



Confederation of Indian Industry

IGBC Green New Buildings Rating System

Version 4.0



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Foreword from the Indian Green Building Council (IGBC)

India's construction sector is experiencing rapid growth across infrastructure and building developments. With this expansion comes the critical responsibility to safeguard the environment and promote sustainable practices.

To drive environmental stewardship within the construction industry, the **CII-Sohrabji Godrej Green Business Centre** established the **Indian Green Building Council (IGBC)** a consensus driven, not for profit body representing diverse stakeholders from the building sector. The Council brings together builders, developers, architects, consultants, and owners to design and construct green buildings that deliver both economic and environmental benefits.

Since its inception in **2001**, IGBC has been at the forefront of the **Green Building Movement in India**, fostering awareness, capacity building, and innovation among industry stakeholders. To date, the Council has facilitated the development of over **14.6 billion sq. ft.** of green building space across the country, catalysing a significant market transformation in sustainable materials and technologies.

Continuing its commitment to advancing green practices, IGBC develops tools and frameworks that support the integration of sustainability into building design and construction. The launch of the **IGBC Green New Buildings Rating System – Version 4** marks a significant milestone in promoting next-generation green building standards in India.

Acknowledgements

The IGBC Green New Buildings rating system Version 4 Abridged Reference Guide has been made possible through the efforts of many dedicated stakeholders, staff members and others in the IGBC community. Excellent inputs came in during the 'Technical Committee Meeting' held in October 2025 at Mumbai and 'Call for Public Comments' in November 2025. Several champions have led this initiative from the front since 2014 onwards. They have shown tremendous involvement, commitment and leadership in developing this standard from Pilot Version to Version 4.0. IGBC places on record its sincere thanks to the participating organisations and individuals who enthusiastically volunteered in development of the rating system.

IGBC would like to thank the following Technical Committee members for their participation and contribution in developing the rating programme. We also thank members for agreeing to participate in future development of the rating programme.

- ADW Developments UK
- AEON Design & Development
- Aquasense Private Limited
- Anjani Ecological Solutions
- ASHRAE India Chapter
- Brookfield Properties
- Building Environment (India) Pvt. Ltd
- CapitaLand Group Pte. Ltd
- Centre for Construction Management, IIT Madras
- Centre for Municipal Capacity Building and Research (MCGM)
- CBRE Group, Inc.
- Climacto
- Earthonomic Engineers Pvt Ltd
- Eco 360 Pvt. Ltd.
- Elemental Consultancy Services
- EN3 Sustainability Solutions Pvt Ltd
- Enviro Consultancy Pvt. Ltd.
- Environmental Design Solutions (EDS)
- FreeSpanz Design Build Pvt. Ltd.
- Furaat Earth Pvt. Ltd.
- Ganesh Technical Consultancy Services
- Godrej & Boyce Mfg. Co. Ltd.
- Godrej Properties Ltd.
- Greets Building Services Pvt Ltd.
- Grune Design Pvt. Ltd.
- Indian Oil Corporation Limited
- Integrated Consulting Engineering Services (Energy & Environment)
- Jones Lang LaSalle (JLL)
- Kaizen Design Solutions Pvt. Ltd. (KDS)
- Kamal Cogent Energy (KCE)
- K. Raheja Corp
- LEAD Consultancy and Engineering Services Pvt. Ltd.

- Lucent Lighting Limited
- MAG Consultants
- Maharashtra Pollution Control Board - State Climate Action Cell
- Milind Joshi & Associates
- Mindspace REIT
- Panache Greentech Solutions Pvt. Ltd.
- PEC Greening India
- Pidilite Industries Ltd
- Qpro Design Consultants Pvt. Ltd.
- Raivat
- Ramboll India Pvt. Ltd.
- Saint Gobain Gyproc Business
- Savvy Group
- SHASHWAT Green Building Consultants
- Siemens Ltd.
- Signify N.V.
- SSA Architects
- Surmount Energy Solutions Pvt. Ltd.
- Sustainable Stewardship Private Limited
- TATA Ecofirst Services Limited
- The Air-Conditioning Heating and Refrigeration Institute (AHRI)
- Third Wave Environmental Design (TWED)
- Ultratech Cement Ltd.
- VK:e environmental

Introduction

The building sector in India is expanding rapidly, contributing significantly to the nation's economic growth and urban transformation. While this progress signals strong economic momentum, it also underscores the urgent need to align development with India's decarbonisation and sustainability goals. Integrating green building concepts and techniques within the sector is therefore essential—not only to optimise resource use, but also to ensure that growth remains environmentally responsible, socially inclusive, and aligned with global ESG benchmarks.

Green building practices can play a pivotal role in advancing India's low-carbon transition. They address critical national priorities such as improving water and energy efficiency, reducing dependence on fossil fuels for commuting and operations, promoting effective waste management, and conserving natural ecosystems. Beyond environmental benefits, these practices enhance occupant health, well-being, and productivity.

In this context, the **Indian Green Building Council (IGBC)** has introduced the '**IGBC Green New Buildings Rating System (Version 4)**', designed to integrate decarbonisation strategies and sustainable resource management into building design and operation. This comprehensive tool enables architects, developers, and policymakers to measure, monitor, and reduce environmental impacts across diverse climatic zones and evolving urban lifestyles, thereby supporting India's commitments to net-zero emissions and the United Nations Sustainable Development Goals (SDGs).

To develop this advanced framework, IGBC constituted the **Green New Buildings Technical Committee** under the leadership of **Mr. Ramesh Nair**. The committee brings together a diverse group of stakeholders—including architects, builders, consultants, developers, owners, institutions, manufacturers, and industry representatives—whose collective expertise has shaped a robust and inclusive rating system. The outcome is a future-ready tool that embeds Net Zero principles into India's built environment, accelerating the transition toward a resilient, low-carbon economy.

Benefits of Green New Buildings

The IGBC Green New Buildings Rating Programme is a powerful tool that integrates sustainability from the planning stage and contributes directly to India's broader decarbonisation roadmap and strengthen their alignment with ESG performance standards.

The tangible benefits of implementing the IGBC Green Service Buildings framework are immediate and significant. From the very first day of occupancy, projects typically achieve:

- 20–30% energy savings, resulting in improved energy efficiency thereby reducing the carbon emissions and operational costs.
- 30–40% potable water savings, supporting national goals on water security and resource efficiency.

These efficiency gains directly contribute to measurable progress in climate action, responsible consumption, and natural resource conservation. Equally important are the intangible benefits, which deliver long-term social and governance value. Collectively, these outcomes strengthen organizational resilience, enhance ESG credibility, and contribute to a low-carbon, sustainable future for India's built environment.

National Priorities Addressed in the Rating System

The IGBC Green New Buildings rating system addresses the most important national priorities which include enhancing resource efficiency, conservation of biodiversity & ecosystem, water conservation, zero waste to landfill, energy efficiency, reduced use of fossil fuels, embedded carbon footprint and health & well-being of occupants. The rating system requires the application of National standards and codes such as the NBC, ECSBC, MoEF guidelines, CPCB/ SPCB guidelines, and several others. The overarching goal is to exceed prevailing national standards, setting progressive benchmarks for sustainability and performance.

IGBC Green New Buildings Rating System

Features

The IGBC Green New Buildings Rating System® 2025 is a voluntary, consensus-driven framework designed to promote sustainability and environmental responsibility in the built environment. Developed around materials, technologies, and practices currently available in the Indian market, the system provides a practical pathway for transforming conventional buildings into high-performance, resource-efficient, and low-carbon spaces.

The primary objective of the IGBC Green New Buildings Rating System is to enable a holistic approach to sustainable design and construction. It emphasizes integrated architectural planning, energy and water efficiency, waste management, and the use of sustainable materials and technologies, all while prioritizing occupant health, comfort, and well-being. Through these principles, the programme supports India's decarbonisation goals and strengthens the ESG performance of the nation's building sector, setting a benchmark for environmentally responsible growth.

The rating system evaluates certain mandatory requirements & credit points using a prescriptive approach and others on a performance-based approach. The rating system has evolved to be comprehensive and at the same time user-friendly.

Some of the unique aspects addressed in this rating system are as follows:

- **Recognition of Passive Design Strategies:** Integration of climate-responsive design and conceptual analysis to enhance thermal comfort while reducing energy demand
- **Optimised Water Management and Towards Net Zero Water:** Reduce dependency on potable water and roadmap for Net Zero Water.
- **Enhanced Energy Efficiency:** Integration of latest standards and passive design principles to further improve energy efficiency in buildings.
- **Renewable Energy Integration:** Combination of on-site and off-site renewable energy (RE) solutions to reduce reliance on fossil fuel-based electricity and advance towards Net Zero Energy.
- **Mandatory Waste Management:** Reinforces circular economy principles by mandating comprehensive waste segregation, recycling, and reuse to achieve zero waste to landfill.
- **Material Resource Efficiency:** Promote the use of sustainable building materials to reduce lifecycle emissions and enhance sustainability in construction.
- **Decarbonisation Pathway and GHG Inventorisation:** Provides a structured framework for carbon accounting, monitoring, and progressive decarbonisation across the building lifecycle.

- **ESG Impact Drivers:** Integrates ESG considerations, encouraging projects to address environmental stewardship, social well-being, and responsible governance through design and operation.

Scope

- IGBC Green New Buildings rating system® is designed primarily for new buildings, both for air-conditioned and non-air-conditioned buildings. New Buildings include (but are not limited to) offices, IT parks, banks, shopping malls, airports, stadiums, convention centers, educational institutions (colleges, universities), libraries, museums, etc.,
- Building types such as residential, factory buildings, schools, integrated townships will be covered under other IGBC typology specific rating programmes.
- IGBC Green New Buildings rating system is broadly classified into two types:
 - Owner-occupied buildings are those where $\geq 50\%$ or more of the building's built-up area is occupied by the owner.
 - Tenant-occupied buildings are those where $\geq 50\%$ or more of the building's built-up area is occupied by the tenants.
Based on the scope of work, projects can choose any of the above options.
- New buildings are those which are in operation for less than one year.
- Major renovation in buildings includes, but not limited to, major renovation of external façade (wall and glazing), interiors, lighting and HVAC systems.

Validity

The rating awarded for IGBC Green New Buildings would be valid for a period of 3 years. The building can apply for re-certification/ upgradation within 1 year of award of the rating for a superior rating, if new green features are implemented or existing green features are enhanced in the building under New Building rating system.

In case the project team wants to apply for re-certification/ upgradation after 1 year of award of rating, the building must apply for certification with the Existing Building rating system

Future Developments in IGBC Green New Buildings Rating System

Many new green building materials, equipment and technologies are being introduced in the market. With continuous upgradation and introduction of newer green technologies and products, it is important that the rating programme also keeps pace with current standards and technologies.

Therefore, the rating programme will undergo periodic revisions to incorporate the latest advancements and changes. It is important to note that the project teams applying for IGBC Green New Buildings rating system should register their projects with the latest version of the rating system. During the course of implementation, projects have an option to transit to the latest version of the rating system.

IGBC will highlight new developments on its [website](#).

Overview and Process

IGBC Green New Buildings rating system (Version 4) addresses green features under the following categories:

- Site Selection and Planning
- Water Conservation
- Energy Efficiency
- Building Materials and Resources
- Indoor Environmental Quality
- Innovation and Decarbonisation in Building

The guidelines detailed under each mandatory requirement & credit, enables the design and construction of new buildings of all sizes and types (as defined in scope). Different levels of green building certification are awarded based on the total credits earned. However, every building should meet certain mandatory requirements, which are non-negotiable.

The project can apply for IGBC Green New Buildings rating system certification, if the project can meet all mandatory requirements and achieve the minimum required points and evaluate all the possible points to apply under the rating system using a suitable checklist.

Registration

Organisations interested in registering their projects under IGBC Green New Buildings rating system Certification are advised to first register with IGBC. The website includes information on registration fee for IGBC member organisations as well as non-members.

Registration is the first step which helps establish initial contact with IGBC and provides access to the required documents and important communications, along with other necessary information. IGBC website provides all important details on IGBC Green New Buildings rating system registration & certification - process, timeline and fee.

Kindly refer the link to [Register your Project](#)

Precertification

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 needs to submit the following:

- ❖ General information about project, including
 - Project brief stating project type, different type of spaces, occupancy (permanent & transient), number of floors, area statement, etc.
 - General drawings (in PDF format only): Master/ Site plan, Parking plans, Floor plans, Elevations, Sections, Photographs of the green measures implemented and Filled-in templates
 - Narratives and supporting documentation such as drawings, tentative calculations (in excel sheets), declarations/ contract documents, tentative manufacturer data sheets/ material test reports, etc., for each mandatory requirement and credit.
 - A certificate is provided to projects on achieving precertification.

The Precertification is valid for 3 years from the date of award, after which projects are required to apply for the full certification (or) submit construction progress reports once in six months to get an extension certificate for Precertification rating. The projects in design or early construction stage can apply for precertification.

Note:

Projects (Owner-occupied Buildings) applying for MoEF clearance can apply Precertification.

Renewal of Precertification

Kindly refer to the link for the guidelines on [Precertification Renewal](#)

Certification

To achieve the IGBC Green New Buildings rating, the project must satisfy all the mandatory requirements and the minimum number of credit points.

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 needs to submit the following:

- ❖ General information about project, including
 - Project brief stating project type, different type of spaces, occupancy (permanent & transient), number of floors, area statement, etc.,
 - General drawings (in PDF format only): Master/ Site plan, Parking plans, Floor plans, Elevations, Sections, Photographs of the green measures implemented and Filled-in templates
 - Narratives and supporting documentation such as drawings, calculations (in excel sheets), declarations/ contract documents, purchase invoices, manufacturer data sheets/ letters/ material test reports, etc., for each mandatory requirement and credit.
 - A certificate and mountable plaque is provided to projects on achieving certification.

Project Documentation:

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 the minimum number of credits. After the preliminary submission, review is done by third-party assessors and review comments would be provided.
- **Final Phase:** The next phase involves submission of clarifications to preliminary review queries and final submittal. This final review will be provided, after which the rating is awarded.

Note:

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, construction and operational features, as applicable. If there are changes in any 'expected credits' after preliminary review, these changes need to be documented and resubmitted during the final review. Before the release of final review along with the IGBC rating, a site visit is carried out by IGBC to verify the green features implemented in the project.

Threshold for Certification & Precertification	
Certification Level	New (Owner and Tenant Occupied) Buildings
Certified	50 – 59
Silver	60 – 69
Gold	70 – 79
Platinum	80 – 100



Certification Process

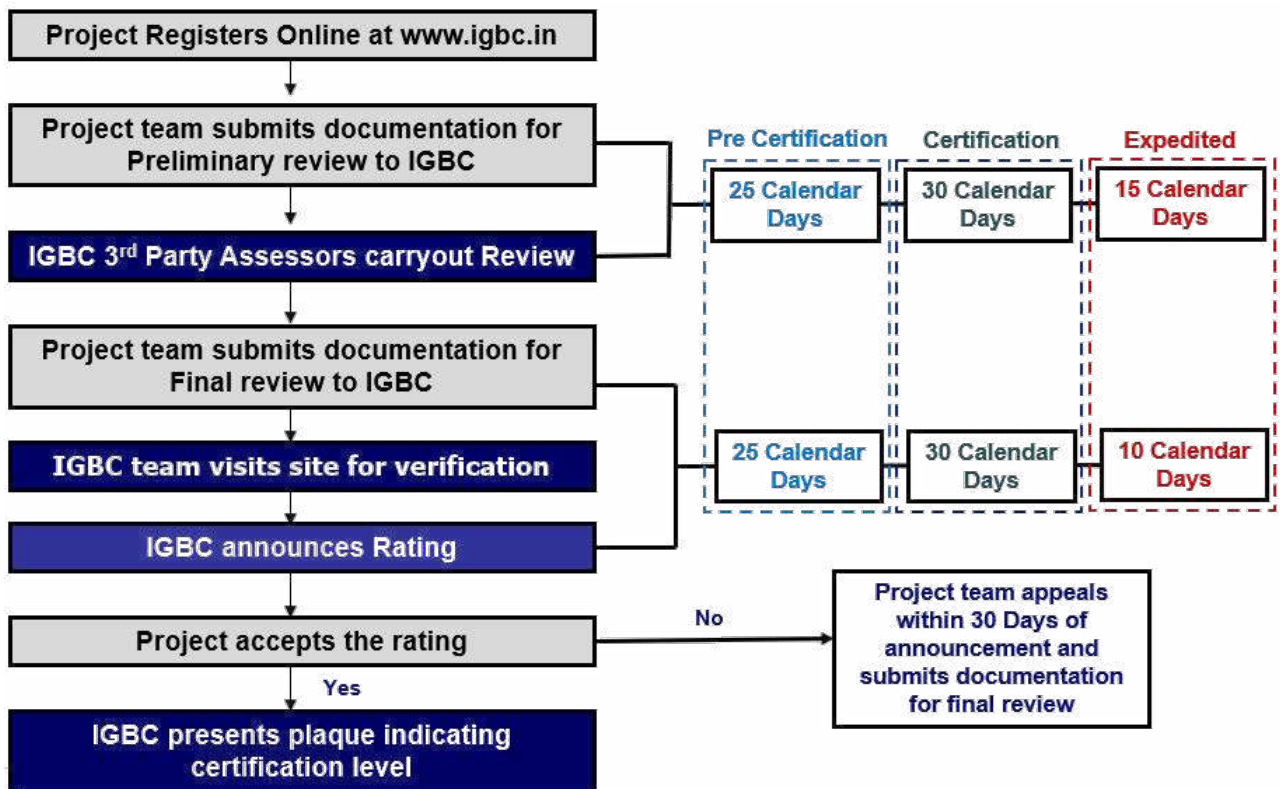


Figure 1 Certification Process

Credit Interpretation Ruling (CIR)

In some instances, there is a possibility that the design/ construction/ operations team may encounter certain challenges in applying or interpreting a mandatory requirement or a credit. It can also happen in cases where the project can opt to achieve the same intent through a different compliance route.

