Institute for Sustainable Futures

Australian Government
Australian Renewable Energy Agency

Media Release

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Smarter grid regulations needed to support Demand Management and cut costs for energy users

A new study commissioned by the Australian Renewable Energy Agency (ARENA) has found that a move towards smarter electricity network regulation would improve reliability, reduce emissions and cut power bills for energy users.

The study found that the current regulatory framework favours investing in network infrastructure - such as new poles and wires - over demand management involving energy providers helping consumers to reduce their power demand and bills.

The study, undertaken by the Institute for Sustainable Futures at the University of Technology Sydney, found that building new grid infrastructure was more profitable for network businesses than demand management solutions.

Demand management includes offering incentives to help customers save energy through smarter, more efficient appliances and voluntarily shifting energy use from peak periods.

Removing the regulatory bias against demand management could deliver more power capacity than a Hazelwood power station, ISF Project Director said Chris Dunstan.

“Our study has found a clear and quantifiable bias in the regulatory incentives in favour of building network infrastructure over energy saving, local generation and storage solutions, which would offer a better deal for customers.

“Intelligently reducing electricity demand can be just as useful as increasing supply, and is often cheaper and quicker to achieve,” Mr Dunstan said.

The study was in part intended to assist the Australian Energy Regulator (AER) which is currently developing a Demand Management Incentive Scheme. The new scheme is intended to create a level playing field for network demand management.

ARENA Chief Executive Officer Ivor Frischknecht said the study was an important contribution to understanding how to support the reliable and affordable integration of variable renewable energy into the electricity grid.

“Having more variable renewable energy in our electricity system means we will also need more flexible resources to balance the system,” said Mr Frischknecht.

“Batteries can help provide this flexibility but in many cases it may be simpler, cleaner and cheaper for electricity networks to work with customers to reduce or shift power demand,” he said.

“Demand management also allows more efficient use of our existing network assets and reduces the need for network investment”, Mr Frischknecht said.

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Summary of Findings

- The study has revealed significant bias against demand management in Australia's national electricity regulations.
- The study examined four generic scenarios of supply constraints in the grid as case studies, and compared the cost and benefits of network infrastructure and demand management solutions.
- Analysis of these scenarios found that bias in economic incentives meant that investing in new network infrastructure was often more profitable for network businesses, even where demand management solutions were found to deliver lower costs for consumers.
- The study concluded that creating incentives for demand management would improve reliability and reduce carbon emissions while also reducing power bills.
- The ISF study was in part intended to assist the AER in designing a Demand Management Incentive Scheme.
- The first recommendation is to "normalise" demand management cost recovery and put demand management expenditure on an equal footing with network capital expenditure.
- The second recommendation is to provide a specific Demand Management Incentive to level the playing field for demand management and to compensate network businesses for passing on the benefits of demand management to consumers.

The study included extensive consultation with network businesses, demand management providers, regulators, government and consumer representatives.

The full report will be available at arena.gov.au/knowledge-bank and isf.uts.edu.au

ABOUT ARENA

On behalf of the Australian Government, ARENA is working to accelerate Australia's shift to affordable and reliable renewable energy. We collaborate with industry and innovators to make renewable energy affordable and reliable for all Australians. Our role is to support the development of local renewable energy technology by helping bring the best ideas to life. We provide funding to researchers, developers and businesses that have demonstrated a pathway to commercialisation for their technologies and projects. We build and support networks, and share the knowledge, insights and data from our funded projects to help people and organisations learn from one-another.

ABOUT INSTITUTE FOR SUSTAINABLE FUTURES

The Institute of Sustainable Futures was established at the University of Technology Sydney in 1997 to work with industry, government and the community to develop sustainable futures through research and consultancy. Our mission is to create change towards sustainable futures that protect and enhance the environment, human well being and social equity. **For further information, visit isf.uts.edu.au**

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