

Orano and its industrial partners launch a pilot project for the recycling of electric vehicle batteries

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The Orano Group is joining forces with recognized partners in the field – Paprec, MTB Manufacturing, Saft and CEA – to test an innovative process for recycling the metals contained in electric vehicle batteries.

Known as RECYVABAT (Recycling and Recovery of Batteries), the project is aligned with the concept of the circular economy, giving a second life to recoverable battery materials. The challenge is a significant one: by 2030, the number of electric vehicles on the road worldwide is expected to increase from the current 10 million to 100 million.

Working in a consortium, Orano and its partners have developed a process which separately purifies and recovers the metals contained in the batteries of electric vehicles (lithium, cobalt, nickel, etc.) so that they can be recycled and made into new battery components.

By pooling their expertise, the partners have the skills required to cover the whole value chain: collection and dismantling of battery packs by Paprec; preparation of materials using equipment supplied by MTB; production of new components by Saft using materials recycled by Orano; and the contribution of CEA-Liten to research activities on the entire life cycle.

Two industrial pilots will be built in the new facilities of the CIME (Center for Innovation in Extractive Metallurgy) on the Orano site in Bessines-sur-Gartempe in the Limousin region in order to conduct technical trials and tests on the process.

Recycling of batteries is an important way of protecting the environment as it limits the impact on natural resources. It also boosts French and European autonomy in the procurement of strategic materials.

The RECYVABAT project meets the criteria of the economic stimulus plan initiated by the French government and the roadmap of projects supported by the Nouvelle-Aquitaine Region. The consortium has been awarded subsidies of €6.1m by France Relance and received €334,000 from the Region.

About Orano

As a recognized international operator in the field of nuclear materials, Orano delivers solutions to address present and future global energy and health challenges.

Its expertise and mastery of cutting-edge technologies enable Orano to offer its customers high value-added products and services throughout the entire fuel cycle.

Every day, the Orano group's 16,500 employees draw on their skills, unwavering dedication to safety and constant quest for innovation, with the commitment to develop know-how in the transformation and control of nuclear materials, for the climate and for a healthy and resource- efficient world, now and tomorrow.

Orano, giving nuclear energy its full value.

Head office:
125 Avenue de Paris,
F-92320 Châtillon
Phone: +33 (0) 1 34 96 00 00
Fax: +33 (0) 1 34 96 00 01

Press Office
+33 (0)1 34 96 12 15
press@orano.group

Investor relations
Marc Quesnoy
investors@orano.group

About the partners



The group was founded and has been managed since its creation by Jean-Luc Petithuguenin. French leader in recycling, Paprec is now ranked the third French leading company in waste treatment (methanation, composting and management of non-hazardous waste storage facilities). In 25 years, it has expanded from 45 to 12,500 employees at more than 280 sites in France and Switzerland. Its turnover for 2021 will reach 2 billion euros.

The Paprec Group has been known and recognized since its creation for its commitment to diversity, secularism and the fight against all forms of discrimination within the company. Jean-Luc Petithuguenin has also been chosen twice for the Entrepreneur of the Year award, by Ernst and Young and by BFM Business. The editorial staff of *Urine Nouvelle* [a weekly French business magazine] named him Manufacturer of the Year in 2020.



MTB Group is the only player in the world with the dual competence of recycling operator and manufacturer of recycling solutions. For 40 years, more than 40,000 tons of waste have been processed each year at the company's historic recycling site. A commitment to Zero Waste and an ambitious premium

positioning to provide raw materials with incredibly low environmental impact differentiate MTB Recycling.

MTB Manufacturing designs processes and manufactures equipment for the recycling of industrial waste (cables, WEEE, shredder residues, tires, batteries, etc.). An innovative player that invests in its production facilities and R&D (8% of turnover) for the future of generations to come and participates in numerous eco-design projects in order to develop customized solutions for technical and technological waste.

MTB Group, France - 180 employees.

MTB, More Than Business



Saft specializes in advanced technology battery solutions for industry, from the design and development to the production, customization and service provision. For more than 100 years, Saft's longer-lasting

batteries and systems have provided critical safety applications, back-up power and propulsion for our customers. Our innovative, safe and reliable technology delivers high performance on land, at sea, in the air and in space. Saft is powering industry and smarter cities, while providing critical back-up functionality in remote and harsh environments from the Arctic Circle to the Sahara Desert. Saft is a wholly owned subsidiary of TotalEnergies, a broad energy group that produces and markets fuels, natural gas and electricity.



The CEA is a key player in research, development and innovation in four main areas: energy transition, digital transition, technology for the medicine of the future and defense and security. The CEA makes expertise and innovative technology available to the public authorities and the industry for the roll-out of low-carbon energy systems. Employing an integrated approach to energy systems, the CEA carries out research on all sources of low-carbon energy

generation (nuclear power and renewable energy) and on how they interact within the supply system (storage, management and conversion), as well as on the issue of resources (waste management and recycling) intensively circular economy oriented. The CEA also conducts building and renovation programs at its nuclear facilities, together with dismantling and remediation operations.