VICTORIAN DAIRY FARMERS TO MILK THE BENEFITS OF SOLAR

Around 200 dairy farmers in Victoria's Latrobe Valley are poised to participate in an innovative project that marks a new chapter in the region's long history as an energy production hub – a virtual microgrid or online marketplace that would allow them to sell renewable energy and grid support services.

ARENA has provided support to LO3 Energy for the first step in this process, a study to test the feasibility of creating a local energy marketplace in the Gippsland region. The virtual microgrid would incorporate solar PV, battery storage, smart appliances and enabling technologies, combined with LO3's Exergy peer-to-peer energy trading platform.

LATROBE VALLEY MICROGRID FEASIBILITY STUDY

Lead organisation: LO3 Energy
ARENA funding: $370,000
Total project cost: $775,000
Location: Latrobe Valley, VIC

Dairy farms typically need the most energy for milk production in the mornings and afternoons. The project capitalises on the midday lull, creating an opportunity for farmers to sell excess electricity being generated by solar panels back to the grid.

Image: LO3 Energy

The virtual marketplace would also make it possible for farmers to offer demand response or grid stability services. Overall, it would potentially reduce energy costs and create a valuable new revenue stream for participants.

The feasibility study is expected to be completed by the end of 2018, and, if successful, the pilot microgrid could be rolled out in Gippsland in 2019. The pilot would also involve more than 100 households with rooftop solar that will act as either energy users or suppliers, and around 20 commercial and industrial customers to create a range of energy supply and use patterns to test the scheme.

If successful, the scheme could be rolled out in other agricultural areas, allowing farmers and other participants to take control of their energy use while trading renewable energy from distributed energy resources - such as solar combined with batteries - back to the grid.