gas storage in France

On February 29, 2020, the European Commission announced that it had launched an in-depth investigation into the regulation mechanism for the storage of natural gas 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 for the purposes of the Commission's investigation aimed at reaching a final decision. The initiation of these proceedings provides no guarantee as to the outcome of the investigation.

25.3 Rest of Europe

25.3.1 Resumption and extension of operations at the nuclear power plants

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 and Tihange 1 reactors. The Brussels Court of Appeal dismissed Greenpeace's claims in a decision dated June 12, 2018. Greenpeace appealed this decision before the Court of Cassation. This appeal was rejected by a ruling of the Court of Cassation dated January 9, 2020, such that the decision by the Brussels Court of Appeal dated June 12, 2018 is now final. As for the action brought before the Constitutional Court, on June 22, 2017 the 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 assessments, including a cross-border public consultation process, by December 31, 2022 at the latest. The appeal before the *Conseil d'État* is still ongoing.

In addition, some local authorities and various organizations have challenged the authorization to restart operations at the Tihange 2 reactor. On November 9, 2018, the *Conseil d'État* rejected the action brought by some local German authorities seeking the annulment of this decision. Civil proceedings are still ongoing before the Brussels Court of First Instance. On September 3, 2020, the Court ruled that the case was admissible, but unfounded.

25.3.2 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 refuse 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.

25.3.3 Claim by the Dutch tax authorities related to power plant impairment losses

The Dutch tax authorities have disallowed the tax deduction of asset impairment losses reported by ENGIE Energie Nederland NV on its 2010-2013 tax returns. The authorities challenged both the period of coverage of the impairment losses and the amount. Accordingly, they added back the full amount of the accumulated asset impairment losses over the abovementioned period, i.e., an amount of €1.9 billion. ENGIE has contested the tax authorities position as regards both the period and the amount and filed an administrative appeal in November 2018, which was rejected in February 2019. ENGIE is considering whether to launch legal proceedings.

25.3.4 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 S.A. was excessive. ENGIE and Electrabel S.A. are challenging this adjustment. Belgium and France have begun conciliation proceedings to settle the dispute.

25.3.5 Spain - Punica

In the Punica case (investigation into the awarding of contracts), 12 Cofely España employees, as well as the company itself, were placed under investigation by the examining judge in charge of the case. The criminal proceedings are still ongoing and will probably continue through 2021.

25.3.6 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 began on December 11, 2018 and will continue through 2021.

25.3.7 Italy - Tax dispute relating to excise duties and ENGIE Italia VAT (formerly GDF SUEZ Energie)

In 2017, the Italian tax authorities challenged the excise duty waiver for gas transfers carried out by ENGIE Italia SpA (ENGIE Italia) for industrial customers in Italy on the grounds that it did not have a certificate for these customers. The authorities plan to issue a tax reassessment for a total amount of €126 million (excise duties, VAT, late payment penalties and interest). ENGIE Italia has challenged the legality of this procedure both in light of Italian and European law and in any event deems the sanction to be disproportionate compared to a formal requirement.

In 2018, ENGIE Italia launched an appeal with the Perugia Court of First Instance requesting the cancellation of the tax reassessment notice.

In October 2018, the Court of First Instance dismissed the cancellation request, simply applying an outdated ministerial decree and ignoring ENGIE Italia's legal arguments.

ENGIE Italia appealed the ruling in November 2018 and the Court of Appeal ruled in its favor in November 2019 on the grounds that the documents requested by the Italian tax authorities were not legal and that the authorities needed to take into account the factual situation of the taxpayer to determine its requirement to pay excise duties. In 2020, the tax authorities referred the case to the Court of Cassation.

25.3.8 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 S.A. 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 Energy Services International SA. On November 17, 2020, the Authority appealed the Lazio RAC's decision before Italy's highest administrative court.

25.4 Latin America

25.4.1 Concessions in Buenos Aires and Santa Fe

In 2003, ENGIE and its joint shareholders, water distribution concession operators in Buenos Aires and Santa Fe, initiated two arbitration proceedings against the Argentinean State before the International Center for Settlement of Investment Disputes (ICSID). The purpose of these proceedings was to obtain compensation for the loss in value of investments made since the start of the concession, in accordance with bilateral investment protection treaties.

