GB-Sol

SOLAR POWER PORTAL UK AWARDS 2013 — WINNER — BEST DOMESTIC ROOFTOP INSTALLATION UP TO 10KW

Fully integrated Solar roof

Solar powered BIPV roof

When Arnold Gilpin Associates (www.a-g-a.co.uk) created the design for this riverside Bedfordshire eco home they employed Reading based Spirit Solar to design and install the fully integrated solar roof on the rear elevation.

The north elevation has a traditional roof covering but the rear south facing elevation used the GB-Sol RIS system to provide a complete solar roof.

This BRE weather tested system mounts directly on the membrane/roof decking, as can be seen in the pictures.

Design

The GB-Sol design engineer produced CAD drawings of the construction and PV panels with dimensions adjusted to meet the architects roof dimensions providing a full width, weatherproof array. Further liaison enabled us to develop specific flashings adapted from our standard designs to match the overall roof design.

The result is an aesthetic, sympathetic, compliment to the architectural design.

There was a fresh approach to the ventilated ridge too, as the top of the array was design to fit into the ridge structure to ensure maximum and more than adequate air movement to ventilate the pv panels and ensure maximum output from the array which was designed to provide just under 6.8kW.

Installation

Spirit Solar (www.spiritsolar.co.uk) are well known for their quality designs and installations which was confirmed by the efficient, careful and thorough way they worked on this project.

Spirit Solar's engineers had supplementary training on the RIS system by GB-Sol at our South Wales factory where all elements of the array are produced making them a fully accredited installer of this BIPV systems.

This knowledge of the system allowed for a fast sealing of the roof structure essential in the weather conditions that were prevailing at the time.

A truly UK designed and produced solution which as locally produced maximises it's CO^2 efficiency.

GB-Sol equipment used

GB-Sol panels – Manufactured in the UK all GB-Sol panels provide the lowest carbon footprint, and are designed with hidden bus-bars to provide an uninterrupted appearance that compliments the natural slate on the northern roof.

Mounting system – The RIS system has been tested by BRE under simulated hurricane conditions and has verified these excellent results in use even in coastal conditions since 1995. GB-Sol roof integrated 'RIS' mounting rails and cap strips are extruded in South Wales using Welsh recycled aluminum. The system has been in use, without issue, in the UK since 1995.

Engineered to be robust, long lasting, and fitted to the roof structure, the system is assembled on site from pre-configured components so no further cutting or drilling is required. The flashings even though designed specifically for the project are drilled on site to accommodate building tolerances. The RIS's lightweight construction means that it imposes a lower load on the battens/roof paneling than the tiles or slates that it replaces.