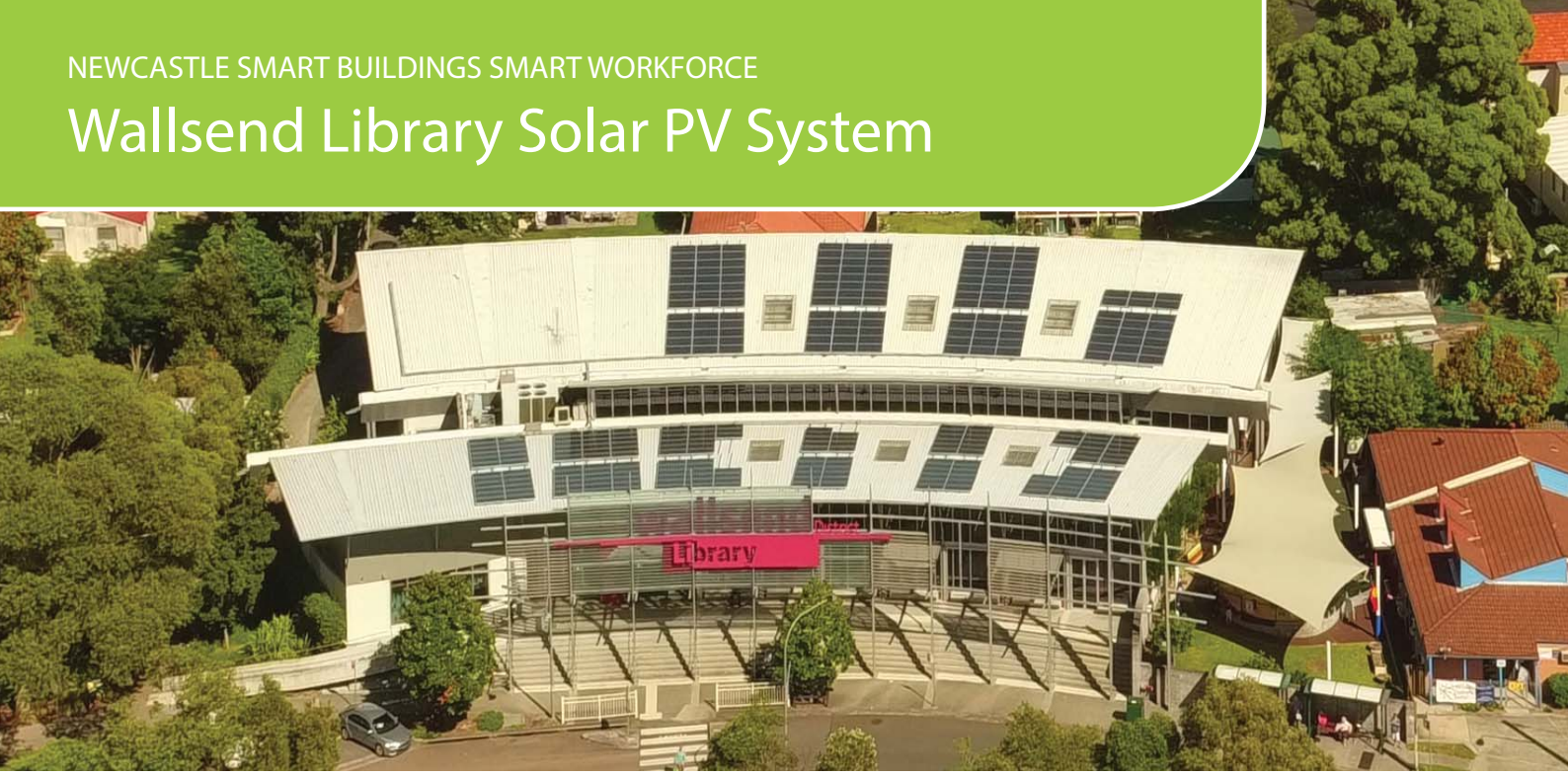
NEWCASTLE SMART BUILDINGS SMART WORKFORCE

Wallsend Library Solar PV System



Quick Facts

System size	80.08 kW
Location	Wallsend, NSW
Total project cost	$100,000
Date system switched on	18 November 2015
Payback	6.65 years
Internal rate of return	15%
Solar generated electricity	115,000 kWh pa
Grid consumption reduction	45% pa *
Energy and peak capacity savings	$15,000 pa

** At the time that the system was completed*

Technology

Solar panel type	Multicrystalline
No. of panels	308
Panel efficiency	≥ 15.3%
Panel wattage	260W

Key Benefits

- Increase Council-owned electricity generation.
- Reduce the carbon emissions associated with the purchase of grid generated electricity.
- Reduce Council's exposure to electricity prices.
- Assist Council to attain its goal to have 30% of its electricity generated from low-carbon sources by 2020.

Wallsend Library Solar Photovoltaic System

The award-winning Wallsend District Library is the newest of the Newcastle Region Library facilities. Opened in 2006, it is a spacious library full of natural light and boasts living ficus trees in the centre of an open plan setting. The Library offers a wide range of resources and facilities to the community including study rooms, meeting rooms and an exhibition area.

To reduce electricity costs, the Library's roof space was identified as a highly suitable location for photovoltaic technology. After a comprehensive review of the steel sheet roof top's ability to support 18kg per square metre of solar PV systems, an 80 kW grid-connected solar system consisting of 308 panels was installed.

The installation works were undertaken out-of-hours to minimise the disruption to staff and library patrons. The system was 'switched on' on18 November 2015.

This solar PV system will significantly decrease the Library's reliance on grid-generated energy usage and is anticipated to reduce energy and peak capacity costs by approximately $15,000 per annum.

To find out more contact Energy & Resource Management on 02 4974 2000 or visit:

www.newcastle.nsw.gov.au/environment

The City of Newcastle