



Wellington Solar and battery VPP

Wellington Electricity is the electricity distributor responsible for managing the poles, wires and equipment that deliver electricity to about 166,000 homes and businesses in the Wellington region.

OVERVIEW

Distributed energy resources, including solar generation, battery storage and load management provide electricity distributors with an alternative to network investment. At scale, these resources have the potential to reduce network costs, therefore reducing electricity bills for homes and businesses.

The Wellington CBD, Southern and Eastern suburbs of the city are mainly supplied by one substation, meaning that an outage impacting this substation could potentially lead to a large number of Wellington's population losing electricity supply. Parts of the network are also nearing capacity limits, which will ultimately require Wellington Electricity to consider additional investment to maintain reliable electricity supply.

This project provided an opportunity to trial the application of coordinated distributed energy resources, assess how they could benefit the network and whether they could provide an alternative to additional network investment.



DEMAND FLEXIBILITY

Wellington Electricity identified network locations from Island Bay to Newtown and south to Island Bay. Contact installed solar, battery and hot water control systems with 29 customers.

During times of high power demand on the network, Wellington Electricity's network control room automatically provided signals to Contact's Virtual Power Plant (VPP). Contact's VPP is connected to customer devices, enabling the batteries to discharge and the hot water cylinders to reduce load, ultimately supporting the network.

Location: Wellington
Assets: Batteries and hot water cylinders
Markets: Demand Response

BENEFITS

Participation in Contact's VPP enabled Wellington Electricity to trial:

- Automated control of customer-owned distributed energy resources to support the network
- Utilising distributed energy resources as an alternate solution to building more "poles and wires"
- Increasing local generation around the Wellington region in turn to increase network resiliency