

Sustainable Power for the Harry Perkins Institute for Medical Research

► Location:



Murdoch, Western Australia

► Installation Date:

July, 2016

► Inverters:

SolarEdge 15kW x 2

► Smart Panels:

Canadian Solar
260W x 152



“The installation’s design flexibility, 25-year power optimiser warranty, and panel-level monitoring platform, are what helped to win the tender.”

► Ben Emery, Project Director



The Harry Perkins Institute decided to install a solar PV system on the roof of its research centre to help bring down their energy costs. In order to improve the lifetime profitability of the PV system, they turned to Rise Energy Services & Yeoman, who are experienced solar PV installers.

The Harry Perkins Institute is committed to maintaining an energy efficient building, and given the complex roof layout with multiple obstructions, both Ben Emery of Rise Energy Services and Rob Rohrlach of Yeoman knew that SolarEdge’s DC optimised inverters would provide an optimal solution.



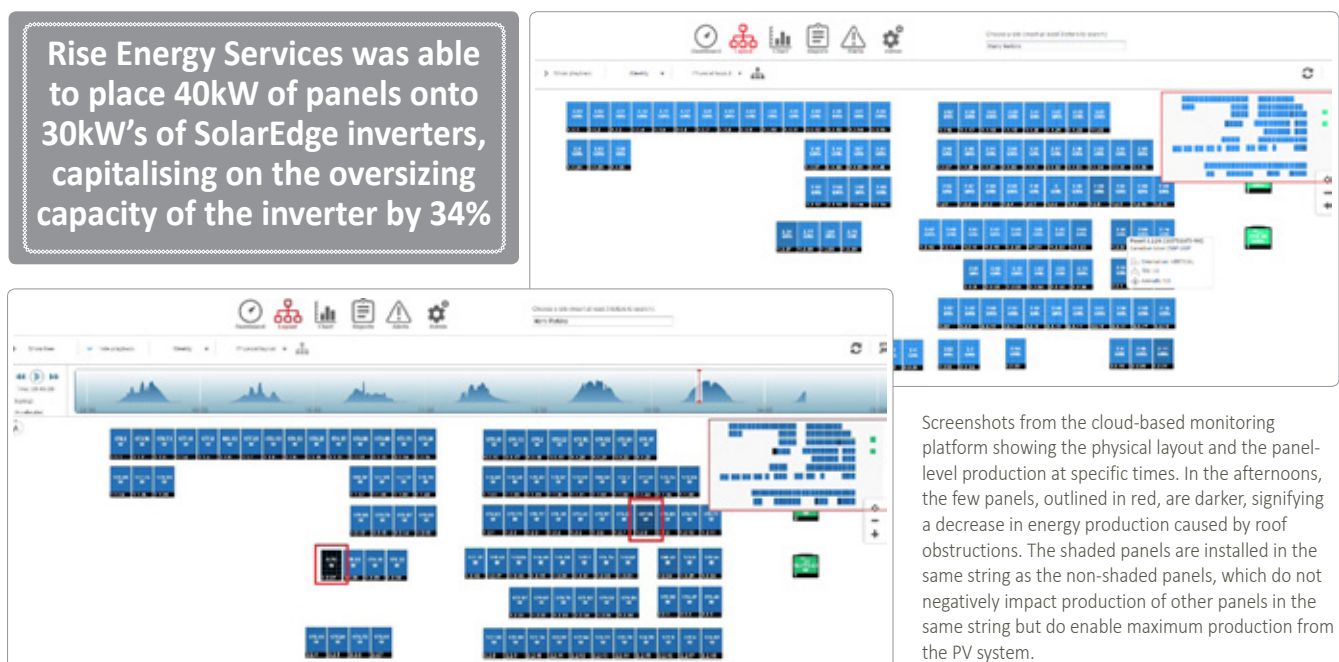
[Click here to see the drone video](#)

Increased Energy Yield

The SolarEdge DC optimised inverter system increases the site's energy production due to its maximum power point tracking (MPPT) per panel, which allows each panel to generate its own maximum possible energy. This eliminates power losses due to panel mismatch caused by a variety of sources, including tolerance and thermal mismatch, soiling, uneven aging, panel orientation, and partial shading.

The Harry Perkins Institute system specifically gets shading from roof level obstructions especially during the winter months. With a traditional inverter, the installer would have needed to design around these obstacles, significantly reducing the system size and energy production. According to the installer, the SolarEdge DC optimised inverter solution allowed for the optimal number of panels on the roof reaching a total of 152 panels.

