CASE STUDY



Enhanced Performance in Commercial Installations

Modules: 200 x Yingli Solar 250Wp

Inverters: 3 x SE16k

Power Optimizers: 100 x OP600 (2-to-1)

"The whole installation was a very straightforward and even simple process and I am really impressed with SolarEdge as a product – easy to install and just as easy to monitor remotely"



Simon Lord, SOL Electrical

Increased energy harvest, easy monitoring, PV safety and design flexibility – these are the four main benefits of a SolarEdge system, and these are exactly the reasons why Simon Lord from SOL Electrical chose SolarEdge for the commercial 50kW installation on top of an agricultural storage building in a farm near Bideford in Devon.

More Energy with Panel-Level MPPT

Simon Lord explains: "I chose to use SolarEdge due to the enhanced performance it can offer and the benefits of monitoring the system both for ourselves and the customer".

Traditional inverters track the maximum power point [MPP] collectively for a whole string of panels. Any mismatch in the MPP of the different panels in the string, will cause energy losses, as each panel requires a different combination of current and voltage to produce maximum power. Therefore weaker modules hamper the output of stronger modules in the array.

In commercial installations, panel mismatch can be caused by numerous factors such as panel damage during transportation, temperature variance, and unequal soiling. As PV installations age, uneven panel degradation occurs, resulting in an increasing mismatch between panels.

Panel-level power optimisers, on the other hand, track MPP individually for each panel, allowing it to work at its optimal current and voltage and guaranteeing that panels produce maximum power at all times.

Increased Uptime and Lower Maintenance Cost

Power optimisers also enable performance monitoring at the panel level and allow accurate troubleshooting, pinpointed on a virtual site map, for enhanced maintenance and increased system uptime.

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Installer Simon Lord adds: "We went for SolarEdge because the monitoring system identifies any faults or any modules' underperformance quickly and precisely, thus significantly reducing the cost of any remedial work."

Automatic System Shutdown for Superior Safety

Power optimisers enable automatic shutdown of panels' DC voltage whenever AC power is off or inverter is disconnected, ensuring safe installation, maintenance and firefighting.

"I believe that the safety features that SolarEdge offer have a growing relevance and importance. This was a key selling point for us when first discussing the install with the



customer." Says Simon Lord. "There was a fire recently at a local golf club where the fire chief commented on the BBC News about their concerns in attending a fire with a PV system on the roof. The PV system had nothing to do with the fire but the fire brigades were made aware that the system was still live even when isolated. SolarEdge clearly addresses this concern and risk."

Reduced Balance of System Cost through Design Flexibility

The design flexibility enabled by panel-level power optimisers allows for longer strings, which reduce the expenses on wiring, combiner boxes, fuses and other balance of system (BoS) components. The new SolarEdge OP600 power optimisers further reduce installation cost as they enable connection of 2 panels per one power optimisers, making them the most cost efficient optimisation solution for commercial systems.