



## SunPower panels lift energy savings in 18 new Western Australian apartments

In May 2009, the construction of eighteen leading-edge apartments was completed in Augusta, Western Australia. The Seine Bay Apartments have stunning ocean and river views, but they have something much more unusual: the latest sustainable systems and features all built-in, including a SunPower photovoltaic system on each rooftop. The company behind the development, New Wave Property, has for years been enthusiastic about energy-saving methods for private homes. But this is the first Seine Bay development to make sustainability the centre piece. New Wave Property were certain that the market was finally ready. They chose SunPower panels because their high efficiency meant fewer panels were needed on each roof. Their grouping could be uniform and compact, so the panels would beautifully complement the design of the apartments.

### PROJECT OVERVIEW

**Location:** Augusta, Western Australia  
**Completed:** April 2009  
**Installation type:** residential rooftop  
**System size:** 27 kWp  
**Covered roof area:** 151 m<sup>2</sup>  
**Products:** SPR-215-WHT  
**Number of panels:** 126

### BENEFITS

- Supplies about 50% of each apartment's electricity
- Saves each apartment owner AU\$ 346 per year
- Saves 45 tonnes per year of CO<sub>2</sub> for all 18 apartments
- Gives the apartments great buyer appeal

### PARTNERS

**Project Managers:**  
New Wave Property  
**Project Developer:**  
Seine Bay Pty Ltd  
**Solar panel manufacturer:**  
SunPower  
**Installer:** Planetary Power Solutions

***“Just 7 SunPower panels do the job of 12 ordinary panels, so we could group the panels on one side of each roof and make it all look very attractive.”***

James Challis,  
Seine Bay Pty Ltd

### **WHY THE SUSTAINABLE APARTMENTS WERE BUILT**

The owners of Seine Bay Pty Ltd knew that a lot of Australians were now looking for a lifestyle sea-change. In many cases that included sustainability. So they equipped the Seine Bay Apartments with insulated floors and walls, used local materials like limestone and timber for the building, put in evacuated-type solar hot water systems, and installed SunPower solar panels on every roof.

This has enormous appeal to buyers passionate about sustainability. But it has also appealed to other buyers who have simply been bowled over by the economic advantages of owning such an apartment.



### **TECHNICAL FINESSE**

Planetary Power Solutions, a SunPower authorised dealer in Augusta, advised against a proposal to feed each apartment's solar output into a single large inverter (which turns DC solar power into ordinary AC power). About AU\$ 40,000 was saved by instead using a small inverter for each apartment and backfeeding the power as AC into the main switchboard. This way, each apartment shares in reducing the total draw on the main grid and shares fairly in the cost saving from all the panels on all the roofs.

### **SHARP DROP IN ELECTRICITY COSTS**

The SunPower panels will supply each apartment with about 2,500 kWh per year. At the current buyback rate of electricity, this translates to around AU\$ 346 (in 2009). Electricity costs are expected to rise by 78% over the next two years, bringing the estimated annual savings to AU\$ 615. If a suitable feed-in tariff is implemented as expected in Australia, the saving per apartment could exceed AU\$ 1,200 a year.