



Media Release

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Increasing renewable energy back to the grid

A new analysis tool by researchers at the University of Queensland aims to increase the networks' capacity to host customer solar PV systems.

The Australian Renewable Energy Agency (ARENA) has today announced \$1.19 million in funding to the University of Queensland for the development and trial of the new and innovative network analysis tool which aims to give distribution network service providers (DNSP) increased visibility of their Medium Voltage networks.

The project, totalling \$2.88 million, helps networks to improve their solar connection process to the grid, which can include residential, commercial and industrial customers and grid connected systems.

The project involves adapting and trialling a new state estimation algorithm (SEA) that estimates the network's' operational conditions. Seven medium voltage distribution feeders located in South-east Queensland, Victoria and Tasmania will be trialled.

Currently some parts of the network are at capacity, which reduces the amount of customers that can install new PV systems and their ability to export energy to the grid. The network analysis tool has the potential to fix this.

A new semi-automated network analysis computer program will also be developed and trialled with the aim of improving their PV connection assessment processes.

The SEA will also be trialled in real-time mode for monitoring the operating conditions on a local low voltage distribution line, exploring whether customers could supply useful data to the SEA and enable customer PV export restrictions to be lifted and improve the safety and efficiency of the network.

ARENA CEO Ivor Frischknecht said UQ's research was vital in improving energy productivity.

"The University of Queensland's project offers a real breakthrough in providing medium voltage installations to not only allow for a greater percentage of Solar PV to enter the

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network, but also in increasing the renewable energy makeup of the NEM and aligning with ARENA's key investment priorities." Mr Frischknecht said.

The Solar Enablement Initiative Project Director, Professor Simon Bartlett AM, said the project would be good for energy consumers.

"Around two million homes in Australia already have a solar PV system, and this development will enable the energy industry to support its customers as this number continues to grow,"

"The award of the \$1.2 million ARENA grant together with \$1.5 million of industry support demonstrates UQ's outstanding relationship with Australia's energy industry and their confidence in UQ's abilities to develop and trial innovative technologies to help deliver sustainable, secure, and affordable electricity to all Australians," said Professor Bartlett.

For further information about this project, visit

<https://arena.gov.au/projects/increasing-visibility-of-distribution-networks/>

For further information on ARENA's projects, visit www.arena.gov.au

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