# Verification Method for an Electric Resistance Storage Water Heater Supplied by On-Site Renewables (Supply)

## Scope

This verification method applies to an electric resistive storage water heater, as part of a heated water service, that is supplied in part or in whole by a renewable energy system located on the same residential property as the water heater.

This verification method only applies to a water heater in new Class 1 and Class 10 buildings.

## Objective

The Objective of this Verification Method is as per Section BO2(e) of the 2019 National Construction Code Volume 3 as they apply to a water heater in a heated water service.

## Performance requirements

The water heater must, to the degree necessary, obtain heating energy as per Section BP2.6(3)(b) of the 2019 National Construction Code Volume 3.

## Verification

Compliance with the Performance Requirement is verified through the verification method described in Section BV2.1 of the 2019 National Construction Code Volume 3.

## Deemed to satisfy provisions

For a water heater in a heated water system that is supplied by an on-site photovoltaic system, the Performance Requirements above are satisfied by complying with the following:

1. The water heater is an electric resistance water heater that:
    a) Has delivery of not more than 700 litres in accordance with AS 1056.1; and
    *b)* Meets the requirements of the *Greenhouse and Energy Minimum Standards (Electric Water Heaters) Determination 2012*; and
    c) Is installed as per the requirements of Part B2 of the National Construction Code Volume 3; and
2. Accompanying the installation of the water heater is the installation of a new or additional photovoltaic supply that meets:
    a) The minimum capacity requirements as outlined in Table 11; and
    *b)* The requirements for creation of certificates under Section 20AC of the *Renewable Energy (Electricity) Regulations 2001*

***Table 11 — Minimum PV capacity requirements for differing water heater sizes and climate zones***

| **For a water heater tank size of:** (in accordance with AS 1056.1) | **Minimum PV capacity (kilowatt-peak) when installed in[#]:** | | | |
|---|---|---|---|---|
| | **Zone 1** | **Zone 2** | **Zone 3** | **Zone 4** |
| Not more than 220 litres | 1.05 | 1.11 | 1.23 | 1.43 |
| Greater than 220 litres and not more than 400 litres | 1.66 | 1.76 | 1.95 | 2.28 |
| Greater than 400 litres and not more than 700 litres | 2.34 | 2.47 | 2.75 | 3.21 |

*[#] The zones shown in this table are as per the Clean Energy Regulator's Postcode Zones for Solar Panel systems. See:*

*http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/Postcode-zone-ratings-and-postcode-zones-for-solar-panel-systems.aspx*

3. For the purpose of item 2, an on-site photovoltaic supply is accompanying the installation of the water heater if it is:
   a) Installed on the same residential property as the installed water heater;
   b) Installed within 90 days prior to the installation date of the water heater, as demonstrated by a Certificate of Compliance for the photovoltaic system installation and a Certificate of Compliance for the water heater installation; and
   c) Installed in such a way as to supply energy in one or a number of the following forms:
      - Directly supplied to the water heater
      - Supplied to the water heater via a controller that regulates the provision of energy from the on-site photovoltaic system to the water heater and, potentially, other electrical loads
4. For the purpose of item 3 (c), where the photovoltaic energy is supplied to the water heater either directly or via a controller, the energy supplied to the water heater must be of a form that is consistent with any product approvals for the water heater under the *Energy Products (Safety and Efficiency) Act 2000*.