



CASE STUDY

St Katherine's School

This pioneering project is designed to reduce the schools carbon footprint, and to teach, innovatively, about sustainable energy and environmental stewardship, meeting curriculum requirements of Key Stages 3 & 4 in mathematics, science, geography and technology .

Part of a wider project, for St Katherine's to gain Special Status as a Science College, and become an educational centre of excellence in science.

A visible demonstration of solar energy which supports programmes, run in association with the Centre for Sustainable Energy in Bristol, designed to raise awareness of renewable energy in the local community.

The school has started with the provision of solar technology. Imagination Solar has installed both a solar water heating system to feed the hot water basins in the sixth form college and a solar photovoltaic (electric) system on the refurbished science block.

"As a Science College, we were keen to demonstrate renewable energy to engender a sense of responsibility about the environment within the student body and the surrounding community. The response has been positive and there is a sense of pride that the school is leading the way in raising awareness about environmental stewardship."

Dr Tim Hooker, Head of Science, St Katherine's.



solar water heating system



solar photovoltaic (electric) system



"We were thrilled to be involved in such an interesting and innovative project, which has such important educational value, particularly as it's a school local to us."
Clare Hawtin, Marketing Manager, Imagination Solar

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Dr Tim Hooker by inverters and meter for photovoltaic system

Photovoltaic System Description

A 5kWp (kilowattpeak) system installed on consoles on the flat roof of the recently refurbished science block.

Over the year, the electricity generated exceeds the energy demand of the lighting in the science block, with any excess being exported and sold to the national grid.

Inverters and meters have been installed in one of the science laboratories to allow monitoring of the electricity being generated. The data collected then supports the students educational needs.



Meter for solar water heating system

Solar Water Heating System Description

A 2-panel (5.4m²) system installed on the metal roof of the newly constructed sixth form college building using aluminium on-roof mounting frame.

The system provides the hot water for the hand basins in the toilets of the building, which are used by students and staff.

Data is collected on how much heat is generated, system temperatures and how many hours a day the system runs. This data is available via the meter stored in a tamper proof display in a corridor so students can take readings at any time.

Grants

An EST government grant was awarded, covering 65% of the installed cost.

A 'Clear Skies' government grant covered 60% of the installed cost.

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