

# Responsible carbon impacts – new buildings and fitouts

Points Available: up to 3 points

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## Aim

To recognise assets that reduce and offset their embodied carbon and move the supply chain to carbon neutrality.

## Rating Tool Eligibility

- Green Star – Design & As Built v1 or later.
- Green Star – Interiors v1 or later

The boundary of the innovation challenge is defined in line with the LCA Credit for your Green Star Submission.

*This PILOT innovation challenge does not yet apply to Green Star – Communities or Green Star - Performance. If projects wish to explore how this framework could be applied to their communities or existing building projects, please contact GBCA to discuss.*

## Why is this Innovation Challenge Important?

With the release of the Australian Government's National Carbon Offset Standard for Buildings (*the standard*), industry has agreed and adopted a clear definition of carbon neutrality for buildings in operation. The standard addresses the full scope of emissions; scope 1 (on-site emissions), scope 2 (emissions from electricity consumption) and scope 3 (such as emissions from water, wastewater, waste and transport).

As the standard is for the operational emissions of a building, it does not address embodied carbon. This Innovation Challenge aims to provide guidance, and a pathway, for those seeking to be responsible for a building's embodied carbon impacts. It also aims to drive the creation of a carbon neutral supply chain for products and materials. It does this by recognising the use of products and materials certified against the Australian Government's National Carbon Offset Standard for Products & Services (Product Standard).

This is PILOT Innovation Challenge, and the requirements will be reviewed in 12 months to incorporate industry feedback. GBCA encourages a range of building types and projects to consider this PILOT Innovation Challenge and provide feedback to GBCA. If you have queries about how this challenge could apply to your project or building type, including industrial and retail, please contact your technical coordinator to discuss.

## Compliance Requirements

The following points are available in this challenge:

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### Green Star – Design & As Built and Green Star - Interiors

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<b>Minimum requirement: Life Cycle Impacts</b>	<p>It is a requirement that:</p> <ul style="list-style-type: none"> <li>• At least three points be achieved in 'Life Cycle Impacts' through pathway '19A Life Cycle Assessment'; and</li> <li>• When excluding module B6 (operational energy reduction) from the results, the <i>climate change</i> impact category results in the LCA calculation showing a 10% reduction against the reference building.</li> </ul> <p>The calculations must be based on a conservative scenario to estimate the embodied carbon emissions.</p>
<b>Responsible carbon impact reductions</b>	<p>1 point is awarded where the:</p> <ul style="list-style-type: none"> <li>• The minimum requirement is met; and</li> <li>• National Carbon Offset Standard eligible offsets are purchased and retired equal to the remaining embodied carbon.</li> </ul>
<b>Further responsible carbon impact reductions</b>	<p>1 additional point is awarded where:</p> <ul style="list-style-type: none"> <li>• The minimum requirement is met;</li> <li>• The calculation result shows a 20% reduction in the <i>climate change</i> impact category; and</li> <li>• National Carbon Offset Standard eligible offsets are purchased and retired equal to the remaining embodied carbon.</li> </ul>
<b>Carbon neutral products and materials</b>	<p>1 additional point is awarded where:</p> <ul style="list-style-type: none"> <li>• At least one point in this Innovation Challenge has been achieved;</li> <li>• At least 5% of the in total embodied carbon reduction in the <i>climate change</i> impact category comes from materials or products that are carbon neutral certified against the National Carbon Offset Standard for Products &amp; Services, or similar, where:             <ul style="list-style-type: none"> <li>• That the calculated reduction in total embodied carbon is through products that have been supplied by at least 5 distinct product suppliers; and</li> <li>• The products or materials provided by each supplier contribute at least 0.2% of the total reduction achieved.</li> </ul> </li> </ul> <p>If all the above requirements are not achieved, 0.1 point will be awarded for every product certified against the National Carbon Offset Standard for Products &amp; Services that contributes at least 0.2% to the total reduction in embodied carbon, up to a maximum of 0.5 points. See worked examples under Guidance.</p>

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## Guidance

The National Carbon Offset Standard is a voluntary standard across five categories to manage greenhouse gas emissions and to achieve carbon neutrality. It provides rules for measuring, reducing, offsetting, reporting and auditing emissions required to make a carbon neutral claim. It also provides a list of eligible offset units that have been assessed as meeting offset integrity principles, designed to ensure that eligible offset units represent genuine and credible emission reductions.

The Product Standard provides a framework for entities to certify their products or materials as carbon neutral. To achieve certification entities are required to undertake a life cycle assessment and offset calculated emissions through the use of eligible offset units.

In addition to products certified against the Product Standard, international product certification may be accepted under this Innovation Challenge. Should project teams wish to demonstrate compliance using an equivalent alternate certificate, standard or framework, a technical question may be submitted to the GBCA to confirm equivalency.

The table below outlines some potential project scenarios for obtaining the *carbon neutral products and materials* point, and outlines how points are awarded in each scenario.

