IGBC

Confederation of Indian Industry

IGBC Net Zero Energy Buildings Rating System

Pilot Version

Abridged Reference Guide

November 2018

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www.igbc.in

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Indian Green Building Council

C/o Confederation of Indian Industry
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Foreword

India is witnessing tremendous growth in construction industry and infrastructure development. Modern buildings are energy intensive, contribute significantly for the Green House Gas (GHG) emissions and the related environment impacts. There is a need for addressing the growing demand for energy consumption in the buildings and reduce the environment impacts.

Enhancing energy efficiency in buildings addresses the increase in energy demand to a large extent. With advancements in the renewable energy technologies and the multiple options available for the buildings to purchase the renewable power at competitive price; there exists an opportunity to meet the energy requirement of the building fully with the support of renewable energy and become a 'Net Zero Energy' building.

The Indian Green Building Council (IGBC) is spearheading the initiative on 'Advancing Net Zero' by the World Green Building Council (WGBC). 'Net Zero Energy' building is the first step towards 'Achieving Net Zero' in buildings in terms of Carbon, Water and Waste.

Against this background, IGBC with the support of all the stakeholders of the building sector, has developed 'IGBC Net Zero Energy rating system' for buildings. The rating system will facilitate the buildings to enhance their energy efficiency on a continuous basis and meet the rest of the energy consumption through renewable energy sources.

IGBC would also focus on activities that would enable a market transformation of technologies and services related to Net Zero Buildings. As we progress, IGBC would also work towards developing tools that facilitate adoption of Net Zero concepts in terms of carbon, water and waste in future.

Acknowledgment

The IGBC Net Zero Energy Buildings rating system Abridged Reference Guide has been made possible with the support of all the stakeholders of Indian building sector. The Abridged Reference guide was developed by the IGBC Net Zero Core Committee.

Our special thanks to Mr Ashish Rakheja, Chairman and Mr Jayesh Hariyani, Co-Chairman, IGBC Net Zero Core Committee. We thank all the core committee members from the following organisations for their contribution towards developing this rating system.

- AEON Integrated Building Design Consultants LLP
- Ankoor Sanghvi Architects
- AVRD architect
- American Society of Heating Refrigerating and Air Conditioning (ASHRAE)
- Capgemini India
- Carrier Air-conditioning & Refrigeration Ltd
- Centre for Energy & Environment, MNIT Jaipur
- Centre for IT in Building Science, IIIT Hyderabad
- Climaveneta Climate Technologies Pvt Ltd
- Conserver Consultants
- Danfoss
- Ecological
- Enviro Consultancy LLP
- Environmental Design Solution
- ESSTEAM
- Facilio
- Godrej & Boyce
- Greentree Global
- Green Inertia
- ICICI Bank Limited
- Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)
- INI Design Studio
- Kamal Cogent Energy Pvt Ltd
- LEAD Consultancy & Engineering Services
- National housing bank

- Philips Lighting
- Philips Lighting Academy
- Photon Energy Systems Ltd.
- ROXUL ROCKWOOL Technical Insulation India Pvt. Ltd.
- Savvy group
- Shakti Foundation
- Saint Gobain
- Tecton Consultants
- Telangana State Renewable Energy Development Corporation Limited
- Vastunidhi Architects, Planners & Interior Designers
- WindStream Technologies
- Wave Group

Introduction

The building sector in India is growing at a rapid pace and contributing significantly for the increase in energy demand. The increase in energy demand leads to increase in Green House Gas (GHG) emissions and hence global warming. The green building movement in India, led by the Indian Green Building Council (IGBC) has contributed immensely for reducing GHG emissions by improving energy efficiency in buildings and use of renewable energy sources partly for meeting their energy requirements.

The green buildings have demonstrated that about 25-30% reduction in energy consumption with respect to the national baselines, can be achieved by implementing energy efficient practices and technologies. Depending upon the availability of space on site and the cost economics, green buildings have also implemented onsite/ offsite renewable energy generation to meet their requirement to the extent of about 10 -15%.