As a reminder, prior to the stock market listing of SUEZ Environnement Company, ENGIE and SUEZ (formerly SUEZ Environnement) entered into an agreement providing for the economic transfer to SUEZ of the rights and obligations relating to the ownership interests held by ENGIE in Aguas Argentinas and Aguas Provinciales de Santa Fe, including the rights and obligations resulting from the arbitration proceedings.

On April 9, 2015, the ICSID ordered the Argentinean State to pay USD 405 million in respect of the termination of the Buenos Aires water distribution and treatment concession contracts (including USD 367 million to ENGIE and its subsidiaries), and on December 4, 2015, to pay USD 225 million in respect of the termination of the Santa Fe concession contracts. The Argentinean State sought the annulment of these awards. By decision dated May 5, 2017, the claim for the annulment of the Buenos Aires award was rejected. The claim to annul the award in the Santa Fe case was rejected by a decision dated December 14, 2018. Consequently, the two ICSID awards, which are a step in the settlement of the dispute, are now final.

The Argentinean government and the various shareholders of Aguas Argentinas entered into and implemented a settlement agreement in accordance with the arbitral award of April 9, 2015, handed down in respect of the water distribution and treatment concession contracts in Buenos Aires. In accordance with the above-mentioned agreement concerning the economic transfer to SUEZ of ENGIE's rights and obligations, SUEZ and its subsidiaries received €224.1 million in cash. Furthermore, the December 14, 2018 ruling pertaining to the water distribution and wastewater treatment concessions granted to Aguas Provinciales de Santa Fe has yet to be applied.

25.4.2 Planned construction of an LNG terminal in Uruguay

GNLS SA, a joint subsidiary of Marubeni and ENGIE, was selected in 2013 to build an offshore LNG terminal in Uruguay. On November 20, 2013, GNLS contracted out the design and construction of the terminal to Construtora OAS SA. Following a number of problems and defects, GNLS terminated the contract in March 2015 and made use of its guarantees. OAS challenged the termination of the contract but did not take action against GNLS. OAS went bankrupt in Uruguay on April 8, 2015. In September 2015, GNLS and the authorities agreed to cancel the planned construction.

On May 24, 2017, OAS and GNLS appeared before the Uruguayan courts in a conciliation process at the request of OAS. The conciliation process was unsuccessful. OAS then threatened to call GNLS before the Uruguayan courts to claim damages.

Since GNLS had incurred significant losses as a result of the termination of the contract, it filed a request for arbitration on August 22, 2017 in accordance with the terms of the contract providing for dispute resolution in Madrid by the ICC International Court of Arbitration, claiming a principal amount of USD 373 million. OAS responded by summonsing GNLS before the Montevideo Commercial Court, claiming USD 311 million in damages. ENGIE was officially named as a party to the proceedings on December 5, 2018. Both proceedings are still pending.

25.4.3 Claim against sales tax adjustments in Brazil

On December 14, 2018, the Brazilian tax authorities sent ENGIE Brasil Energia S.A. tax assessment 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 492 million Brazilian reals, including 229 million Brazilian reals in taxes to which are added fines and interest.

ENGIE Brasil Energia disputes these notices of tax assessment and introduced tax claims in 2019, which the tax authorities have rejected, however. A final claim at administrative level (prior to possible appeals before tax courts at judicial level) was filed by ENGIE Brasil Energia in January 2020.

25.4.4 Mexico – Renewable energy

In the past few months, the Mexican government and public authorities have taken positions 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. In most cases, including in proceedings initiated by ENGIE subsidiaries, the competent courts ordered the suspension of the disputed measures pending a decision on the merits.

25.5 Other

25.5.1 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 to the French tax authorities appealing the decision before the Versailles Court of Appeal in May 2019. The submissions have been exchanged and the parties are awaiting a date for the hearing.

