

PRESS RELEASE

Paris, October 20, 2022

TotalEnergies and Valeo partner to innovate battery cooling in electric vehicles and reduce their carbon footprint

TotalEnergies and Valeo announce that they have signed an agreement to develop an innovative way of cooling electric vehicle batteries using a new, very high-performance dielectric¹ fluid. Not only would this innovation improve the way electric vehicles are used, but it would also reduce their carbon footprint.

With current technology, fluids cannot be used to cool the battery from within. But TotalEnergies has developed a new, innovative dielectric coolant that can be in direct contact with battery cells. Valeo will contribute its expertise in the related thermal systems to design and build the best solution to integrate the coolant within the electric vehicle battery pack, thereby optimizing performance by conditioning it at the right temperature.

Research conducted under the agreement will enable Valeo to reduce the weight of the thermal systems used to cool vehicle batteries – greatly improving the overall weight, travel range and carbon footprint of electric vehicles – and improve safety in response to battery fire risk.

To address these needs and respond to other challenges such as comfort and electric powertrain efficiency, Valeo has developed comprehensive, smart, low-carbon thermal management systems adapted to charging intensity and speed. And the collaborative research program with TotalEnergies will enable it to optimize them even further.

“The dielectric fluid developed by TotalEnergies rounds out our TotalEnergies QUARTZ EV Fluid range aimed at electric mobility. It is a unique and innovative solution that aims to contribute to the decarbonization of the electric mobility sector – one of the company's strategic priorities. What's more, the technological advantage our product offers in terms of safety, one of our core values, makes it even more unique” commented Philippe Charleux, Senior Vice President, Lubricants & Specialties at TotalEnergies. *“We are very pleased to be partnering with Valeo, with whom we share the same ambitions of accelerating the development of sustainable mobility solutions and achieving carbon neutrality.”*

Francisco Moreno, President of Valeo's Powertrain Systems Business Group, commented: *“Helping to reduce the impact of mobility is central to Valeo's strategy. Technologies that contribute to reducing CO₂ emissions now account for 60% of Group sales, and Valeo plans to continue expanding its portfolio of solutions that promote low-carbon mobility. This research partnership with TotalEnergies is an opportunity to create an innovative solution that will further accelerate consumer take-up of electric vehicles.”*

¹ Dielectric materials do not conduct electricity and therefore pose no safety risks.

As well as improving battery thermal management, the program is an opportunity to optimize electric powertrains in all areas where combining dielectric fluid with thermal systems can be beneficial.

About TotalEnergies

TotalEnergies is a global multi-energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity. Its 100,000+ employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.



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About Valeo

As a technology company and partner to all automakers and new mobility players, Valeo is innovating to make mobility cleaner, safer and smarter. Valeo enjoys technological and industrial leadership in electrification, driving assistance systems, reinvention of the interior experience and lighting. These four areas are vital to the transformation of mobility and will drive the Group's growth in the coming years. Valeo is listed on the Paris Stock Exchange. Valeo in figures: In 2021, the Group generated sales of 17.3 billion euros and invested 12% of sales in R&D. At December 31, 2021, Valeo had 184 plants, 21 research centers, 43 development centers and 16 distribution platforms, and employed 103,300 people in 31 countries worldwide.

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