The advancements in the renewable energy technologies, policy interventions by the Govt. and the wider adoption of renewable sources have made the cost of renewable energy generation very competitive. In fact, buildings can become self-sufficient by generating their own energy requirements economically, through the use of onsite/ offsite renewable energy sources.

Against this background, the Indian Green Building Council (IGBC) has launched 'IGBC Net Zero Energy Buildings Rating System'. This rating system is a tool which enables the designer to apply energy efficiency concepts and adopt appropriate renewable sources by design to construct a Net Zero Energy building. In case of an existing building, the tool enables implementation of energy efficient measures to reduce energy consumption and meet the rest of the energy requirements through renewable energy sources.

IGBC has set up the Net Zero core committee under the leadership of Mr Ashish Rakheja and Mr Jayesh Hariyani, to develop the rating system. This committee comprised of key stakeholders, including govt representatives, architects, builders, consultants, developers, owners, institutions, product manufacturers and industry representatives. The committee, with a diverse background and knowledge has added immense value through their input and contribution, enriching the rating system, both in its content and process.

Benefits

IGBC Net Zero Energy Buildings rating system enables reduction in energy consumption and use of appropriate renewable energy sources to meet the energy requirement. The benefits of adopting Net Zero Energy concept in a building are as below:

1. Improvement in energy efficiency and hence reduction in annual energy consumption to the tune of about 25 -30% with respect to national baseline.
2. Overall reduction in energy cost of at least about 30%.

3. Reliable source of power supply if combined with energy storage devices.

The intangible benefits of Net Zero Buildings include compliance to national codes & standards on energy efficiency, increased daylighting and enhanced thermal comfort for the occupants.

National Priorities Addressed

The IGBC Net Zero Energy Buildings Rating System addresses the following national priorities such as:

- Reducing the national energy demand by enhancing energy efficiency.
- Increasing the contribution of renewable energy sources for meeting the energy demand.
- Reducing the use of fossil fuels.
- Ultimately reducing the GHG emissions to meet our international commitments.

The rating system compliments the national mission on Enhanced Energy Efficiency & National Solar Mission and supports the Govt. of India to achieve the set targets.

- **National Solar mission:**

  The National Solar Mission, is an initiative of the Government of India and State Governments to promote solar power. The mission is one of the several initiatives that are part of the National Action Plan on Climate Change. The mission aims to add 100GW of solar power by 2022. Net Zero Energy Buildings are expected to contribute significantly for adding the renewable power generation at national level.

- **National Mission on Enhanced Energy Efficiency**

  National Mission for Enhanced Energy Efficiency (NMEEE) is one of the eight missions under the National Action Plan for Climate Change taken by Govt of India to promote the market for energy efficiency by fostering innovative policies and effective market instruments.

  The Mission, upon its complete execution, envisages to achieve total avoided capacity addition of 19,598 MW, fuel savings of around 23 million tonnes per year and greenhouse gas emissions reductions of 98.55 million tonnes per year.

  Net Zero Energy buildings are expected to contribute for reducing the energy demand and corresponding reduction in fossil fuel use for power generation.

IGBC Net Zero Energy Buildings Rating System

IGBC has set up the Net Zero Energy Buildings Core Committee to develop the rating

programme. This committee comprised of key stakeholders, including architects, builders, consultants, developers, owners, institutions, manufacturers and industry representatives. The committee, with a diverse background and knowledge has enriched the rating system, both in its content and process.

A. **Features**

IGBC Net Zero Energy Buildings Rating System is a voluntary and consensus-based programme. The objective of IGBC Net Zero Energy Buildings Rating System 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 system is evolved to be comprehensive and at the same time user-friendly. The programme is fundamentally designed to reduce the energy needs of a building and national priorities.

B. **Scope**

IGBC Net Zero Energy Buildings Rating System is designed for both new and existing buildings, both for air-conditioned and non-air-conditioned buildings.

These buildings include (but are not limited to) offices, IT parks, banks, shopping malls, hotels, hospitals, airports, convention centres, educational institutions (colleges, universities), factory buildings, schools, etc.

Overview and Process

IGBC Net Zero Energy Buildings Rating System addresses energy efficiency and adoption of renewable energy. The guidelines detailed under each mandatory requirement & credit enables the design and construction of buildings of all sizes and types (as defined in scope).

