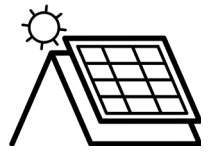




Case Study — Aboriginal Sustainable Homes PVKIT 2.0 & RibBracket™ I



At-A-Glance

Project Name

Aboriginal Sustainable Homes

Location

Moree, New South Wales, Australia

General Contractor

Aboriginal Sustainable Homes

Solar Contractor

Harvey Norman Commercial Solar

Solar Installer

Sam Tapscott (Plan A Electrical Pty Ltd)

Module Manufacturer

Trina (Trina 370W Honey TSM370DD08M.08)

Inverter Manufacturer

Fronius (Fronius Primo 3.0-1)

S-5! Supplier

No. 1 Roofing & Building Supplies

Industry

Residential Community

Situation

In line with its overall green building practices, Aboriginal Sustainable Homes wished to reduce the annual energy bills for its homeowners by supplementing the community's power generation with rooftop solar PV.

Result

The **RibBracket™ I** sheeting-only attachment solution along with the **PVKIT 2.0** pre-assembled components provided a simple, economical method for installers to “lay & play” modules with tested, engineered, attachment of modules to all metal roof types.

Project Stats

Roof Profile: Versiclad Spacemaker insulated trapezoidal, exposed-fastened metal roof

Roof Pitch: 10 degrees

Solar Project Size: 15.54kW (42 modules)

S-5! Products Supplied:

- PVKIT 2.0 (quantity 180)
- RibBracket™ I (quantity 180)



The Project

Aboriginal Sustainable Homes (ASH) designs and constructs indigenous sustainable homes that are culturally sensitive and compatible with cultural norms and practices of indigenous communities, while providing project management services, an education and training program designed to help indigenous people enter the construction industry, and employment and career opportunities.

Based in New South Wales and 51% indigenous owned, ASH consults and contracts to government bodies and remote Aboriginal communities with a focus on addressing the major issues within indigenous communities: Housing, Education, Employment and Health.

A new ASH community located in Moree features four homes with 15.54-kW of solar PV (total) secured to Versiclad Spacemaker insulated trapezoidal metal roofing using S-5!'s **PVKIT 2.0** and **RibBracket™ I**.

The Challenge

Given the metal roofs' trapezoidal profile, a traditional racking solution could not be used due to limited access to the roofs' purlins/rafters and because most racking systems require attachments to the structure for this type of profile.

Additionally, the remote location of this community – located 500 kilometers from the nearest major airport – would mean higher freight charges and a longer wait time for the delivery of traditional rails.

The Solution

S-5! offers a sheet-only attachment solution so the limited access to the purlins/rafters was an asset to mounting solar. The RibBracket is mounted directly onto the crown area of the trapezoidal sheet, straddling the profile. This sheeting-only attachment allows the bracket to be mounted anywhere along the ribs of the roof and can be quickly aligned allowing module installation “on-the-fly.” Together with the PVKIT pre-assembled components, the S-5! solution provided a rail-less, direct-attach mounting method.

The logistical challenge of delivery to a remote area was eliminated because the entire solar mounting solution of 23 kg could easily be transported in a single carton along with all tools required for installation. (This is 85% less weight and 90% less volume of rail components.)



Long-Term Outlook

The Aboriginal Sustainable Homes project was able to reduce its dependency on electricity and supplement its power generation by providing solar power for its electrical generation requirement using S-5!'s sheeting-only attachment solution.

How Did the S-5! Products Help?

- Cut mounting material costs in half, and eliminated all freight costs
- Simplified assembly using only 3 components
- Reduced installation costs by eliminating the requirement for long, cumbersome rails
- Minimized the amount of time workers must spend in harness
- Improved aesthetics
- All roof penetrations are tested by ASTM E2140—the most rigid static water testing in the construction industry
- Quality-assured by S-5's roof-lifetime warranty.

“We installed our first S-5! rail-less, direct-attach system on multiple houses in the Aboriginal Sustainable Homes project in Moree, NSW. We found the S-5! system worked absolutely seamlessly on the Versiclad Spacemaker insulated roof. It was extremely user-friendly, and very fast to install. Once we aligned the first row of panels with the string line and installed the bottom row of brackets, everything just worked and fitted very easily from there. The whole system is very lightweight and super easy to get up on the roof and install. We will definitely be using the S-5! rail-less, direct-attach system again, and recommend other installers definitely give it a try to experience the ease and simplicity of the whole system.”

—Sam Tapscott, Managing Director, Plan A Electrical, Moree, NSW Australia



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