To address this, IGBC uses the process of Credit Interpretation Ruling (CIR) to ensure that interpretations are consistent and applicable to other projects as well.

The following are the steps to be followed in case the project team encounters any difficulty:

- Refer the Abridged Reference Guide for description of the credit intent and compliance options.
- Review the intent of the mandatory requirement / credit and self-evaluate whether the project satisfies the intent.
- Review the Credit Interpretation Ruling web page for previous CIR's, if available, on the relevant mandatory requirement or credit. All projects registered under IGBC Green Service Buildings rating system will have access to this page.
- If a similar CIR has not been addressed or does not answer the question sufficiently, submit a credit interpretation request. Only registered projects are eligible to post credit interpretation request. Two CIRs are answered without levying any fee, and for any CIR beyond the first two CIRs, a fee is levied.

Appeal

In rare cases, mandatory requirements/ credits get denied due to misinterpretation of the intent. On receipt of the final review and if the project team feels that sufficient grounds exist to appeal a credit denied in the final review, the project has an option to appeal to IGBC for reassessment of denying mandatory requirements/ credits. The documentation of the mandatory requirements/ credits seeking appeal may be resubmitted to IGBC along with necessary fees. IGBC will take 15 calendar days to review such documentation. If an appeal is pursued, please note that a different review team will be assessing the appeal documentation. The following documentation should be submitted:

- General information about project, including
- Project brief stating project type, different type of spaces, occupancy, number of floors, area statement, etc.,
- General drawings (in PDF format only): Master/ Site plan, Parking plans, Floor plans, Elevations, Sections, Photographs of the green measures implemented and Filled-in templates

Resubmittal and appeal submittal documentation for only those mandatory requirements / credits that the project is appealing for. Also, include a narrative for each appealed mandatory requirement / credit to describe how the documents address the reviewer's comments and concerns.

Fee

Registration, Certification fee and Expedited fee details are available on the IGBC [website](#).

Updates and Addenda

As the rating system continues to improve and evolve, updates, addenda and errata to the abridged reference guide will be made available through IGBC website. The additions thereof will be suitably incorporated in the next version of the rating system.

CHECKLIST

IGBC Green New Buildings (Version 4) Checklist		Credit Points Available	
		Owner Occupied	Tenant Occupied
Modules		100	100
Site Selection and Planning		15	15
SSP Mandatory Requirement 1	Local Building Regulations	Mandatory	Mandatory
SSP Mandatory Requirement 2	Site Management, During Construction	Mandatory	Mandatory
SSP Mandatory Requirement 3	Differently Abled Friendly Design	Mandatory	Mandatory
SSP Credit 1	Access to Amenities and Transport	2	2
SSP Credit 2	Electric Vehicle Charging	2	2
SSP Credit 3	Sustainable Landscape	5	5
SSP Credit 4	Heat Island Reduction, Roof and Non-roof	3	3
SSP Credit 5	Outdoor Light Pollution Reduction	1	1
SSP Credit 6	Sustainability Initiatives	2	2
Water Conservation		20	20
WC Mandatory Requirement 1	Rainwater Harvesting, Roof & Non-roof	Mandatory	Mandatory
WC Mandatory Requirement 2	Water Efficient Plumbing Fixtures	Mandatory	Mandatory
WC Credit 1	Water Use Reduction for Construction	1	1
WC Credit 2	Rainwater Harvesting, Roof & Non-roof	4	4
WC Credit 3	Water Efficient Plumbing Fixtures	5	5
WC Credit 4	Irrigation Water Reduction	2	2
WC Credit 5	Wastewater Treatment	2	2
WC Credit 6	Alternate Water Use	4	4
WC Credit 7	Water Metering & Management	2	2
Energy Efficiency		26	29
EE Mandatory Requirement 1	Eco-friendly Refrigerants	Mandatory	Mandatory

EE Mandatory Requirement 2	Minimum Energy Efficiency	Mandatory	Mandatory
EE Mandatory Requirement 3	Commissioning Plan for Building Equipment & Systems	Mandatory	Mandatory
EE Credit 1	Passive Design	2	2
EE Credit 2	Enhanced Energy Efficiency	10	13
EE Credit 3	Renewable Energy	10	10
EE Credit 4	Enhanced Commissioning for Building Equipment & Systems	2	2
EE Credit 5	Energy Management	2	2
Building Materials and Resources		13	13
BMR Mandatory Requirement 1	Waste Management, Post occupancy	Mandatory	Mandatory
BMR Mandatory Requirement 2	Organic Waste Management, post-occupancy	Mandatory	Mandatory
BMR Credit 1	Building reuse and Sustainable materials Procurement	5	5
BMR Credit 2	Embodied Carbon Assessment	4	4
BMR Credit 3	Organic Waste Management, Post-occupancy	2	2
BMR Credit 4	Towards Zero Waste to Landfill	2	2
Indoor Environmental Quality		15	12
IEQ Mandatory Requirement 1	Minimum Fresh Air Ventilation	Mandatory	Mandatory
IEQ Mandatory Requirement 2	Tobacco Smoke Control	Mandatory	Mandatory
IEQ Credit 1	Air Quality Management During Construction	1	1
IEQ Credit 2	Low-emitting Materials	2	2
IEQ Credit 3	Indoor Air Quality Monitoring	4	4
IEQ Credit 4	Minimise Indoor and Outdoor Pollutants	1	1
IEQ Credit 5	Daylighting and Controls	5	2
IEQ Credit 6	Outdoor Views	1	1
IEQ Credit 7	Occupant Well-being Facilities	1	1
Innovation and Decarbonisation in Buildings		11	11
ID Credit 1	Innovation in Design	4	4
ID Credit 2	GHG Inventorisation and Roadmap	2	2
ID Credit 3	Environmental and Social Impact Drivers	4	4
ID Credit 4	IGBC Accredited Professional	1	1



SITE SELECTION AND PLANNING

Local Building Regulations

SSP Mandatory Requirement 1

Intent:

Ensure that the building complies with necessary statutory and regulatory codes.

Compliance Options:

The project shall comply with following statutory approvals from the Government of India or State Government authorities, as applicable:

- Approved site plan and building plans for construction
- Status of completion or Completion certificate signed by Principal Architect (OR) Occupancy certificate from Local Authority
- Environment Clearance by MoEF&CC or SEIAA

Note:

- *Buildings with 20,000 sq.m built-up area or more shall submit 'Environmental Clearance Certificate' or 'Environmental Impact Assessment (EIA) Study Report', as applicable, approved by Ministry of Environment & Forests (MoEF) or State Environment Impact Assessment Authority (SEIAA) to show compliance for certification.*
- *The project team must show compliance as per Local norms or EIA or whichever is stringent.*

Site Management, During Construction

SSP Mandatory Requirement 2

Intent:

Control soil erosion and sedimentation, thereby, reducing negative impacts to the site and surroundings.

Compliance Options:

Case A: Erosion and Sedimentation Control

Implement the following measures, as applicable:

❖ **Pre and During Construction:**

- Soil erosion control measures taken before, during and after construction (post-occupancy) must conform to the best management practices highlighted in the ECSBC 2024 or National Building Code (NBC) of India 2016, Part 10 - Landscape Development, Signs and Outdoor Display Structures, Section 1 - Landscape Planning and Design and Development, Chapter 11 - Protection of Landscape During Construction.
- Fertile topsoil (150 to 200 mm in depth) to be stockpiled, preserved, stabilized, and its fertility must be maintained during preconstruction activities, for future reuse or donation, as per NBC 2016, Part 10, Section 1, Chapter 11, Clause 11.1.4 & 12.1.1.
(Not applicable for Brownfield Sites and redevelopment projects)
- Brownfield sites shall be used only after proper remediation. Remediation techniques shall include but not limited to pump-and-treat, bioreactors, land farming and in-situ remediation.
Note: The remediation measures shall be as per local building bye laws.
- Develop measures to address soil erosion, such as desilting chambers, sediment traps, soil stabilisation techniques, landscaping after occupancy.

Notes:

- *If the topsoil in the project is not fertile (or) suitable for preservation, in such a case the project must provide soil fertility test report indicating the soil is not fertile.*
- *The stored topsoil shall be utilized as the finished grade for planting areas either within the site or externally. If the stored topsoil is not utilized on-site, appropriate measures must be taken to ensure its proper reuse. Donation of substantial quantity of fertile topsoil could be to other projects, nurseries, etc.*
- *In case of redevelopment/ brownfield projects, topsoil preservation from non-vegetated areas is exempted.*

❖ **Post Construction:**

- Natural Vegetation
- Storm water channels with sediment traps/ check dams
- Soil stabilizers/ binders to enhance the cohesion of the soil
- Silt fences, Erosion control blankets, or Mats

Case B: Basic Facilities for Construction Workforce

Provide basic facilities for construction workforce to exceed the guidelines of 'The Building and other Construction Workers Act, 1996 & Rules, 1998'.

- Adequate housing to meet or exceed local / labour byelaw requirement within or outside the site.
 - In case the housing is provided outside the site, the project team/ contractor must have provision of transport for travel to & from site
- Mandating that the workers are thermally comfortable.
- Sanitary facilities: Provide at least 3 toilet seats & 3 urinals for the first 100 workers and one additional toilet seat & urinal for every 100 workers thereafter (or) as defined by local / labour byelaw. (The sanitary measures should be provided separately for men and women).
- First-aid and emergency facilities.
- Adequate drinking water facilities.
- Personal protective equipment (by owner / contractor).
- Dust suppression measures.
- Adequate illumination levels in construction work areas.
- Site emergency alarm.
- Day care/ crèche facility for workers' children.
(Only if, more than 50 female building workers are employed full time)

Note:

The project can consider 'Constructional Practices and Safety Guidelines' from National Building Code (NBC) of India 2005, Part 7 - Constructional Practices and Safety.

Differently Abled Friendly Design

SSP Mandatory Requirement 3

Intent:

Ensure that the building design caters to differently abled and senior citizens.

Compliance Options:

Design the building / campus to provide the following, for differently abled and senior citizens in accordance with the guidelines of the National Building Code (NBC) of India 2005.

❖ **Dedicated Parking for Differently Abled**

Preferential parking for differently-abled individuals shall be provided in accordance with NBC 2016 – (Part 3, Annexure B-3.2) that includes,

- For up to 100 parking spaces, four designated accessible parking spaces shall be provided
- For up to 200 parking spaces, six designated accessible parking spaces shall be provided
 - For over 200 parking spaces, six designated accessible parking spaces for 200 parking spaces and one for each additional 100 parking spaces shall be provided.
- The minimum width of the parking space for a car shall be 3900 mm, and the minimum length shall be 5400 mm. This minimum width includes the transfer area beside the car with a minimum of 1500 mm.
- Dedicated parking shall be accessible within 30m of the main entrance/ lobbies.
- Signages shall be installed for dedicated differently abled parking at a minimum height of 2.1 m.
- Symbol of accessibility shall be painted on floor surface as per NBC 2016 -Part 3, Annexure B-3.3.

❖ **Easy access to the main entrance of the building**

- The clear width of the accessible entrance door shall not be less than 900mm.
- Non-slippery ramps, with handrails on at least one side (as applicable).
- Provide minimum one accessible entrance with provision of ramp. Ramps designs shall conform to NBC 2016 – Part 3, Annexure B-6.2.2 - Table 10 and B-6.2.1 c, B-6.2.4.
- Single row of tactile ground surface indicator warning blocks shall be placed at the beginning and end of each ramp conform to NBC-2016, Part-3 Annexure B, Clause B-2.5.2

❖ **Elevator**

- The elevator opening shall be minimum 900 mm as per NBC 2016-Part 3, Annexure B, Clause B-6.4.1 & Clause B-6.4.3.
- The minimum size of the lift shall be 1500 mm wide by 1500 mm deep.
- Additionally, Audio and braille assistance shall be provided in lifts for visually impaired people as per NBC 2016-Part 3, Annexure B, Clause B-6.4.7.

❖ **Restrooms (toilets) in common areas**

- Provide minimum one unisex wheelchair user accessible restroom that shall conform to NBC 2016 – Part 3, Annexure B Clause 9.2.2, with central placement of water closet and provision

of washbasin, however, if separate male and female wheelchair-accessible restrooms are provided, ensure compliance with either Clause B-9.2.2 or Clause B-9.2.3 of NBC 2016 – Part 3, Annexure B.

- The restroom doors should swing out/should be two-way opening type or sliding.
 - The floor surfaces shall be slip resistant, anti-glare and firm.
 - Signages at entrance of accessible toilets shall conform to NBC 2016 – Part 3, Annexure B-9.18.
- ❖ **Main Walkways / Pathways** with adequate width in exterior areas as per NBC 2016-Part 3, Annexure B, Clause B-2.2.2
- ❖ **Uniformity in Floor Level** for hindrance-free movement in common areas & exterior areas, allowing vertical changes up to 6 mm without edge treatment and levelling changes between 6 mm and 12 mm with a slope not more than 1:2, in accordance with NBC-2016 Part 3, Annexure B, Clause B-2.4.1.
- ❖ **Visual Warning Signage** in common areas & exterior areas as per NBC 2016-Part 3, Annexure B, Clause B-2.6.5.
- Signages such as 'Steps Ahead', 'Differently abled Parking', 'Way finding' etc.

Access to Amenities and Transport

SSP Credit 1

Points: 2

Intent:

Provide access to basic amenities and public transport, so as to reduce negative impacts caused from automobile use.

Compliance Options:

Option 1: Basic Amenities (1 point)

Select a site with access to at least seven basic amenities, within a walking distance of 800 m from the building entrance.

List of Basic Amenities:

- Automated Teller Machine (ATM) / Bank
- Healthcare Clinic / Hospital
- Grocery Store / Supermarket
- Park / Garden
- Pharmacy
- Post Office / Courier Service
- Stationery Store/ Xerox/ Print Store
- Restaurant / Cafeteria
- Utility Bill Payment Center (Electricity/ Water)
- Service Apartment / Hotel
- Sports Club / Fitness Center / Gym
- Petrol/ Diesel/ Cng Pump
- Vehicle Repair Shop/ Service Center

Notes:

- *The basic amenities shall be functional at the time of project completion.*
- *All amenities are to be considered only once.*
- *The amenities shall be accessible to building occupants and other users of the building.*
- *Basic amenities within the campus can also be considered to show compliance.*
- *For campus projects with multiple buildings, the compliance for basic amenities can be shown through one or a combination of the following criteria:*
 - *Within the campus*
 - *From entrance of the campus / zone*

(And/Or)

Option 2: Transit Connectivity (1 point)

❖ **Public Transport**

Locate the building within 800 meters walking distance from an intra-city railway station (or) a bus-stop (or) Auto stand (or) other modes of public transport.

Notes:

- *For campus projects with multiple buildings, the compliance can be shown from the entrance of the campus/ zone.*
- *If the project includes an auto stand for compliance, it must be a permanent stand.*

(Or)

❖ **Non-Fossil Fuel Based Vehicles**

Operate or have a contract in place for non-fossil fuel-based vehicles within or outside the building as shuttle services, to cater at least 20% of the building occupants. Also, designate preferred parking spaces for such vehicles within the site.

Note:

- *For Electric Vehicles, the project shall install electric charging facilities within the projects' parking area to cater to the electric vehicles.*

Electric Vehicle Charging

SSP Credit 2

Points: 2

Intent:

Encourage the use of non-fossil fuel vehicles, thereby reducing negative impacts resulting from fossil fuel-based automobiles.

Compliance Options:

Option 1: Electric Vehicle Charging Equipment (2 points)

Provide charging facilities for low-emitting vehicles within the site, to cater at least 10% of the total two-wheeler and four-wheeler parking capacity (excluding visitor parking):

Points are awarded as below:

Compliance Requirement	Percentage of total 2 and 4 wheelers parking spaces	Points
Electric Vehicle Charging Equipment	≥ 10%	1
<i>Additionally, if the project demonstrates,</i>		
Electric Vehicle Infra Ready	≥ 10%	1

(Or)

Option 2: Electric Vehicle Infra Ready (1 point)

Provide EV infrastructure for 10% of the total 2 wheelers and 4 wheelers parking holding capacity.

EV-ready parking spaces must provide a full-circuit installation with the required panel capacity, and a conduit (raceway) with wiring that terminates in a junction box or charging outlet. The service panel must have enough capacity and physical space for the new circuit.

Refer below requirement for charging equipment's:

Provision Norms for Charging Points	Four Wheelers		2 Wheelers	
		1. 1 Slow/ Moderate charger per 3 EV's		3. 1 Slow/ Moderate charger per 2 EV's
	2. 1 Fast charger per 10 EV's		4. 1 Fast charger per 10 EV's	
Charger Type	Charger Connectors*	Rated Voltage	No of Charging Points/ No. of Connector guns (CG)	
Fast	CCS (min 50 kW)	200 – 1000	1/1 CG	
	CHAdeMO (min 50 kW)	200 – 1000	1/1 CG	
	Type-2 AC (min 22 kW)	380 – 480	1/1 CG	
Moderate/ Slow	Bharat DC-001 (15 kW)	72 – 200	1/1 CG	
	Bharat AC-001 (10 kW)	230	3/3 CG of 3.3 kW each	
*In addition, any other fast/slow/moderate charger as per approved BIS standards whenever notified.				