Rise Energy Services was able to place 40kW of panels onto 30kW's of SolarEdge inverters, capitalising on the oversizing capacity of the inverter by 34%



“Colliers International is very pleased with the quality of SolarEdge inverters and power optimisers (integrated into the 260W Canadian Solar smart panels)”.

“Ongoing monitoring of the system performance is easy thanks to the SolarEdge online platform, which offers reporting features and allows for monitoring of performance and potential failures down to the individual panel level. We trust the detailed monitoring system coupled with extra-long warranties of up to 25 years for key components will limit potential maintenance costs for fault-finding and repairs to minimum levels.”

“Yeoman and Rise Energy Services were selected because they suggested the best technical and commercial solution suitable for the site conditions, which included SolarEdge power optimisers integrated into the 260W Canadian Solar smart panels. Their exemplary professionalism in delivering the proposed SolarEdge system was integral in achieving great satisfaction by our client.”

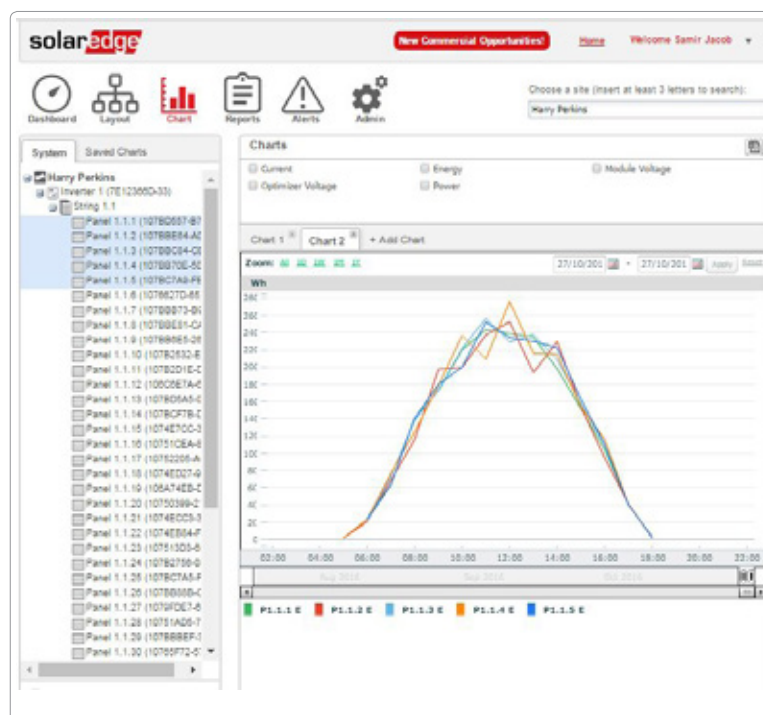
> Patrick Jeannerat, Sustainability Manager, Occupier Services



Solar Asset Management

The SolarEdge DC optimised inverter system with remote monitoring at the panel, string, and system levels acts as a strategic solar asset management tool to help minimise operation and maintenance (O&M) expenses. To ensure maximum profitability, the SolarEdge cloud-based monitoring platform provides clear tracking of the system's performance through a variety of features:

- > Comprehensive analytics tracking and reports of energy yield, system uptime, and financial performance
- > Pinpointed and automatic alerts for immediate fault detection, accurate maintenance, and rapid response
- > Remote troubleshooting for fast and efficient resolution with minimal onsite visits



The chart view from the SolarEdge monitoring platform shows the performance of individual panels. This graph illustrates that the power of each panel is optimal and independent of other panels in the same string. The dips show the effects of roof level obstructions.

“Our client is seeking the lowest levelised cost of energy over the next 25 years. SolarEdge helps us to deliver on that criteria.”

> Rob Rohrlach, Director

YEOMAN

Enhanced Safety

As a leader in cutting edge medical research, safety is always a top priority for the Harry Perkins Institute. So in order to best protect its solar asset as well as the property itself, they demanded that the installed PV system meet the most advanced safety standards.

With a built-in safety feature called SafeDC™, the SolarEdge DC optimised inverter system is designed to decrease DC current, as well as voltage from all string wires, when inverter or grid power is shutdown. The voltage of each panel is reduced to 1V.

