
BUILDING ADVISORY SERVICES BRANCH

BUILDING NOTE

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SOLAR PHOTOVOLTAIC INSTALLATIONS

The purpose of this building note is to advise the building certification industry that the installation of solar photovoltaic (PV) frames and panels requires a building permit prior to installation in Declared Building Control Areas of the Northern Territory.

The most common PV system is a grid connect system that produces energy from sunlight and transfers the converted energy back to the electricity grid. They are typically mounted on the roof of a house or building.

The Building Advisory Committee (BAC) has recently approved some PV panel support frames and fixings to metal clad roofs for inclusion in the NT Deemed to Comply Manual (DTCM). The approved DTCM data sheets only cover the support frame and fixing of the support frame.

The PV panels themselves are not covered by the DTCM data sheet and require separate certification as noted on the DTCM data sheet.

Where an installer seeks to obtain a building permit using the DTCM data sheet for the support frame, the building certifier should ensure that the manufacturer provides documentation certifying the structural integrity of the panels as part of the certification process.

The BAC notes that there is no specific information on pressure coefficients above or below solar panels in the current building regulations or in AS/NZS 1170.2.

Accordingly, in the interim a coefficient of $C_{pe} = -1.3$ should be used for flat panels which are fixed parallel and close to the roof sheeting on class 1 and 10 structures. Additionally no panels should be placed within 1200 mm of the eaves, barge and ridge unless otherwise determined by a certifying engineer (structural).

More recently the Cyclone Testing Station at James Cook University has raised concerns about the structural integrity of the panels. The BAC shares these concerns and strongly recommends that manufacturers pursue the testing of panels to ensure their suitability to withstand all regional wind speeds.

Accordingly, the BAC has advised the PV installation industry that until there is greater certainty (through testing) on the ability of panels to withstand regional wind speeds, there will be no exemption of the requirement to obtain a building permit.

By way of clarity, a building permit is not dependant on a product being included in the Deemed to Comply Manual. It is open to manufacturers to provide adequate documentation and technical data with regard to the panels and the mounting of panels for building certifiers and certifying engineers (structural) to sign off and issue building permits.



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