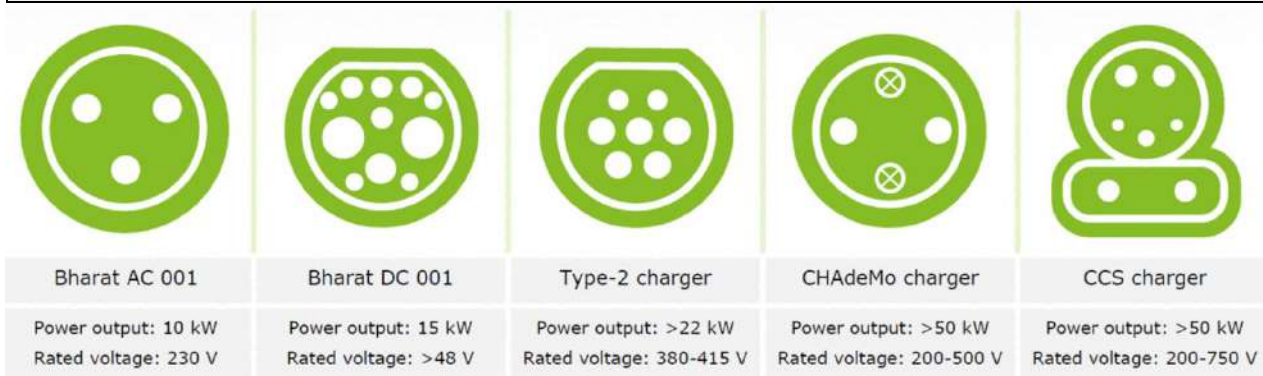


Figure 2 Types of charger connectors

Notes:

- Preferred parking spaces refer to the spaces that are easily accessible to the building entrance.
- Low-emitting vehicles sourced on contract by the owner/ developer for building occupants can also be considered to show credit compliance.
- Charging facilities for low-emitting vehicles include electric, Compressed Natural Gas (CNG), biodiesel, etc.

Exemplary Performance:

Provide Electric Vehicle Charging Equipment for ≥ 20% of total 2 and 4 wheelers parking spaces.

Sustainable Landscape

SSP Credit 3

Points: 5

Intent:

Encourage retaining the site features to minimise site damage or restore the site by designing landscape to reduce long-term negative environmental impacts, thereby promoting habitat and biodiversity.

Compliance Options:

Case A: Site Preservation (1 point)

Demonstrate that the project complies with one of the following measures:

- ❖ **Existing Topography / Landscape**
Retain at least 20% of the existing vegetated areas, without any disturbance whatsoever.
- ❖ **Water Bodies / Natural Rocks**
Retain 100% of the water bodies / natural rocks, without any disturbance whatsoever.
- ❖ **Existing Trees**
Design to integrate trees with new development, so as to preserve 75% of existing trees.

(And/Or)

Case B: Landscape Design (4 points)

Option 1: Vegetation over Ground / Built Structures (2 points)

Design ecologically appropriate vegetated spaces over ground / built structures, for at least 20% of the site area (including development footprint).

Points are awarded as below:

Percentage of Site Area with Vegetation on the ground and/or over built structures	Points
≥ 20%	1
≥ 30%	2

Notes:

- Existing Landscape shall not be considered to show compliance.
- Development footprint includes building footprint and other hardscapes areas such as parking, footpaths, walkways, roads, etc.,
- Vegetation and soft landscaping should be done with native species, including rare, endemic, endangered, and threatened taxa, wherever ecologically appropriate. Planting design should follow a multi-tiered structure—incorporating trees, shrubs, climbers, and ground cover—to enhance habitat complexity, biodiversity, and ecosystem resilience.
- The use of exotic and invasive species or fast-growing monoculture should be strictly avoided.

- *Vegetation on the ground as well as vegetation over built structures such as roofs, basement, podiums, etc., can be considered.*
- *Vertical Landscaping on the external walls can also be considered for this credit calculation. Native evergreen climbers and creepers should be considered, as their year-round foliage ensures continuous green cover, sustained microclimatic regulation, habitat availability, and effective dust and noise attenuation throughout the year.*
- *Partially vegetated areas and disturbed site areas such as grass pavers, grass medians, jogging track, open-air theatre, playground, is considered as site disturbances and shall not be considered.*
- *Only native / adaptive/ drought tolerant vegetation shall be considered for this credit calculation.*
- *Potted plants, artificial vegetation, non-native /invasive monocultures shall not be considered as vegetation.*

(And/ Or)

Option 2: Plantation or Preservation or Transplantation of Trees (1 point)

Plant tree saplings that can mature into grown-up trees with medium to large canopy in the next 5 to 8 years on the project site, as per the criteria given below.

Note:

The project team can consider existing and transplanted trees within the project site to demonstrate compliance.

Site Area	Number of Tree Saplings (Including Existing and Transplanted Trees)
For every 80 sq.m	1 or more

Notes:

- *Trees/ Saplings shall be in place at the time of occupancy.*
- *Trees transplanted from other sites to the project site can also be considered to show credit compliance.*
- *Calculation of existing fully grown trees (and / or) tree saplings is allowed to show credit compliance.*
- *Only native / adaptive trees and tree saplings shall be considered for this credit calculation.*
- *Trees / Saplings planted in pots shall not be considered for credit calculations.*

(And/ Or)

Option 3: Plantation Strategy (1 point)

Limit use of turf on the site and ensure that landscaped area is planted with drought tolerant / native / adaptive species.

Points are awarded as below:

Type of Landscape	Percentage of the Total Landscaped Area	Points
Turf Area	$\leq 20\%$	1
Drought Tolerant / Native / Adaptive Species Area	$\geq 60\%$	

Notes:

- The landscape here refers to soft landscaping, which includes only pervious vegetation.
- The use of exotic and invasive species or fast-growing monoculture should be strictly avoided.
- Drought tolerant species are those species that do not require supplemental irrigation. Generally accepted time frame for temporary irrigation is 1 - 2 years.
- Vertical Landscaping to the external walls can also be considered for this credit calculation.
- Potted plants, artificial vegetation, non-native /invasive monocultures shall not be considered as vegetation.
- Areas planted with turf should not exceed a slope of 25 percent (i.e. 4 to 1 slope).

Exemplary Performance:

This credit is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process, if

- The percentage of Site Area with Vegetation on the ground and/or over built structures is $\geq 40\%$.
- There is no turf in landscape designed and more than 80% of the landscaped area is planted with drought tolerant / native / adaptive species.

Heat Island Reduction, Non-Roof and Roof

SSP Credit 4

Points: 3

Intent:

Minimise heat island effect to reduce negative impact on micro-climate.

Compliance Options:

Option 1: Non-roof Impervious Areas (2 points)

Provide one or combination of the following, for at least 50% of exposed non-roof impervious areas within the project site:

- Shade from existing tree cover/ newly planted saplings that can mature into grown-up trees with medium to large canopy in the next 5 to 8 years
- Open grid pavers or grass pavers
- Hardscape materials with SRI of at least 29 (and not higher than 64)

Points are awarded as below:

Non-roof Impervious Area as a Percentage of Total Non-roof Area	Points
≥ 50%	1
≥ 75%	2

Notes:

- Non-roof impervious areas include, but not limited to, footpaths, pathways, roads, driveways, uncovered surface parking, and other impervious areas.
- SRI values of reflectance materials shall be as per ASTM Standards tested in NABL accredited labs.
- Exposed non-roof area need not include service areas such as DG sets, transformer, STP etc.,

(And/ Or)

Option 2: Roof Area (1 point)

Use material with a high solar reflective index (and/ or) vegetation to cover at least 75% of the exposed roof area, including covered parking.

Percentage of roof area covered with High Reflective Material	Points
> 95%	1

(Or)

Percentage of roof area covered with Vegetation	Points
> 75%	1

Notes:

- Material with high solar reflectance index (SRI) include white / light coloured broken China mosaic tiles or white cement tiles or other high reflective materials / coatings.
- Minimum Solar Reflective Index (SRI) values for different roof types are provided below:

Roof Type	Slope	Minimum SRI Value	Maximum SRI Value
Low-sloped roof	< 2:12	82	-
Steep-sloped roof	> 2:12	29	64
Podium/ Basement Roof	-	29	64

Solar Reflective Index (SRI) values for different roof types

- All roof areas, including podium, covered surface parking, utility blocks and areas covered with elevated solar photovoltaic/ Bifacial PVs (1.8 m above ground), which are exposed to the sky (at and above ground level) shall be considered for this credit calculation.
- Projects with solar PV and solar water heaters mounted in contact with the roof can include the area covered with Solar PV as a strategy to mitigate heat island effect.
- Exposed roof area need not include equipment platforms, skylights, driveways, roads, play areas, etc.
- The compliance for SRI value shall be for a newly coated paint.
- Artificial vegetation shall not be considered.
- SRI values of high reflectance materials shall be as per ASTM Standards. Broken China mosaic tiles are exempted from showing SRI value.

Exemplary Performance:

This credit is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process, if:

Option 1: Non-roof Impervious Areas

95% of exposed non-roof impervious areas are under tree cover (and / or) with open grid pavers / grass pavers (and / or) hardscape materials with an SRI of at least 29 (and not higher than 64).

(Or)

Option 2: Roof Area

95% of the exposed roof area is covered with vegetation only.

Outdoor Light Pollution Reduction

SSP Credit 5

Point: 1

Intent:

Reduce light pollution to increase night sky access and enhance the nocturnal environment.

Compliance Options:

Design exterior lighting with fixtures that are fully shielded (or the photometric file clearly indicates zero upward lighting) to prevent light from escaping upward, typically by ensuring no light is emitted above the horizontal plane (including façade lighting)

- Upward Light Ratio (ULR) - The proportion of light emitted directly upwards must not exceed 0.5%.
- Colour Temperature - CCT of the light should not exceed 3000K. Use lower colour temperatures (warm light) minimizing glare.
- Fixed installation or limited adjustable angle - The installation method should be fixed to prevent changing the light's angle. If the fixture must be adjustable, the angle of adjustment should be limited to a maximum of $\pm 10^\circ$.
- Light Direction & Luminaire Specification - Luminaires used for façade lighting shall be with defined optical distributions (e.g., narrow beam angles) and aimed precisely onto the intended surfaces to prevent stray light.
- Adaptive Controls - Fixtures should be dimmable to reduce light levels during off-peak hours (optional)
- Signage Lighting - All externally illuminated non-emergency signage must be turned off automatically after midnight (optional)



Figure 3

Source: Dark Sky Assessment Guide

Exemplary Performance:

This credit is not eligible for exemplary performance.

Sustainability Initiatives

SSP Credit 6

Points: 2

Intent:

Encourage integrated design approach to construct a high-performance building, thereby reducing negative environmental impacts. Organise awareness sessions and trainings during & pre-construction phase to ensure that all workforce members and stakeholders involved in the project are well-informed, responsible, and aligned with the organization's sustainability and compliance objectives.

Compliance Options:

Option 1: Design Stage & Construction Stage *(1 point)*

❖ Integrated Design Approach

- Demonstrate that the project has involved team members from multi-disciplinary fields for effective decision-making and enhanced building performance, right from conceptual stage till completion of the project.
- Ensure that the project owner involves the following project team members, as applicable, at each stage of the project:
 - Architect, Commissioning Authority, Energy Modeler, Facility Managers, General Contractor, Green Building Consultant, Interior Designer, Landscape Architect, MEP Consultant, Project Management Consultant, Structural Consultant, and other project team members.
- Document at least three project meetings at different stages of the project.

(And)

❖ Awareness Sessions for Labors and Sustainability training for Employees & Vendor Project Team

- Awareness sessions for construction workforce on health, safety, environmental protection, and social responsibility standards applicable to project activities
- Awareness session for project team and vendors on green product procurement and sustainability principles, including resource efficiency, water & waste reduction, energy conservation, etc.
- Display signages indicating envisaged green features

(And/ Or)

Option 2: Post Occupancy Stage *(1 point)*

- Install permanent educational signage in common areas of the building with green concepts such as Go green, save earth; Water is precious, save it; Turn off lights, when not in use; Say no to mixed waste; Plant a tree, save the environment, etc.
- Install screen to showcase building performance dashboard and green features in the building.
- Project specific green building guidelines providing information that helps building occupants to implement and utilise the green features, post occupancy.

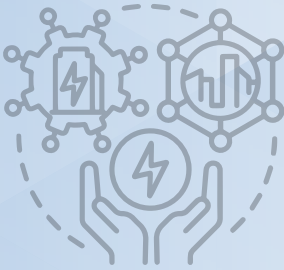
List of Credits applicable for Green Building Guidelines

- Sustainable Transportation
- Universal Design
- Water Efficient Plumbing Fixtures
- Alternate Water
- Water Metering and Management
- Energy Efficiency
- Eco-friendly Refrigerants
- Waste Management
- Sustainable Building Materials
- Organic Waste Management, Post occupancy
- Green Procurement
- Minimum Fresh Air Ventilation
- Tobacco Smoke Control
- IAQ Monitoring
- Daylighting and Views
- Occupant Well being
- Minimise Indoor & Outdoor Pollutants
- Low-emitting Materials

Note: The list is illustrative only.

Exemplary Performance:

This credit is not eligible for exemplary performance.



WATER CONSERVATION

Rainwater Harvesting, Roof

WC Mandatory Requirement 1

Intent:

Enhance ground water table and reduce municipal water demand through effective rainwater management.

Compliance Options:

Case A: Rainwater Harvesting, Roof and Non-Roof

Design rainwater harvesting system to capture at least 'one-day rainfall*' runoff volume from roof and nonroof areas.

S No.	Average Peak Month Rainfall (in mm)	One-day Rainfall (% of Average Peak Month Rainfall)
1	Upto 250	9%
2	251 – 350	7.5%
3	351 – 500	6%
4	501 – 700	4.5%
5	701 & above	3%

Criteria to arrive at 'One Day Rainfall'

Case B: High Ground Water Table

In areas where the Central / State Ground Water Board does not recommend artificial rainwater recharge (or) if the groundwater table is less than 8 meters, the project is required to provide justification for not implementing rainwater harvesting system.

Notes:

- *Rainfall Information: For rainfall information, refer Indian Metrological Department data → Customized Rainfall Information System (CRIS) → Rainfall Statistics → District Wise Rainfall Last 5 years [http://hydro.imd.gov.in/hydrometweb/\(S\(vcenta45dxa4dpbpffd3ud3g\)\)/DistrictRaifall.aspx](http://hydro.imd.gov.in/hydrometweb/(S(vcenta45dxa4dpbpffd3ud3g))/DistrictRaifall.aspx)*
 - *Choose the state and district from the dropdown boxes, to populate the rainfall data of the district (project's location)*
 - *To arrive at average peak month rainfall, consider an average of minimum last 5 years peak month rainfall (of the respective year).*
- *Runoff volume = Surface area x Runoff Coefficient x Rainfall*
- *Consider Rainwater Harvesting Guidelines from the National Building Code (NBC) of India 2016, Part 11 - Approach to Sustainability, Section 7.2 - Rainwater Harvesting-Surface Runoff.*
- *In areas where the water percolation is limited, collection tanks may be provided to meet the above requirement.*
- *Percolation can be calculated from Infiltration rates of soil or third-party percolation test report indicating the water percolated per day.*

- *Filtering of suspended solids/ sediments shall be ensured by providing suitable filtering media before letting the water into the collection tanks, water bodies, municipal storm water drains.*

Run-off co-efficient for typical surface types		
S. No.	Surface Type	Run-off Co-efficient
1	Cemented / Tiled Roof	0.95
2	Corrugated GI Sheets	0.95
3	Roof Garden (<100 mm thickness)	0.5
4	Roof Garden (100 – 200 mm thickness)	0.3
5	Roof Garden (201 – 500 mm thickness)	0.2
6	Roof Garden (> 500 mm thickness)	0.1
7	Turf, Flat (0 - 1% slope)	0.25
8	Turf, Average (1 – 3% slope)	0.35
9	Turf, Hilly (3 - 10% slope)	0.4
10	Turf, Steep (> 10% slope)	0.45
11	Vegetation, Flat (0 - 1% slope)	0.1
12	Vegetation, Average (1 - 3% slope)	0.2
13	Vegetation, Hilly (1 - 3% slope)	0.25
14	Vegetation, Steep (> 10% slope)	0.3
15	Concrete Pavement	0.95
16	Gravel Pavement	0.75
17	Open-grid Concrete Pavement	0.75
18	Open-grid Grass Pavement	0.5
19	Water Bodies (lined) Ex: Swimming Pool	0.95
20	Water Bodies (un-lined) Ex: Water Pond	0

Run Off coefficient for typical surface types

Infiltration rates for different soil types		
S. No.	Soil Type	Infiltration Rate (mm/hour)
1	Sand	Less than 30
2	Sandy Loam	20 – 30
3	Loam	10 – 20
4	Clay Loam	5 – 10
4	Clay	1 – 5

Infiltration rate for different soil types; Source: Food and Agriculture Organisation

Water Efficient Plumbing Fixtures

WC Mandatory Requirement 2

Intent:

Enhance efficiency of plumbing fixtures, thereby minimising potable water use.

Compliance Options:

Use water efficient plumbing fixtures (as applicable) whose flow rates meet the baseline criteria in aggregate. The total annual water consumption from the plumbing fixtures should not exceed the total base case water consumption computed.

Note:

Use of treated wastewater/ captured rainwater shall not be considered to show water savings.