The levels of Net Zero Energy ratings awarded are as below:

Certification Level	Recognition
Net Zero Energy	National Excellence
Net Zero Energy Platinum	Global Leadership

A. When to use IGBC Net Zero Energy Buildings Rating System

IGBC Net Zero Energy Buildings Rating System is designed for both New and Existing Buildings.

The project team can evaluate all the possible points to apply under the rating system

using a checklist. The project can apply for IGBC Net Zero Energy Buildings Rating System certification if the project can meet all mandatory requirements and is able to demonstrate that the net annual energy consumption as zero.

B. Registration

Organisations interested in registering their projects under IGBC Net Zero Energy Buildings Rating System Certification are advised to first register on IGBC website (www.igbc.in) under 'IGBC Net Zero Energy Buildings Rating System' tab. The website includes information on registration fee for IGBC member companies as well as non-members.

Registration is the first step which helps establish initial contact with IGBC and provides access to the required documents, templates, important communications and along with other necessary information.

IGBC website provides all important details on IGBC Net Zero Energy Buildings Rating System registration & certification - process, schedule and fee.

C. Certification

To achieve the IGBC Net Zero Energy Buildings rating, the project must satisfy all the mandatory requirements and is able to demonstrate that the net annual energy consumption as zero.

The project team is expected to provide supporting documents at preliminary and final stage of submission, for all the mandatory requirements and the credits attempted.

The project documentation is submitted in two phases - Preliminary submittal and Final submittal:

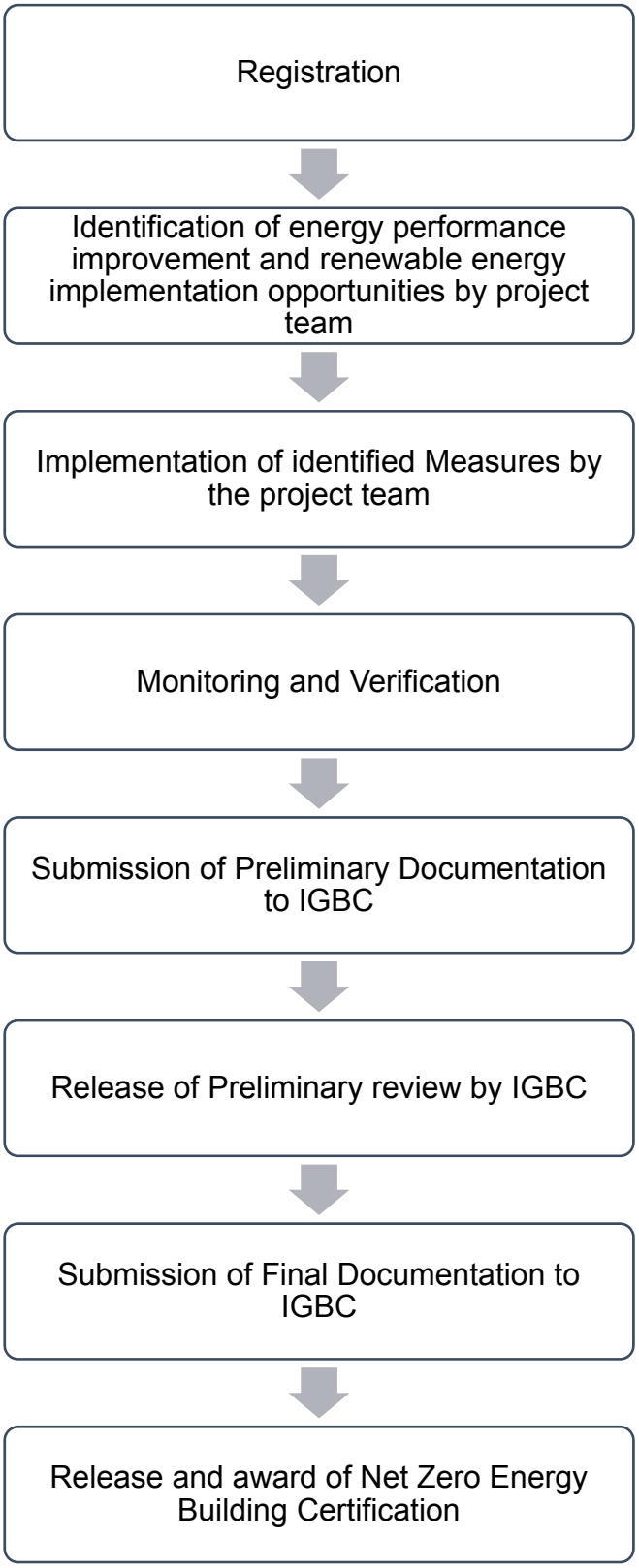
- Preliminary phase involves submission of all documents, which shall include the mandatory requirements and credits. After the preliminary submission, review is done by third party assessors and review comments would be provided within 30 days.
- The next phase involves submission of clarifications to preliminary review queries and final submittal. This review will also be provided within 30 days, after which the rating is awarded.

