

Domestic Microgeneration – Installation of Solar Photovoltaic and Solar Thermal Equipment on a House:

Annex A – Supporting information

Background

Building Standards Division (BSD) are aware of difficulties caused by current approaches to determining if a warrant is required for the installation of solar PV and solar thermal equipment on existing houses. This has been highlighted by installer companies who work across local authority boundaries. In response, BSD held a workshop event in April 2011 involving interested parties to discuss the current issues and identify what action is necessary. It was clear from the views expressed that uniformity in interpretation within the building standards system could be improved.

These different approaches have caused unpredictability for installers and householders at a time when access to the financial incentives is driving ever increasing numbers of installations. Early action is required to streamline the process and support the government's drive for better regulation where possible and assist with the achievement of carbon reduction targets.

Concerns raised at the workshop were about the structural impact of these systems. The factors being the structural integrity of the existing building and the fixing methods. When a solar PV or solar thermal system is installed on a house, the existing structure must be able to withstand the equipment loads. If not, the structure must be strengthened or modified as necessary. It is therefore clear that the householder must be satisfied that an appraisal of the house structure has been done. However this does not mean that a building warrant is needed in all cases. Therefore a uniform approach to the approval process by verifiers would clarify matters.

Scope

Schedule 3 to regulation 5 of the building regulations sets out the descriptions of building and work that do not require a building warrant. Formal permission is not required but there must be compliance with building regulations. Type 1 applies to work to or in a house with a storey at a height of no more than 4.5m. There are some exceptions but type 1 allows a wide range of work to be done to one or two storey houses without a building warrant. In terms of solar PV and solar thermal equipment, the key exceptions are when the installation is considered to be an alteration of elements of structure, the roof, or external walls.

When the existing structure of the house is suitable for the solar PV or solar thermal equipment loadings and fixings, this should not be considered an alteration to an element of structure. Therefore a building warrant should not be necessary. However if the existing structure of the house requires strengthening, this should be considered an alteration, and a building warrant is necessary.

Solar PV or solar thermal equipment needs attaching to the building (for example using brackets or mounting frames) and will penetrate the roof covering or external wall, and any waterproofing membranes. Similarly, there

will be penetrations for associated services such as electrical wiring or small bore pipes. These are similar to other aspects of schedule 3 (for example type 7 balanced flues or type 13 extractor fans) and should not be considered an alteration to the roof or external wall. Therefore a building warrant should not be necessary.

The other exemptions to type 1 must still be considered but are unlikely to result in the need for a building warrant.

To further clarify this advice, BSD is considering issuing a Direction under the Building (Scotland) Act 2003 to all verifiers and local authorities.

Competent Installers

As already noted above, when this type of equipment is installed on an existing building, the building owner must be satisfied that the existing structure is able to withstand the loadings. Therefore a structural appraisal will always be needed and should be undertaken by a competent person. This may require involvement of a member of the [certification of design \(building structures\) scheme](#) established under the Building (Scotland) Act 2003 or a chartered engineer. BSD commissioned research into the structural impacts of these technologies on buildings and the final [report](#) (March 2010) is available on our website.

The use of a member of the [Microgeneration Certification Scheme](#) (MCS) is required for access to financial incentives. The [Construction Licensing Executive](#) (CLE) is a MCS certification body focusing especially on Scottish electrical, heating and plumbing companies.

BSD intends to develop improved guidance for householders who are considering the installation of these technologies