

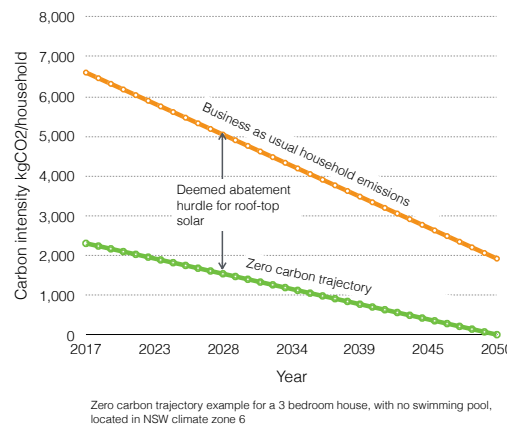
LOW CARBON BUILDINGS CRITERIA UNDER THE CLIMATE BONDS STANDARD

ELIGIBLE RESIDENTIAL BUILDINGS - AUSTRALIA

Trajectory

Residential buildings in Australia are eligible for certification if their operation emissions footprint meets the hurdle rate defined by the zero carbon trajectory for the dwelling type and location.

The diagram to the right shows the relationship of trajectory to the tenor of finance. A spreadsheet is available from Climate Bond that contains all the trajectories will confirm hurdles for each dwelling type and location.



The preferred approach to identifying eligible residential buildings is to use actual data from the operation of the building to quantify the emissions footprint and apply the appropriate zero carbon trajectory as a threshold. This is usually not possible for residential buildings as the relevant energy use data is not readily available at scale, as is the current situation in Australia.

In the absence of such data, Climate Bonds Initiative has developed proxies which can be used to identify eligible residential buildings in Australia based on other relevant information. There are a number of proxies available for residential buildings in New South Wales, Victoria and Tasmania specifically. Information on those is available [here](#). An additional proxy has been developed for use in all states except Western Australia using solar rooftop installations. Which proxy is used for residential buildings in New South Wales, Victoria and Tasmania is at the issuer's discretion.

Two pathways for identifying eligible residential buildings via solar rooftop installations

This eligibility criteria for residential buildings in Australia is based on the high impact which rooftop solar installation has on reducing the emissions footprint of those buildings. Technical analysis has been undertaken to determine what size installation is sufficient for a particular residential building for that building to be deemed to be eligible.

The analysis includes variables such as the type of residential building (house or apartment), size of the building (number of bedrooms), presence of natural gas supply, presence of a swimming pool, the location within Australia (postcode, and hence climate zone and solar intensity), as well as the installed capacity of any rooftop solar system (kW). The resulting proxy, the *Rooftop Solar Proxy*, is described below and associated targets detailed in Appendix A.

However, the information available to lenders is a key factor in creating useful approaches for identifying eligible residential buildings. The information which is systematically collected by most providers of home loans in Australia does not currently include the details of any rooftop solar installation or other key information, except for the type of residential building and the location within Australia. To enable lenders to leverage existing

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information while at the same time adjusting their systems to capture the relevant information, a *Simplified Rooftop Solar Proxy* has also been developed. The simplified approach allows lenders to identify eligible residential properties based on their type, location and the installed capacity of rooftop solar system.

Use of the Simplified Rooftop Solar Proxy is time-limited, and can only be used for residential buildings where the financing was confirmed prior to 30 June 2022. This limit on the use of the simplified approach is intended to encourage lenders to put in place the information collection processes which will enable future use of the more detailed Rooftop Solar Proxy.

Rooftop Solar Proxy

Residential properties with solar installations that are sufficiently sized given the characteristics of the residential buildings they are installed on can be deemed to be eligible. Appendix A provides the necessary solar installation sizes for each characteristic dwelling type for representative regions in Australia. These requirements have been determined based on the net emissions benefit necessary from the rooftop solar to meet the zero carbon trajectory, deemed using the Clear Energy Regulator factors assuming a 20 year life for the panels.

