

Advancing Net Zero Snapshot: India



Context

The Government of India is driving action on climate change through the various missions of the National Action Plan on Climate Change (NAPCC). India Green Building Council's (IGBC) Net Zero Energy Buildings rating supports the implementation of these missions and addresses net zero concepts for both new and existing buildings to achieve net zero performance. The pilot programme focuses on net zero energy and aims to enable market transformation of technologies and services especially in key areas of energy efficiency and renewable energy. As India progresses, IGBC will work towards developing tools in the future that facilitate adoption of net zero concepts for carbon, water and waste.

Pathway: Certification

Launch date: November 2018

The IGBC Net Zero Energy Buildings rating requires a reduction in energy consumption through passive and active design and encourages appropriate use of renewable energy sources to meet remaining energy demand. A Net Zero Energy building should be able to demonstrate Energy Performance Index Ratio (EPI Ratio) less than one to qualify as net zero energy performance. A building may also demonstrate compliance by following prescriptive approach, to meet minimum performance requirements of individual components such as building envelope, air-conditioning, lighting and electrical systems. The rating system promotes use of 100% renewable energy and reduction in operational GHG emissions.

Pilot Projects

10

Registered*

06

Certified*

*as of April 2020

GBC Definition

Net Zero Energy buildings are those that are designed to have the lowest energy demand, high energy efficiency during its operation and thereafter its energy requirements are met through renewable energy sources



1. Measure and Disclose Carbon

Net Zero Energy rating mandates projects to measure operational energy use and disclose actual annual energy consumption as well as renewable energy generation to estimate total carbon emissions. The Net Zero Energy Buildings certification is awarded based on annual energy performance for the preceding year.



2. Reduce Energy Demand

Buildings must reduce their energy demand by improving the Energy Performance Index. To lower the energy demand, buildings must focus on performance improvements to building envelope, air-conditioning, lighting and appliances.



3. Generate Balance from Renewables

The building must meet the annual energy demand through the use of either onsite, offsite or a combination of these renewable energy sources. Net Zero Energy Building rating encourages maximum utilisation of onsite renewable energy sources thereby reducing transmission and distribution losses.



4. Improve Verification and Rigour

The building should follow the International Performance Measurement and Verification Protocol (IPMVP) for measurement and verification of building energy performance. The pilot programme focuses only on energy with subsequent versions to address net zero carbon, water and waste.

Methodology and Verification

- The building should submit documentation for verification to IGBC in the prescribed format. The building will be evaluated by a third-party assessor based on the actual energy performance data submitted. The Net Zero Energy Buildings rating will only be awarded where this performance is sustained for an annual period. Net Zero Energy Buildings at Design must showcase Net Zero Energy performance as well as submit annual data for validation to achieve net zero status during operation.

Additional Information

- $EPI\ Ratio = Actual\ EPI / Baseline\ EPI$
(EPI = Energy Performance Index)
- During the IGBC's Green Building Congress 2018 at Hyderabad; stakeholders from the building community, corporates, owners and operators showed voluntary commitment towards Net Zero by participating in the signature campaign on "Mission towards Advancing Net Zero"

Find out more

- [IGBC](#)
- [WorldGBC's Advancing Net Zero global project](#)

Advancing Net Zero

WorldGBC's global project to accelerate uptake of net zero carbon buildings to 100% by 2050. These snapshots outline specific GBC action, and how it relates to the project framework, including the four key principles shown left.