



Technical bulletin No 15

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INSTALLING RENEWABLES ON METAL ROOFS – A CHECKLIST

The large areas involved with metal roofing make them inviting places to install renewable energy systems for example, photovoltaic panels and gain the feed-in tariff while helping the environment.

With any type of roof there is more to placing renewable energy technology systems on the roof than meets the eye. Positioning photovoltaic panels for example, to gain best power generation is one thing, keeping a fully functional roof is another matter.

This checklist sets out many of the factors that should be considered by the building owner or person responsible for the renewables installation. This list is probably not exhaustive, but a good start.

The MCRMA strongly recommends that for retrofit applications on an ageing roof, a specialist consultant is employed to survey the roof and address the list of questions. MCRMA consultant members who can offer this service are listed at the end of this bulletin.

- 1 Structural. The additional dead load of the renewables installation and uplift wind loads. These loads are transferred to the external skin of the roof via special brackets and fixings. Can the roof construction take these loads? A structural engineer **should** be consulted.
- 2 There are many bespoke photovoltaic fittings for attaching to a roof, some provided by the roof manufacturer. Are they compatible, strong enough and tested? Do they impact the functional performance of the roof?
- 3 Non-roofing people will need to go on the roof for installation and maintenance. Is there safe access to the roof; fall arrest/restraint systems? Is a safe method of work/work permit available?
- 4 Is the roof non-fragile and walkable? Is an old roof sound, are there rooflights (they may be weathered and not obvious). Rooflights should **NEVER** be walked on. Will foot traffic on the roof cause indentations or damage? Has the PV array been designed to allow free walking area around the rooflights?
- 5 Will a photovoltaic cell affect the roof covering below – micro climate, debris build up, poulitice corrosion etc?
- 6 Is the roof material guaranteed? Will the presence of photovoltaics (and the work installing them) negate a guarantee or inhibit inspections that may be required?
- 7 Has the roofing system manufacturer and/or installer been consulted regarding the connection detail?
- 8 Has compatibility of materials, sealants etc. been considered?

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- 9 Will penetrations through the roof be needed for wiring or pipes? These need to be cut and sealed, internally and externally – a specialist operation.
- 10 Once photovoltaics are installed, should a leak or other mishap occur who would put it right? The photovoltaic installer, the roofer, or most likely, the building owner due to split responsibilities?
- 11 And finally, no work should be undertaken without the permission of the building owner

Metal roofing systems, in conjunction with renewable energy technology systems, provide a sustainable and environmentally sensible solution which with due consideration can provide an economic and trouble free installation.

MCRMA members offer a range of solutions but any proposed scheme should be evaluated at the early stages by any of the recognised MCRMA consultants:

A P Williamson Consultants Limited
Building Sciences Limited
Keith Kendal Consultants
Roofconsult Limited

Barry Jackson Associates
David Hicks Consultants
Michael Kilbey Associates Limited
3rd Dimension Designs



Examples of renewable energy technology systems



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