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New testing platform could fast-track large scale grid connections

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has today announced \$498,000 in funding to the University of Queensland (UQ) to develop and test a new platform that will help speed up the process of connecting large scale renewable projects to the grid.

Large scale generators are required to negotiate and agree to a set of Generator Performance Standards before connecting to the grid. Currently, compliance with these standards is demonstrated by extensive power system modeling that must then be validated during onsite commissioning. This process can be challenging and often causes long delays to connect these renewable power sources to the grid.

UQ's Project Partner, EPEC Group, a leading technical advisor on grid connection, has found that many large-scale solar and battery projects have experienced such delays, which substantially affect investor confidence and increase costs of new renewable generation projects.

The new platform will test a streamlined approach, which will allow common commissioning issues to be identified and resolved in a custom-designed testing environment, prior to installation on site. This approach could become standard practice for renewable generators and help to accelerate and de-risk new generation connecting to the grid.

UQ's \$1.46 million study could help to facilitate faster commissioning of renewable energy projects by allowing them to resolve any issues with the modeling prior to commissioning. Faster and lower risk commissioning will result in lower cost renewable energy projects and reduced barriers for hybrid projects.

If successful, UQ and EPEC aim to commercialise the technology and apply the testing platform to future renewable energy projects across the National Electricity Market.

ARENA Acting CEO Chris Faris said the testing platform could help accelerate Australia's transition to renewable electricity.

"To meet our national 2030 and 2050 emissions reductions goals, we must accelerate the pace of commissioning, installing and connecting renewable energy projects. If we can streamline the commissioning process through smart application of technology like this project, we can reduce the costs and risks associated with bringing new generators online.

"This project has the potential to significantly speed up the process for bringing new solar, wind and battery projects online, so we're excited to see what the University of Queensland team delivers," he said.

UQ lead researcher Dr Richard Yan states that this ARENA funded project is based on UQ's cutting-edge research that has been conducted with its project partner, EPEC Group, within the premises of the UQ Solar renewable energy laboratory facility.

"The new testing platform will be a market-leading development to support the growing number of renewable energy projects in Australia. UQ is home to a world-class research facility and group of researchers who want to address the various challenges of the commissioning process."

For more information on the project, visit arena.gov.au/projects.