



power houses

Leading architects blend art and science to increase the energy efficiency of homes. Sally Rawlings surveys some environmentally-friendly designs on the Great Australian Dream.

State of Independence: This South Australian home provides its own energy and water supply (more details overleaf).

I got sunshine

The slatted roof of this specially designed solar verandah is angled so that the winter sun directly penetrates the house's northern windows, but in summer, the verandah is ventilated but entirely shaded.

"It's a deciduous effect without any moving parts," says its inventor Garry Baverstock, of WA-based Baverstock Murphy and Associates. "In between seasons, there's a variation of shade and light. It's a happy medium. Most verandahs provide shading in summer, but they're made out of metal, which heats up. This provides shade with ventilation. The slats are made of cedar, which is one of the most stable timbers in the world, as well as being a renewable resource.

"The big comment about houses with these verandahs is that it's light and bright inside all year round. It's an adjunct to passive solar design. It proves that you can get a good aesthetic result, working with scientific principles."

It works in economic terms as well. Incorporating terracotta tiles, massive limestone walls and other measures to increase thermal mass, this Perth home has energy costs 80% lower than a conventionally-designed counterpart thanks to the natural temperature regulation.

"Passive solar energy designs mean that you can still have a luxury lifestyle, but you don't have to pay for it," Baverstock says.