It is important to note that the mandatory requirements and credits earned at the preliminary review are only considered as expected. These mandatory requirements and credits are not awarded until the final documents are submitted, along with additional documents showing implementation of design features. If there are changes in any 'expected credits' after preliminary review, these changes need to be documented and resubmitted during the final review

A building to achieve Net Zero Energy Platinum, it should secure minimum of 80 credit points. On the other hand, if the building meets all their energy requirements through renewable energy, the building would New Zero Energy rating.

IGBC will recognise all buildings that achieve one of the rating levels with a formal letter of certification and a mountable plaque.

Certification Process



Summary of Credit Points

	Criteria	Credit Points
Mandatory Requirement 1	**Energy Performance**	**Required**
Mandatory Requirement 2	**Thermal Comfort, Indoor Temperature and RH**	**Required**
	Excellence in Energy Performance	
Credit 1	**Simulation Approach**	**75**
	Excellence in Energy Performance – Prescriptive Approach	
Credit 2.1	**Energy Efficient Building Envelope**	**15**
	Option 1: Compliance at component level	
	Roof Assembly	
	U' Value of Roof Assembly	3
	SRI value of Roof	2
	Wall Assembly	
	'U' value of wall assembly	5
	Glazing	
	U 'Value of Glazing	2
	Ratio of VLT/ SHGC	3
	Option 2: Overall Envelope Thermal Transmittance Value and Roof Thermal Transmittance Value	
	Envelope Thermal Transmittance Value (ETTV)	9
	Roof Thermal Transmittance Value (ETTV)	6
Credit 2.2	**Air Conditioning**	**42**
	Specific Energy Consumption of Chiller	30
	Auxiliaries	12

Credit 2.3	**Lighting**	**10**
	Daylighting	3
	Interior Lighting	5
	Exterior Lighting	2
Credit 2.4	**Appliances**	**8**
	Percentage of connected load of appliances	8
Credit 3	**Renewable Energy**	**25**
	Total Credits	**100**

Methodology for calculating total building energy consumption

The project team shall measure the energy consumption through various sources independently and estimate the total building energy consumption on annual basis. The total annual energy consumption can be calculated as below:

Total Building Energy Consumption (kWh) =Total Metered Energy Consumption (kWh)

+ Energy Generated by DG Sets (kWh)

- Existing Onsite Renewable Energy Generation (kWh)(If Any)

Thermal energy consumption is presently not considered for estimation of total energy consumption.

Note 1: In case of factory building, energy consumption related to process load need to be included.

Note 2: Energy consumption for electric vehicles need to be metered separately and discounted from the ‘Total Building Energy Consumption’

Note 3: The building should be at least **80**% occupied

NET ZERO ENERGY

Energy Performance

Mandatory requirement 1

Intent:

Demonstrate energy efficiency of the building to reduce environmental impacts from excessive energy use.

Compliance Options:

The project can demonstrate energy performance of the facility through one of the following options:

Option 1:

Depending upon the typology, project must meet the respective IGBC rating – minimum energy performance requirement. Refer the respective IGBC rating for the minimum energy performance requirements.

