

INNOVATION GUIDANCE

Purpose of this document

This document provides guidance on the Innovation category for *Green Star – Design & As Built v1*.

It includes guidance on what attributes or strategies are considered applicable to the Innovation category and what elements are unlikely to receive Innovation category points under three out of the five criteria that are present in the rating tool. In addition to this document, there are three additional resources where guidance for claiming Innovation points is provided: each credit in the Submission Guidelines, the Global Sustainability section of the GBCA website (coming soon!), and the Innovation Challenge section of the GBCA website.

CHANGE LOG

09/02/2015 Release 1 Initial Release.

30A INNOVATIVE TECHNOLOGY OR PROCESS

The following technologies or processes are considered innovative and will be automatically awarded one (1) point.

Category	Technology or process	Description or benchmark
Indoor Environment	Individual Comfort Control	One (1) point is available for providing individual comfort control in all primary spaces. See 'Thermal Comfort' in the submission guidelines for more information.
Energy	Onsite Renewable Energy	Up to two (2) points may be awarded for installing onsite renewable energy sources on site. See 'Greenhouse Gas Emissions' credit for more information.
Energy	Building Integrated Photovoltaics	One (1) point is available where Building Integrated Photovoltaic (BIPV) systems contribute to the reduction of greenhouse gas emissions by at least 15%. This point can be awarded in addition to the 'Onsite Renewable Energy' points highlighted above.
Water	Heat rejection systems in equipment requiring process cooling	One (1) point is available where potable water use from heat rejection in process cooling is reduced. See 'Potable Water' credit for more information.
Water	Passive Design	Projects that use of passive water treatment systems (such as vegetation to treat water passively) to achieve at least one point in the potable water calculator.

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The following list covers technologies or strategies which do not automatically allow project teams to claim Innovation Category points, and which, by themselves, are unlikely to achieve Innovation Category points in Green Star.

Category	Technology or process	Description or benchmark
Indoor Environment	Ventilation systems	Underfloor ventilation or displacement ventilation, and the use of ceiling (or any other) fans or task air systems. To achieve points, the project team would need to show how a certain technology differs from a comparable system, and how it provides superior comfort or ventilation. Merely showing an equivalent result will not result in project teams being awarded Innovation Category points.
Indoor Environment	Operational practices	The use of any operational policy to address VOC or formaldehyde levels in a space will not result in project teams being awarded Innovation Category points.
Indoor Environment	White noise systems	The use of white noise-generating equipment will not result in project teams being awarded Innovation Category points.
Indoor Environment	Daylight	Skylights, light tubes or atriums designed to bring daylight into a space will not generally result in project teams being awarded Innovation Category points. Instead, these methods are more likely to be recognised as a way to demonstrate compliance with the ' <i>Daylight and Views</i> ' credit.
Indoor Environment & Energy	Facade Systems	The combination of elements in a facade (blinds, shading devices, or 'active facades') will not generally result in project teams being awarded Innovation Category points for glare control or energy reduction. For active facades, the project team must demonstrate environmental benefits above and beyond daylight glare reduction. Quantifying a reduction in thermal gains in a way that that has already been recognised in the ' <i>Greenhouse Gas Emissions</i> ' credit will not generally result in project teams being awarded Innovation Category points either.
Energy	Offsets	The use of greenhouse gas emissions offsets of any kind, including carbon credits, will not result in project teams being awarded Innovation Category points.

Category	Technology or process	Description or benchmark
Energy	Efficient energy systems or energy generation systems	<p>The use of the following systems will not result in project teams being awarded Innovation Category points.. Should they be claimed as innovative for the purposes of Green Star, the project team must justify why these systems are innovative compared to those used elsewhere and how the benefits of these systems are not already rewarded in other existing Green Star credits. Simply installing them as part of a project is not sufficient.</p> <ul style="list-style-type: none"> • Wind turbines • biodiesel procurement • cogeneration • solar hot water • thermal labyrinths • tri-generation • gas-boosted hot water • fuel cells • instant hot water systems • regenerative lift braking • thermal storage • low-energy lifts • night purging • building management and control systems • mixed use ventilation or natural ventilation • active facades • removal of building features (such as cooling towers) • Roof mounted or rack mounted solar panels
Energy & Water	Minor efficiency improvements	The use of equipment, systems and fixtures that feature slight improvements in efficiency or efficacies, will not result in project teams being awarded Innovation Category points., as these benefits are addressed by the Greenhouse Gas Emissions credit or the Potable Water credit (or other relevant credits).

Category	Technology or process	Description or benchmark
Water	Efficient or reuse systems	<p>The use of the following systems will not result in project teams being awarded Innovation Category points. Should they be claimed as innovative for the purposes of Green Star, the project team must justify why these systems are innovative compared to those used elsewhere and how the benefits of these systems are not already rewarded in other existing Green Star credits. Simply installing them as part of a project is not sufficient.</p> <ul style="list-style-type: none"><li data-bbox="763 405 943 434">• aquifer use<li data-bbox="763 458 987 486">• rainwater tanks<li data-bbox="763 510 1106 539">• active greywater systems<li data-bbox="763 563 1084 592">• active blackwater tanks<li data-bbox="763 616 1070 644">• sewer mining systems<li data-bbox="763 668 1240 697">• the use of reticulated recycled water.<li data-bbox="763 721 1115 750">• river or lake heat rejection
Transport	Private transport systems	<p>The use of buses or other methods of mass transport that circulate between a project and its closest public transport option will not result in project teams being awarded Innovation Category points. They can, however, form part of an appropriate strategy to achieve points in the <i>Sustainable Transport</i> credit..</p>

30B MARKET TRANSFORMATION

The following technologies or processes will be automatically awarded an Innovation Category point, under the Market Transformation criteria.

