Renewable Energy and Environmentally Sustainable Design

Case Studies

Box Hill TAFE – UPS, GIPV and Wind

Award Winning Project:
This project won the 2011 Clean Energy Council award for *Best Design and Installation of an Uninterrupted Power Supply System less than 10kWp*

Site:
Box Hill, Melbourne, Victoria

Dates:
- System Design: November 2009
- System Installation: July 2010
- System Commissioned: July 2010

Client:
Box Hill TAFE

Project Goals:
Design, supply and install of a grid-connected power system – PV and wind – complete with a battery storage system for uninterrupted power supply (UPS). The installation was designed to demonstrate a variety of technologies to TAFE college students.

[GIPV = Grid Interactive Photovoltaics]
[UPS = Uninterrupted Power Supply]
[LCD = Liquid Crystal Display]

Project Features:
- PV panels installed both flat-on-roof and on frames.
- Inter-connected wind generator.
- UPS to demonstrate battery storage and grid connection.
- Dedicated, ventilated, battery room.
- Data from SP-Pro inverter integrated with the Building Energy Management System.
- LCD Display in the public reception area.
- No metal to metal contact for increased life expectancy and corrosion avoidance.
- Premium quality German, Australian and American components selected.
- System size: 5.25kWp

Project Team:
- Duncan Macgregor, System Design and Lead Installer, Going Solar
- Jo Bradley, Project Manager, Going Solar
- Glenn Robertson, Electrical Contractor

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PV Panels & Wind Generator

PV Panels on Roof

Framing Support Rails

Dedicated Battery Room and Control Equipment

Case Studies

Batteries in leak-proof containers in ventilated room

Battery Room, Control Panel, Safety Signage and Equipment

Detail of Safety Signage