



INDUSTRY :  
HOSPITALITY



## KEDRON-WAVELL SERVICES CLUB - Queensland, Australia

Designed and installed by Springers Solar

### REQUIREMENTS

Build a system as large as possible to reduce the power bills of the club

### PROJECT SPECS



SYSTEM SIZE

**80.4kW**



PRODUCT

**LG NeON<sup>®</sup>2  
335W**



ESTIMATED ANNUAL OUTPUT

**Approx. 131,000kWh**



INSTALLED

**November 2017**



### BENEFITS



Estimated annual savings on electricity usage fees: **Approx. \$34,100<sup>1</sup> AUD**  
**Approx. 53 tonnes of CO<sub>2</sub>** emission avoided per annum<sup>2</sup>

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## BACKGROUND

The Kedron-Wavell Services Club is located in the vibrant Chermside precinct, only 15 minutes north of Brisbane's CBD. The Club is Brisbane's award winning, premier function, entertainment and leisure destination.

Kedron-Wavell Services Club are in the process of working towards an environmental and sustainable future. Since solar panels were installed in April, they have generated enough power to run thousands of households for a 24 hour period and have also saved tonnes of CO2 gas being released into the atmosphere!

## CHALLENGE

The challenge of this project was to design a system as large as possible to reduce the power bill of the club as much as possible and allow for future expansion of the system in due course. Being a large award winning premier function, the facilities include a Café, Buffet Restaurant, and numerous bars which consume an enormous amount of power. From lighting to air conditioning, to large cool rooms all with high consumption to run the facilities.

Another challenge was the roof of the premises, which had multiple angles and different levels that needed to be catered for. Plant and equipment potentially creating safety hazards as well as shading on the panels needed to be taken into consideration during the design and assessment of the space available for the installation.

## SOLUTION

The LG NeON<sup>®</sup> 2 were the ideal solution for this project due to their high efficiency and lower degradation over time.

A total of 300 LG NeON<sup>®</sup> 2 panels were installed in the Services Club complemented by 3 x Solar Edge SE276 inverters and P800 Optimisers. The system is monitored by a Solar Edge and a Solar Analytics system.

## WHY WERE LG PANELS CHOSEN

The Springers Solar team recommended LG solar panels because they considered them the best in the market with proven performance.

Having limited roof space meant the more efficient LG panels were able to create a bigger system. LG NeON<sup>®</sup> 2 models have been involved in a number of comparison tests against many other brand panels and are consistently amongst the best performing panels. This panel generates more power per square metre, and is able to deliver more electricity per square metre than many competing panels of the same physical size.

The LG NeON<sup>®</sup> 2 panels also have a lower degradation than many competing panels over their lifetime due to the very low use of LID on the treatment of the cells.

LG NeON<sup>®</sup> 2 panels offer a 25 year product and performance warranty which includes parts and labour compared to the 10 year manufacturer's warranty offered by many other manufacturers.



<sup>1</sup> The estimated average annual electricity usage fee savings are estimates made by LG Solar™. The estimates made by LG Solar™ are based on the actual system size, estimated annual output of the system in the post code of the location with degradation of rated electricity production of 2% in the first year and 0.5% in subsequent years, as well as a lifetime of 25 years. We assume a flat electricity rate of \$0.25 per kWh, and a feed-in tariff of \$0.11 per kWh (with annual increases of 2.5% per annum). Based on the industry the end-customer is in, we assume 80% self-consumption of solar electricity generated (e.g. for end-customers in the manufacturing industry we assume 80% self consumption from Monday to Friday and 20% on weekends (with corresponding 20% and 80% being exported into the grid), while for leisure based clients we assume 80% self consumption everyday and 20% being exported into the grid). We do not apply a net present value discount on the estimated annual electricity usage savings. Of course actual annual electricity savings will vary on a wide-variety of factors including installation conditions, usage and self-consumption patterns, actual hours of sunlight, electricity rates, feed in tariffs, increases in electricity rates as well as other factors. For further details and other solar calculators, please see: <https://www.lgenergy.com.au/solar-calculators>.

<sup>2</sup> The estimate for CO2 emissions avoided assumes that the entire electricity output of the system is consumed and the emission factor used is the weighted average for all Australian States based on the calculator available at [carbonneutral.com.au](https://carbonneutral.com.au). For more information, please see: <https://carbonneutral.com.au/carbon-calculator/>.