

Integrating electric vehicles into the grid could prevent blackouts

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Electric vehicles consume a large amount of energy. As more people get electric cars and charge them at home, it puts a strain on our current electricity distribution, but researchers from the CSIRO says it doesn't have to be that way.

They devised a computer module to model how electric vehicles could

be integrated into the [electricity grid](#) to make it more reliable and efficient.

"If we keep just adding electric vehicles to the existing system, demand will soon exceed supply and result in reliability issues in the grid," Mehrdad Aghamohamadi Energy Market Analyst, Cornwall-Insight Australia.

"But I have invented an energy management model that can coordinate the integration of [electric vehicles](#) into the electricity grid.

"If electric vehicle charging is controlled and managed, it can actually support the grid."

The new energy model Mehrdad and his colleagues have developed takes into account the high penetration of residential solar panels in Australia.

On hot summer days, there is often an inverse power flow of unneeded solar-generated power that is extremely dangerous for the grid.

Mehrdad's model instead optimally delivers peak summer peak energy generation to electric vehicle charging stations and other [storage systems](#) throughout the grid.

"Our current electricity distribution system is made of delivery systems as well as renewables and batteries throughout our cities," he says. "Our energy management model can be used to integrate all these systems to operate as efficiently as possible."

Provided by Freshscience

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