The relevant characteristics of the residential buildings shall be confirmed through information provided to the lender and maintained as part of its internal systems. The size of rooftop installations shall be confirmed through either the allocation of an appropriate number of STCs or an installation certificate or equivalent documentation. STCs are Small-scale Technology Certificates issued under the Australian Government's Small-Scale Renewable Energy Scheme, which is managed by the Clean Energy Regulator.

Simplified Rooftop Solar Proxy

The Simplified Rooftop Solar Proxy allows certain residential buildings to be deemed to be eligible based on a reduced amount of information on the characteristics of the residential buildings. The simplified proxy allows eligibility to be assessed within the constraints of the data currently available from existing financing in the Australian market. However, the Simplified Rooftop Solar Proxy can only be used for residential buildings where financing was confirmed by the lender prior to 30 June 2022. This period allows for the change of processes and improvement of loan origination documentation to capture the information on building characteristics necessary to apply the Rooftop Solar Proxy.

The size of rooftop installations shall be confirmed through either the allocation of an appropriate number of STCs or an installation certificate or equivalent documentation.

Additional Information

Worksheets are available from the Climate Bonds website for each of the Rooftop Solar Proxy and Simplified Rooftop Solar Proxy that provide a look-up functionality to obtain the requirements for by rooftop solar by postcode.

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The trajectories used to establish the hurdle rates for Apartments; Semi-detached and terrace houses; and Separate house use a 2017 baseline year derived from household consumption statistics published by the Australian Energy Regulator (AER) and the Australian Bureau of Statistics (ABS).

The climate zones used in the proxy are consistent with the National Construction Code and can be viewed at this link - <https://www.abcb.gov.au/Resources/Tools-Calculators/Climate-Zone-Map-Australia-Wide>.

Aggregation of a portfolio of dwellings with rooftop solar installation can be undertaken on the basis that each dwelling within a portfolio achieves qualification on an individual basis.

The Simplified Rooftop Solar Proxy does not include sensitivity to the size of the dwelling so is less reliable on a dwelling by dwelling basis than the Rooftop Solar Proxy. However, the targets are weighted such that the aggregate performance in any portfolio of financing will remain similarly robust between the Simplified Rooftop Solar Proxy and the Rooftop Solar Proxy.

Proxies adopted by Climate Bonds for qualification against the low carbon criteria are reviewed periodically and it is anticipated any future review of the Rooftop Solar Proxy will additionally consider the requirements for battery storage to complement new generation.

Climate Bonds would like to acknowledge the assistance provided by CBA in supporting the development of this proxy for residential buildings in Australia.

CBI amended this proxy in April 2021 to extend the time limit applied to the Simplified Rooftop Solar Proxy by 18 months to allow for business disruption due to Covid 19.

APPENDIX A - ROOFTOP SOLAR PROXY REQUIREMENTS

NSW (INCLUDING ACT FOR CLIMATE ZONE 7)

DEEMED PROXY PV (KW) - NSW - CLIMATE ZONE 2

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.2	2.3	3.3	5.0
	Yes	No	2.6	2.8	4.0	6.0
	No	Yes	3.4	3.6	5.0	7.2
	Yes	Yes	3.9	4.1	5.7	8.2
Semi/Terrace house	No	No	1.3	1.5	2.5	4.9
	Yes	No	1.6	1.8	3.0	6.0
	No	Yes	2.1	2.4	3.7	7.1
	Yes	Yes	2.4	2.7	4.3	8.1
Apartment	No	No	1.0	1.7	2.9	4.8
	Yes	No	1.2	2.0	3.5	5.8

DEEMED PROXY PV (KW) - NSW - CLIMATE ZONE 5

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.6	2.8	3.7	5.1
	Yes	No	3.2	3.3	4.4	6.1
	No	Yes	4.5	4.7	5.9	7.9
	Yes	Yes	5.0	5.2	6.7	8.9
Semi/Terrace house	No	No	1.6	2.1	3.1	5.0
	Yes	No	1.9	2.6	3.8	6.0
	No	Yes	2.8	3.7	5.1	7.7
	Yes	Yes	3.1	4.1	5.7	8.7
Apartment	No	No	1.4	2.2	3.0	4.5
	Yes	No	1.7	2.6	3.5	5.4

