Renewable Energy and Environmentally Sustainable Design

Case Studies

40 Albert Road – Fuel Cell Enclosure

Site: South Melbourne

Dates:
- Design Phase Commencement: August 2005
- System Commissioning: November 2005

Client: Szencorp

Project Goals:
To use Building Integrated Photovoltaic panels (BIPV) to provide weather protection for one of the first commercial fuel cell systems in Australia.

Project Features:
Following the successful installation of the Solar Pergola at 40 Albert Road [see separate case study] the client decided to use BIPV in the roof section of the enclosure surrounding the fuel cell.

The Building Integrated PV panels generate electricity, provide rain protection, provide shading but allow a degree of natural light

The generated electricity is fed into the electrical grid via the inverter installed to service the solar pergola.

In spite of the previous shading issues– where the building contractors installed equipment (eg a parapet and a television aerial) – shading problems cropped up again, this time with flashing over the silicon in the glass. This was done regardless of written and verbal advice and the building contractors had to return to rectify the problem.

With photovoltaic panels, it is essential that the silicon part of the collector panel remains unshaded to the greatest controllable extent.

Project Team:
- Warwick Johnston, Project Engineer, Going Solar
- Stephen Ingrouille, General Manager, Going Solar
- Steve Cook, Electrician

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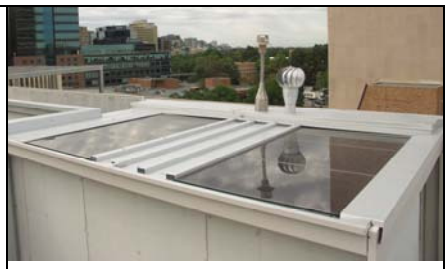

BIPV in the enclosure roof

Inside the enclosure showing the fuel cell & the natural light from the BIPV

40 Albert Road[1] - the fuel cell is in the centre of the rooftop

[1] Drawing courtesy of SJB Architects, Melbourne