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SA Power Networks wins 2020 Industry Innovation Award

Energy Networks Australia has announced SA Power Networks as the winner of the 2020 Industry Innovation Award.

Presented for SA Power Networks' Advanced Virtual Power Plant (VPP) Grid Integration Trial, the award recognises the distribution network's national leadership in the design and application of ground-breaking technology supporting Australia's customer-focused energy transition.

VPPs aggregate large numbers of customer batteries to operate in much the same way as a traditional power station. SA Power Networks worked with Tesla on their South Australian VPP to develop and demonstrate how real-time integration between networks and VPPs can maximise the benefits – economic and environmental – for all customers, VPP operators and network managers in the National Electricity Market.

The project has shown how higher levels of energy exports to the grid from customer systems can be enabled through flexible, rather than fixed, export limits. It tested the value this can create for VPP operators, who also have the opportunity to provide important network support services such as frequency control.

When fully deployed to up to 50,000 households, the SA VPP's power output will be able to be doubled compared with traditional approaches to grid integration, increasing its export capacity to 500 MW – the same capacity as the now decommissioned coal-fired Port Augusta (Northern) Power Station – and supporting up to one third of typical state electricity demand.

This project is believed to be the first to demonstrate this concept in actual operation with the largest VPP actively participating in the Australian energy market, and to seek to measure the real-world costs and benefits of this approach.

Energy Networks Australia CEO, Andrew Dillon, said the project demonstrated SA Power Networks' understanding of the immense change the energy sector was undergoing and the economic and social need to create smarter energy grids.

"The VPP Grid Integration Trial is a fine example of energy network innovation facilitating the renewable energy transition while enhancing the safety, reliability and affordability of electricity," Mr Dillon said.

"This is an important project not just for South Australia but for the nation as we work to integrate increasing amounts of distributed energy into the electricity system.

"The learnings from this ambitious project will contribute to the development of smarter grids and better customer outcomes across the country."

Accepting the Award on behalf of SA Power Networks, Mark Vincent, GM Strategy & Transformation said the concept was simple. "Instead of fixed export limits we have created the capacity to provide flexible export limits that maximise the opportunity for everyone to share the energy generated from their rooftops," he said.

"Our next step is developing a flexible exports option for individual customers to maximise their export capacity as well as the groups of customers managed within VPPs. We are aiming to make this wider offering available to all solar customers in South Australia in 2022.

“This delivers a step change in terms of integrating renewables with the grid and we anticipate the work we are doing is creating the blueprint for a national approach to integration of DER. Our approach has the support of the solar industry, equipment manufacturers, networks, system managers and policy makers.”

The Consumer Engagement Award and the Industry Contribution Award will be announced later in October and all awards will be recognised formally at Energy Networks Australia’s Annual Dinner and conference next year.

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Energy Networks Australia is the national industry body representing Australia’s electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.