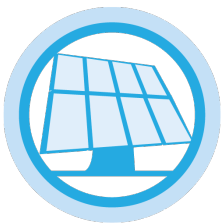


CASE STUDY

UNITING AGED CARE, AUSTRALIA

OVERVIEW:

Australia's largest community service providers, Uniting, powers 27 of its aged care facilities in two states with solar energy. Consisting of over 8,000 Trina Solar Duomax modules, the installation provides over 2.152MW of power across the sites, reducing around 3,000 tonnes of CO₂ annually.



SIZE: 2.152 MW
SYSTEM TYPE:
Rooftop



COMMERCIAL
OPERATION DATE:
June 2016



EPC:
Solgen Energy
Group



OUTPUT:
3,000 MWh/
annum



MODULES:
8,232 x 260W
Trina Solar
Duomax Poly



CO₂ SAVINGS:
3,000 tonnes/
year

SITUATION

Uniting is a major provider of care services that includes older people, children and young people, and offers counselling and mediation support to the community. Its aged care facilities operate round the clock, providing personal care and health management services to its residents.

Underscoring its commitment to sustainable environmental sustainability and reducing its carbon footprint Uniting made the switch to solar power to meet the energy needs of 27 aged care facilities in New South Wales and the Australian Capital Territory.

To do this, it enlisted Solgen Energy Group, who partnered with Trina Solar, for the design, engineering and installation of this project. Throughout the process of installing the solar power arrays considerable care was taken to ensure that the works took place with minimal disruption to residents.

PRODUCT SOLUTION

The solar power arrays consisted of 8,232 Trina Solar Duomax Poly 260W panels. The panel utilise an innovative double glass design that prevents leakages and erosion from exterior metal parts. The sleek and visually pleasing design also helped meet the customer's aesthetic requirements.

The panel is resilient against the demanding Australian environment. It performs well in extreme temperatures, withstands moisture, material ageing and has fast heat dissipation, making it suitable for hot and high humidity climates. It can also withstand extreme weather conditions such as hailstones up to 35mm at windspeeds of 97 km/hr.

CASE STUDY

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The installation was designed so that each array would face different directions in order to accommodate the unique roof surfaces and different facing aspects of each aged care facility. This complex system configuration and electrical wiring was designed for optimal output. The use of high efficiency Trina Solar panels alongside quality inverters allowed for system flexibility and superior system performance within a complex solar array.

Trina Solar's exacting safety and quality standards with over 30 in-house tests that go beyond certification requirements help guarantee the panels perform at no less than 83 percent of its original output by the 13th year. With an annual degradation of 0.5 percent, this compares favourably against the industry standard of 0.7 percent degradation per annum.

RESULTS

Uniting's solar installation has reduced its carbon footprint and is expected to pay for itself in four to six years. The switch to sustainable solar energy is expected to generate more than 20 percent of the energy needs for each facility, reducing costs by over AUD \$20,000. Uniting's commitment extends to its wider community and environment and is a positive step in helping Australia reach its renewable energy goals by 2020.