DEEMED PROXY PV (KW) - NSW - CLIMATE ZONE 6

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.8	3.0	3.8	4.7
	Yes	No	3.4	3.5	4.5	5.6
	No	Yes	5.0	5.2	6.3	7.7
	Yes	Yes	5.5	5.7	7.0	8.6
Semi/Terrace house	No	No	2.1	2.6	3.6	4.7
	Yes	No	2.4	3.1	4.3	5.6
	No	Yes	3.7	4.5	6.0	7.7
	Yes	Yes	4.1	5.0	6.7	8.6
Apartment	No	No	1.7	2.6	3.3	3.9
	Yes	No	2.1	3.1	4.0	4.6

DEEMED PROXY PV (KW) - NSW AND ACT - CLIMATE ZONE 7

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	3.3	3.2	4.5	6.5
	Yes	No	3.8	3.7	5.2	7.5
Semi/Terrace house	No	No	2.2	2.3	3.7	5.8
	Yes	No	2.5	2.6	4.3	6.7
Apartment	No	No	2.0	2.8	3.7	5.9
	Yes	No	2.3	3.3	4.2	6.7

NORTHERN TERRITORY

DEEMED PROXY PV (KW) - NORTHERN TERRITORY - CLIMATE ZONE 1

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	3.8	4.2	5.2	6.2
Semi/Terrace house	No	No	2.5	3.2	3.9	6.9
Apartment	No	No	2.4	3.4	4.0	5.6

QUEENSLAND

DEEMED PROXY PV (KW) - QUEENSLAND - CLIMATE ZONE 1

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.8	3.2	4.3	5.8
	Yes	No	3.0	3.4	4.6	6.3
Semi/Terrace house	No	No	2.0	2.5	3.6	5.6
	Yes	No	2.1	2.7	3.9	6.0
Apartment	No	No	1.8	2.7	4.0	4.6
	Yes	No	1.9	2.9	4.3	5.0

DEEMED PROXY PV (KW) - QUEENSLAND - CLIMATE ZONE 2

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.3	2.4	3.5	5.3
	Yes	No	2.6	2.6	3.8	5.9
	No	Yes	3.6	3.7	5.1	7.5
	Yes	Yes	3.9	3.9	5.5	8.0
Semi/Terrace house	No	No	1.4	1.7	3.0	5.4
	Yes	No	1.5	1.9	3.3	5.9
	No	Yes	2.2	2.7	4.5	7.5
	Yes	Yes	2.4	2.9	4.8	8.0
Apartment	No	No	1.2	1.8	2.7	5.3
	Yes	No	1.3	2.0	3.0	5.8

DEEMED PROXY PV (KW) - QUEENSLAND - CLIMATE ZONE 3

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	3.1	3.5	5.0	6.4
	Yes	No	3.3	3.7	5.3	6.9
Semi/Terrace house	No	No	2.8	3.1	4.4	4.9
	Yes	No	3.0	3.3	4.8	5.3
Apartment	No	No	2.1	2.8	4.5	5.5
	Yes	No	2.2	3.0	4.8	5.9

DEEMED PROXY PV (KW) - QUEENSLAND - CLIMATE ZONE 5

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.1	2.1	3.2	4.7
	Yes	No	2.3	2.4	3.5	5.2
	No	Yes	3.7	3.8	5.4	7.6
	Yes	Yes	3.9	4.1	5.8	8.1
Semi/Terrace house	No	No	0.9	1.5	2.4	4.8
	Yes	No	1.0	1.7	2.7	5.3
	No	Yes	1.7	2.7	4.2	7.7
	Yes	Yes	1.9	2.9	4.5	8.3
Apartment	No	No	1.4	1.6	2.2	4.7
	Yes	No	1.5	1.8	2.4	5.3

