



# Fact Sheet:

## Renewables and Offsets in Green Star

## 1. Introduction

This document provides an overview of the definitions and application of renewables and offsets in the Green Star Rating system. This approach is informed by:

- GBCA's Strategic Direction - in particular the Carbon Positive Roadmap, particularly the priorities, outcomes and approach; and
- Alignment and consistency with regulatory and voluntary schemes.

## 2. Strategic Direction

The Green Building Council of Australia's (GBCA's) strategic plan calls for the development of a carbon positive roadmap for industry. This roadmap aims to support our industry as we strive to keep global warming to within the 1.5°C target outlined in the Paris agreement. The roadmap will complement the recommendations established by the Australian Sustainable Built Environment Council (ASBEC) in its landmark report Low Carbon, High Performance, and it will support the World Green Building Council's Advancing Net Zero project.

### Priorities

In close consultation with industry, the GBCA has drafted five outcomes to underpin the roadmap:

- Commit to a permanent transition to buildings and fitouts with no carbon emissions
- Switch, install, or procure renewable energy
- Build, operate, or occupy low energy intensive buildings and fitouts
- Support the transition to electric vehicles
- Adopt net zero carbon products, materials and services

The guidance in this document aims to encourage the third outcome: Investing in resilient and renewable energy infrastructure in Australia.

GBCA aims to encourage a permanent transition to renewable energy in Australia. Green Star responds to this by equally recognising the emissions reductions benefits of on-site renewable energy systems, GreenPower, or off-site renewables.

## 3. Definitions

The following definitions for are used in this document:

- **Renewable Energy:** Renewable energy is any source of energy that can be used without depleting its reserves including sunlight or solar energy, wind, wave, biomass and hydro energy<sup>1</sup>.
- **On-site renewables:** Renewable electricity that is supplied directly to the building. The location of the renewable generation does not need to occur on the same site as the building, it may occur adjacent to it for example. The key is the direct supply to the asset (known as 'behind the meter'), and the traceability of the energy supply to the building or fitout itself.

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<sup>1</sup> NABERS Glossary of terms

<https://nabers.gov.au/public/webpages/ContentStandard.aspx?module=50&template=2&id=430>

- **Off-site renewables:** Renewable electricity that is supplied to the grid, which in turn distributes energy to the building. As above, the location of the generator does not dictate whether it's considered off-site or on-site. Rather, it is that the generator supplies the grid directly without such supply being directly used by the building itself.
- **Accredited off-site renewables:** Renewable electricity supplied through the grid that has received GreenPower® or GreenPower® Connect accreditation. GreenPower® is the only voluntary government accredited program that enables an electricity provider to demonstrate that the purchased electricity is helping develop new renewable infrastructure in Australia.
- **Offsets:** Offset Units are defined by the [National Carbon Offset Standard for Buildings](#) as: '*Represents reductions of greenhouse gases or removals of greenhouse gases from the atmosphere by sinks, relative to a business-as usual baseline. Offset units are tradeable and can be used to negate (or offset) all or part of another entity's emissions*'.

The following terms are also useful in understanding this document:

- **Small-scale technology certificate (STC):** A certificate generated for systems that generate less than 100kw of power per year. STC's generated behind the meter do not need to be surrendered.
- **Large generation certificate (LGC):** A certificate generated for systems that generate more than 100kw of power per year. LGCs can be surrendered to the electricity regulator (in which case the certificate cannot be used by a second entity to make a claim). Alternatively, LGCs can be sold to a second entity, which can then make a claim against its liability.
- **Renewable energy certificate (REC):** Both STCs and LGCs are examples of Renewable Energy Certificates.

#### 4. Making credible renewable electricity usage claims

To make claims with regards to renewable electricity usage, GBCA has reviewed the principles of [RE100](#), as outlined in '[RE100 technical briefing: Making credible renewable electricity usage claims](#)'<sup>2</sup>. We have also reviewed principles established by NABERS with regards to renewable energy use. Where the principles between schemes conflict, we have chosen the guidance that is most relevant to the Australian built environment.

##### Making credible claims in Australia when installing on-site renewables

The following scenarios can be claimed as on-site renewable energy for purposes of Green Star. The scenarios referenced are explained in more detail in **Appendix B**:

- On-site systems are present and only STCs are generated (Scenario A)
- On-site systems are present and LGCs are generated and retired (Scenario B)
- On-site systems are present and LGCs are generated and sold (Scenario C)
- On-site systems are present and LGCs are generated and sold, and offsets are purchased (Scenario C)

##### Making credible claims in Australian policy context when procuring electricity

The following claims are considered renewable energy in Australia for purposes of Green Star:

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<sup>2</sup> See Appendix A, and <http://www.recs.org/documents/re100-technical-briefing--making-credible-renewable-electricity-usage-claims>

- GreenPower® or GreenPower Connect® (Scenario E)
- A Power Purchasing Agreement (PPA) between a generation source and user, where the Australian Renewable Energy Certificates are retired to the regulator (Scenario F)
- Grid electricity is purchased, and Australian Renewable Electricity Certificates (RECs) are purchased by the project and retired to the regulator. (Scenario I)

### Promoting innovation and leadership

GBCA recognises that renewable electricity procurement in Australia is rapidly evolving due to national policy changes, rapidly developing technical solutions, and new procurement models.

