

Renewable Energy and Environmentally Sustainable Design Case Studies

Caulfield Grammar School

Site: Yarra Junction Campus, Victoria

Dates:

- Design Phase Commencement: 1998
- System Commissioning: 2000

Client: Caulfield Grammar

Project Goals:

Incorporate renewable energy technologies - as part of the education process - into the redevelopment of the existing accommodation cabins and the new Earth Studies Centre.

Project Features:

Stage 1 - Accommodation Cabins. The four cabins direct rainwater from the cabin roof to the ground storage tanks. Water is then pumped (by hand pump – which teaches the value of energy) to header tanks. Cold water is then supplied by gravity feed to the bathrooms and to the hot water header tank. The hot water tanks are located inside the enclosed box under the elevated cold header tank. The hot water tanks are heated by solar hot water panels and wood stoves. Students are supplied with a measured amount of firewood to tend the wood stoves. The four systems each include PV modules and batteries to provide cabin lighting

Stage 2 - Earth Studies Centre. The Earth Studies Centre incorporates passive solar features along with photovoltaic panels and a wind generator to supply batteries as part of the remote area power system. A solar hot water system connected to a wood stove is also included.

Project Team:

- Stephen Ingrouille, General Manager, Going Solar
- Alan Barlee, Director, Solar Rays

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Cabins - Before



Cabins - After

Control system and batteries at the cabins



Earth Studies Centre



Control system and batteries at the Earth Studies Centre