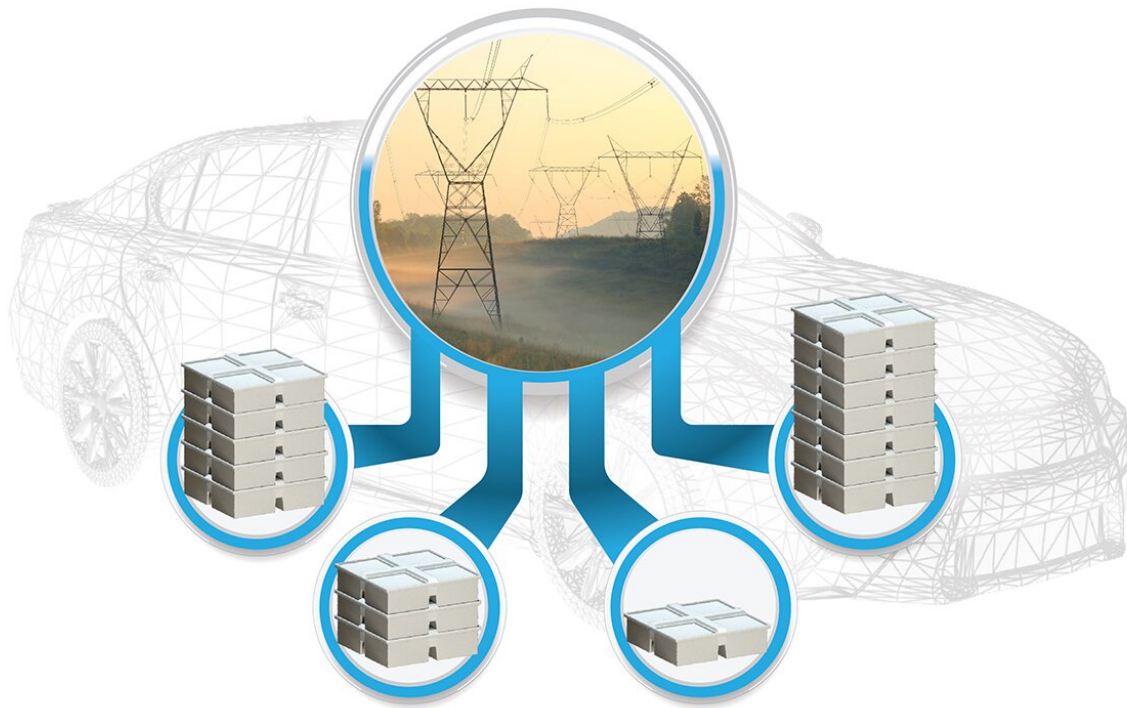


Reused car batteries rev up electric grid

February 16 2023



ORNL researchers have developed a way to manage car batteries of different types and sizes as energy storage for the power grid. Credit: Andy Sproles/ORNL, U.S. Dept. of Energy

When aging vehicle batteries lack the juice to power your car anymore, they may still hold energy. Yet it's tough to find new uses for lithium-ion batteries with different makers, ages and sizes. A solution is urgently needed because battery recycling options are scarce.

Researchers at Oak Ridge National Laboratory have developed a new technology enabling battery reuse: a type of power electronics equipment that can manage a variety of EV batteries as an energy storage system for an electric utility.

The mix of batteries can be controlled to release a predetermined amount of electricity to the grid. "We have each [battery pack](#) discharging at a different rate, while ensuring that the target energy output stays the same," said ORNL's Michael Starke.

When electricity demand spikes, utilities can use this stored energy instead of burning [fossil fuels](#) at "peaking" plants. The approach can reduce pollution, prolong the usefulness of EV batteries and make electricity service more reliable, at almost no cost.

The paper is published in the *2022 IEEE Electrical Energy Storage Application and Technologies Conference (EESAT)* proceedings.

More information: Michael Starke et al, An Intelligent Power Electronic System for Secondary Use Batteries, *2022 IEEE Electrical Energy Storage Application and Technologies Conference (EESAT)* (2022). [DOI: 10.1109/EESAT55007.2022.9998039](https://doi.org/10.1109/EESAT55007.2022.9998039)

Provided by Oak Ridge National Laboratory

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