Device makes electric vehicle charging a two-way street

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New tech means cars can power houses, as well as the other way round.

A new device turns electric vehicles into chargers for houses and stranded cars.

Researchers led by Seyedfoad Taghizadeh from Australia's Macquarie

University are looking to commercialize the technology, which may significantly increase the appeal of the vehicles.

The new charging system is installed inside a vehicle, which can then be charged by simply plugging it into a domestic circuit. However, for houses that rely on batteries for storage, the fully charged vehicle is also capable of feeding power in the other direction, thus becoming a back-up system.

"It is also useful on the road," explains Dr. Taghizadeh. "If the car runs out of power and is nowhere near a charging station, the device lets the driver plug into another electric vehicle and boost the battery that way."

The device, dubbed the Intelligent Charger, also creates less anxiety on the power network than existing systems. The researchers predict this will reduce concerns among energy providers and power utilities about any drain on available resources that might arise as electric vehicles become more common.

The research has been described in papers published in journals, including *Applied Energy*.

More information: Seyedfoad Taghizadeh et al. A unified multi-functional on-board EV charger for power-quality control in household networks, *Applied Energy* (2018). DOI: 10.1016/j.apenergy.2018.02.006

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