The baseline criteria is as below:

Fixture Type	Maximum Flow Rate / Consumption at 4.1 bar	Maximum Flow Rate / Consumption at 3 bar	Duration	Estimated Daily Uses per FTE *
Water Closets (Full flush)	6 LPF	6 LPF	1 flush	1 for male; 1 for female
Water Closets (Half-flush)	3 LPF	3 LPF	1 flush	2 for female
Urinals	3 LPF	3 LPF	1 flush	2 for male
Faucets / Taps	8 LPM	6.8 LPM	15 seconds	4
Health Faucet	6 LPM	5.13 LPM	15 seconds	1
Kitchen Faucet	8 LPM	6.8 LPM	15 seconds	1
Showerhead / Handheld Spray	10 LPM	8.55 LPM	8 minutes	0.1

Notes:

* Full Time Equivalent (FTE) represents a regular building occupant who spends 8 hrs per day in the building. Part-time or overtime occupants have FTE values based on their hrs per day divided by 8.

Baseline flow rates/Consumption for plumbing fixture

Notes:

- Water fixtures do not include irrigation systems.
- Faucets / Taps installed for hand wash in rest rooms and canteen shall be considered, whereas faucets / taps installed for dish washers and washing clothes need not be considered.
- Rain showers (if any) need to be considered in the calculations under Showerhead.
- If the project has residential/ equivalent space with showerheads, in such case the daily use per occupant shall be considered as 1.

- *The baseline flows can be demonstrated at a flowing water pressure of 4.1 bar. Flowing water pressure of 3 bar does not mean that the water supply in the building is at 4.1 bar. The building fixtures can operate at lower pressures; however, to show compliance under this credit, the design flow rates are to be submitted at 4.1 bar.*
- *Default occupancy shall be considered as 50% for male and female.*
- *FTE occupancy shall be considered in the calculation, including visitors.*
- *Plumbing fixtures that are certified by CII under Green Product Certification Programme (GreenPro) or by a third-party agency approved by IGBC, can be used by the project to show compliance.*
- *In the absence of specific cutsheets use the following conversion formula to arrive at discharge at 4 bar pressure. The project team should submit the supplementary calculation to indicate the flowrates at 4 Bar pressure along with individual cutsheet of the water fixture. Project can use the following formula to calculate the approximate flowrates: $Q_2 = Q_1 \sqrt{P_2/P_1}$ Where, Q_1 & P_1 are the known flow rate(Q_1) and known pressure (P_1). The resulting flow rate (Q_2) is calculated for the pressure applied (P_2).*
- *Hostel buildings must demonstrate water savings separately for guest rooms considering the daily uses for showerheads as 1.*

Water Use Reduction for Construction

WC Credit 1

Points: 1

Intent:

Enhance water use efficiency, thereby minimising the use of potable water for construction activities.

Compliance Options:

Demonstrate that the project has reduced at least 10% of the potable water required for construction activities (concrete mixing, plastering works and curing), as compared to national and international practices, for the building type being designed, with the use of:

- Treated Wastewater
- Admixtures & Curing compounds
- Any other innovative measures

Ensure that the quality of construction is not compromised by reducing potable water requirement or by reusing treated wastewater.

(And)

The treated wastewater shall meet the quality standards suitable for reuse during construction, as prescribed by:

- Bureau of Indian Standards (BIS) - Plain and Reinforced Concrete (Code of Practice) IS 456 : 2000, Section 2 - Materials, Workmanship, Inspection and Testing, 5.4 - Water, 'Table 1 - Permissible Limit for Solids'.
- (Or)
- Central (or) State Pollution Control Board

Notes:

Treated wastewater from other sites / local authorities through permanent piped connections or other means can also be considered to show compliance.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Rainwater Harvesting, Roof and Non roof

WC Credit 2

Points: 4

Intent:

Enhance ground water table and reduce municipal water demand through effective rainwater management.

Compliance Options:

Option 1: Rainwater Harvesting, Roof

Design rainwater harvesting system to capture at least 'one-day rainfall*' runoff volume from roof and non-roof areas.

Option 2: High Ground Water Table

Design rainwater harvesting system to capture at least 'one-day rainfall*' runoff volume from roof areas.

S No	Average Peak Month Rainfall (in mm)	One-day Rainfall (% of Average Peak Month Rainfall)		
		2 points	3 points	4 points
1	Upto 250	12%	15%	18%
2	251 – 350	10%	12.5%	15%
3	351 – 500	8%	10%	12%
4	501 – 700	6%	7.5%	9%
5	701 & above	4%	5%	6%

Rainfall Information:

- For rainfall information, refer Indian Metrological Department data → Customized Rainfall Information System (CRIS) → Rainfall Statistics → District Wise Rainfall Last 5 years
[http://hydro.imd.gov.in/hydrometweb/\(S\(vcenta45dxa4dpbpf3ud3g\)\)/DistrictRaifall.aspx](http://hydro.imd.gov.in/hydrometweb/(S(vcenta45dxa4dpbpf3ud3g))/DistrictRaifall.aspx)
 - Choose the state and district from the dropdown boxes, to populate the rainfall data of the district (project's location)
 - To arrive at average peak month rainfall, consider an average of at least last 5 years peak month rainfall (of the respective year).
- Consider Rainwater Harvesting Guidelines (as and when available) from the National Building Code (NBC) of India 2016, Part 11 - Approach to Sustainability, Section 7.2 - Rainwater Harvesting-Surface Runoff.
- In high groundwater areas or areas where the water percolation is limited, collection tanks may be provided to meet the above requirement.
- Filtering of suspended solids/ sediments shall be ensured by providing suitable filtering media before letting the water into the collection tanks, water bodies, municipal storm water drains.

Exemplary Performance:

This credit is eligible for exemplary performance under IP Credit 1 - Innovation in Design Process, if rainwater runoff from Roof & Non roof areas under Case A and from Roof areas under Case B is harvested, as listed below:

S No	Average Peak Month Rainfall (in mm)	One-day Rainfall (% of Average Peak Month Rainfall)
1	Upto 250	21%
2	251 – 350	17.5%
3	351 – 500	14%
4	501 – 700	10.5%
5	701 & above	7%

Criteria to arrive at 'One-day Rainfall' for Exemplary Performance

Water Efficient Plumbing Fixtures

WC Credit 3

Points: 5

Intent:

Enhance efficiency of plumbing fixtures, thereby minimising potable water use.

Compliance Options:

Use water efficient plumbing fixtures (as applicable) whose flow rates are at least 15% less than the baseline criteria given table, in aggregate.

The enhanced water savings criteria a is as below:

Fixture Type	Maximum Flow Rate / Consumption at 4.1 bar	Maximum Flow Rate / Consumption at 3 bar	Duration	Estimated Daily Uses per FTE **
Water Closets (Full flush)	4.8 LPF	4.8 LPF	1 flush	1 for male; 1 for female
Water Closets (Half-flush)	2.8 LPF	2.8 LPF	1 flush	2 for female
Urinals	2 LPF	2 LPF	1 flush	2 for male
Faucets / Taps	6 LPM	5.13 LPM	15 second	4
Health Faucet	5 LPM	4.2 LPM	15 seconds	1
Kitchen Faucet	6 LPM	5.13 LPM	15 seconds	1
Showerhead / Handheld Spray	8LPM	6.8 LPM	8 minutes	0.1

Notes:

* Full Time Equivalent (FTE) represents a regular building occupant who spends 8 hrs per day in the building. Part-time or overtime occupants have FTE values based on their hrs per day divided by 8.

Baseline flow rates/ Consumption for Plumbing fixtures

Points are awarded as below:

Water Efficient Plumbing Fixtures (Individually or in aggregate) (less than enhanced rates)	Points
15%	1
20%	2
25%	3
30%	4
35%	5

Notes:

- Use of treated wastewater/ captured rainwater shall not be considered to show water savings.
- Water fixtures do not include irrigation systems.
- Faucets / Taps installed for hand wash in rest rooms and canteen shall be considered, whereas faucets/ taps installed for dish washing and washing clothes need not be considered.
- Rain showers (if any) need to be considered in the calculations under Showerhead.
- If the project is a mixed-use building and has residential space with showerheads, in such case the daily use per occupant shall be considered as 1.
- The baseline flows can be demonstrated at a flowing water pressure of 4.1 bar. Flowing water pressure of 4.1 bar does not mean that the water supply in the building is at 4.1 bar. The building fixtures can operate at lower pressures; however, to show compliance under this credit, the design flow rates are to be submitted at 4.1 bar and 5.5 bar for showerheads.
- Default occupancy shall be considered as 50% for male and female.
- FTE occupancy shall be considered in calculation, including visitors.
- In the absence of specific cutsheets use the following conversion formula to arrive at discharge at 4 bar pressure. The project team should submit the supplementary calculation to indicate the flowrates at 4 Bar pressure along with individual cutsheet of the water fixture. Project can use the following formula to calculate the approximate flowrates: $Q_2 = Q_1 \sqrt{P_2/P_1}$ Where, Q_1 & P_1 are the known flow rate(Q_1) and known pressure (P_1). The resulting flow rate (Q_2) is calculated for the pressure applied (P_2).

Exemplary Performance:

This credit is eligible for exemplary performance under IP Credit 1 - Innovation in Design Process, if water consumption is 40% lesser than the baseline criteria.

Irrigation Water Reduction

WC Credit 4

Points: 2

Intent:

Reduce water demand for irrigation through water efficient landscape design and management systems.

Compliance Options:

Irrigation Systems and Water Savings:

Demonstrate water savings achieved due to efficient landscape design and irrigation systems (Sprinkler, Drip, Segregation of bedding areas, Soil moisture sensor, timers), as compared to base design.

Methodology to calculate water consumption for irrigation:

Water Consumption for proposed case = (Monthly Evapotranspiration Rate * Landscape Area * Plant Factor) / Irrigation System Efficiency

Percentage of water savings achieved	Points
20%	1
30%	2

Kindly refer below table for the Plant factor and Irrigation System Efficiency:

Plant Species	Plant Factor
Lawns (On ground /podium)	0.85
Native shrubs (On ground/podium)	0.5
Exotic shrubs (newly planted)	0.7
Native Trees on Ground	0.5
Fully grown Existing Trees (native)	0.2
Native Trees on Podium	1.2
Exotic Trees on Podium	1.3

Plant Factor

Source: FAO (Food and Agricultural Organization of the United Nations)

Irrigation Systems	Irrigation System Efficiency
Flood Irrigation (To be considered for base case)	0.65
Drip Irrigation	0.9
Sprinkler	0.85

Irrigation systems efficiency

Source: Ministry of Water Resources Central Water Commission

Notes:

- *Design case water requirement must be considered as per the water requirement for the landscape species and irrigation system designed in the project.*
- *Refer to the link for evapotranspiration rates: <https://indiawris.gov.in/wris/#/evapotranspiration>*
- *The evapotranspiration rate is the amount of water lost from a unit area of land to the atmosphere per unit time due to the combined effects of evaporation and plant transpiration. It is usually expressed in millimetres per day (mm/day) or millimetres per year (mm/year).*
- *Irrigation System Efficiency is a coefficient used in irrigation planning to account for the portion of crop water requirements that needs to be supplied through irrigation, considering contributions from rainfall, soil moisture, and other water sources.*
- *Plant Factor (also called Crop Coefficient) is a dimensionless number that represents the water requirement of a specific crop or plant relative to a reference crop.*
- *To calculate the base case water consumption, the project team must consider the irrigation system efficiency as flood irrigation (0.65) for all types of species and plant factor as 0.85 (Lawns).*
- *Landscape area must remain constant in both base and proposed case*
- *For projects where irrigation systems other than that mentioned in Table are used in the project, then the project team can define the system irrigation efficiency based on relevant source and demonstrate % reduction in irrigation efficiency.*

Exemplary Performance:

This credit is eligible for exemplary performance if the project team demonstrates potable water savings of more than 40% due to efficient landscape design and irrigation systems.

Waste Water Treatment

WC Credit 5

Points: 2

Intent:

Ensuring responsible management of wastewater generated on-site by treating it to prescribed standards, thereby preventing contamination of natural water bodies and promoting safe discharge or reuse.

Compliance Options:

Waste Water Treatment: (2 points)

Provide an on-site wastewater treatment system to treat 100% of wastewater generated in the project, to the quality standards suitable for reuse as prescribed by Central (or) State Pollution Control Board, as applicable.

Notes:

- *Wastewater here refers to both grey and black water.*
- *The credit point(s) can be claimed only if the wastewater is treated in-situ and reused in-situ. In case the local authorities insist the project to divert wastewater to a centralised / common wastewater treatment plant, then the project can show compliance by reusing treated wastewater from the centralised / common / any other wastewater treatment plant.*

Exemplary Performance:

The credit is eligible for exemplary performance if the black water and grey water are treated separately in the on-site wastewater treatment system.

Alternate Water Use

WC Credit 6

Points: 4

Intent:

Encourage use of alternate water, thereby demonstrating commitment to reduce dependency on raw water.

Compliance Options:

Option 1: Alternate Water Use (3 points)

Demonstrate alternate water use for at least 25% of the total water consumption in the project for various applications including domestic, irrigation, cooling tower & water-cooled DG make-up water etc.

$$\left\{ \begin{array}{l} \% \text{ Use of Alternate water} \\ \text{(Water Performance Ratio)} \end{array} \right. = \frac{\text{Alternate Water Consumption}}{\text{Total Water Consumption}} \right\}$$

Points are awarded as below:

Application (in aggregate)	Percentage of Alternate Water to the Total Water Consumption	Points
Water Performance Ratio	≥ 25%	1
	≥ 35%	2
	≥ 50%	3

Notes:

- Domestic water here includes water consumption for flushing, handwash, cooking, drinking, swimming pool, fountains, etc.
- The project team must treat rainwater in WTP to reuse water for handwash, etc. If alternate water is not used, the same must still be considered in the total water consumption.
- Treated wastewater sourced from other sites / local authorities through permanent piped connections or other means can also be considered to show compliance for 'wastewater reuse'.
- Use of alternate water includes the rainwater (captive use), condensate water or any purchased treated wastewater (water meter for tanker water).
- Water from sources such as bore wells, natural wells, municipal water systems is considered as potable water
- The water requirement for landscaping shall be considered as per WC Credit 3.
- Potted plants shall not be considered under vegetation.

(And/Or)

Option 2: Roadmap towards Net Zero water (1 point)

Develop a comprehensive roadmap to achieve zero water discharge within the project, thereby minimizing dependence on potable water for meeting operational requirements.

The roadmap shall include strategies and timelines for achieving net zero water based on any of the points outlined below:

- Water Audit and Baseline Assessment (atleast once in 3 years)
- Water use Demand Reduction
- Waste water treatment and use of alternate water
- Metering, Monitoring and Smart Management
- Offset and Replenishment Initiatives

Exemplary Performance:

This credit is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process, if the water performance ratio for the project is $\geq 65\%$.

Water Metering and Management

WC Credit 7

Points: 2

Intent:

Encourage sub-metering and continuous monitoring & management to identify improvement opportunities in the buildings' water performance, thereby reducing potable water consumption.

Compliance Options:

Option 1: Water Metering (1 point)

Demonstrate sub-metering for at least three of the following major water use applications, as applicable:

- Municipal water supply
- Bore water consumption
- Input water to STP
- Irrigation water requirements
- Water consumption for flushing
- Cooling tower make-up water requirements
- Stored rainwater consumption, if applicable
- Any other major source of water consumption

(Or)

Option 2: Water Monitoring and Management System (2 points)

Demonstrate integration of atleast 4 digital/ smart water meters (IoT enabled) with a smart water management system for real-time monitoring of water consumption, for optimizing distribution and empowering consumers with usage insights through dashboard visibility, ultimately enhancing water efficiency. The project shall install the following:

❖ Smart Monitoring System (1 point)

- Digital flow meters (IoT enabled)
- Tank level sensors
- Dashboard visibility
- Historical data logging

❖ Automated Water Management (1 point)

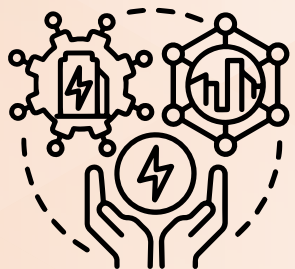
- Pump automation (based on tank levels)
- Valve automation (zone control)
- Overflow prevention logic

Also, commit to provide the annual total building water consumption data to IGBC. The water data shall be provided for all the major water consuming systems.

Note: Water metering compliance should be demonstrated at the building level.

Exemplary Performance:

This credit is not eligible for exemplary perform



ENERGY EFFICIENCY

Eco-friendly Refrigerants

EE Mandatory Requirement 1

Intent:

Encourage use of eco-friendly refrigerants and halons in the building, thereby minimising negative impact on the ozone layer.

Compliance Options

Eco-friendly Refrigerants

Demonstrate that refrigerants used in the buildings Heating, Ventilation & Air-conditioning (HVAC) equipment are HFC based refrigerants and have Global Warming Potential (GWP) less than 2100.

(And)

Halon-free Fire Suppression Systems

Demonstrate that fire suppression systems used in the building are free from Halons or any other ozone depleting substances.

Minimum Energy Efficiency

EE Mandatory Requirement 2

Intent:

Optimise energy consumption, to reduce negative environmental impacts from excessive energy use.

Compliance Options:

Design the building to comply with ECSBC 2024 (or) ASHRAE Standard 90.1-2022 through one of the following approaches:

- Option 1 - Performance based approach / Whole building simulation
- Option 2 - Prescriptive approach

The total annual energy consumption of the building should not exceed the total base case of energy consumption computed, as per ECSBC 2024 (or) ASHRAE Standard 90.1-2022.