Option 2:

Calculate the Energy Performance Index Ratio (EPI Ratio) as below:

$$\text{Energy Performance Index Ratio (EPI Ratio)} = \frac{\text{Actual Energy Performance Index}}{\text{Design Energy Performance Index}}$$

The actual energy performance index ratio of the project should be less than or equal to the design energy performance index on annual basis.

This can be demonstrated through Energy Simulation approach.

Option 3:

Demonstrate that the energy performance of major equipment such as HVAC systems and Lighting are meeting the Energy Conservation Building Code requirements

a) For HVAC system, the design COP should be greater than or equal to the prescribed COP as per Energy Conservation Building Code (ECBC) 2017

b) For Lighting the Lighting Power Density (LPD) should be less than or equal to the LPD requirements prescribed in ECBC 2017.

Thermal comfort, Indoor Temperature and RH

Mandatory requirement 2

Intent:

To provide comfortable thermal indoor environment, promote productivity and well-being of occupants

Compliance Option

Demonstrate that the building is maintained at the requisite temperature and relative humidity conditions, for 90% of the time. The comfort condition to be maintained is 26 ± 2 degree C and RH in the range of 30% to 70%.

Also conduct a survey once in 6 months and show that 80% of the building occupants are satisfied with the temperatures maintained.

Excellence in Energy Performance Max Points: 75

Credit 1

Intent:

Demonstrate excellence in energy efficiency of the building to reduce environmental impacts from excessive energy use.

Compliance Options:

The project can demonstrate the excellence in energy performance of the facility through one of the following two approaches:

Option 1: Simulation Approach:

Demonstrate that the project is able to reduce the Energy Performance Index Ratio (EPI Ratio) by improving the energy performance of the facility. Points are awarded as below.

EPI Ratio of the building	Points
0.95	15
0.90	30
0.85	45
0.80	60
0.75	75

For development of the baseline design for benchmarking and comparison please refer Table 9-1 Modelling Requirements for Calculating Proposed and Standard Design of ECBC 2017.

Option 2: Prescriptive Approach:

Demonstrate that the project is able to reduce enhance the performance of the building in the following areas:

1. Envelope
2. Air Conditioning
3. Lighting
4. Appliances

The credits are awarded for meeting the prescriptive requirement. The details of the requirements are given in the subsequent section.

Excellence in Energy Efficiency – Prescriptive Approach

Energy Efficient Building Envelope — Max Points: 15

Credit 2.1

Intent:

Reduce the heat gain and energy loss in a building by enhancing thermal performance of envelope.

Compliance Options:

Option 1: Demonstrate the excellence in energy efficiency of building envelope by meeting the specified requirements at the following envelope component level.

1.0.1. Roof Assembly

‘U’ value of Roof

- Measure the ‘U’ value of roof assembly (or) estimate the ‘U’ value of the roof assembly as per ECBC prescriptive method based on the details of construction of roof.

Points are awarded as below:

Range of ‘U’ values ($W/m^2 K$)	Points
≤ 3.00	1
≤ 1.50	2
≤ 0.50	3

SRI value of Roof

Cover the exposed roof area with High Solar Reflective Index (SRI) paint. The recommended SRI value for low- sloped roof is >90 and for steep sloped roof is >29 & <64.

Points are awarded based on the percentage of roof area covered with High Reflective Material.

Percentage of roof area covered	Points
≥ 75 %	1
≥ 95 %	2

1.0.2 Wall Assembly

- Measure the ‘U’ value of wall assembly (or) estimate the ‘U’ value of the wall assembly as per ECBC prescriptive method based on the details of construction of wall.

Points are awarded as below.

Range of 'U' values ($W/m^2 K$)	Points
≤ 2.00	1
≤1.50	2
≤ 1.00	3
≤ 0.50	4
≤ 0.25	5

1.0.3 Glazing

Utilise GreenPro or any other equivalent International Eco label certified glass for meeting the glazing requirements

Or

Submit the test certificates of the installed glass for the following parameters

1. 'U' value
2. Solar Heat Gain Coefficient (SHGC)
3. Visual Light Transmittance (VLT)

Points are awarded as below.

