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New life for electric vehicle batteries

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has announced \$1.49 million in funding to Melbourne battery technology company Relectrify to advance their commercial scale battery and inverter system using repurposed second-life electric vehicle (EV) batteries.

Relectrify is launching a 36 kW / 120 kWh commercial scale modular battery product, utilising second-life electric vehicle battery packs.

The \$3.3 million project will see Relectrify finalise development and undertake certifications ahead of the roll out of 20 battery units across commercial and industrial customer applications throughout Australia.

Relectrify's advanced BMS+Inverter battery control technology can boost lifetime and performance of batteries, while reducing battery system costs. The technology, which was developed with support from ARENA in 2018, combines both hardware and software.

EV batteries are often considered to have reached end of life when their batteries have degraded to 80 per cent of their initial capacity. While EV drivers may seek a new battery to improve driving range, the second-life battery remains a valuable and useful asset in stationary storage applications.

Relectrify's project will showcase the capability of its technology to extend the lifetime of batteries while also highlighting the opportunity to reduce battery cost further using second-life batteries.

Relectrify will offer these batteries to selected Australian customers and electricity network businesses. Prospective customers include utilities, industry and communities, both grid-connected and off-grid.

ARENA CEO Darren Miller said the project will also help to reduce costs and improve pathways for battery storage to be installed at commercial scale, particularly in industrial settings.

"Battery storage is already playing a crucial role in supporting the transition to renewable energy within industry, however, we need to do more to make it commercially viable," he said.

"Second-life batteries have significant potential to drive down costs, and Relectrify's battery management and inverter technology can provide what is needed to transform them into valuable assets for businesses looking to make the switch.

This new commercial-scale battery - roughly ten times the size of a Tesla Powerwall 2 - will provide a cost-effective form of battery storage for use in commercial and industrial settings.

Relectrify's battery technology could be rolled out in a range of applications such as solar integration, providing backup power on farms and to microgrids, deferring the need for network upgrade and replacing diesel generators," he said.