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CATL Unveils Quick-Charging PHEV Battery

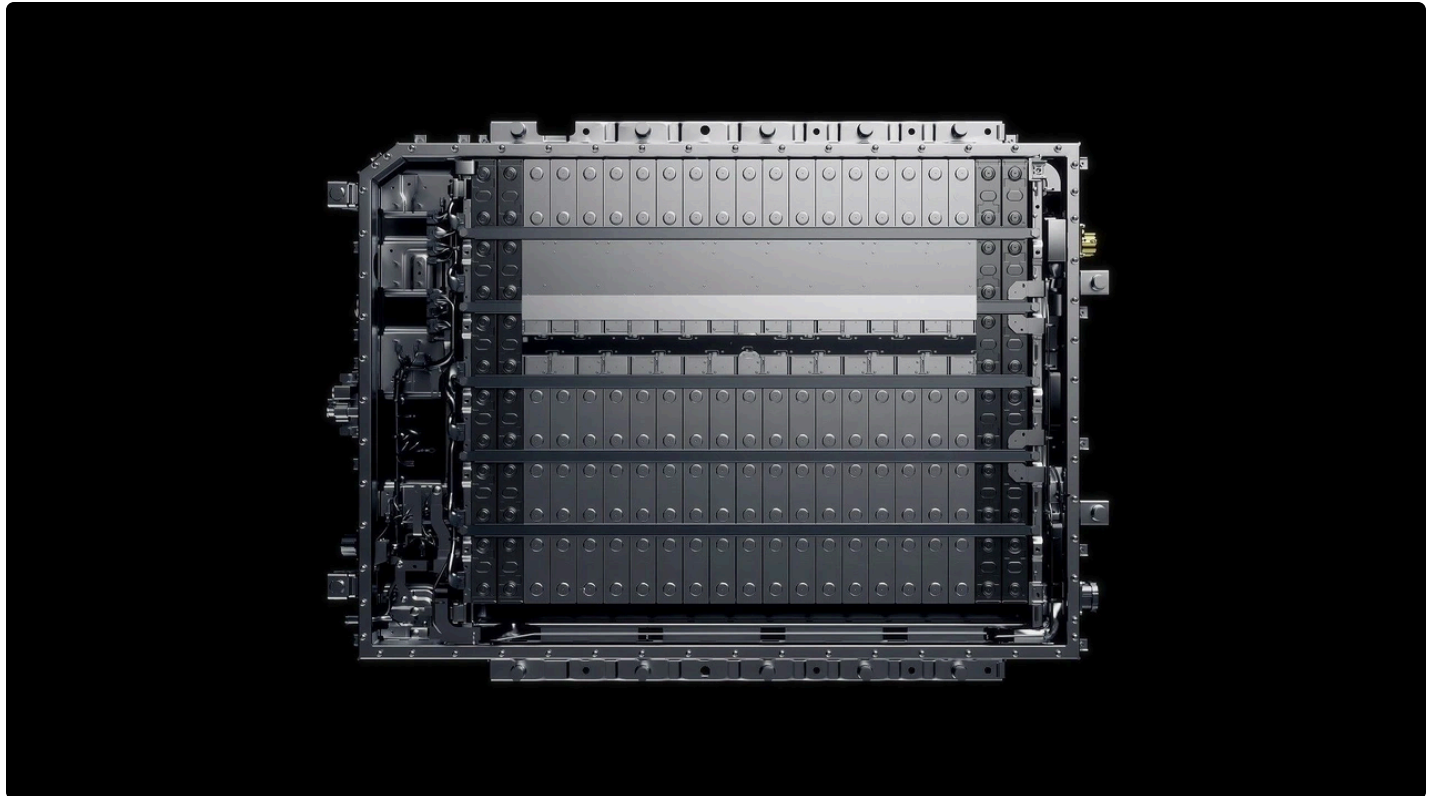
The Chinese battery specialist promises a 249-mile range from future plug-in hybrid-electric models.



Greg Kable, Contributor

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Energy density, rapid charging among Freevoy Super Hybrid Battery's advantages.

Contemporary Amprex Technology Ltd. (CATL) reveals its Freevoy Super Hybrid Battery developed specifically for plug-in hybrid vehicles, claiming a significant increase in electric range, charging capability and cold-weather efficiency compared to its current unit.

Set to be incorporated in the propulsion systems of PHEV models from various manufacturers in 2025, it is the third major new automotive battery CATL has introduced in recent times, joining the Qilin and Shenxing batteries – both of which were developed for all-electric vehicles.

The Freevoy battery uses a sodium-ion chemical compound to balance energy density and provide a claimed electric range of up to 249 miles (400 km), albeit without CATL providing details to the size or corresponding energy capacity of the unit used in its specific example.

The Chinese battery specialist says the battery has been designed to meet the growing demand for PHEV models that rely more on the electric motor than the internal-combustion engine for propulsion and charging.

One of the key breakthroughs in the Freevoy battery is its ability to charge quickly. With a 4C charging rate, the battery can achieve 174 miles (280 km) of range after just 10 minutes of charging, says CATL – again, without mention of the battery’s capacity or a maximum charging rate.

This development comes in response to what CATL sees as a critical gap in the market: Many existing PHEVs offer relatively small battery capacities, forcing frequent charges and thereby reducing the overall lifespan of the battery when the vehicle is run in electric mode.

“Many hybrid drivers want to use more electricity and less fuel, but current (PHEV) models often prioritize the (internal-combustion engine),” says Gao Huan, chief technical officer of CATL’s E-car business.

“Our new battery addresses this by extending electric range and providing faster charging, while also performing well in extreme temperatures.”

underperform due to temperature-induced efficiency losses.

As well as PHEVs, the new CATL battery also could be a fit for range-extender vehicles, commonly referred to as EREVs or REVs. Like PHEVs, they use an ICE in combination with an electric motor and battery, with the former acting exclusively as a generator to produce electricity without any direct drive to the wheels. The Freevoy battery will be launched in models from Li Auto and Changan's Avatr, Deepal and Nevo brands, with other manufacturers, including Geely, Chery, GAC and Dongfeng brand Voyah to follow in 2025, according to CATL.

About the Author



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Greg Kable has reported about the global automotive industry for over 35 years, providing in-depth coverage of its products and evolving technologies. Based in Germany, he is an award-winning journalist known for his extensive insider access and a contact book that includes the names of some of the most influential figures in the automotiv...

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