



Project details

System size: 24kW 2016 Date:

Energy produced: 36.03 MWh yr. **Connection:** On-grid

CO² savings: Solar panel: Phono 255W 33 tonnes per yr.

No. of panels: **Inverter type:** 3 x SolarEdge 93

No. of battery's: 6 Powerwall 1 **Battery:**

At the time of installation, in 2016, this was a World record for the most Tesla Powerwall home batteries installed in one property. At 42kWh of energy storage the media described the install at this Gold Coast property as a 'mini power station'. In reality the installation was the culmination of many months' hard work and clever electrical engineering to ensure that this system provided the calculated returns.



With an impressive ability to store 98% of the electricity the solar system generates

Project outline

The main solar system features 93 Phono 255W panels and 3 SolarEdge inverters. The home has 3 phase power so each phase was connected to 2 Powerwall batteries each providing a total capacity, when fully charged, of 14kWh per phase. Discharging can be made from one battery at a time, per phase, however, the phases can work together with three batteries in total being discharged simultaneously.

Clever by design

The system has also been designed so cheaper off peak energy can be used to charge the Powerwall batteries overnight. This is then used to offset the more expensive periods of energy import from retailers, should it be required. Such scenarios may occur in poor energy producing periods or where panel performance has been inhibited for whatever reason and also to boost savings with multiple daily battery cycles.

As well as looking impressive the system is designed to provide the complete power requirements for the home and also offer a significant backup facility should a blackout occur. Complimenting this is the 3 string array of panels, each 8kW. Each array is connected via a smart system to control the energy produced.

Return on investment

Savings are expected to be in the region of \$13,000 per year, with a return on investment expected between 5 - 6 years.

The system was also designed to accommodate the advent of new technologies allowing energy to be sold back to the grid on demand. Such systems offer larger incentives for the energy than the traditional Feed in Tariff (FiT).





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