

## Renewable Energy News

THURSDAY 28 MAY, 2009

### New System Boosts Solar Panel Efficiency

by Energy Matters



While [solar panel](#) technology has improved in leaps and bounds in recent years; issues such as variation in the performance of panels in array, roof utilisation problems, partial shading and a host of other challenges mean that up to a 20-30 percent loss in energy output can be experienced in a solar panel based system.

[SolarEdge Technologies](#) recently announced the availability of technology the company claims will improve power generation of residential and large-scale [solar farms](#) by up to 25 percent; while reducing costs and complexities for panel manufactures, systems integrators, installers and owners.

The SolarEdge system consists of 3 aspects. The first element is the SolarEdge PowerBox, based on an ASIC chip set. The PowerBox replaces the traditional junction box and can be embedded on the back of a panel. The PowerBox optimises energy output and enables performance tracking for each solar module.

The second element is the SolarEdge Inverter. As MPPT and voltage management are handled separately for each solar panel, the SolarEdge inverter is only responsible for DC to AC inversion, allowing the component to be simpler and more reliable than traditional inverters. So confident is SolarEdge in its reliability, the company includes a warranty of 12 years on the inverter.

The third element is the SolarEdge Monitoring web-based software. It offers per panel, string-level and system-wide monitoring; providing alerts on a wide range of issues affecting energy generation that might otherwise go undetected. The monitoring will even alert to the attempted [theft of solar panels](#) from the system being monitored.

The SolarEdge system has attracted a great deal of interest at the Intersolar exhibition currently under way in Germany. BP Solar and SolarEdge today announced a joint agreement to explore incorporating the system into [BP solar panels](#).