



Madeley Academy

Madeley Academy is a modern state-of-the-art academy based in the historic mining town of Madeley, Telford. The school reopened its doors in September 2009 and educates students from age 11 to 18.

The building is light and airy, and is equipped with an underfloor heating system, air conditioning and automated windows to maintain a comfortable working temperature all year round for students. There are 12 fully equipped ICT suites, and the CAD/CAM Design and Technology department has a very well-equipped facility, with CNC milling machines, laser engravers, and a bank of computers for students to use to produce project work.



The process

The academy is part of the Thomas Telford Multi Academy Trust, and Kembla have already installed solar at two sister schools, Walsall, and Sandwell. The excellent facilities at the Academy obviously require a lot of power and with a desire to reduce the Academy's impact on the planet's resources, it made sense for the school to reach out to Kembla.





What we did

Kembla supplied and installed a 403kWp system, which consists of 949 solar panels across several of the Academy buildings.

A SolarEdge modbus device was also installed to allow the school full export and import monitoring. Kembla also installed a SolarEdge firefighter gateway.

This great device monitors the system and in the event of a fire signals the inverters into standby mode. This increases the safety of the system complies with the requirements of the school's insurers.

Total system:

- ✓ 949 x Trina Vertex S 425W Mono
- ✓ 4 x SolarEdge 90kW three phase Synergy inverters
- ✓ 1 x SolarEdge Wattnode Modbus Meter for import and export monitoring
- ✓ 476 x SolarEdge P850 Optimisers
- ✓ Fire fighter gateway



Estimated production per year = **335MWh**



Equivalent trees planted: **2983**

Expected generation

This system is now expected to generate 335MWh per year which will result in a 26% reduction in electricity costs per year.

Why was installing a Solar PV system important for the school?

As a group of schools we wanted to make a bold statement about our commitment to renewable energy and the benefits it brings. The projects were underpinned by strong financial returns but have returned much broader benefits for our schools and students.

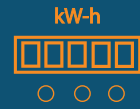
Tom Osbourne, Finance Director
The Thomas Telford Trust



Stats



CO2 Emissions reduced by 64 tonnes per annum



403kWp System



4.1 years payback



Full import and export Monitoring



SolarEdge firefighter gateway