SOUTH AUSTRALIA**DEEMED PROXY PV (KW) - SOUTH AUSTRALIA - CLIMATE ZONES 5/6**

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.0	2.1	3.1	4.8
	Yes	No	2.6	2.7	4.0	6.0
	No	Yes	3.7	3.8	5.3	7.8
	Yes	Yes	4.3	4.4	6.2	9.1
Semi/Terrace house	No	No	1.4	1.7	2.6	4.5
	Yes	No	1.8	2.1	3.4	5.8
	No	Yes	2.6	3.0	4.5	7.4
	Yes	Yes	3.0	3.5	5.2	8.6
Apartment	No	No	1.4	1.9	2.4	4.2
	Yes	No	1.8	2.4	3.0	5.3

TASMANIA

DEEMED PROXY PV (KW) - TASMANIA - CLIMATE ZONE 7

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	4.5	4.6	6.8	10.0
	Yes	No	12.9	13.3	19.6	28.6
Semi/Terrace house	No	No	2.8	3.4	5.7	10.2
	Yes	No	7.9	9.8	16.3	29.2
Apartment	No	No	2.6	3.2	5.5	10.0
	Yes	No	7.6	9.3	15.8	28.7

VICTORIA

DEEMED PROXY PV (KW) - VICTORIA - CLIMATE ZONE 4

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	3.2	3.7	5.5	8.0
	Yes	No	3.8	4.3	6.5	9.5
Semi/Terrace house	No	No	2.1	2.7	3.7	7.8
	Yes	No	2.5	3.2	4.4	9.2
Apartment	No	No	3.6	3.4	4.8	5.1
	Yes	No	4.3	4.0	5.6	6.0

DEEMED PROXY PV (KW) - VICTORIA - CLIMATE ZONE 6

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	2.6	2.7	3.7	5.3
	Yes	No	3.4	3.5	4.9	6.9
	No	Yes	5.0	5.1	6.7	9.1
	Yes	Yes	5.8	6.0	7.9	10.7
Semi/Terrace house	No	No	1.5	1.9	3.0	4.8
	Yes	No	2.0	2.5	3.9	6.4
	No	Yes	3.0	3.7	5.4	8.4
	Yes	Yes	3.5	4.4	6.3	9.8
Apartment	No	No	1.4	2.0	3.2	4.9
	Yes	No	1.9	2.6	4.2	6.4

DEEMED PROXY PV (KW) - VICTORIA - CLIMATE ZONE 7

Dwelling Type	Dwelling has Gas?	Dwelling has a Swimming pool ?	Number of Bedrooms			
			1	2	3	4+
Separate house	No	No	3.1	3.2	4.6	7.0
	Yes	No	3.8	4.0	5.7	8.7
Semi/Terrace house	No	No	1.5	2.0	3.5	6.9
	Yes	No	1.8	2.5	4.4	8.6
Apartment	No	No	1.7	1.9	3.1	6.6
	Yes	No	2.1	2.3	3.8	8.2

Notes:

- The PV size requirements presented in the tables above are applicable to approximately 95% of postcodes each climatic region. Confirmation of actual for any postcode should be obtained from the Australia Rooftop Solar Criteria worksheet.

APPENDIX B - SIMPLIFIED ROOFTOP SOLAR PROXY

NEW SOUTH WALES AND ACT*

Dwelling Type	Climate Zone	(kW)
Separate House	2	4.3
	5/6	5.0
	7	7.1
Apartment	2	2.3
	5/6	2.9
	7	3.4

*(Only for Climate Zone 7)

NORTHERN TERRITORY

Dwelling Type	Climate Zone	(kW)
Separate House	1	5.0
Apartment	1	3.4

QUEENSLAND

Dwelling Type	Climate Zone	(kW)
Separate House	1/2	4.7
	3	5.2
	5	4.1
Apartment	1/2	2.7
	3	3.3
	5	1.9

SOUTH AUSTRALIA

Dwelling Type	Climate Zone	(kW)
Separate House	5/6	4.3
Apartment	5/6	2.5

TASMANIA

Dwelling Type	Climate Zone	(kW)
Separate House	7	19.8
Apartment	7	10.6

VICTORIA

Dwelling Type	Climate Zone	(kW)
Separate House	4	6.6
	6	5.0
	7	6.1
Apartment	4	4.3
	6	2.8
	7	2.7