

 Confederation of Indian Industry
 


IGBC Net Zero Energy Buildings Rating System









1. Net-zero Energy



2. Reduce Energy Consumption



3. High Performance Envelope



4. Appropriately Designed Systems



5. OnSite Energy Production



6. Monitoring & Verification

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Available IGBC Rating Systems

IGBC Green New Buildings	IGBC Green Existing Buildings	IGBC Green Homes
IGBC Green Residential Societies	IGBC Green Interiors	IGBC Green Healthcare
IGBC Green Schools	IGBC Green Factory Buildings	IGBC Green Data Center
IGBC Green Campus	IGBC Green Villages	IGBC Green Townships
IGBC Green Cities	IGBC Green Existing Cities	IGBC Green SEZs
IGBC Green Landscapes	IGBC Green Mass Rapid Transit System	IGBC Green Existing Mass Rapid Transit System
Government Incentives to IGBC Projects	IGBC Green Affordable Housing	IGBC Health and Well-being Rating
IGBC Green Resort Rating	IGBC Green Hills	IGBC Net Zero Building Rating



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What is a Net Zero Energy Building?

'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'



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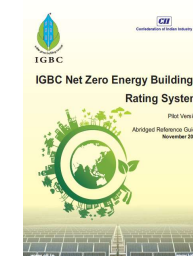


About The Rating System

- ❖ IGBC Net Zero Energy Buildings Rating is a voluntary & consensus-based.
- ❖ The objective of the Rating is to facilitate a holistic approach to make energy efficient buildings and fully powered by renewable energy sources.
- ❖ The rating system evaluates buildings on a performance-based approach.
- ❖ The rating is evolved to be comprehensive and user-friendly.
- ❖ The programme is fundamentally designed to reduce the energy needs of a building and national priorities.



Green Building Congress, November 2018 , Hyderabad, India



Methodology for Calculating Total Building Energy Consumption

$$\text{Total annual energy Consumption(kWh)} = \text{Total Metered energy consumption(kWh)} + \text{Energy Generated by DG Sets(kWh)} - \text{Existing Onsite Renewable Energy Generation (kWh)}$$

- ❖ Thermal energy consumption is presently not considered for estimation of total energy consumption.
- ❖ Energy consumption for electric vehicles need to be metered separately and discounted from the 'Total Building Energy Consumption'.



The building should be at least 80% occupied.

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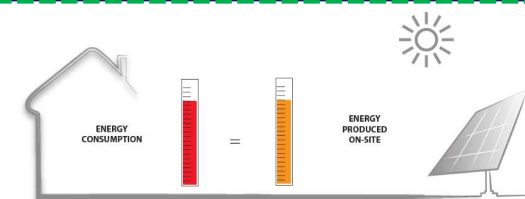


Levels of Certification

Certification level	Recognition	IGBC Requirement
Net Zero Energy	National Excellence	Building meets all the energy requirements through renewable energy
Net Zero Energy Platinum	Global Leadership	Score minimum 80 points



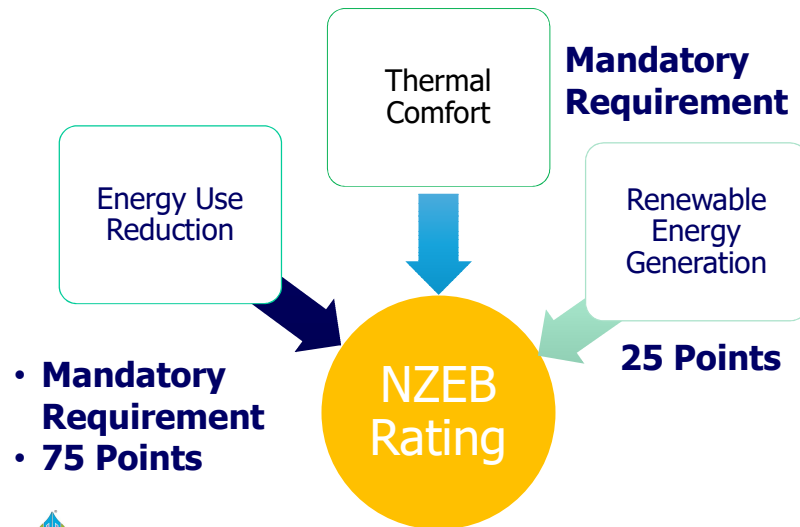
Targeted Level of Rating



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Key Areas of IGBC NZEB Rating System



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RE Credit Requirement

IGBC Credit	Points Available	Credit Requirements
Credit 2	Renewable Energy	25
Install onsite and offsite renewable energy sources to meet the total annual energy consumption of the building. Maximise utilisation of onsite renewable energy sources to offset consumption of energy produced from fossil fuels. Points are awarded as below:		
Percentage of total energy consumption met through Offsite / Onsite renewable energy sources		Points
95 : 05		2
90 : 10		4
85 : 15		6
80 : 20		8
75 : 25		10
70 : 30		12
65 : 35		14
60 : 40		16
55 : 45		18
50 : 50		20
45 : 55		22
40 : 60		24
35 : 65		25



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Benefits of NZEB Rating

❖ **Benefits of adopting Net Zero Energy concept in a building are as below:**

Tangible benefits :

- Improvement in energy efficiency and hence reduction in annual energy consumption to the tune of about 25 -30% with respect to national baseline.
- Overall reduction in energy cost of at least about 30%.
- Reliable source of power supply if combined with energy storage devices.

Intangible benefits:

- Compliance to national codes & standards on energy efficiency,
- Increased day-lighting and enhanced thermal comfort for the occupants.



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Thank you !



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