Note:

Project with multiple buildings (including projects with common basement) must independently meet the Minimum Energy Performance criteria for each building.

Option 1 - Performance Based Approach / Whole Building Simulation

Demonstrate compliance of the building performance by whole building simulation, as per the baselines outlined in ECSBC 2024 (or) ASHRAE Standard 90.1-2022 (without amendments), Appendix - G.

Notes:

- *In tenant-occupied buildings, if air-conditioning equipment is in tenant scope, the developer would mandate the installation of efficient air-conditioning equipment for to meet the minimum efficiency requirements (COP/ EER) as defined in green lease agreement.*
- *In tenant-occupied buildings, if lighting is in tenant scope, the developer would mandate the installation of efficient lighting systems to meet the LPD values as defined in the green lease agreement.*
- *Projects that use on-site renewable energy sources (such as solar energy, wind power, biomass, etc.,) can subtract renewable energy generated from the total annual energy consumption of the proposed case. Projects that use solar hot water systems can model the systems in the proposed case, as against electrical heaters in the base case, to show energy savings.*
- *Projects (such as laboratories, substations, etc.,) which have process loads not related to building operations should be considered during simulation. While reporting, such loads can be excluded from the base case and proposed case annual energy consumption. The process loads which are excluded shall be justified with a narrative.*
- *For tenant occupied buildings, the project team must submit signed tenant lease agreement by owner and tenant for at least 50% of the spaces (by area) clearly indicating the green measures implementation mandated to the tenants.*
- *For projects when modelling district cooling, the proposed and baseline building designs must both assume purchased chilled water as the cooling source.*

Option 2 - Prescriptive Approach

(Applicable for non-air-conditioned Owner-occupied buildings)

The project should meet the applicable criteria for the following compliances as established in the prescriptive measures of ECSBC 2024.

❖ Building Envelope:

The project must ensure that the following building envelope measures meet the baseline requirements mentioned in ECSBC 2024, Chapter 5 – Building Envelope, Section 5.3.

Building Envelope Parameters					
Building Category	Composite	Hot & Dry	Warm & Humid	Temperate	Cold
Vertical Fenestration					
Maximum U-factor (W/m ² .K)	2.20	2.20	2.20	3.00	1.80
Maximum SHGC Non-North	0.25	0.25	0.25	0.25	0.62
Max SHGC North for latitude ≥ 15°N	0.50	0.50	0.50	0.50	0.62
Max SHGC North for latitude < 15°N	0.25	0.25	0.25	0.25	0.62
Wall Assembly					
All building types, except below	0.40	0.40	0.40	0.55	0.34
No Star Hotel < 10,000 m ² AGA	0.63	0.63	0.63	0.63	0.40
Business < 10,000 m ² AGA	0.63	0.63	0.63	0.63	0.40
School <10,000 m ² AGA	0.85	0.85	0.85	1.00	0.40
Roof Assembly					
All Buildings	0.26	0.26	0.26	0.26	0.20
Assembly & Hospitality (>10,000 m ²)	0.20	0.20	0.20	0.20	0.20

Notes:

For Climatic Zones of India, please refer Annexure - I.

*Low SHGC value can be achieved through chajjah or other sun shading devices or efficient fenestration or a combination of both. For details, refer ECSBC section 5.2.1 - Fenestration, Exception to ECSBC 5.2.1.

❖ **Lighting:**

The Lighting Power Density (LPD) in the building interior shall meet the LPD as outlined in the Building Area Method (under Chapter 7, Table 7.1) or Space by Space Method (under Chapter 7, Table 7.4) and exterior & parking areas (under Chapter 7, Table 7.7) of ECSBC 2024.

Notes:

- Compliance for the lighting power density shall be shown either through Building Area Method or Space Function Method. If Building Area Method is considered, compliance for parking area lighting shall be shown separately.
- Exterior areas illuminated by lighting only should be considered for lighting power density calculations.
- The LPD should include power consumption of complete fixture, including lamps and ballasts.

❖ **Space Conditioning Systems:**

• **Unitary, Split, and Packaged Air-Conditioners**

Unitary, Split, and Packaged Air-Conditioners should meet or exceed the requirements mentioned in ECSBC 2024, Chapter 6 - Comfort Systems and Controls, Section 6.2.2.b - Unitary, Split, and Packaged Air-Conditioners.

Unitary, Split: >10.5 kW (BEE Star) and Packaged Unit		
Cooling Capacity (kW _r)	Water Cooled	Air Cooled
< 10.5	NA	BEE 3 STAR
> 10.5	3.3 EER	2.8 EER

• **Variable Refrigerant Flow (VRF)**

Variable Refrigerant Flow (VRF) should meet or exceed the requirements mentioned in ECSBC 2024, Chapter 6 - Comfort Systems and Controls, Section 6.2.2.c - Variable Refrigerant Flow (VRF).

For Heating or Cooling or Both		
Type	Size Category (kW _r)	ISEER (W/W)
VRF Air Conditioners, Air Cooled	<40	5.4
	≥ 40 and < 70	5.5
	≥ 70	5.6

❖ **Fans**

Fans installed in the building shall have an efficiency equivalent to BEE 3-star rating or more.

Notes:

- Non-air-conditioned buildings are those which are not serviced and will not be serviced in the future, either through central air-conditioned systems or unitary air-conditioners.

- *Air-conditioning may be considered for critical areas, not more than 10% of the total regularly occupied area.*
- *Spaces with unitary air-conditioners shall comply with IEQ Mandatory Requirement 1 - Fresh Air Ventilation, non-air-conditioned buildings criteria.*

Commissioning Plan for Building Equipment & Systems

EE Mandatory Requirement 3

Intent:

Verify and ensure that the building's equipment & systems are commissioned to achieve performance as envisaged during the design stage.

Compliance Options:

The project shall comply with the following requirements:

Demonstrate that the project owner has signed an agreement with third party Commissioning Authority/ Agency (CxA), not involved in any capacity.

Notes:

- *Air-conditioned Buildings: Projects with less than 2,000 sq.m of built-up area, the owner or the designer can submit the commissioning plan.*
- *Non-air-conditioned Buildings: For non-air-conditioned projects, the owner or the designer can submit the commissioning plan.*

(AND)

- Document owners brief in terms of performance expectations from the building.
- Plan to show how the building would be audited for its green building performance after occupancy, with regard to the following:
 - HVAC systems - chiller, VRV systems, primary & secondary water pumps, cooling tower, AHU fans, fresh air fans and flow settings, fresh air treatment units, heat recovery wheel, VFDs
 - Unitary air-conditioners
 - Temperature and RH measurements in individual spaces
 - Pumps & motors
 - Lighting systems
 - Renewable energy systems
 - CO2 monitoring system
 - Energy & Water metering
 - Building management system
 - DG sets or Back-up systems
 - Sewage treatment plant
 - Any other equipment's and systems
- Report specific observations and variations identified by commissioning authority to the project owner, for each equipment & system, with respect to commissioning plan and how they were addressed.
- Measurement & verification plan for yearly reporting.
- Post-occupancy survey to verify occupant comfort (lighting levels, temperature, relative humidity, noise levels, etc.,).

- Functional test reports on green building performance of the equipment & systems listed in commissioning plan. The report for each of the equipment & systems should cover the following:
- Equipment specifications
- Test results with specific comments from the Commissioning Authority, at the time of commissioning
- Key monitoring aspects to sustain performance
- Estimated energy & water consumption
- Scope for performance enhancing in future, and savings thereof.

Passive Design

EE Credit 1

Points: 2

Intent:

Adopt passive design features to minimise building loads through an iterative design process to optimise building energy performance.

Compliance Options:

Case A: Simulation Approach (Air-conditioned Buildings)

The project team can demonstrate the savings of at least 2%, by adopting passive design strategies against baseline as per the design process requirements stated in ASHRAE SSPC 209:

Percentage of Reduction in Building's Total Annual Energy through Passive Design Strategies	Points
≥ 2 %	1
≥ 4 %	2

Step 1: Goal Setting and Climate Analysis (Preparatory)

- Climate Analysis: Conduct a detailed climate analysis for the project to inform early design decisions. Analysis shall include solar radiation, temperature/humidity ranges, wind patterns, and rainfall.

Step 2: Conceptual Design Modelling (Establishing the Performance Baseline)

- Baseline Model Creation: Model the baseline as per the requirements of ECSBC 2024 / ASHRAE 90.1-2022 (Appendix-G) for the building envelope (e.g., U-values, SHGC, Window-to-Wall Ratio).
- Preliminary Goals: Analyse preliminary base case energy loads and identify the key passive design opportunities (e.g., Orientation, Zoning, Thermal massing, Shading devices or any other passive measures).

Step 3: Load Reduction Modelling (Quantifying Passive Design Impact)

- Parametric Analysis: Develop the Proposed Design Model by parametric analysis of different passive measures and indicate the reduction against the baseline.

Notes:

The following must be constant in both proposed and base case:

- HVAC system type and efficiency
- Lighting Power Density (LPD) and schedules
- Equipment Power Density (EPD) and schedules
- All other internal loads and operational schedules

Case B: Prescriptive Approach (Non-Air-conditioned Buildings)

Demonstrate that the project has implemented at least one of the following climate responsive passive measures that result in energy savings: (1 point for two measures; maximum 2 points)

List of Climate Responsive Passive Design measures

Concept	Criteria
Orientation & Thermal zoning	Zoning of buffer areas and regularly occupied areas as per the Sun path analysis.
Skylight	Skylights shall comply with the maximum U-factor and maximum SHGC requirements as prescribed in Energy Conservation Sustainable Building Code 2024 (ECSBC), Section 5.3.4-Skylights, Table 5.15: Skylight U-Factor and SHGC Requirements.
Courtyard	Design building with at least one courtyard. The courtyard's shorter side should not be more than 2.5 times the height of the abutting walls to ensure self-shading while permitting diffused light.
Shading corridors	Design corridors that are exposed to ambient climatic conditions so as to achieve 75% shading during daytime
Exterior Openings	At least 75% of the exterior openings (fenestration) have a Projection Factor* of 0.3 or more (with overhangs or vertical fins)
Windows (Punched/ Bay)	Design atleast 75% of the windows as per climatic zone and orientation
Light shelves	Design light shelves for 50% of the windows/ glazed areas, as per climatic zone and orientation
Walls	Design 75% of the external walls (Trombe wall, High thermal mass, Cavity walls, Hollow brick walls) by surface area as per climatic zone
Cross ventilation	Design 50% of the unconditioned regularly occupied spaces so as to achieve cross ventilation.
Passive Cooling / Heating Technologies	Wind tower, Earth tunnel, Geothermal technologies, etc.

Notes:

- Roof area covered with Solar PV will not be considered as a passive design measure, for this credit
- Points to consider for Skylight:
 - SRR: Skylight Roof Ratio which is the ratio of the total skylight area of the roof, measured to the outside of the frame, to the gross exterior roof.
- All enclosed roof areas, including podium/ basement areas can also be considered for credit calculations.
- Covered surface parking and utility blocks need not be considered for this credit calculation.

- *Point to consider for Exterior Openings:*
 - *Projection Factor is a ratio of the length of overhang projection divided by height from window sill to the bottom end of the overhang (must be permanent). For more details, please refer Energy Conservation Building Code (ECBC).*
- *Points to consider for Cross Ventilation:*
 - *The doors/ windows should not have any obstruction within 2 m from outside surface. In case the doors open into internal corridors, then such corridors should not be enclosed as there would not be air movement.*
 - *The opening considered should meet HWB Mandatory Requirement 1 – Minimum Fresh Air Ventilation, Case B: Non-Air-conditioned Spaces criteria.*
 - *Regularly occupied spaces with an opening to the outdoors only in one orientation can also be considered for calculations, if there is a permanent opening to the adjoining room which meets cross ventilation criteria.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Enhanced Energy Efficiency

EE Credit 2

Points: 1-13

Intent:

Optimise energy consumption to reduce negative environmental impacts from excessive energy use.

Compliance Options:

Option 1: Air-conditioned Buildings

Design the building to comply with ECSBC 2024 (or) ASHRAE Standard 90.1-2022 (without amendments) through whole building simulation approach or Normative Appendix – G Performance Rating Method.

Points are awarded based on energy performance saving as detailed below:

Percentage of Energy Savings over ESCBC 2024 Base Case			
Owner-occupied Buildings	Tenant-occupied Buildings	Major Renovation Buildings	Points
6%	4%	2%	1
8%	6%	4%	2
10%	8%	6%	3
12%	10%	8%	4
14%	12%	10%	5
16%	14%	12%	6
18%	16%	14%	7
20%	18%	16%	8
22%	20%	18%	9
24%	22%	20%	10
-	24%	22%	11
-	26%	24%	12
-	28%	26%	13

Percentage of Energy Savings over ASHRAE 90.1-2022			
Owner-occupied Buildings	Tenant-occupied Buildings	Major Renovation Buildings	Points
1%	0.5%	-	1
1.5%	1%	0.5%	2
2%	1.5%	1%	3
2.5%	2%	1.5%	4
3%	2.5%	2%	5
3.5%	3%	2.5%	6

4%	3.5%	3%	7
4.5%	4%	3.5%	8
5%	4.5%	4%	9
5.5%	5%	4.5%	10
-	5.5%	5%	11
-	6%	5.5%	12
-	6.5%	6%	13

Notes:

- *Project with multiple buildings (including projects with common basement) must independently meet the Minimum Energy Performance criteria for each building.*
- *Major renovation buildings are those where significant modifications have been made in the building envelope, mechanical and electrical systems.*
- *Projects that use on-site renewable energy sources (such as solar energy, wind power, biomass, etc.,) can subtract renewable energy generated from the total annual energy consumption of the proposed case. Projects that use solar hot water systems can model the systems in the proposed case, as against electrical heaters in the base case, to show energy savings.*
- *For tenant occupied buildings, the project team must submit signed tenant lease agreement by owner and tenant for atleast 50% of the spaces clearly indicating the green measures implementation mandated to the tenants*

Option 2: Non-air-conditioned buildings (Prescriptive Approach) (Maximum 10 points)

(Applicable for Owner-Occupied buildings only)

Owner-occupied non-air-conditioned buildings shall meet or exceed the following prescriptive measures, as applicable:

❖ **Building Envelope (3 points – 1 point for each measure)**

The project must ensure that the following building envelope measures meet the baseline requirements mentioned in ECSBC 2024, Chapter 5 – Building Envelope, Section 5.3.

Building Envelope Parameters					
Building Category	Composite	Hot & Dry	Warm & Humid	Temperate	Cold
Vertical Fenestration					
Maximum U-factor (W/m ² .K)	1.80	1.80	1.80	2.20	1.80
Maximum SHGC Non-North	0.20	0.20	0.20	0.20	0.62
Max SHGC North for latitude ≥ 15°N	0.50	0.50	0.50	0.50	0.62
Max SHGC North for latitude < 15°N	0.20	0.20	0.20	0.20	0.62

Wall Assembly					
All building types, except below	0.34	0.34	0.34	0.55	0.22
No Star Hotel < 10,000 m2 AGA	0.44	0.44	0.44	0.44	0.34
Business < 10,000 m2 AGA	0.44	0.44	0.44	0.55	0.34
School <10,000 m2 AGA	0.63	0.63	0.63	0.75	0.44
Roof Assembly					
All Buildings	0.20	0.20	0.20	0.20	0.20

❖ Lighting (2 points)

The Lighting Power Density (LPD) in the building interior shall be reduced by at least 20% from the LPD as outlined in the Building Area Method (under Chapter 7, Table 7.2) or Space by Space Method (under Chapter 7, Table 7.5) and exterior & parking areas (under Chapter 7, Table 7.8) of ECSBC 2024.

Points are awarded as below:

Reduction in Lighting Power Density Points	Points
≥ 20%	1
≥ 30%	2

Notes:

- Compliance for the lighting power density shall be shown either through Building Area Method or Space Function Method. If Building Area Method is considered, compliance for parking area lighting shall be shown separately.
- Exterior areas illuminated by lighting only should be considered for lighting power density calculations.
- The LPD should include power consumption of complete fixture, including lamps and ballasts.

❖ Lighting Controls (1 point)

All non-emergency exterior & common area lighting such as façade, pathways, landscaping, surface and covered parking, street lighting, staircases should have at least one of the following:

- Daylight sensor
- Occupancy / Motion sensor
- Timer

❖ Space Conditioning Systems (2 points)

- **Unitary, Split, and Packaged Air-Conditioners (2 points)**

Unitary, Split, and Packaged Air-Conditioners should meet or exceed the requirements mentioned in ECSBC 2024, Chapter 6 - Comfort Systems and Controls, Section 6.3.7 - Unitary, Split, and Packaged Air-Conditioners.

Unitary, Split: >10.5 kW (BEE Star) or Packaged Unit		
Cooling Capacity (kW _r)	Water Cooled	Air Cooled
< 10.5	NA	BEE 4 STAR
> 10.5	3.7 EER	3.2 EER

(Or)

- **Variable Refrigerant Flow (VRF) (2 points)**

Variable Refrigerant Flow (VRF) should meet or exceed the requirements mentioned in ECSBC 2024, Chapter 6 - Comfort Systems and Controls, Section 6.3.8 - Variable Refrigerant Flow (VRF).