Range of 'U' values ($W/m^2 K$)	Points
≤ 5.00	1
≤ 3.00	2
VLT/SHGC Ratio	
≥ 1.0	1
≥ 1.1	2
≥ 1.2	3

Option 2: Demonstrate the enhanced energy efficiency of building envelope by meeting the specified limits of overall Envelope Thermal Transmittance Value (ETTV) and Roof Thermal Transmittance Value (RTTV). The ETTV and RTTV for the building should be less than 50 W/m^2, respectively.

ETTV

ETTV =12(1-WWR) Uw +3.4(WWR)Uf +211(WWR)(CF)(SC)

Where

ETTV : Envelope Thermal Transmittance Value (W/m^2)

WWR : Window to wall ratio

U_w : Thermal transmittance of opaque wall (W/m^2 K)

U_f : Thermal transmittance of fenestration (W/m^2 K)

CF : Correction Factor for solar heat gain through fenestration

SC : Shading Coefficient of fenestration

ETTV of the whole building envelope can be calculated using the formula below

$$ETTV = \frac{(A01 \times ETTV1 + A02 \times ETTV2 + \ldots\ldots + A0n \times ETTVn)}{(A01+A02+A03+\ldots\ldots..+An)}$$

Where,

A01, A02, A0n: gross areas of exterior wall for each orientation (m^2).

Points are awarded as below:

ETTV (W/m2)	Points
≤ 50	3
≤ 45	6
≤ 40	9

Note: The ETTV can also be demonstrated through simulation approach.

RTTV

RTTV =12.5(1-SKR)Ur +4.8(SKR)Us +485(SKR)(CF)(SC)

RTTV : Roof Thermal Transmittance Value (W/m^2)

SKR : Skylight ration to roof (skylight area / gross area of roof)

U_r : Thermal transmittance of opaque roof ($W/m^2 K$)

U_s : Thermal transmittance of skylight ($W/m^2 K$)

CF : Correction Factor for roof

SC : Shading Coefficient of skylight

If roof consists of different sections facing different orientations or pitched at different angles, the RTTV for the whole roof shall be calculated as follows:

ETTV = (A01 x RTTV1 + A02 x RTTV2 +….+ A0n x RTTVn)/(A01+A02+A03+...+An)

Where

A01, A02, A0n: gross areas of roof for each section (m^2).

Points are awarded as below:

RTTV (W/m2)	**Points**
≤ 50	2
≤ 45	4
≤ 40	6

Air Conditioning System — Max Points: 42

Credit 2.2

Intent:

Reduce demand side energy consumption by optimising the energy consumption of air-conditioning system.

Compliance Options:

2.2.1 Performance of Chillers

For New Building:

Carry out cooling load calculations for the building for all the four seasons and based on the design performance parameters of air-conditioning system, estimate the average specific energy consumption.

For Existing Building

Carry out cooling load calculations for all the four seasons and based on actual annual energy consumption, estimate the average specific energy consumption of air-conditioning systems.

Points are awarded as below:

Specific Energy Consumption (Units/TR)	Points
≤ 1.25	2
≤ 1.15	4
≤ 1.05	6
≤ 1.00	8
≤ 0.95	10
≤ 0.90	12
≤ 0.85	14
≤ 0.80	16

≤ 0.75	18
≤ 0.70	20
≤ 0.65	22
≤ 0.60	24
≤ 0.50	26
≤ 0.45	28
≤ 0.40	30

Note1:

The sqft/TR for the chiller should be minimum of 190.

2.2.2 Auxiliaries

a) **Pumps:**

Demonstrate that the design efficiency of at least 50% of the pumps by capacity used for chilled water, cooling water and other potable water pumping systems is ≥ 85%.

Percentage of High Efficiency Pumps	Points
≥ 50% of pumps by capacity having efficiency more than 85%	1
≥ 75% of pumps by capacity having efficiency more than 85%	2
≥ 95% of pumps by capacity having efficiency more than 85%	3

b) **Fans:**

Demonstrate that the design efficiency of at least 50% of the fans used by capacity for air handling units, mechanical ventilation and exhaust systems is ≥70%.

