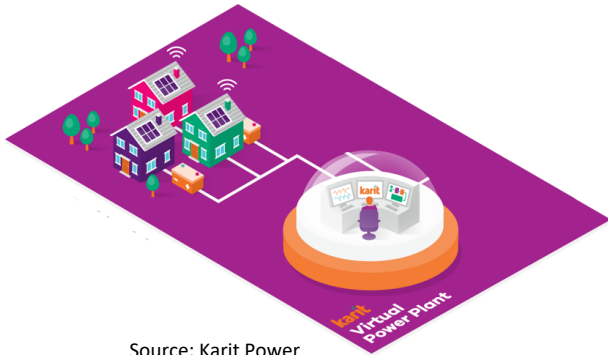


6 FACTS FOR **VIRTUAL POWER PLANT**

1 What Is a Virtual Power Plant?

If your strata building has a battery, it can generate additional revenue through participation in a Virtual Power Plant (VPP). This allows the operator of a VPP to remotely control your battery and discharge the stored energy back into the grid when required. As the VPP operator aggregates this excess energy from thousands of participating batteries, it forms a “Virtual Power Plant”. A virtual power plant is not a physical power plant, but it can act as one.



Source: Karit Power

2 How Does a Virtual Power Plant Make Money?

In Australia, a wholesale energy market is in place which allows generators and retailers to trade electricity. The wholesale energy prices usually spike up in summer time when all the air-conditioners are operating. In addition, when a large fossil fuel plant fails unexpectedly, this can also push up energy prices.

A VPP operator can act like a large generator and bid into the wholesale energy market during periods of high prices. The stored energy inside the batteries of the participants will be discharged back into the electricity grid allowing battery owners to profit from these peak pricing events. The earnings will be shared between the VPP participants and the VPP operator.

3 How to Participate in a Virtual Power Plant?

There are quite a number of VPP offers currently available in NSW (click [here](#)). However, different providers have their own specific requirements for the brands of batteries which can be used to participate in their VPP.

It's free to join a VPP. However, you may need to install an additional piece of hardware to connect to the VPP. In other cases, the battery inverters already have the capability to be remotely controlled by the VPP operator.

4 Virtual Power Plant Subsidy

Some VPP programs offer an upfront subsidy for your participation in the VPP. The amount of subsidy can vary from one VPP to another. The subsidy is the highest in Victoria and South Australia, due to the support from state governments to incentivise the uptake of battery storage.

5 Tips for Participants

The concept of joining a VPP is still relatively new. When researching a VPP, you might like to consider the following:

- What do you know about the VPP operator and electricity retailer (if it is not the same company)?
- How will you be rewarded for participating in the VPP i.e. annual, monthly or daily reward payments, a discounted battery or an exclusive retail offer?
- What electricity plan will you be on and how does the usage charge and daily supply charge and Feed in Tariff (FiT) compare with other retail offers in the market?
- Is there a contract term and/or early termination fee?
- How much electricity is the VPP operator contractually allowed to draw from your battery each year?

6 The Success of Initial Trials

The VPP trial was first launched in South Australia with the support of the state government. The trial involved 1,100 Housing SA properties being fitted with solar and Tesla Powerwall home battery systems. Installations under the trial phase were completed in 2019.

In addition to generating earnings for VPP participants, the SA VPP was the first virtual power plant in Australia to help stabilise frequency levels in the grid. As of August 2020 it is one of only two virtual power plants in Australia to do this. The stability services SA VPP provides have already helped with significant events such as:

- A unit of the Kogan Creek coal power station in Queensland tripped in October 2019 (click [here](#) for further reading)
- Disconnections of the grid between South Australia and Victoria in November 2019 and January 2020
- Providing power to Port Lincoln residents during catastrophic fire conditions in November 2019

By demonstrating grid stability services, SA VPP is creating a path for other distributed energy resources in the future. VPP's are able to provide important grid services that until now have only been provided by large, conventional generators.

Due to the success of the initial trials, the project has now moved onto phase 3, where Tesla plans to have up to 50,000 South Australian homes connected over time.

