

Aligning initiatives:

How Green Star Buildings and ILFI's Zero Carbon Certification are jointly driving industry to a net zero emissions outcome.



Zero Carbon Certification by ILFI

Zero Carbon Certification (ZC) was developed by the International Living Future Institute (ILFI). It is a third-party verified industry recognised standard verifying that the operational and embodied carbon emissions of a built project have been neutralised. By achieving the performance targets of ZC, organisations demonstrate a credible and comprehensive approach to carbon neutrality.

ZC is one of several programs offered by ILFI, which also includes the Living Building Challenge, the world's most stringent sustainability standard.

Key stats about ZC

- Released in 2018, ZC is one of the fastest-growing programs from ILFI
- By 2020, more than 840,000+ sqm of building space around the globe had registered for ZC
- Google's 28,000+ sqm Pancras Square project in London was the first ZC Certification in the world.
- ZC is based on actual performance.



Green Star Buildings by GBCA

Green Star was developed by the Green Building Council of Australia (GBCA). It is a third-party verified holistic rating system for the built environment. From libraries offices and to the biggest regeneration projects in the country, Green Star continues to drive sustainable outcomes in buildings, fitouts, and communities.

Green Star Buildings is the latest version of the rating tool for new construction. This new version addresses the three key challenges of the next decade: climate action, health and wellbeing, and resources and circularity.

Key stats about Green Star

- Released in 2003, more than 2,000 buildings have achieved some form of Green Star certification.
- 48 million sqm of building space is Green Star certified
- 44% of CBD office space is Green Star certified
- 40% of retail space is Green Star certified
- 790,000+ people will live or work in the 50+ Green Star communities we have certified, including 450,500 + residents and 340,000 workers and students

Aligning on a common definition of net zero carbon buildings

The expectations for our built environment have grown alongside the need to drastically reduce our emissions. Without urgent climate action, as noted by the Intergovernmental Panel on Climate Change's SR15 report, there is a high risk that our planet will become one that is not appropriate for most of us.

In 2017, WorldGBC, GBCA, and other others, such as ILFI, developed the Advancing Net Zero program. The program set a clear vision for industry: All new buildings must be net zero by 2030, and all existing buildings by 2050.

In Australia, GBCA released "A Carbon Positive Roadmap" to show how it was going to drive all new buildings to be net zero by that date, starting with Green Star rated buildings. It developed a vision for net zero carbon buildings: Highly efficient buildings, fossil fuel free, powered by renewables, built with low upfront carbon emissions, and offset with nature. For existing buildings, industry adopted Climate Active's Carbon Neutral Standard, which was developed by GBCA, NABERS, and the Property Council of Australia. There are currently 43 buildings certified to this standard.

Internationally, ILFI's suite of programs continued to expand. Building on the influential Living Building Challenge and the Zero Energy Standard, in 2018 ILFI released the Zero Carbon Certification, a new methodology for assessing the carbon performance of buildings that aimed to be net zero. It was created as a response to the need to reduce carbon emissions in new buildings. It also served to provide clear guidance around the procurement of renewables and offsetting of embodied carbon emissions.

Zero Carbon Certification and Green Star

In 2020, GBCA released Green Star Buildings. The new rating tool introduced specific requirements to drive the built environment to net zero carbon over time. From 2020, 6 Star Green Star rated buildings will need to be net zero carbon in operations and be rewarded for also addressing their upfront carbon emissions¹. These requirements will apply to 5 Star rated buildings that register from 2023 onwards and 4 Star rated buildings that register from 2026 onward.

Green Star Buildings and Zero Carbon Certification both address very similar issues through slightly different points of view. Green Star considers Australian practice, benchmarks, and capabilities, while Zero Carbon Certification aims to provide global comparability. As such there are some discrepancies that over time will be aligned.

In the meantime, GBCA and ILFI, through Living Future Institute of Australia, have agreed on how to provide guidance to project teams seeking a dual rating.

Contact information

For more information, please contact Green Building Council of Australia at greenstar@gbca.org.au or Living Future Institute Australia at australia@living-future.org

¹ Green Star Buildings introduces a sliding scale for net zero carbon minimum expectations that apply to distinct star ratings over time.

Guidance for projects seeking dual ratings.

All guidance in this document is about Green Star Buildings V1.0 and International Living Future Institute Zero Carbon Certification. For reference purposes, credits in Green Star and achievement level are bolded.

In summary, while operational carbon requirements of Green Star and Zero Carbon Certification are in alignment, there are some discrepancies between Green Star and Zero Carbon Certification around refrigerants and embodied carbon. ILFI, LFIA, and GBCA commit to continue aligning both schemes over time as they are updated.

	Green Star Buildings	Zero Carbon certification	Additional guidance
Energy efficiency	<p>Energy Use Credit Achievement</p> <p>20% more energy efficient than a building built to the National Construction Code 2019.</p>	<p>25% reduction of energy use intensity (EUI) from an equivalent new building.</p> <p>30% reduction of EUI from equivalent existing buildings</p>	<p>As both schemes use distinct baselines for comparison, ILFI and GBCA have agreed that they will be considered equivalent for purposes of a dual rating.</p>
Fuel types	<p>Energy Source Exceptional Performance</p> <p>No fossil fuels on site (with the exception of process loads, or emergency services).</p>	<p>No new combustion (existing building systems permitted).</p>	<p>As both schemes aim to decarbonise new cooling, heating, and cooking systems, ILFI and GBCA have agreed that they will be considered equivalent for purposes of a dual rating.</p>
Renewables	<p>Energy Source Credit Achievement</p> <p>On- or off-site renewables (3 or 5 year requirement for off-site).</p>	<p>On- or off-site renewables (15 year requirement for off-site).</p>	<p>As Green Star's contractual requirements are in line with Australian practice, both ILFI and GBCA have agreed to consider them equivalent.</p> <p>However, for Zero Carbon certification, the project owner will need to provide in writing a letter noting their intent to continue procuring renewables in line with WorldGBC's Global Commitment for Net Zero Carbon Buildings.</p>
Reduction of embodied carbon	<p>Upfront Carbon Emissions Credit Achievement</p> <p>20% reduction against equivalent buildings.</p>	<p>10% reduction against equivalent buildings.</p>	<p>Buildings will need to comply with Green Star's requirement to obtain a dual rating.</p>
Refrigerants	<p>Other Carbon Emissions Credit Achievement</p> <p>Eliminate or offset refrigerants.</p>		<p>Buildings will need to comply with Green Star's requirement to obtain dual ratings.</p>

Green Star Buildings

Zero Carbon certification

Additional guidance

Offsets

**Other Carbon Emissions
Exceptional Performance**

Offset all embodied carbon emissions, and remaining emission sources.

Offset all embodied carbon emissions.

Green Star projects seeking Zero Carbon certification will need to also comply with the **Other Carbon Emissions Exceptional Performance**.

This credit is not currently required for 6 Star rated buildings but will be in 2023.

Changelog

2021/03 - Release