Percentage of High Efficiency Fans	Points
≥ 50% of fans by capacity having efficiency more than 70%	1
≥ 75% of fans by capacity having efficiency more than 70%	2
≥ 95% of fans by capacity having efficiency more than 70%	3

c) **Motors:**

Demonstrate that at least 50% of the motors installed at site have a rating IE3 and above.

Percentage of High Efficiency Motors	Points
≥ 75% capacity of motors of rating IE3 and above	1
≥ 95% capacity of motors of rating IE3 and above	2

d) **Variable Flow Control**

Demonstrate that at least 50% of the pumps and fans are installed with variable flow control devices.

Installation of Variable Flow Control	Points
Pumps	
≥ 50% pumps with variable flow control	1
≥ 75% pumps with variable flow control	2
Fans	
≥ 50 % fans with variable flow control	1
≥ 75% fans with variable flow control	2

Lighting Max Points: 10

Credit 2.3

Intent:

Reduce energy demand of the building by enhancing daylighting and efficiency, thereby reducing environmental impacts.

Compliance Options:

2.3.1. Daylighting

Demonstrate that at least 50% of the regularly occupied areas of the building has daylighting with lux levels of 110 to 2200.

Points are awarded as below:

Percentage of Regularly Occupied Areas with Daylighting	Points
≥ 50%	1
≥ 75%	2
≥ 95%	3

Artificial Lighting

2.3.2. Interior

Demonstrate that the interior lighting power density of the building is less than 0.6 W/sqft using either lighting simulation or prescriptive approach.

Points are awarded as below

Interior Lighting Power Density (W/sqft)	Points
≤ 0.6	1
≤ 0.5	2
≤ 0.4	3
≤ 0.3	4

≤ 0.2	5

2.3.3. Exterior

Demonstrate that the exterior lighting power density of the building is less than 0.3 W/sqft using either lighting simulation or prescriptive approach.

Exterior Lighting Power Density (W/sqft)	Points
≤ 0.3	1
≤ 0.2	2

Appliances Max Points: 8

Credit 2.4

Intent:

Reduce the demand side energy consumption by utilising energy efficient appliances thereby reducing the environmental impacts.

Compliance Options:

Demonstrate that at least 25% of appliances based on connected load of total appliances are BEE Star labelled or GreenPro certified or any other equivalent eco-labelled.

Appliances include fans, water heaters, refrigerators, TVs, computer monitors, printers, copiers, scanners etc.

Points are awarded as below

% of labelled / certified appliances based on connected loads	Points
≥ 25% of connected load	2
≥ 50% of connected load	4
≥ 75% of connected load	6
≥ 95% of connected load	8

Renewable Energy Max Points :25

Credit 3

Intent:

Achieve net zero energy status by installing both onsite and offsite renewable energy resources.

Compliance Options:

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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About CII
(Confederation of Indian Industry)

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has over 7,900 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 2,00,000 enterprises from around 240 national and regional sectoral industry bodies.

With 66 offices, including 9 Centres of Excellence, in India, and 8 overseas offices in Australia, Bahrain, China, Egypt, France, Singapore, UK, and USA, as well as institutional partnerships with 312 counterpart organizations in 106 countries, CII serves as a reference point for Indian industry and the international business community.

About IGBC
(Indian Green Building Council)

The Indian Green Building Council (IGBC), part of Confederation on Indian Industry (CII) was formed in the year 2001. The vision of the council is 'To enable a sustainable built environment for all and facilitate India to be one of the global leaders in sustainable built environment by 2025'.

The council offers a wide array of services which include developing new green building rating programmes, certification services and green building training programmes. The council also organises Green Building Congress, its annual flagship event on green buildings.

The council is committee-based, member-driven and consensus-focused. All the stakeholders of construction industry comprising of architects, developers, product manufacturers, corporate, government, academia and nodal agencies participate in the council activities through local chapters.

For more information on Green Built Environment,
please contact

Confederation of Indian Industry

Indian Green Building Council
Greening India since 2001

Confederation of Indian Industry
CII-Sohrabji Godrej Green Business Centre

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