For Heating or Cooling or Both		
Type	Size Category (kW _r)	ISEER (W/W)
VRF Air Conditioners, Air Cooled	<40	6.4
	≥ 40 and < 70	6.5
	≥ 70	6.6

- ❖ **Low Energy Comfort System (1 point)**

Alternative HVAC systems which have low energy use may be installed in place of (or in conjunction with) refrigerant-based cooling systems. Such systems shall be deemed to meet the minimum space conditioning equipment efficiency levels of Section 6.2.2 of ECSBC 2024 but shall comply with all other applicable mandatory provisions of Section 6.2 as applicable. Wherever applicable, requirements of Section 6.3 and 6.3.12 shall be complied with. The approved list of low energy comfort systems is given below:

- Evaporative cooling
- Desiccant cooling system
- Solar air conditioning
- Tri-generation (waste-to-heat)
- Radiant cooling system
- Ground source heat pump
- Adiabatic cooling system
- Under-floor Air distribution (UFAD) system

- ❖ **Hot water production (1 point)**

A minimum BEE 3-star rated solar water heating system compliant with IS 12976, heat recovery systems that utilize waste heat from condensers, or air-to-water/water-to-water heat pumps. The use of electricity, gas, or oil-fired boilers is discouraged unless they are essential for a specific process or if by-product steam or hot water is available for this purpose.

Notes:

- **** Degree day:** The difference in temperature between the outdoor mean temperature over 24-hour period and a given base temperature.
- ****Heating degree day base 18°C, (HDD 18):** For any one day, when the mean temperature is less than 18°C, there are as many degree-days as degree centigrade temperature difference between the mean temperature for the day and 18°C.
- Annual heating degree-days (HDDs) are the sum of the degree-days over the calendar year.

❖ Fans (Applicable for Non-Air-conditioned Owner-occupied buildings) (2 points)

Fans installed in the building shall have an efficiency equivalent to BEE 5-star rating or fan with BLDC motor.

Notes:

- *Non-air-conditioned buildings are those which are not serviced and will not be serviced in the future, either through central air-conditioned systems or unitary air-conditioners.*
- *Air-conditioning may be considered for critical areas, not more than 10% of the total regularly occupied area.*
- *Spaces with unitary air-conditioners shall comply with IEQ Mandatory Requirement 1 - Fresh Air Ventilation, non-air-conditioned buildings criteria.*

Exemplary Performance:

This credit (Case A - Air-conditioned Buildings) is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process, if:

- **Owner-Occupied Buildings:** Energy cost savings are more than 5.5% in Owner-occupied buildings, when compared to the ASHRAE Standard 90.1-2022 Appendix – G or 24%, when compared to ECSBC-2024, base case.
- **Tenant-Occupied Buildings:** Energy cost savings are more than 7% in Tenant-occupied buildings, when compared to the ASHRAE Standard 90.1-2022 Appendix – G or 30%, when compared to ECSBC-2024, base case.
- **Major Renovation Buildings:** Energy cost savings are more than 6.5% in Tenant-occupied buildings, when compared to the ASHRAE Standard 90.1-2022 Appendix – G or 28%, when compared to ECSBC-2024, base case.

Renewable Energy

EE Credit 3

Points: 6-10

Intent:

Encourage the use of renewable technologies, to minimise the environmental impacts associated with the use of fossil fuel energy.

Compliance Options:

Demonstrate percentage savings through on-site (and/or) off-site renewable energy generation to offset total annual energy consumption of the building (interior & exterior areas).

Points are awarded as below:

Option 1: On-Site Renewable Energy

Percentage of On-site Renewable Energy Generated to the Total Annual Energy Consumption		Points
(Owner Occupied)	(Tenant Occupied)	
≥ 2 %		1
≥ 4 %		2
≥ 6 %		3
≥ 8 %	≥ 1 %	4
≥ 10 %	≥ 2 %	5
≥ 12 %	≥ 3 %	6
≥ 14 %	≥ 4 %	7
≥ 16 %	≥ 5 %	8
≥ 18 %	≥ 6 %	9
≥ 20 %	≥ 7 %	10

(Or)

Option 2: Off-Site Renewable Energy

Percentage of Off-site Renewable Energy Generated to the Total Annual Energy Consumption of the Building		Points
Owner Occupied	Tenant Occupied	
≥ 50 %	≥ 10 %	2
≥ 65 %	≥ 20 %	4
≥ 80 %	≥ 30 %	6
≥ 95 %	≥ 40 %	8

(Or)

Option 3 - Combination of On-Site Renewable & Off-Site Renewable Energy

Percentage of On-Site & Off-Site Renewable Energy Generated to the Total Annual Energy Consumption of the Building		Points
(Owner Occupied)	(Tenant Occupied)	
≥ 10 %	≥ 5 %	1
≥ 20 %	≥ 10 %	2
≥ 30 %	≥ 15 %	3
≥ 40 %	≥ 20 %	4
≥ 50 %	≥ 25 %	5
≥ 60 %	≥ 30 %	6
≥ 70 %	≥ 35 %	7
≥ 80 %	≥ 40 %	8
≥ 90 %	≥ 45 %	9
≥ 95 %	≥ 50 %	10

Notes:

- Renewable energy sources include solar energy, wind power, biomass, etc.
- Solar hot water systems cannot be considered as power generation source and cannot be subtracted from the total annual energy consumption of the proposed case.
- Type of renewable energy source shall be in compliance with the Ministry of New and Renewable Energy (MNRE), Government of India and respective State Regulatory Commissions.
- The project team shall enter into a minimum one-year agreement with the Electricity Board for the purchase of Green Power, followed by consecutive renewals for an additional minimum period of two years.
- Supply of Green Energy to the project under Green Tariff policy of the respective DISCOM is considered as an offsite Renewable Energy Source by IGBC. The calculation of % offset of the total annual energy consumption will be evaluated based on the certificate issued by the DISCOM/authority mentioning quantity of green energy supplied to the project.
- Unregulated RECs are not accepted by IGBC.
- IGBC would recognise only those Renewable Energy purchased/ RECs which are regulated by CERC, and the quantity of such Renewable Energy purchased must be:
 - Equal to or lower than the energy traded through Energy Exchange Platforms (IEX/ other CERC approved), and the same should reflect in the energy bill of the respective months.
- The total annual energy consumption can be arrived either through Performance based approach or Prescriptive approach.
 - Buildings following Prescriptive approach should estimate the total annual energy consumption of the building by calculating the energy consumption of all mechanical and electrical equipment & systems based on the number of hours of operation per day.
- Hydro power projects with 25 MW or lesser size shall only be considered under this credit.

Exemplary Performance:

This credit is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process, under Option 1, if on-site renewable energy generation is:

Owner Occupied Buildings	Tenant Occupied Buildings
≥ 22% of total annual energy consumption	≥ 8% of total annual energy consumption

Enhanced Commissioning for Equipment & Systems

EE Credit 4

Points: 2

Intent:

Verify and ensure that the building's equipment & systems are commissioned to achieve performance as envisaged during the design stage.

Compliance Options:

The project shall comply with the following requirements:

- Demonstrate that the project owner has signed an agreement with third party commissioning authority, not involved in any capacity. The commissioning authority must be ASHRAE or ISHRAE Building Commissioning Professional and have at least 3 years prior experience in equipment & systems.
- Demonstrate that there is an agreement in place for post occupancy commissioning by a third-party commissioning authority for a period of one year, to ensure that the commissioned equipment & systems perform efficiently.

Notes:

- *Air-conditioned Buildings: Projects with less than 2,000 sq.m of built-up area, the owner or the designer can submit the commissioning plan.*
- *Non-air-conditioned Buildings: For non-air-conditioned projects, the owner or the designer can submit the commissioning plan.*
- *In tenant-occupied buildings, if commissioning of building equipment & systems is not in the developer scope, then this credit cannot be attempted.*
- *In tenant-occupied buildings, if commissioning of project's high side air-conditioning equipment is not in the developer scope, then this credit cannot be attempted."*

(AND)

- Document owners brief in terms of performance expectations from the building.
- Plan to show how the building would be audited for its green building performance after occupancy, with regard to the following:
 - HVAC systems - chiller, VRV systems, primary & secondary water pumps, cooling tower, AHU fans, fresh air fans and flow settings, fresh air treatment units, heat recovery wheel, VFDs
 - Unitary air-conditioners
 - Temperature and RH measurements in individual spaces
 - Pumps & motors
 - Lighting systems
 - Renewable energy systems
 - CO₂ monitoring system
 - Energy & Water metering
 - Building management system
 - DG sets or Back-up systems
 - Sewage treatment plant
 - Any other equipment's and systems

- Report specific observations and variations identified by commissioning authority to the project owner, for each equipment & system, with respect to commissioning plan and how they were addressed.
- Measurement & verification plan for yearly reporting.
- Post-occupancy survey to verify occupant comfort (lighting levels, temperature, relative humidity, noise levels, etc.).
- Functional test reports on green building performance of the equipment & systems listed in commissioning plan. The report for each of the equipment & systems should cover the following:
 - Equipment specifications
 - Test results with specific comments from the Commissioning Authority, at the time of commissioning
 - Key monitoring aspects to sustain performance
 - Estimated energy & water consumption
 - Scope for performance enhancing in future, and savings thereof.

Energy Metering and Management

EE Credit 5

Points: 2

Intent:

Encourage sub-metering and continuous monitoring to identify improvement opportunities in building's energy performance.

Compliance Options:

Option 1: Energy Metering (1 point)

Install sub-meters for at least five of the following energy use applications, as applicable:

- Source Metering
- Interior & Common area lighting
- Exterior area lighting
- Centralised water pumping
- Treated wastewater pumping
- Renewable energy generation
- Power backup systems (Generators sets, Gas turbines, etc.,)
- Elevators, Escalators, Travelators, etc.,
- BTU meter for chilled water consumption (*Applicable for tenant-occupied buildings only*)
- Any other energy consuming equipment and systems

(And / Or)

Option 2: Building Management System (1 point)

Demonstrate that the building management system is in place to monitor and control the at least three of following systems, as applicable:

- **Air-conditioning management system**
HVAC operations must include temperature control, chiller and AHU performance, humidity levels, and system scheduling. The system should enable real-time monitoring and adjustment to maintain indoor comfort while maximising energy efficiency.
- **Lighting management system**
Ensure BMS manages common area and exterior lighting through automated controls, occupancy sensors (if applicable), and scheduling.
- **Renewable energy management system**
Ensure BMS tracks energy generation, monitors performance, and optimises utilisation of renewable power in coordination with the building's overall energy profile.
- **Elevator management system**
Ensure elevator operations are connected to the BMS to monitor energy use, traffic patterns, wait times, and system efficiency.

- **Fresh air monitoring system**

Ensure BMS continuously monitors outdoor and indoor air quality parameters, including fresh air intake levels. The system should ensure adequate ventilation as per design requirements and trigger adjustments to maintain healthy indoor environments.

- **CO₂ control and monitoring system**

Demonstrate that sensors are installed to track CO₂ concentrations in occupied spaces, with the BMS adjusting the ventilation rates accordingly to maintain the differential of 530ppm.

Also, commit to provide the annual total building energy consumption data to IGBC. The energy data shall be provided for all the major energy consuming equipment and systems.

Exemplary Performance:

This credit is not eligible for exemplary performance.



BUILDING MATERIALS AND RESOURCES

Waste Management, Post Occupancy

BMR Mandatory Requirement 1

Intent:

Facilitate segregation of waste post occupancy at source to encourage reuse or recycling of materials, thereby avoiding waste being sent to landfills.

Compliance Options:

Building-level & Centralized Facility

Provide separate four stream segregation of solid waste at source the waste as per table below, at all the floors and common areas of the building, as applicable. Divert the collected waste to a centralized facility and provide separate bins for safe disposal of hazardous and e-waste.

Bin Color	Type of Waste	Examples of Waste
Green	Biodegradable and Organic Waste	Food, fruits & vegetables, coffee/ tea grounds, flowers, etc
Blue	Dry waste and Recyclable Items	Paper, cardboard, metal, disposables, glass
Red	Sanitary and Medical Waste	Sanitary napkins, diapers, etc.
Black	Special Care Waste	CFL bulbs, tube lights, expired medicines, batteries, etc.

Types of waste bins

Notes:

- *The project must follow waste segregation principles as per the Solid Waste Management Rules 2026.*
- *The project must follow the Hazardous Waste Management Guidelines as prescribed by the Ministry of Environment & Forest (MoEF), Government of India.*
- *The project team must install permanent signages for bins provided at building and centralized facility.*

Organic Waste Management, Post-occupancy

BMR Mandatory Requirement 2

Intent:

Ensure effective organic waste management to avoid domestic or organic waste being sent to landfills and to improve sanitation and health.

Compliance Option:

Install an on-site waste treatment system for handling at least 50% of the organic (kitchen) waste generated in the building (including tenant-occupied areas). The generated manure or biogas shall be utilised as appropriate.

Projects having an organic waste convertor in an enclosed room, then design such area with exhaust/mechanical ventilation system, self-closing door, deck-to-deck partition/ hard ceiling.

Notes:

- *For calculation, food waste to be considered as 0.06 kg per person per day for the total occupants & visitors or as prescribed by the local byelaw, whichever is more stringent.*
- *For calculations of food waste in hotels/ fully functional restaurants/food courts with kitchen, consider 0.18 kg per person per day of food waste for occupants catered in such facilities.*
- *The equipment efficiency of the OWC must be < 0.06 kW/kg.*
- *Projects having built up area <5000 sq.m, the project authority may hand over the segregated organic waste to the concerned local body if the municipality has a wet waste pick-up mechanism in place.*

Sustainable Material Reuse and Procurement

BMR Credit 1

Points: 1-5

Intent:

Encourage the use of building materials to reduce dependence on materials that have associated negative environmental impacts.

Compliance Options:

Option 1: Material Reuse (1 Point)

(Applicable to Major Renovation buildings)

Ensure at least 50% (by area) of the structural and/or at least 25% (by area) of the non-structural (interiors) elements of the existing building are retained.

Building elements	Threshold	Points
Structural	≥ 50%	1
Non-Structural (Interiors)	≥ 25%	

Notes:

- *Building reuse is applicable only to projects which extend the life of building by retaining the structural and non-structural (interiors) elements of the existing building after its life span.*
- *Structural elements include, columns, beams, floor slabs, exterior walls, structural glazing, etc.,*
- *Non-structural (interiors) elements include, interior walls, ceiling, flooring materials, doors, windows, etc.,*
- *The credit is applicable for major renovation projects. For other projects, project team can attempt Option 2 to show compliance.*

(And/Or)

Option 2: Green Materials Procurement

(4 Points – Major Renovation Building; 5 points – New Buildings)

Ensure that the project uses green building materials, products, and equipment that are certified by CII under Green Product Certification Programme (GreenPro) or any other Type 1 Ecolabel.

Points are awarded as below:

Category	Number of Certified Green Products used	Points
Civil Materials	2	1
	4	2
	6	3
Electrical / Mechanical Systems and Equipment	2	1
Other Categories (e.g. Plumbing fixtures, housekeeping chemicals, wood-based material/ furniture)	2	1

Notes:

- *Civil Materials include glazing, insulation, paints & coatings, adhesives & sealants, fly ash blocks, cement, concrete, false ceiling materials, wood, flooring materials, gypsum-based products, high reflective materials & coatings, etc.,*
- *Electrical systems include lighting systems & controls, pumps & motors, etc. and mechanical systems chillers, cooling towers, unitary air conditioners, etc.,).*
- *Materials/Equipment's addressed in other credits cannot be considered to demonstrate compliance as it is already addressed in other credits. Eg – CRI certified carpet*
- *Materials that are not in developer's scope (Example- Housekeeping chemicals etc) cannot be considered to demonstrate compliance in tenant occupied building.*

Exemplary Performance:

This credit is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process:

- Retention of at least 75% of the structural elements and / or atleast 50% of non-structural elements (by area) of the existing building.

Embodied Carbon Footprint

BMR Credit 2

Points: 2-4

Intent:

Select materials with low carbon emissions during design & construction phase, and report the embodied carbon associated with the building's materials & products portfolio.

Compliance Options:

Option 1: Embodied Carbon Analysis for High Impact Material (2 points)

Calculate the embodied carbon associated with the project's civil materials (limited to high impact materials – Steel, Concrete, Cement, Building blocks and Glass), as defined under this criterion.

Material quantities used must be as per the Bill of Quantities (BOQ) and LCA result to be reported in kgCO₂e per square meters of built-up area (kgCO₂e/m² BUA).

S. No.	Building Element	Indicative Civil Materials
1	Substructure <ul style="list-style-type: none"> • Foundation • Ground Beams & Slab • Basement Walls & Slab 	<ul style="list-style-type: none"> • Concrete • Reinforcement & structural Steel <p><i>or any alternative civil material specified to serve an equivalent functional purpose.</i></p>
2	Superstructure <ol style="list-style-type: none"> 1. Frame (incl. columns & beams) 2. Structural Floors 3. Core Walls/Shear Walls 4. Roof Beams & Slab 5. Staircase 	<ul style="list-style-type: none"> • Concrete • Reinforcement & structural Steel • Structural Timber <p><i>or any alternative civil material specified to serve an equivalent functional purpose.</i></p>
3	External Envelope <ul style="list-style-type: none"> • External Wall assembly (including insulation & outer-skin finish) • Windows • External Doors • Roof Covering (including insulation & exposed roof finish) • Curtain wall 	<ul style="list-style-type: none"> • Glass • Bricks/Blocks <p><i>or any alternative civil material specified to serve an equivalent functional purpose</i></p>

High Impact Materials and Building element for Embodied carbon Analysis.

(Or)

Option 2: Life Cycle Embodied Carbon Analysis (4 points)

Calculate the embodied carbon associated with the project's civil materials (Steel, Concrete, cement, Building blocks, Glass, Aluminium, Gypsum, Metal, Wood, Tiles, RMC, Stone/ Marble, UPVC or listed in Table 14, as applicable), as defined under this criterion.