Scenario Details	At least 10% total reduction* through design and product selection	The total reduction due to certified carbon neutral products equals at least 5%*	Each product contributes at least 0.2% reduction*	There is at least five distinct suppliers	Awarded points
<p><b>A</b></p> <ul style="list-style-type: none"> <li>The project team uses 5 products that are certified carbon neutral against the Product Standard, contributing in total 6% reduction</li> <li>The project achieves a total of 15% reduction in embodied carbon emissions (the remainder are not carbon neutral certified)</li> <li>There are five distinct suppliers</li> <li>All products contribute between 0.5 and 2% of the reduction.</li> </ul>	✓	✓	✓	✓	1 full point is awarded
<p><b>B</b></p> <ul style="list-style-type: none"> <li>The project team used three products from Company A, and three products from Company B. All of these products are certified carbon neutral against the Product Standard.</li> <li>The contribution of the six products is 12% reduction in climate change.</li> <li>The contribution of each product is 2% reduction in climate change.</li> </ul>	✓	✓	✓	X	As not all requirements are met, 0.1 point is awarded for each carbon neutral certified product up to a maximum of 5 products. Hence 0.5 points are awarded.
<p><b>C</b></p> <ul style="list-style-type: none"> <li>The project team used six products that are certified carbon neutral against the Product Standard from four distinct suppliers.</li> <li>One of these suppliers' products contributed a 7% reduction by itself.</li> <li>Each of the other supplier's products contributed at least 1% reduction.</li> </ul>	✓	✓	✓	X	As not all requirements met, 0.1 point is awarded for each product up to a maximum of 5 products. Hence 0.5 points are awarded.

<b>D</b>	<ul style="list-style-type: none"> <li>• The project team used 8 products from different suppliers that are certified carbon neutral against the Product Standard, contributing in total 4% reduction.</li> <li>• The project achieves a total of &gt;10% reduction in embodied carbon emissions.</li> <li>• 3 of the 8 certified products contribute at least 0.2% reduction</li> </ul>	✓	X	✓ (3 products only)	✓	<p>As not all requirements met, 0.1 point is awarded for each product up to a maximum of 5 products. Hence 0.3 points are awarded.</p>
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*\* Percentage reduction is defined through the LCA calculation showing the percentage reduction in the climate change impact category (excluding B6: operational energy reduction) against the reference building.*

**Alternative Compliance Methods**

A technical question may be submitted to the Green Building Council of Australia (GBCA) when an applicant wishes to proposed an alternative yet equivalent method of meeting the Compliance or Documentation Requirements. Any technical questions submitted for this Innovation Challenge will be processed as free-of-charge.

## Documentation Requirements

### Design Review / As Built Submission

Provide the **Submission Template** outlining how the project has achieved the Innovation Challenge requirements. The Submission Template also enables project teams to provide feedback on the Innovation Challenge to inform future developments.

In addition to information provided in other credits, provide documentation to support the claims made within the Submission Template. This may include:

Design Review	As Built Submission
<p><b>Minimum requirement: Life Cycle Impacts</b></p> <ul style="list-style-type: none"> <li>Reference to Green Star – Design &amp; As Built or Interiors v1.2 LCA calculator where the revised figure for 'Climate Change' impact category is provided, showing at least 10% reduction against the reference building.</li> <li>A description as to how the calculations are based on a conservative scenario to estimate the emissions.</li> </ul>	<ul style="list-style-type: none"> <li>Confirmed final LCA calculations based on As Built building or fitout.</li> </ul>
<p><b>Responsible carbon impact reductions</b></p> <ul style="list-style-type: none"> <li>Signed commitment by the building owner to a strategy to purchase the expected quantity of National Carbon Offset Standard eligible offsets to cover the modelled emissions.</li> </ul>	<ul style="list-style-type: none"> <li>A copy of any offset certificates equal to the remaining emissions modelled. Confirmation that the offsets provided meet the National Carbon Offset Standard for Buildings. Evidence that the offsets have been retired for the relevant asset for the relevant time period by the time of the claim. Evidence of retirement could include screenshots of the relevant offset registry or the transaction receipt showing retirement.</li> </ul>
<p><b>Further responsible carbon impact reductions</b></p> <ul style="list-style-type: none"> <li>Reference to Green Star – Design &amp; As Built v1.2 LCA calculator where the revised figure for 'Climate Change' impact category is provided showing at least 20% reduction against the reference building.</li> <li>Signed commitment by the building owner to a strategy to purchase the expected quantity of National Carbon Offset Standard eligible offsets to cover the modelled emissions.</li> </ul>	<ul style="list-style-type: none"> <li>Confirmed final LCA calculations based on As Built building or fitout.</li> <li>A copy of any offset certificates equal to the remaining emissions modelled. Confirmation that the offsets provided meet the National Carbon Offset Standard for Buildings. Evidence that the offsets have been retired for the relevant asset for the relevant time period by the time of the claim. Evidence of retirement could include screenshots of the relevant offset registry or the transaction receipt showing retirement.</li> </ul>
<p><b>Carbon neutral products and materials</b></p> <ul style="list-style-type: none"> <li>Signed commitment by the building owner to purchase the relevant number of carbon neutral products and materials.</li> </ul>	<ul style="list-style-type: none"> <li>Calculations demonstrating the contribution of the products and materials to the reduction.</li> <li>Proof of purchase of the products in quantities specified in the calculations</li> <li>A copy of the certification for each product and material claimed.</li> </ul>