

US battery maker claims electric car breakthrough

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A US manufacturer said Tuesday it had developed a new automotive battery which can perform in extreme temperatures, offering the potential to cut the cost of making electric cars.

Massachusetts-based A123 Systems said its Nanophosphate EXT would "reduce or eliminate the need for heating or cooling systems, which is expected to create sizeable new opportunities" for automotive and other types of batteries.

"We believe Nanophosphate EXT is a game-changing breakthrough that overcomes one of the key limitations of lead acid, standard lithium ion and other advanced batteries," chief executive David Vieau said.

He said the new [battery technology](#) "can reduce or even eliminate the need for costly thermal management systems, which we expect will dramatically enhance the business case for deploying A123's [lithium ion battery](#) solutions for a significant number of applications."

Testing showed the battery can retain more than 90 percent of its initial capacity at 45 degrees Celsius (113 Fahrenheit). It also can deliver starting power at minus 30 degrees Celsius (22 below Fahrenheit).

Yann Guezennec, professor of mechanical engineering at the Ohio State University who participated in testing, said the new technology "could be a game-changing battery breakthrough for the electrification of transportation, including the emerging micro [hybrid vehicle](#) segment."

The announcement comes amid sputtering sales in the United States of electric cars, and doubts about whether the high purchase costs will be justified by lower operating costs.

John Voelcker, analyst with [Green Car Reports](#), said the technology could help cut costs of "thermal conditioning."

He said most [electric cars](#) have some system of pumping coolant to remove excess heat from their battery packs.

"Pumping coolant through this system eats up energy and reduces on-road range," he said.

If it works as promised, Voelcker said, "that would reduce the weight, complexity, and cost of future plug-in vehicles, bringing down their cost and moving them closer to mass-market competitiveness."

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