**Appendix B** includes an analysis of how different scenarios are recognised, or not, by Green Star, NABERS, the Australian Government's National Carbon Offset Standard, and RE100. Where project teams believe their scenario is not addressed by this table, or where the scenario is not represented accurately by this document, they are encouraged to contact us for a ruling on whether the scenario can be recognised as renewable energy for the purposes of Green Star. GBCA notes that this ruling will take longer than the standard 10 day response time due to the complexity of the issues involved and level of consultation required.

## 5. Offsets in Green Star

Offsets can be used to claim a reduction in Greenhouse Gas Emissions under certain limited circumstances.

In the components of Green Star rating system where offsets eligible under the National Carbon Offset Standard are accepted, they may only be applied to the following:

- Scope 1 emissions from refrigerant leakage or minor/residual fossil fuels on site<sup>3</sup>
- Scope 3 emissions as detailed in the relevant innovation challenge.

GBCA and Green Star recognise all National Carbon Offset Standard eligible offset units. These are offset units that have been deemed to meet the National Carbon Offset Standard's offsets integrity principles, and are listed in Appendix A of the standard.

GBCA encourages project teams to consider offset units where the reduction claim is based on sequestration activities. These are offsets dedicated to sequestration of carbon through land use, land use change, and forestry, through others may also exist.

Green Star aims to drive investment in resilient and renewable energy infrastructure in Australia. For Green Star, renewable electricity through onsite generation or offsite procurement is the only mechanism available to reduce emissions resulting from electricity use in buildings, fitouts or communities.

Offsets will not be accepted as a mechanism to reduce greenhouse gas emissions from electricity consumption or major uses of fossil fuels in Green Star.

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<sup>3</sup> For existing buildings only

### Offsets in existing rating tools

The use of Offsets have been previously approved as an acceptable way to reduce the greenhouse gas emission impact related to electricity in both:

- Green Star – Performance: this is written into the Submission Manual v1.0 & v1.1 and unchanged in v1.2
- Green Star – Interiors: offsets have been previously accepted through individual project Credit Interpretation Requests.

As a result of engagement and a review of priorities, offsets will no longer be accepted as a mechanism to address carbon impacts from electricity in Green Star – Interiors projects. A small number of projects have received guidance from GBCA that offsets are allowed, and can still claim offsets as noted. No other projects will be able to make the claim against them.

GBCA notes that offsets will still be accepted in Green Star – Performance for projects that have registered under v1.0, v1.1, and v1.2. However, projects are advised that the use of offsets will be phased out from the next revision onwards. While this will not affect currently registered projects during their three year review cycle, they will be required to shift away from offsets when seeking certification beyond the three year cycle.

## 6. Next steps

This document provides general guidance to support Green Star Projects. If you have queries on how this guidance applies to your project, please contact your Technical Coordinator.

This document is a living document. It will be updated with the best available guidance as it becomes relevant. Projects are only required to follow this document that was applicable at the time of registration.

The work to date is part of a broader discussion on carbon and greenhouse gas emissions that will continue with the release of GBCA's Carbon Positive Roadmap. We look forward to working collaboratively with industry on outlining how the built environment can continue to lead in combatting climate change and deliver healthy, resilient, and positive places for people and the natural environment.

## 7. Changelog

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Version	Date	Comments
1.0	6/08/2018	Initial release

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## Appendix A: Review against RE100 principles

The RE100 approach is based on the concept of 'electricity attributes'. Renewable electricity in a shared grid is not physically delivered to the purchaser or traceable, so the use of a specified renewable electricity on a shared grid can only be determined by defining, tracking and allocating attributes contractually from generation to end use. Below is a summary and interpretation of the information required by RE100 to make a credible renewable electricity usage claim.

