

Enova Energy

Byron Bay Arts & Industrial Estate Microgrid Project

Preliminary outcomes: 6 Month Report Summary

Date: 7 May 2021

INTRODUCTION: This is a summary of the first report from the data collected over the first 6 months of Enova Energy's Byron Bay Industrial Estate Microgrid Project. The project involves 23 businesses – made up of 9 prosumers (businesses with solar panels) and 14 consumers (without solar panels). The project demonstrated that a Microgrid can deliver financial benefits to consumers.

WattWatchers devices were used to collect data on solar generation and energy consumption every half hour from 1 March to 31 August 2020.

A special Microgrid Tariff was applied to all participants' electricity use. The new Microgrid Tariff was developed to encourage more consumption of the solar generated. It included a special feed-in tariff (FiT) to benefit prosumers. The tariff had different rates for the peak period, the sun time period (peak generation time between 10am – 2pm) and night-time period.

Under the Microgrid Tariff, participants were buying solar electricity, made available to the Microgrid by fellow participants with rooftop solar, more cheaply than they would have from the wider grid.

The data showed that:

- **15 participants were better off and could save an average of \$74 per month on their energy purchases.**
- **Six participants experience slight increases in their purchases of only \$1 or \$2 per month.**
- **2 customers' bills remain unchanged.**
- **All 9 solar customers were better off.**
- **Large users experienced the greatest bill reductions.**

The microgrid trial impacted Enova by delivering a net reduction in revenue from the 23 businesses of about 20.7%, as well as increased fixed costs related to operating a microgrid.

Essential Energy, the distribution network provider, and Transgrid, both experienced reductions in revenue (4.9% and 11% respectively) due to reduced consumption of wider grid electricity by participants.

A final report analysing 12 months of data will be published shortly. The idea of these studies is to demonstrate that local microgrids are possible to deliver financial benefits to customers, networks, transmission network and retailers.

CONCLUSION: The construct of the microgrid tariff in this study results in financial benefits to the microgrid customers (small businesses) and not to the network, transmission network or retailer. Regulatory changes (Local Use of System charges) and incentives are required to encourage networks and retailers to consider the longer term financial, social and environmental benefits of microgrids, rather than short term financial gain. Enova Energy, in leading this research, endeavours to provide these findings as a foundation for considering new microgrid models and tariff structures to benefit customers and market participants.