elementenergy

Zuckerman Institute Building Integrated Photovoltaic Array

client: University of East Anglia, UK.

client brief: To incorporate a PV array which will provide renewable electricity and solar shading for an exhibition hall.

our solution: The detailed design of PV array including CFD analysis of summertime thermal comfort. Technical project management and PV procurement. Funding acquisition to allow implementation.

description: A 33 kWp PV array is fully integrated into the glazed exhibition area of the Zuckerman Institute for Connective Environmental Research (ZICER), a research centre at the University of East Anglia. The project makes use of semitransparent PV technologies to provide a comfortable internal environment by minimising problems of glare and solar overheating. The PV array is integrated into an openable façade which allows natural ventilation to both cool the exhibition area and cool the rear of the PV panels, improving their efficiencies. Element Energy directors Shane Slater and Ben Madden were the designers for the scheme and helped the client acquire funding.

The project forms a part of the larger European funded project UnivERsol, which will integrate PV into 26 University Campuses across Europe to act as an educational tool and a source of inspiration for future decision makers.

awards: Low energy building of the year 2005 – Building Magazine sustainability awards.

ZICER building (© BP Solar)

Exhibition hall shading provided by PV (© BP Solar)