INDUSTRY :
RECREATION
(GOVERNMENT)

LG Business Solutions

BLUEWATER LEISURE CENTRE - Victoria, Australia

Designed and installed by Urban Renewables

REQUIREMENTS

LG panels were recommended for their warranty, power generation per square metre, performance, and high quality

PROJECT SPECS

SYSTEM SIZE
98.64kW

PRODUCT
LG NeON®R 360W

ESTIMATED ANNUAL OUTPUT
Approx. 132,000kWh

INSTALLED
June 2018

BENEFITS

Estimated annual savings on electricity usage fees: **Approx. $25,000[1] AUD**
Approx. 120 tonnes of CO2 emission avoided per annum[2]

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BACKGROUND

Bluewater Leisure Centre is a multipurpose aquatic and recreation centre that has been in operation since 1974. The centre is operated by Colac Otway Shire Council and provides first class leisure and recreation facilities.

The facilities feature a number of pools, spa and steam room and a gymnasium offering numerous fitness options. A three-court basketball and multi-sports stadium, a cafe and meeting rooms for the community to hire.

CHALLENGE

The centre has a very high power consumption to keep all the pools, gymnasium equipment and other facilities running constantly.

Urban Renewables was engaged to design, plan and install a solar system for the Leisure Centre with the aim of reducing power costs and the carbon consumption footprint.

Due to the restriction of roof space available, Urban Renewables worked with the Council to conduct a roof structure assessment to create a design that would deliver thegreatestenergyproducti onandbestreturnoninvestment.

SOLUTION

The Urban Renewables team recommended the LG NeON® R 360W as the best suitable product to maximise energy production. The high efficiency LG NeON® R 360W panels allowed the team to install a 98.64kW system rather than an 84kW size other many competing panels would have allowed due to the restrictions with the roof space.

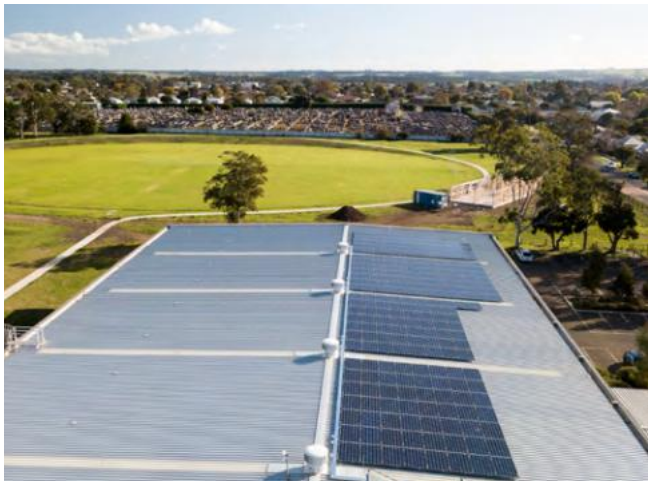
The system was complimented with Fronius inverters and monitoring system.

Urban Renewables designed, installed managed the project from start to completion.

WHY WERE LG PANELS CHOSEN

LG panels were recommended for their warranty, power per square metre, performance and quality. The 25 year warranty applies to parts and labour as well as on the performance which is longer than for many competing panels.

LG panels have high efficiency, producing more power per square metre, the NeON® R 360W are warranted to still achieve 87% of rated output after 25 years, compared to 80.2% for many competing panels. The annual degradation rate is 0.4% compared to 0.7% for many competing panels.



1 The estimated average annual electricity usage 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, 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.

2 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. For more information, please see: https://carbonneutral.com.au/carbon-calculator/.