Material quantities used must be as per the Bill of Quantities (BOQ) and LCA result to be reported in kgCO₂e per square meters of built-up area (kgCO₂e/m² BUA).

S. No.	Building Element	Indicative Civil Materials
1	Substructure <ul style="list-style-type: none"> Foundation Ground Beams & Slab Basement Walls & Slab 	<ul style="list-style-type: none"> Concrete Reinforcement & structural Steel <i>or any alternative civil material specified to serve an equivalent functional purpose.</i>
2	Superstructure <ul style="list-style-type: none"> Frame (incl. columns & beams) Structural Floors Core Walls/Shear Walls Roof Beams & Slab Staircase 	<ul style="list-style-type: none"> Concrete Reinforcement & structural Steel Structural Timber <i>or any alternative civil material specified to serve an equivalent functional purpose.</i>
3	External Envelope <ul style="list-style-type: none"> External Wall assembly (including insulation & outer-skin finish) Windows External Doors Roof Covering (including insulation & exposed roof finish) Curtain wall 	<ul style="list-style-type: none"> Glass Bricks/Blocks Aluminium framework Insulation Metal Cladding <i>or any alternative civil material specified to serve an equivalent functional purpose</i>
4	Internal elements (Owner Occupied only) <ul style="list-style-type: none"> Internal wall/ partition system Internal windows & doors Staircase finish & balustrades Wall, floor & ceiling systems 	<ul style="list-style-type: none"> Bricks/Blocks for partition Dry wall Gypsum boards system (incl. stud systems where applicable) Wooden/ UPVC / Aluminium frames for windows Wooden/PVC doors, Laminates Tiles, stones/ marble <i>or any alternative interior material specified to serve an equivalent functional purpose</i>
5	MEP Systems (As applicable)	<ul style="list-style-type: none"> HVAC systems Lighting (common areas) Plumbing (Common Areas)

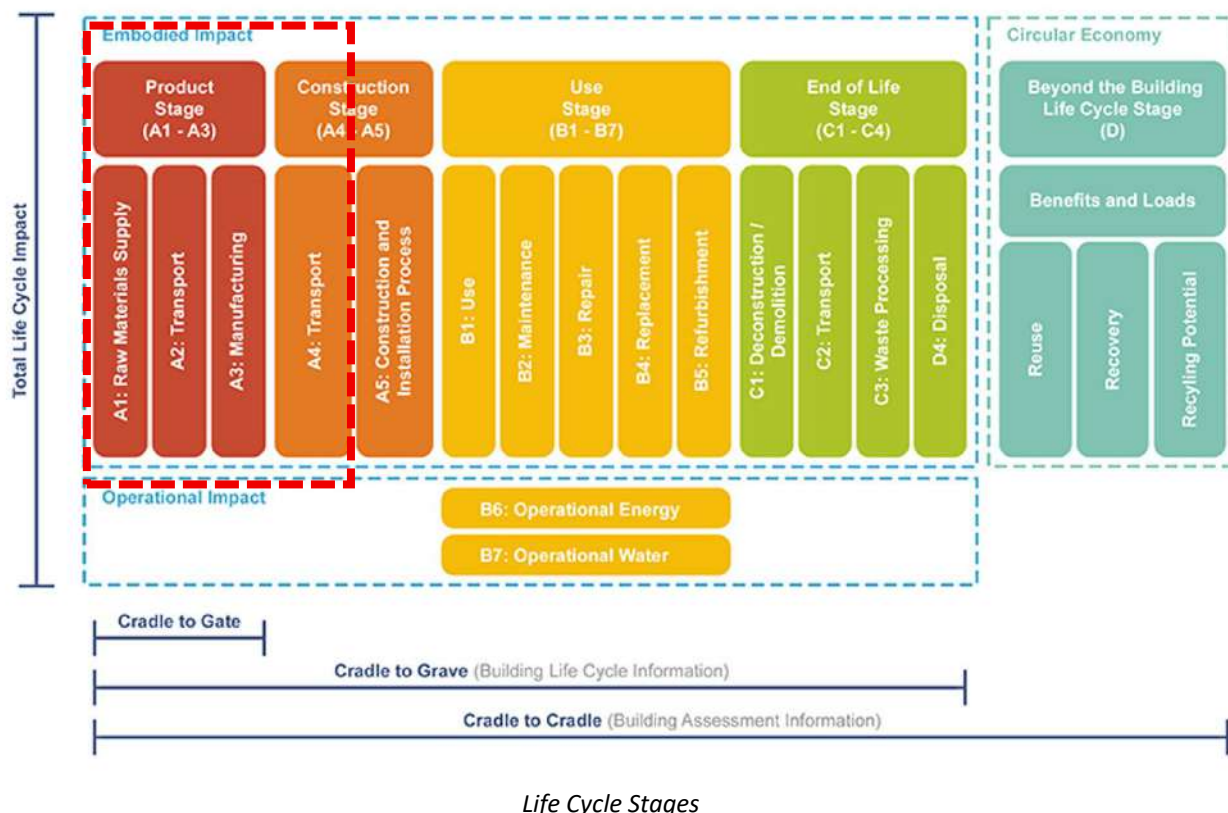
Materials and Building element for Embodied carbon Analysis.

Key considerations for performing a Life Cycle Assessment (LCA)

- **LCA Boundary: Life Cycle Stages/ Modules**

The LCA should only report the embodied carbon (kgCO₂e) associated with the following Life-Cycle Stages:

- A1–A3: Product stage (raw material supply, transport, manufacturing)
- A4: Construction process stage (transport to site)



- **LCA Boundary: Material and Building element**

The LCA report should only include the embodied carbon (kgCO₂e) associated with materials across the building elements listed in Option 1 and/or for Option 2.

- **Data Source**

The embodied carbon factors of materials modelled within the defined scope of the LCA boundaries set under this criterion should be sourced from Eco-labelling programmes such as GreenPro or equivalent, where available. Where this is not available, the LCA should use third-party (independently) verified, or peer-reviewed carbon factors to ISO 14067, integrated into software databases.

Notes:

The embodied carbon impacts not addressed/included in this credit are:

- Embodied carbon associated with interior and finishing material (as applicable), and equipment and systems, except when it is under developer scope.
- Embodied carbon associated with Module A5 which includes:

- *Emissions in construction stage from consumption of energy via use of electricity, DG sets, and other means.*
- *Emissions in construction stage from the transportation of any other activities, other than building materials & products, such as sourcing water for construction activities.*
- *Emissions in construction stage from the diversion of construction waste.*
- *Movement of labour and employees within or outside the project site.*
 - *Embodied Carbon associated with Module B (Use Stage) and Module C (End-of-Life Stage)*

Exemplary Performance:

The credit is not eligible for exemplary performance.

Organic Waste Management, Post-occupancy

BMR Credit 3

Points: 2

Intent:

Ensure effective organic waste management to avoid domestic or organic waste being sent to landfills and to improve sanitation and health.

Compliance Options:

Option 1: On-site Waste Management Plant (2 points)

Install an on-site waste treatment system for handling 100% of the organic waste generated in the building (including tenant-occupied areas) and atleast 50% landscape waste generated in the project. The generated manure or biogas shall be utilised as appropriate.

Waste Generated	Points
100% organic waste and 50% landscape waste	1
100% organic waste and 95% landscape waste	2

(Or)

Option 2: Waste to Energy Plant

Install a biogas plant to manage and convert 100% of the organic waste generated in the building (including tenant-occupied areas) and landscape waste generated in the project into biogas in compliance with solid waste management regulations.

Notes:

- For calculation, food waste to be considered as 0.06 kg per person per day for the total occupants & visitors or as prescribed by the local byelaw, whichever is more stringent.
- For calculations of food waste in hotels/ fully functional restaurants/food courts, consider 0.18 kg per person per day of food waste for occupants catered in such facilities. For other occupants in the building, food waste to be considered as 0.06 kg per person per day.
- For calculation, landscape waste to be considered as 0.2 kg per sqm per day or as prescribed by the local byelaw, whichever is more stringent.
- The equipment efficiency of the OWC shall be 0.06 kW/kg or less.

Towards Zero Waste to Landfill

BMR Credit 4

Points: 2

Intent:

Ensure the project implements a comprehensive roadmap for source segregation of construction, demolition, and post-occupancy waste to promote reuse and recycling, minimizing landfill disposal.

Compliance Option:

Option 1: Segregation and Management of Construction Waste, During Construction (1 point)

Demonstrate that at least 75% of waste generated during construction (as per owner / developer's scope) is diverted from landfills, for reuse or recycling.

- **Non-Hazardous waste:** Including but not limited to land clearing debris, Metals, Cement and Concrete, Masonry materials, Flooring, Ceiling, Roofing materials, Insulation materials, Cladding materials, Glass, Wood, etc.
- **Packaging waste:** Including but not limited to cement bags, Wooden crates and pallets, Cardboard boxes, Plastic wrapping and shrink wrap, Foam and bubble wrap, Strapping bands and steel wires, PE film or plastic sheeting, Plastic or metal drums/buckets/containers, Corrugated plastic sheets, specialized packaging etc.
- **Construction Hazardous waste:** Including but not limited to lead, tars, adhesives, sealants, broken glass.

Allocate a designated waste yard to segregate and store construction and demolition waste.

Notes:

- *Excavated earth & stones should not be considered under this credit, as these are natural resources.*
- *Temporary materials such as materials used for (1mwork, scaffolding etc., shall not be considered for credit calculations.*
- *No construction and demolition waste shall be littered or deposited to prevent obstruction to the traffic or the public or drains. (C&D Waste Management Rules, 2016).*
- *Some types of construction waste can be reused/repurposed on-site as fill material for levelling uneven terrain, filling excavated areas, or creating embankments, as a base or subbase material for road construction, for erosion control measures, constructing retaining walls, as bedding and backfill material for utility pipelines, etc.*
- *Use consistent metrics, either weight or volume, to show compliance.*

(And/Or)

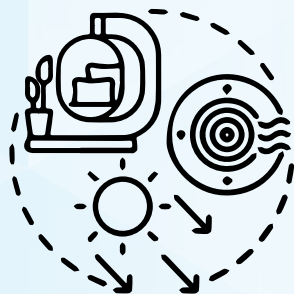
Option 2: Roadmap towards Zero Waste to Landfill, Post Occupancy (1 point)

Develop and implement a comprehensive roadmap outlining steps towards Zero Waste to Landfill.

- Formal contracts with authorized waste management agencies to ensure effective collection, and daily diversion of all recyclable and reusable waste streams.
- Prepare and implement a waste management action plan to address waste generated during renovation, refurbishment, and fit-out activities, ensuring maximum recovery and recycling of materials.
- Monitor and document waste diversion performance periodically to track progress, identify gaps, and continually improve waste reduction strategies.

Exemplary Performance:

Option 1: The project is eligible for exemplary performance under ID Credit 1 - Innovation in Design Process, if at least 95% of waste generated during construction (as per owner / developer's scope) is diverted from landfills, for reuse or recycling.



INDOOR ENVIRONMENTAL QUALITY

Minimum Fresh Air Requirements

IEQ Mandatory Requirement 1

Intent

Provide adequate outdoor air ventilation, so as to avoid pollutants affecting indoor air quality.

Compliance Options:

Demonstrate that the project has ventilation system in place for all regularly occupied spaces of the building to meet the criteria below:

Option 1: Mechanically Ventilated Spaces

Demonstrate that fresh air ventilation in all regularly occupied areas (owner-occupied and tenant-occupied) meets the minimum ventilation rates, as prescribed in ASHRAE Standard 62.1, 2022.

Notes:

- *Projects with unitary air conditioning system catering less than 10% of the total regularly occupied area can show compliance for minimum fresh air ventilation through the criteria defined for non-air-conditioned Spaces.*
- *Residential buildings in mixed-use developments (Residential + Commercial) can show compliance for minimum fresh air ventilation through the criteria defined in the respective rating system*
- *Exhaust outlets shall be located at a minimum height of 3 m away from ground level and away from doors, occupied area and operable windows.*
- *Fresh air intake shall be located at least 7.6 m away from exhaust stacks, cooling tower and/or any other polluting sources.*
- *In tenant-occupied buildings, if air-conditioning equipment is in tenant scope, then the developer shall mandate provision of fresh air ventilation for tenant occupied spaces in tenant agreement, specifying minimum fresh air ventilation requirements as per ASHRAE Standard 62.1 – 2022. During certification the fresh air system must be installed and operational in at least 50% of the regularly occupied areas.*
- *Inline fans shall be permitted for offices/ retail areas, etc. with regularly occupied areas less than 100 sqm.*
 - *The fresh air system (inline fans) must be integrated with all the indoor units in the regularly occupied areas to distribute fresh air as per the fresh air cfm requirement in each space.*
- *Sizing of louvers/ opening provided in AHU room should be based on the face velocity, typically within the range of 2.0 to 2.5 m/s, as recommended by design standards such as ASHRAE Standard 62.1, 2022 and AHRI.*

(And / Or)

Option 2: Naturally Ventilated Spaces

Demonstrate that the project has operable windows and /or doors to the exteriors, in all regularly occupied areas, such that the operable area is designed to meet the criteria as outlined in the table below:

Category	Percentage of Operable Area to Total Carpet Area
Regularly Occupied Areas (< 100 sq.m)	8%
Regularly Occupied Areas (> 100 sq.m)	12%

Notes:

- *For sliding windows/ doors, only operable area to the exteriors shall be considered in calculations.*
- *Windows / doors should not have any obstruction within 2 m from the exterior surface. Shading devices can be excluded.*
- *Openings for fresh air intake shall be located at least 7.6 m away from exhaust stacks, parking areas, cooling tower and/or any other polluting sources.*

Tobacco Smoke Control

IEQ Mandatory Requirement 2

Intent

To minimize exposure of non-smokers to the adverse health impacts arising due to passive smoking in the building.

Compliance Options:

Option 1: No Smoking

Demonstrate that smoking is prohibited in the project and is in accordance with the regulations of Ministry of Health & Family Welfare, Government of India.

(Or)

Option 2: Outdoor Smoking Areas

In case the project has assigned outdoor smoking areas, demonstrate that such areas are located at a minimum of 7.6 meters from all outdoor air intakes (entrance doors, window openings etc.)

(Or)

Option 3: Designated Smoking Rooms

Alternately, compliance can be shown through designated smoking rooms which capture and remove tobacco smoke from the building.

Notes:

- *If smoking is not prohibited, the project shall provide designated space for smoking (space can be utilized for another purpose). Compliance can be shown through designated smoking rooms which capture and remove tobacco smoke from the building. At a minimum, the smoking room must be directly exhausted to the outdoors, away from air intakes and building entry paths, with no recirculation of tobacco smoke containing air to nonsmoking areas and enclosed with impermeable deck-to-deck partitions.*
- *The smoking room shall be completely sealed.*
- *The conditioned air entry into the smoking zone shall not return or be transferred to the air-handling units. This air shall be completely exhausted.*
- *The exhaust air louver / duct should be located at least 7.6 meters away from building entry or fresh air intakes.*
- *The ventilation requirements for smoking room shall be followed as per ASHRAE 62.1 2022.*

Air Quality Management, During Construction

IEQ Credit 1

Points: 1

Intent

Minimize construction-related air quality issues to protect worker and occupant health, ensuring the building is free of contaminants before occupancy.

Compliance Options:

Case A: Outdoor Air Quality Management during Construction

- Covering of Stockpiles at Site with high quality green net / advanced fabrics
- Water suppression and sprinkling targeted at locations and activities that are highly dust-emitting, such as unpaved roads, excavation, demolition, etc.
- Dust barriers and screens as per EIA/ULB Guidelines
- Low-Emission Equipment and Machinery
- Site Barricading on all sides as per relevant local norms
- Structure under demolition/ construction to be enclosed by green cloth
- Wheel washing of vehicles before exiting the site and vehicle carrying construction materials shall be fully covered
- Air Quality Monitors as specified by ULB/PCB (as applicable, if mandated by the Local Authority)
- Systematic reporting of air quality levels against activities taking place on site and mitigation measures adopted to reduce PM suspension

(And)

Case B: Indoor Air Quality Management during Construction

Develop and implement an Indoor Air Quality (IAQ) management plan during construction and pre-occupancy phase, addressing the following measures, as applicable:

- **Scheduling**
 - Coordinate construction activities to minimise disruption of occupied spaces.
 - Carefully sequence construction activities to minimise IAQ issues.
 - Protect stored on-site and installed absorptive materials from moisture damage. Do not install moisture-damaged materials unless they have properly dried.
- **Electrical & Mechanical Equipment & Systems Protection**
 - Store equipment & systems in a clean, dry location.
 - Protect ducts and equipment by sealing openings.
 - Clean air plenums before use.

- **Housekeeping**
 - Implement practices to ensure a clean job site to control potential contaminants such as dirt, dust and debris.
 - Clean up spills and keep work areas dry.

- **Isolate Clean Areas**
 - Isolate areas to prevent contamination of clean or occupied spaces using physical separation.

- **Source Control**
 - Avoid use of finish materials with high VOC and formaldehyde levels.
 - Isolate and ventilate, as appropriate, when using any toxic materials or creating exhaust fumes.
 - Implement measures to avoid the tracking of pollutants into the work area and occupied portions of the building.

Notes:

Consider 'During Construction Indoor Air Quality Management Guidelines' from National Building Code (NBC) 2016 of India, Part 7 - Constructional Management, Practices and Safety.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Low-emitting Materials

IEQ Credit 2

Points: 2

Intent

Encourage use of materials and systems with low or no VOC emissions, to reduce adverse health impacts on building occupants.