Category	Technology or process	Description or benchmark
Management	Soft Landings	The building is designed, built, commissioned, and tuned by adopting a 'Soft Landings' approach. For information on how to implement a 'Soft Landings' approach, please see https://www.bsria.co.uk/services/design/soft-landings/free-guidance/
Energy	Passive Design	Projects that achieve more than 15 points through passive design or without energy generation or the purchase of offsets or Green Power in the <i>Greenhouse Gas Emissions</i> credit can claim an Innovation Category point.
Materials	Sustainable sourcing of Concrete Aggregates	Project teams who demonstrate the use of concrete aggregates that have chain of custody, or come from a responsible source can claim an Innovation Category point.

30C IMPROVING ON GREEN STAR BENCHMARKS

Improving on the following credits, as defined in the table below, may lead to one or more Innovation Category points. Guidance on how to claim these points is provided in the Submission Guidelines. Project teams must contact the GBCA for more information should they believe they have improved on Green Star benchmarks for a credit not listed in this document.

Credit	Criterion	Benchmark
Commissioning and Tuning	Supplementary or tenancy fitout systems review	See Credit.
Visual Comfort	Daylight	See Credit.
Indoor Pollutants	Zero VOC paints	See Credit.
Greenhouse Gas Emissions	Reference Building Pathway	On-site energy renewable systems produce 5% more energy than what is required by the building. Energy is exported or stored on site. Every 5% improvement is rewarded with an extra point.
Sustainable Transport	No new car parks on site	See credit.
Potable Water	Discharge to sewer	See credit.
Life Cycle Impacts	Comparative Life Cycle Assessment	An additional point is awarded where the cumulative impact reduction as defined within the credit is 150%. Every additional 20% improvement is rewarded with an additional point.
Sustainable Products	Product Sustainability and Transparency	An additional point is awarded where the percentage of compliant products is 12%. Every additional 3% improvement is rewarded with an additional point.
Construction and Demolition Waste	Reduction of construction and demolition waste	See credit.
Stormwater	Stormwater pollution targets	See credit.

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Improving on the following benchmarks will not be rewarded with an Innovation Category point. This occurs where credits either don't allow for improvements, or offer negligible environmental benefits if they did.

- Green Star Accredited Professional
- Sustainable Transport: Reduced car parking provision (unless no car parks are provided)
- Life Cycle Impacts – Concrete
- Life Cycle Impacts – Steel
- Life Cycle Impacts – Building reuse
- Construction and Demolition Waste: Percentage Benchmark

A note on *Prescriptive Pathways*

Improving on Prescriptive Pathways highlighted within the Submission Guidelines can be used to claim Innovation Category points (unless noted otherwise). When doing so, the project team must show how the improvement is significant. For example, within *Greenhouse Gas Emissions*, reducing emissions from lighting is recognised within the Prescriptive Pathway. The benchmark for lighting reduction is set at 30%. An improvement of 35% is unlikely to be awarded an Innovation Category point. However, an improvement of 50% would, as that is a significant reduction in lighting power density for example.

30D INNOVATION CHALLENGES

The following Innovation Challenges can be found within the Submission Guidelines and are applicable to this rating tool:

Credit	Challenge	Benchmark
Indoor Pollutants	Plants	Spaces are fitted out with plants evenly distributed throughout the space.
Indoor Pollutants	Mattresses (health and hospitality projects only)	All mattresses installed emit a reduced amount of indoor pollutants.
Stormwater	Water Sensitive Urban Design	Demonstrate how water sensitive urban design principles have reduced the impacts addressed in the Stormwater credit.
Microbial Control	Microbial control in hot water systems	Hot water systems have been designed to manage the risk of microbial control.

The following additional Innovation Challenges apply to this rating tool. See the GBCA website for more information.

- High Performance Site Offices
- Market Intelligence
- Employment Creation
- Financial Transparency
- Marketing Excellence
- Design for Active Living
- Employment Creation
- Social Return on Investment
- Community Benefits
- Contractor Education
- Affordable Housing
- Culture, Heritage and Identity

The following additional Challenges are only applicable when certain pathways or credits are claimed within this rating tool:

- Building Air Tightness – applicable to *Greenhouse Gas Emissions* credit, NABERS Energy Pathway and Modelled Performance Pathway.
- Energy Metering Integrity – applicable only where the *Metering and Monitoring* credit is achieved.

30E GLOBAL SUSTAINABILITY

The following Credits found in other Green Star rating tools or other international rating systems can be used to claim innovation points within this rating tool. A Credit Interpretation Request must be submitted detailing how the credit will be adapted for this rating tool prior to the submission being made. Projects seeking to claim any other credit, whether from the Green Star rating system or other not present in this list must submit a Credit Interpretation Request prior to submission.

GREEN STAR RATING SYSTEM

Green Star – Interiors

- Ergonomics
- Quality of Amenities

Green Star – Communities

- Community Investment
- Incentive Programs
- Digital Infrastructure

Green Star – Performance

- Green Cleaning
- Procurement and Purchasing
- Groundskeeping Practices

BREEAM

New Construction (NC) 2014

- Design for Robustness
- Efficient Use of Land
- Responsible Construction Practices

DGNB

- Integration with Public Art
- Handicapped Access
- Building related Life-cycle costs
- Value Retention suitability for third party use
- Backup capacity of technical systems

LEED

LEED NC v4

- Integrative Design Process

PILOT credits

- Design for Adaptability
- Clean Construction
- Social equity within the supply chain

LIVING BUILDING CHALLENGE 3.0

- Habitat Exchange
- Beauty