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 will be repaid to the assignee banks. The case has been referred to the *Conseil d'État* by the two parties. Pursuant to an application for a priority preliminary ruling on the issue of constitutionality, on October 23, 2020, the *Conseil d'État* decided to seek a preliminary ruling from the Court of Justice of the European Union to ascertain whether Directive 90/435/EC of 1990 precludes the withholding of the *précompte* upon the redistribution by a parent company of dividends received from subsidiaries established in the European Union.

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 (CJEU) 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.

25.5.2 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 do 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 September 15, 2020, the hearing was held in the presence of the parties and the Court’s decision is currently pending.

25.5.3 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 a proceeding 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 appeal automatically suspends the execution of all of the penalties ordered by the UOKiK.

25.5.4 Sale of 29.9% of the capital of SUEZ to Veolia

In the context of the sale by ENGIE of 29.9% of the capital of SUEZ to Veolia, on October 6, 2020, ENGIE was summonsed to various proceedings, both in summary hearings or hearings on the merits, and both in labor law and commercial law matters. The main proceedings involved Veolia and SUEZ and were initiated by SUEZ, acting alone or jointly with its staff representation bodies. ENGIE has acted within its rights in all circumstances, has not violated any of its obligations and there is no irregularity in the form or substance of the sale to Veolia, which is now final, that is likely to affect the validity thereof.

NOTE 26 SUBSEQUENT EVENTS

No significant event occurred after the closing of the financial statements at December 31, 2020.

NOTE 27 FEES PAID TO THE STATUTORY AUDITORS AND TO MEMBERS OF THEIR NETWORKS

Pursuant to Article 222-8 of the General Regulations of the French Financial Markets Authority (AMF), 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.

The Shareholders' Meeting of ENGIE SA 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	**5.6**	**7.1**	**12.7**	**6.0**	**8.9**	**14.9**	**27.6**
ENGIE SA	2.4	-	2.4	2.6	-	2.6	5.0
Controlled entities	3.2	7.1	10.3	3.3	8.9	12.2	22.6
Non-audit services	**0.7**	**1.6**	**2.3**	**1.3**	**1.2**	**2.5**	**4.8**
ENGIE SA	**0.6**	**-**	**0.6**	**1.1**	**0.0**	**1.1**	**1.7**
Of which services related to legal and regulatory requirements	*0.3*	*-*	*0.3*	*0.3*	*-*	*0.3*	*0.6*
Of which other audit services	*0.3*	*-*	*0.3*	*0.7*	*-*	*0.7*	*0.9*
Of which reviews of internal control	*-*	*-*	*-*	*0.1*	*-*	*0.1*	*0.1*
Of which due diligence services	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Of which tax services	*-*	*-*	*-*	*-*	*0.0*	0.0	0.0
Controlled entities	**0.2**	**1.6**	**1.7**	**0.3**	**1.2**	**1.4**	**3.1**
Of which services related to legal and regulatory requirements	*-*	*0.4*	*0.4*	*0.2*	*0.2*	*0.4*	*0.8*
Of which other audit services	*0.1*	*0.2*	*0.3*	*0.1*	*0.3*	*0.4*	*0.7*
Of which reviews of internal control	*-*	*0.1*	*0.1*	*-*	*-*	*-*	*0.1*
Of which due diligence services	*0.1*	*0.2*	*0.3*	*0.0*	*-*	*0.0*	*0.4*
Of which tax services	*-*	*0.7*	*0.7*	*-*	*0.6*	*0.6*	*1.3*
Total	**6.4**	**8.7**	**15.0**	**7.3**	**10.1**	**17.3**	**32.4**

NOTE 28 INFORMATION REGARDING LUXEMBOURG AND DUTCH COMPANIES EXEMPTED FROM THE REQUIREMENTS TO PUBLISH ANNUAL FINANCIAL STATEMENTS

Some companies in the Rest of Europe and Others reportable segments 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, Epon Eemscentrale III BV, Epon Eemscentrale IV BV, Epon Eemscentrale V BV, Epon Eemscentrale VI BV, Epon Eemscentrale VII BV, Epon Eemscentrale VIII BV, Epon International BV, Epon Power Engineering BV, IPM Energy Services BV, Electrabel Invest Luxembourg, ENGIE Corp Luxembourg SARL, ENGIE Treasury Management SARL and ENGIE Invest International SA.

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