

## Crowne Plaza Alice Springs Solar PV project

### Technical Data

- The project involves the installation of the largest building mounted solar system in Australia. (304.98kWp) The next largest system is the Queen Victoria Market PV system in Victoria at 220kWp.
- The proposed system consists of a total of 1326 SunPower SPR230 solar modules, totaling 304.98kWp.
- In total, 57 inverters will be used to convert the DC output of the panels to AC power suitable for connection to the hotel's sub boards. The inverters incorporate RS485 cards for data collection and transmission into Crowne Plaza's MATV system which will act as a real time display - demonstrating the benefits of solar power to all hotel guests.
- The Sun Power SPR-230 module is designed for use in on-grid commercial systems where the highest module efficiency and energy delivery is critical. Utilising 72 series connected solar cells, the SPR-230 delivers high power density with total module efficiency over 18.5%, making it the most efficient commercially available module of its type on the market at present. Market leading voltage-temperature coefficient, excellent low-light performance and high sensitivity to light across the entire solar spectrum means that the output from the system is maximised. The SPR230 has a 25 year warranty on power output and 5 year warranty on workmanship.
- The system will generate approximately 531,594kWh per annum, distributed into the hotel complex's electrical distribution system and will be configured as a NETT metered PV system.
- **Displaces fossil Fuels:** the CPAS PV system will displace 172m<sup>3</sup> of Natural Gas per annum
- **Eligibility to generate RECS:** Due to size of the CPAS PV system it will be registered as a Power Station for the purposes of creating and registering RECS. The design of the CPAS PV system meets all the requirements for registration as a Renewable Power Generator as per the guidelines prepared by the Office for the Renewable Energy Regulator
- **Helps provide effective remote power:** While the project has been designed to meet the needs of the CPAS complex itself, it will assist in reducing the total load on the Alice Springs town grid which is an isolated grid with no external supplies or interconnections.
- **Utilisation of appropriate renewable energy sources:** According to the NSOL Solar Irradiance data sets, Alice Springs has the highest solar resource of any major town within Australia; as such Solar PV is an ideal technology to take advantage of the renewable resource available
- **Assists in development of RE industry:** The scale of the CPAS project means that no single organization within Australia can claim to have experience installing a PV system of the same extent. As a result, all the aspects of the project, from tendering, contracting, logistics and installation will challenge the industry to meet the demands of the project. Within Alice Springs, at least 7 different sub-contractors will be engaged for different portions of the project, including two local renewable energy installation companies.



- **Long term GHG abatement:** The CPAS PV project will result in the reduction of approximately 420 tonnes of CO<sub>2</sub>-e per annum upon the initial commissioning of the system and will still provide a reduction of over 300 tonnes of CO<sub>2</sub>-e per annum after 20 years (assuming a non-cumulative system output degradation of 1% per year)
- The PV installation will lead the way in demonstrating the effectiveness and viability of large scale PV systems within the commercial arena, particularly in regions susceptible to **higher than average increases in electricity prices** such as Alice Springs.

### **About Crowne Plaza Alice Springs**

#### **About CAT Projects**

CAT Projects has been appointed by the owners of the Crowne Plaza Alice Springs as the overall Project Manager for the project.

CAT Projects is a wholly owned subsidiary of the Centre for Appropriate Technology (CAT), Australia's leading Indigenous science and technology organisation.

CAT Projects has extensive experience in the design, manufacture, installation and support of renewable energy systems in both off grid and on grid application. CAT Projects specialises in renewable energy feasibility studies, system design and specification, performance monitoring and project management.

For more information contact Lyndon Frearson, Senior Project Manager, 0438 839 920

#### **About Alice Solar City**

Alice Solar City is part of the Australian Government's \$100 million Solar Cities Program and will provide information on real-time energy use in the community over the next six years. Trials involving governments, industry, businesses and residents across Australia will help create a new energy future for Australian communities and change the way we think about and use energy.

For more information contact Brian Elmer, General Manager on +61 8 8950 4350  
[www.alicesolarcity.com.au](http://www.alicesolarcity.com.au)

#### **About SunPower Corporation Australia Pty Ltd**

Sunpower Corporation Australia Pty Ltd designs, integrates and markets high-performance solar electric power technology. Solar Sales is an Australian owned and run company with over 25 years service to the Renewable Energy Industry and, as such, is one of the longest established companies operating anywhere in Australia in this field. Solar Sales has a team of professionals employed in the fields of project delivery, renewable energy, electrical, mechanical engineering, design and installation.