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## AEMO to trial integrating Virtual Power Plants into the NEM

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has announced \$2.46 million for the Australian Energy Market Operator (AEMO) to run a Virtual Power Plant (VPP) integration trial.

AEMO will run the VPP integration trial over a 12 to 18 month period, focusing on demonstrating the operational capabilities of VPPs to deliver energy and Frequency Control Ancillary Services (FCAS).

A VPP is a portfolio of distributed energy resources (DER) - such as rooftop solar, batteries and controllable loads - installed behind-the-meter that can be collectively managed and controlled to deliver services like a conventional power plant.

AEMO will invite existing pilot scale VPPs around Australia to participate, including the ARENA-funded AGL and Simply Energy pilot scale VPPs in South Australia.

Under the demonstration, participating VPPs will operate their portfolio of DER to deliver energy, system security and local network support services.

ARENA's funding will accelerate upgrades to AEMO's systems and processes to allow smooth integration of VPPs before they reach commercial scale.

While VPPs are currently at relatively small scale - approximately 5-10 MW, AEMO forecasts there may be up to 700 MWs of VPP capacity by 2022.

AEMO will also use the data collected to inform changes to regulatory settings and operational processes.

ARENA CEO Darren Miller said the trial is a vital step towards increasing participation of VPPs in the NEM so they can deliver energy as well as helping to provide system security and reliability.

"AEMO needs visibility over VPPs and the ability to test how they operate within the market if we want to maximise the benefit both to consumers and to the system. This trial will allow us to learn how to better integrate larger scale VPPs in the coming years," he said.

"As we transition to a more decentralised energy system, VPPs have an important role to play in harnessing the collective potential of consumer owned energy assets like rooftop solar, batteries, smart appliances and electric vehicle charging. VPPs could see vast improvements in the reliability of the network and an increase in market competition which will ultimately benefit all customers," Mr Miller said.

AEMO Managing Director and CEO Audrey Zibelman said this would provide evidence-based learning to advance the integration of DER into the grid.

"Australia's energy landscape is transforming towards a deep penetration of consumer-level renewable generation and storage capability," Ms Zibelman said.

"Our focus is on the operation of the bidirectional system to increase system security and consumer value for both VPP participants and the power system as a whole," she said.