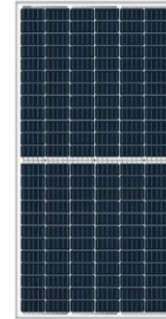


COMPONENT SELECTION

PV MODULE

Solgen Energy proposes to install LONGi Solar's 440W PERC monocrystalline module for this project which offers the following advantages:

- Maximum Efficiency: 20.2%
- Cell Orientation: 72 cells
- Technology: Low LID Monocrystalline PERC
- Positive Power Tolerance: 0~ +5W
- Front Side Loading: 5400Pa
- Operational Temperature: -40°C to 85°C
- Product Warranty: 12 years
- Performance Warranty: 25 years (0.55% annual degradation)
- Certifications: IEC61215, IEC 61730, UL 61730



Established in 2000, LONGi Solar has been an industry leading Tier-1 solar panel manufacturer for over 20 years. Their unrivalled supply capacity is bolstered by a 5GW full automated module manufacturing facility which provides LONGi with the highest nameplate panel assembly capacity of any manufacturer in the world.

In 2018 LONGi was also named as one of the top 3 most bankable PV module brand in the world and the highest Altman-Z score for credit-strength, in an annual report by Bloomberg New Energy Finance. Their technical capabilities are underscored by unrivalled investment in R&D as the world's current leading panel manufacturer in R&D spending alone. In 2019, LONGi achieved a world record 24.06% efficiency for their P-type mono PERC bifacial solar cells.

INVERTER & OPTIMISERS

We have proposed a SolarEdge inverter solution for this project. The DC optimisers offered by this solution increase energy output from PV systems by constantly tracking the maximum power point (MPPT) at panel level. The power optimiser monitors the performance of each module and communicates performance data to an online monitoring portal for enhanced, cost-effective module-level maintenance. The key advantages of SolarEdge are provided in the table below.



SolarEdge is a globally leading manufacturer of solar DC optimised systems since 2010. Solgen Energy has forged a strong relationship with SolarEdge and is now the largest distribution and installer of SolarEdge products in Australia.

SOLAREEDGE FEATURES	DETAILS
Safe solar	- Panel-level DC isolation to remotely deactivate modules - Arc, fire and safety hazard mitigation
Efficient O&M	- Panel-level monitoring to pinpoint panel inefficiencies - Detailed real-time alerts and analytics
System integration	- No additional boxes to mount - Manual reset following a trip can be achieved without accessing the roof
Increased power density	- Install more modules on any roof - Uneven string length enables flexible design
Maximised energy harvest	- Impedance matching technology eliminates mismatch losses - More power from each module bin

MOUNTING SYSTEM

For the proposed carport array we propose S-Rack's CR1 mounting system made from hot dipped galvanized steel and a minimum 2.6m ground clearance at the shortest point.



S-Rack Australia Pty Ltd is part of the German-based NWI Group who are one of the largest manufacturers of mounting systems for roof, car port and ground mounted solar systems worldwide – with over 20 years of experience. Based in Alexandria, NSW, S-Rack offers economical, high-quality solar racking solutions supported by a 10-year product warranty.

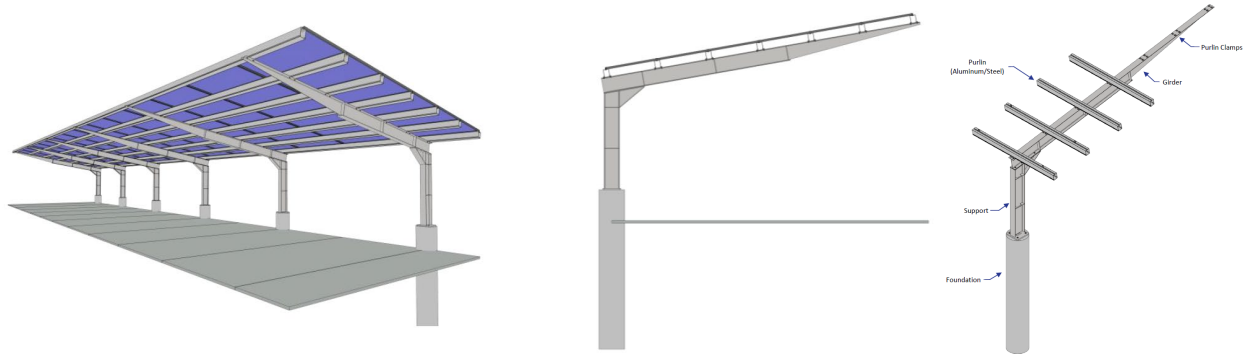


Figure 3. S-Rack's CR1 solar carport systems

