

Optimising PV at Cambridge University

Capacity: 78.75 kWp

Location: Cambridge, UK

Installation Date: May, 2013

Inverter: 6x SolarEdge SE12.5k

Power Optimisers: 315 x SolarEdge OPJ300 module embedded

Modules: 315 x SOLraise black 250wp

Installed by: Ecolution Renewables



“We chose SolarEdge because its technology benefits are far superior to other technologies. SolarEdge allowed Cambridge University to increase energy yield and improve maintenance capabilities. As an additional benefit, by using SolarEdge technology, we were able to design a beautiful PV system.”

Paul Bradbury, Project Manager of Ecolution Renewables

The SolarEdge power optimisers perform MPPT per module, allowing modules to be installed in a single string on roofs with varying tilts, orientations, and sun exposure. Combined with SolarEdge inverters, this allows increased design flexibility and maximum power generation.

In order to meet SAP requirements, Cambridge University wanted a PV system on the roof of its sports center. With help from its installer, Ecolution Renewables, Cambridge University investigated multiple different types of technologies to improve the PV system’s overall performance. After analysing the options, Cambridge University chose SolarEdge technology because its power optimisers and inverters maximised design flexibility, increased energy yield, and enhanced maintenance.

Maximum Design Flexibility

SolarEdge power optimisers maintain a fixed-string voltage at the inverter's input. This allows all available space to be utilised through unprecedented design flexibility and significantly longer strings - up to 50 modules per string (compared to a maximum of only 24 modules per string with a typical string inverter). Doubling the amount of modules per string decreases the amount of strings by 50%, resulting in a significant reduction in DC BoS costs.

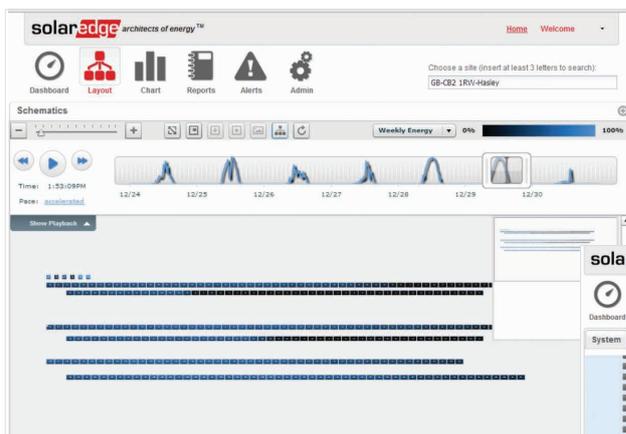
Additionally, SolarEdge technology allows strings of uneven length to be comprised of modules installed on varying roof tilts, orientations, and facets. This flexibility in design allowed Cambridge University's PV system to be aesthetically designed to complement the unique architectural structure of the building.

Increased Energy Yield through Module-Level MPPT

SolarEdge module-level power optimisers perform per module MPPT and therefore allow each module to generate its own maximum possible energy and therefore eliminating power losses due to module mismatch. Cambridge University will receive increased energy benefits from the first year of its system and onwards.

Enhanced Maintenance

SolarEdge power optimisers also enable performance monitoring at the module level. Alerts and underperforming modules are pinpointed on a virtual site map which offers Cambridge University fast and accurate maintenance and increased system uptime.



The chart view from the SolarEdge monitoring platform shows the performance of individual modules. This graph illustrates the power of each module is optimal and independent of other modules.

The layout view from the SolarEdge monitoring platform shows the system's physical layout. The blue color code indicates the performance level of each module and proves that each module requires its own individual MPPT. The individual tracking enables any issues to be pinpointed on the virtual site map.