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<b>1. Accurate and credible generation data</b>	<ul style="list-style-type: none"><li>• Have access to all 'static' information about generation (fuel type, location, date of operation)</li><li>• Have access to the 'dynamic' electricity generation data, from a revenue grade meter.</li><li>• All electricity generation data must be third party verified.</li></ul>
<b>2. Renewable Energy Attribute aggregation</b>	<ul style="list-style-type: none"><li>• Any claims can be substantiated through documentation of all attributes of the electricity (Renewable Energy, plus any environmental or social benefit)</li><li>• All attributes certificates must be owned by the same party and none can be sold off.</li><li>• All renewable energy attribute certificates must be third party verified.</li></ul>
<b>3. No double counting of generation or attributes</b>	<ul style="list-style-type: none"><li>• Exclusive sale verifying exclusive delivery from generators, suppliers to consumer for permanent end use (specified in contract)</li><li>• Legal enforceability of the contract (that is, the user has property rights).</li><li>• Tracking – the attributes are reliably tracked from generator right through to the consumer</li><li>• The tracking is independent and transparent.</li></ul>
<b>4. Exclusive claim by users - no double counting</b>	<ul style="list-style-type: none"><li>• The buyer cannot claim unless they own and retire the attribute certificates related to the energy use.</li><li>• If the user is in a location where there are separate certificates for different attributes, renewable energy attributes and carbon attributes must be owned by the same entity.</li></ul>
<b>5. Geographic market limitations</b>	<ul style="list-style-type: none"><li>• The power purchased must be connected to the same grid. In Australia, the generator and user must be in the National Electricity Market. For geographic regions not in the NEM (i.e. Western Australia and the Northern Territory) the generator and user must be connected to the same grid.</li></ul>
<b>6. Vintage limitations</b>	<ul style="list-style-type: none"><li>• The vintage of attributes and certificates must be reasonably close to the year of electricity consumption.</li><li>• For Green Star, this is deemed to be within the timeframe for Green Star certification.</li></ul>

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## Appendix B: Renewable Electricity procurement scenarios for Green Star

On-site renewables				Off-site renewables				Offsets			
Scenario A	B	C	D	E	F	G	H	I	J	K	L
Electricity from on-site systems where	Electricity from on-site systems where:	Electricity from on-site systems where	Electricity from on-site systems where:	Renewable electricity purchased from retailers accredited through:	Renewable electricity purchased directly from a generator / retailer through a PPA or contract where	Renewable electricity purchased directly from a generator / retailer through a PPA or contract, where:	Renewable electricity purchased directly from a generator / retailer through a PPA or contract where:	Grid electricity is purchased and:	Grid electricity is purchased and:	Grid electricity is purchased where:	Grid electricity is purchased and:
<ul style="list-style-type: none"> <li>• STCs are generated</li> <li>• certificates are sold.</li> </ul>	<ul style="list-style-type: none"> <li>• LGCs are generated</li> <li>• certificates are retired</li> </ul>	<ul style="list-style-type: none"> <li>• LGCs are generated.</li> <li>• certificates are sold</li> </ul>	<ul style="list-style-type: none"> <li>• LGCs are generated</li> <li>• certificates are sold</li> <li>• Offsets are purchased</li> </ul>	<ul style="list-style-type: none"> <li>• GreenPower®</li> <li>• GreenPower Connect®</li> </ul>	<ul style="list-style-type: none"> <li>• LGCs are provided to user</li> <li>• LGCs are retired by the user.</li> </ul>	<ul style="list-style-type: none"> <li>• LGCs are provided to user</li> <li>• LGCs are sold by the user.</li> </ul>	<ul style="list-style-type: none"> <li>• LGCs are provided to user</li> <li>• LGCs are sold</li> <li>• The emissions from the electricity consumed are calculated at the grid factor and carbon offsets are purchased.</li> </ul>	<ul style="list-style-type: none"> <li>• An equivalent amount of <b>Australian</b> RECs (LGCs) have been purchased to cover the amount of electricity used by the building</li> <li>• These certificates are retired.</li> </ul>	<ul style="list-style-type: none"> <li>• An equivalent amount of <b>international</b> RECs have been purchased to cover the amount of electricity used by the building</li> <li>• These certificates are retired.</li> </ul>	<ul style="list-style-type: none"> <li>• An equivalent amount of offsets have been purchased to cover the greenhouse gas emissions attributed to scope 2 &amp; 3 grid emissions from the building's electricity use.</li> </ul>	<ul style="list-style-type: none"> <li>• The retail electricity product is certified as carbon neutral against the Australian Government's National Carbon Offset Standard for Products and services</li> </ul>
<b>Outcome</b>											
<b>Recognised by NABERS</b>	Yes	Yes	Yes	Yes <sup>4</sup>	Yes	No	No	No	No	No	No
<b>Recognised by NCOS</b>	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes
<b>Consistent with RE100</b>	Yes	Yes	No	No	Yes	Yes	No	No	Yes	No	No
<b>Zero emissions electricity in the Australian Government's National Carbon Offset Standard for Buildings.</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>
<b>Considered renewable electricity in Green Star</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No<sup>5</sup></b>	<b>Yes</b>	<b>No</b>	<b>No<sup>6</sup></b>

<sup>4</sup> Though for purposes of NABERS and Green Star, the purchase of offsets is irrelevant.

<sup>5</sup> Projects seeking alternative solutions similar to this one are encouraged to approach GBCA for more information about their method's suitability.

<sup>6</sup> Carbon Neutral certified electricity is currently being reviewed as to its suitability in Green Star. Please contact us for more information.