Compliance Options:

Demonstrate that the project complies with any two of the following categories:

(1 Point for each measure)

Option 1: Paints & Coatings (1 point)

Use paints and coatings (including primers) with low or no VOC content as specified in the table given below for 95% of interior wall and ceiling surface area.

Type of Paints & Coatings	VOC Limit (g/L less water)
Interior Non-flat (Glossy)	150
Interior Flat (Mat)	50
Exterior Flat (Mat)	200
Exterior Non-Flat (Mat)	100
Metallic/ Anti-corrosive/ Anti-rust	250
Clear Wood Finish: Varnish	350
Clear Wood Finish: Lacquer	550
Floor Coatings	100

VOC Limits for Paints & Coatings

(Or)

Option 2: Adhesives & Sealants (1 point)

For adhesives used within the interiors, ensure that the VOC content does not exceed the limits as specified in the table given below:

Type of Adhesives	VOC Limit (g/L less water)
Glazing adhesives	100
Ceramic tile adhesives	65
Drywall and panel adhesives	50
Wood substrata adhesives	30
Wood flooring adhesives	100
HVAC duct insulation	350
Indoor Carpet adhesives	50
Multipurpose construction adhesives	70

VOC Limits for Adhesives

Notes:

- *The Paints & Coatings and Adhesives certified by CII under Green Product Certification Programme (GreenPro) or by a third-party agency approved by IGBC can be used by the project to show compliance.*
- *Volatile organic compounds (VOCs) are carbon compounds that participate in atmospheric photochemical reactions (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates, and ammonium carbonate). The compounds vaporise at normal room temperatures.*
- *If the project has used small quantities of non-complying paints & coatings and / or adhesives, a VOC budget can be calculated to demonstrate that the weighted average VOC of all products (based on litres of each applied) is below the allowed limit, by each type.*

*(Or)***Option 3: Carpets (1 point)**

All carpets installed in the building interior (as per owner / developer's scope) must comply with GreenPro or CRI Green Label Plus Carpet Programme.

Notes:

The Project is eligible for this credit point only if the carpet is installed in at least 10% of the project total carpet area.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Indoor Environmental Quality Monitoring

IEQ Credit 3

Points: 4

Intent

To ensure a healthy and energy-efficient indoor environment by continuously monitoring air quality parameters and controlling ventilation based on occupancy levels for enhanced occupant comfort and well-being.

Compliance Options:

Option 1: IEQ Monitoring during Occupancy (3 points)

Demonstrate that the project monitors IAQ parameters in at least 50% of the regularly occupied spaces and ensure that at least 80% of the measurements are well within the threshold values:

Parameters	Threshold Values			Frequency of Monitoring
	Class A	Class B	Class C	
CO ₂	Ambient + 350 ppm	Ambient + 500 ppm	Ambient + 700 ppm	Daily Monitoring
PM 2.5	< 15 µg/m ³	< 25 µg/m ³	< 25 µg/m ³	
PM 10	< 50 µg/m ³	< 100 µg/m ³	< 100 µg/m ³	
CO (in parking areas)	< 2 ppm	< 9 ppm	< 9 ppm	

Source: 'IGBC Rating Guidelines' and 'Indoor Environment Quality Standard, ISHRAE Standard -10001:2019'

Threshold values of IAQ Parameters:

- Class C (Minimum applicable) - It defines the minimum acceptable value for critical parameters of IAQ elements. The project meeting class C threshold values will gain '1' credit point.
- Class B (Acceptable) - It defines acceptable value of parameters of IAQ elements in the space. The project meeting class B threshold values will gain '2' credit points.
- Class A (Aspiration) - It defines aspirational values for parameters of IAQ elements in the space. The project meeting class A threshold values will gain '3' credit points.

(And/ Or)

Option 2: Thermal Comfort - Indoor Temperature & RH (1 point)

Demonstrate that the operating temperature and humidity are maintained in at least 50% of the regularly occupied spaces as below, for at least 75% of operating hours.

Level of Activity	Type of Building/ Space	Temperature (°C)		Humidity (%)
		Summer	Winter	
Low	Offices, Conference room, Workstations, Cafeteria/Restaurant, Common areas, Reception	24.5 ± 2.5	23.0 ± 3.0	30% - 70%
Medium	Retail, Shopping Malls	23.0 ± 3.0	19.0 ± 4.0	

Note:

The project team can also calculate the operative temperature through the following approach:

$$T_o = (T_{mr} + T_a) / 2$$

Where,

T_o is the Operative temperature,

T_{mr} is the mean radiant temperature and

T_a is the air temperature

Further, demonstrate that the operative temperature falls within the comfort band using Predicted Mean Value (PMV) model, where the criteria of passing shall be -0.5 to +0.5 on the PMV scale.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Minimise Indoor and Outdoor Pollutants

IEQ Credit: 4

Points: 1

Intent

Minimise the exposure of building occupants and maintenance team to hazardous indoor and outdoor pollutants, which adversely affect indoor air quality and occupant health.

Compliance Options:

Demonstrate that the project complies with at least two of the following criteria, as applicable:

Option 1: Entryway Systems

Install entryway systems of minimum 2 meters (6 feet) in length, at all the building main entrances.

(OR)

Option 2: Chemical Storage Rooms and Janitor Rooms

Isolate areas exposed to hazardous gases or chemicals from regularly occupied areas, as per owner / developer's scope. Also, design such areas with exhaust system*, self-closing door, deck-to-deck partition / hard ceiling. Additionally, use eco-friendly housekeeping chemicals to minimize adverse effects on the respiratory system.

(OR)

Option 3: Air Filtering Media

For mechanically ventilated buildings, install air filtering media after building flush-out, with at least MERV 13 (Minimum Efficiency Reporting Value) or EU 7 or equivalent, to treat fresh air.

(OR)

Option 4: Germicidal or UV Lamps

For mechanically ventilated buildings, install germicidal/ UV lamps in Air-Handling-Unit (AHU) cooling coils.

Notes:

- *The Chemical storage / Janitor rooms shall be a separate room and maintained at a negative pressure of 5 Pascals (0.00005 bar).*
- *The compliance option for Air filtering media and Germicidal or UV Lamps shall not be applicable in case the installation of air filtering media or UV lamps is under tenant's scope.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Daylighting and Controls

IEQ Credit 5

Points: 1-5

Intent

To ensure connectivity between the interior and exterior environment by providing adequate daylight and integrating lighting controls for improved comfort and energy efficiency.

Compliance Options:

Option 1: Daylighting (2 - 3 points)

Using daylight simulation based on the Useful Daylight Illuminance (UDI) approach, demonstrate that regularly occupied areas maintain illuminance values within the range of 100 lux to 2,000 lux across the minimum required floor area as defined in the table below for at least 90% of the potential daylight hours.

Building Typology	Percentage of Regularly Occupied Areas with Daylighting	Credit Points
Owner Occupied Buildings	≥ 40 %	1
	≥ 45 %	2
	≥ 50 %	3
Tenant Occupied Buildings	≥ 40 %	1
	≥ 50 %	2

Refer the following notes for modelling:

- Measure illuminance at a work plane height of 0.8 m above the finished floor.
- Analysis period: minimum of 8 continuous hours/day
- Useful Daylight Illuminance (UDI) shall be assessed using a 1 m² grid across the floor area.
- Fenestration must be modelled using actual Visible Light Transmittance (VLT) values from material specifications.
- Daylight obstructions (natural or man-made) must be modelled if within 2× their height from the building façade. If surface reflectance is unknown: use 30% for man-made and 0% for natural obstructions.
- Interior surface reflectance shall follow actual material data, or default values if not available. (Walls - 50%, Floor – 20%, Ceiling – 70%, Furniture – 50%)

(And/Or)

Option 2: Lighting Controls (2 points)*(Not Applicable for Tenant Occupied Buildings)*

Demonstrate that daylight sensors are provided in atleast 25% of regularly occupied areas to maintain illuminance levels within the range of 100–2000 lux. The sensors shall switch off the light fixtures or dim/step down up to 10% of full power.

Percentage of Regularly Occupied Areas with Daylight Sensors	Credit Points
≥ 25 %	1
≥ 50 %	2

Notes:

- Regularly occupied areas are those where people sit or stand as they work, irrespective of the number of days occupied in a year. Regularly occupied areas shall include only enclosed spaces.
- Regularly occupied areas include workstations, cabins, meeting rooms, etc., whereas areas with audio-visual facilities such as auditoriums, conference rooms, etc., can be excluded from this credit calculation, with justification and supporting documents.
- Non-regularly occupied areas include toilets, storerooms, etc.,
- Regularly occupied areas which are used for multi-purposes, such as cafeteria-cum-meeting room, can be considered as separate spaces based on the function. The room boundary need not be a physical boundary.
- Project with multiple buildings (including projects with common basement) must independently meet the Daylighting criteria for each building.
- The compliant area shall be determined based on the effective coverage area of the installed sensors.
- Each control device/ sensor shall control a maximum of 250 m² for a space less than or equal to 1,000 m², and a maximum of 1,000 m² for a space greater than 1,000 m². The daylight sensors must be located within 6m from the building periphery.

Exemplary Performance:

Option 1: Daylighting: Using daylight simulation based on the Useful Daylight Illuminance (UDI) approach, demonstrate that regularly occupied areas achieve illuminance levels between 100 lux and 2,000 lux over at least 60% of the floor area in Owner occupied buildings, for a minimum of 90% of the potential daylight hours.

Note: Exemplary performance is applicable to only owner-occupied buildings.

Outdoor Views

IEQ Credit 6

Points: 1

Intent

Ensure connectivity between the interior and the exterior environment, by providing adequate views.

Compliance Options:

Achieve direct line of sight to vision glazing between 0.9 meters (3 feet) and 2.1 meters (7 feet) above the finished floor level, for building occupants in at least 75% of all regularly occupied spaces.

Also, the project shall comply with the following criteria:

- The building occupants must not have any obstruction of views at least 8 meters (26.2 feet) from the exterior vision glazing.

(Or)

- The building occupants must have access either to sky or flora & fauna or both.

Notes:

- *Tenant-occupied buildings shall show compliance through feasible typical floor plans & sections.*
- *Regularly occupied areas are those where people sit or stand as they work, irrespective of the number of days occupied in a year. Regularly occupied areas shall include only enclosed spaces.*
- *Regularly occupied areas include workstations, cabins, meeting rooms, etc., whereas areas with audio-visual facilities such as auditoriums, conference rooms, etc., can be excluded from this credit calculation, with justification and supporting documents.*
- *Non-regularly occupied areas include toilets, storerooms, etc.,*
- *Regularly occupied areas which are used for multi-purposes, such as cafeteria-cum-meeting room, can be considered as separate spaces based on the function. The room boundary need not be a physical boundary.*
- *Internal courtyards with vegetation can be considered for this credit calculation.*
- *Project with multiple buildings (including projects with common basement) must independently meet the Outdoor Views criteria for each building.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Occupant Well-being Facilities

IEQ Credit 7

Points: 1

Intent

Provide occupant well-being facilities, so as to enhance physical, emotional and spiritual well-being of building occupants.

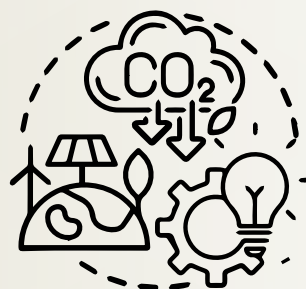
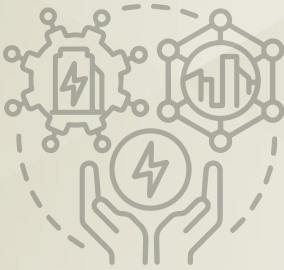
Compliance Options:

Demonstrate that the project designs at least two of the following occupant well-being facilities to cater to at least 5% of building occupants, at a single point of time during the day.

- Wellness Room (for rest, prayer, or nursing mothers)
- Yoga/ Meditation Room
- Dedicated Outdoor space for social gathering
- Spiritual space/ zone
- Gymnasium / Fitness Centre
- Rooftop Gardens / Sky Decks (e.g. Pergola, Gazebo etc.)
- Recreation Area - Indoor activities such as chess, carrom, etc.
- Library/ Art Corners

Exemplary Performance:

This credit is not eligible for exemplary performance.



INNOVATION AND DECARBONISATION IN BUILDINGS

Innovation in Design

ID Credit 1

Points: 4

Intent:

Provide design teams and projects an opportunity to be awarded points for innovative performance in green building categories not specifically addressed by the IGBC Green New Buildings rating system and / or exemplary performance above the requirements set by the IGBC Green New Buildings rating system.

Compliance Options:

Case A: Innovation in Design

Identify the intent of proposed innovation credit, proposed requirement for compliance, and proposed documentation to demonstrate compliance, and the design approach used to meet the required measures.

(And/ Or)

Case B: Exemplary Performance

The project is eligible for exemplary performance, if the design and / or construction measures greatly exceed the credit requirements of the IGBC Green Service Buildings rating system.

Note:

Illustrative list of credits eligible for innovation and list of base credits eligible for exemplary performance is listed in the table below.

Illustrative List of Credits eligible for Innovation	
Innovation Credit	Requirement
Ecological Assessment	Conduct ecological assessment to understand baseline biodiversity, ecosystem functions, and landscape linkages, ensuring that development avoids ecological harm and enables informed, sustainable restoration and planning.
Parking Space Optimisation	Ensure that the project has used smart parking systems for at least 25% of the total parking spaces to optimise the parking space in the project.
Electric Vehicle Charging through solar to promote clean energy	Ensure at least 25% of the EV charging capacity/ load (kW) installed at site is powered through on-site solar energy generation to promote clean and renewable mobility solutions.
Waste water treatment	Separate grey and black water treatment
Nature based Solutions for waste water treatment	Treat 100% wastewater generated on-site, through biological treatment.
Energy Storage	Demonstrate that project integrates grid + solar+ energy storage with ToD to optimise carbon emissions.

Eco Friendly Refrigerant	Demonstrate that refrigerants used in the buildings Heating, Ventilation & Air-conditioning (HVAC) equipment have GWP values less than 750.
Construction Workers Wellbeing	Provide well-being facilities such as outdoor play area, rest areas, etc. and thermal comfort measures.
Circadian Lighting System	Implement a lighting system that supports human circadian rhythms by achieving a Melanopic Equivalent Daylight (D65) Illuminance (MEDI) of at least 250 lux at eye level (1.2m) for seated occupants in workspaces which can be typically achieved using tunable white luminaires.
List of Base Credits eligible for Exemplary Performance	
Credit	Requirement
Site Selection and Planning	
SSP Credit 2: Sustainable Transportation	Electric Vehicle Charging Equipment for > 20% of total 2 and 4 wheelers parking spaces.
SSP CR 3: Sustainable Landscape	≥ 40% of site area is restored and/ or designed with vegetated spaces.
SSP Credit 3: Heat Island Reduction, Non-Roof and Roof	95% of exposed non-roof impervious areas with open grid pavers / grass pavers (and / or) hardscape materials with an SRI of at least 29 (and not higher than 64). <i>Or</i> 95% of net roof area covered with vegetation
Water Conservation	
WC Credit 1: Rainwater Harvesting, Roof & Non-roof	Rainwater Harvesting, Roof & Non-roof (as defined in credit)
WC Credit 2: Water Efficient Plumbing Fixtures	≥ 40% reduction in potable water use
WC Credit 3: Irrigation Water Reduction	≥ 35% water savings through efficient landscape design and irrigation systems
WC Credit 4: Onsite Wastewater Treatment System	Treat the black water and grey water separately in the on-site wastewater treatment system.
WC Credit 5: Alternate Water Use	Use of alternate water for ≥ 70% of raw water demand
Energy Efficiency	
EE Credit 2: Enhanced Energy Efficiency	<u>Enhanced Energy Performance as per ASHRAE 2022:</u> I. Owner-occupied Buildings: ≥ 5.5% II. Tenant-occupied Buildings: ≥ 7% III. Major Renovation Buildings: ≥ 6.5% <u>Enhanced Energy Performance as per ECSBC 2024:</u> • Owner-occupied Buildings: ≥ 24%

	<ul style="list-style-type: none"> • Tenant-occupied Buildings: $\geq 30\%$ • Major Renovation Buildings: $\geq 28\%$
EE Credit 3: Renewable Energy	<u>Option 1: On-site Renewable Energy</u> Owner Occupied $\geq 22\%$ of total annual energy consumption Tenant Occupied $\geq 11\%$ of total annual energy consumption
Building Materials and Resources	
BMR Credit 2: Sustainable Building Materials	<u>Option 1: Building Reuse:</u> <ul style="list-style-type: none"> ○ Structural > 75% ○ Non-structural (Interiors) > 50%
BMR Credit 5: Zero Waste to Landfill	Option 1: Segregation and Management, during construction: $\geq 95\%$
Indoor Environmental Quality	
IEQ Credit 2: Daylighting and Controls	<u>Option 1: Daylighting - Owner Occupied</u> $\geq 60\%$ of the floor area, for a minimum of 90% of the potential daylight hours

Illustrative list of credits eligible for innovation and list of base credits eligible for exemplary performance.

GHG Inventorisation and Roadmap

ID Credit 2

Points: 2

Intent:

To encourage organizations to demonstrate leadership in climate action by systematically measuring, managing, and reducing greenhouse gas (GHG) emissions across operations and the value chain.

Ensure organizations align with global Net Zero goals, establish a science-based decarbonization roadmap, and publicly disclose progress to enhance accountability and transparency.

Compliance Options:

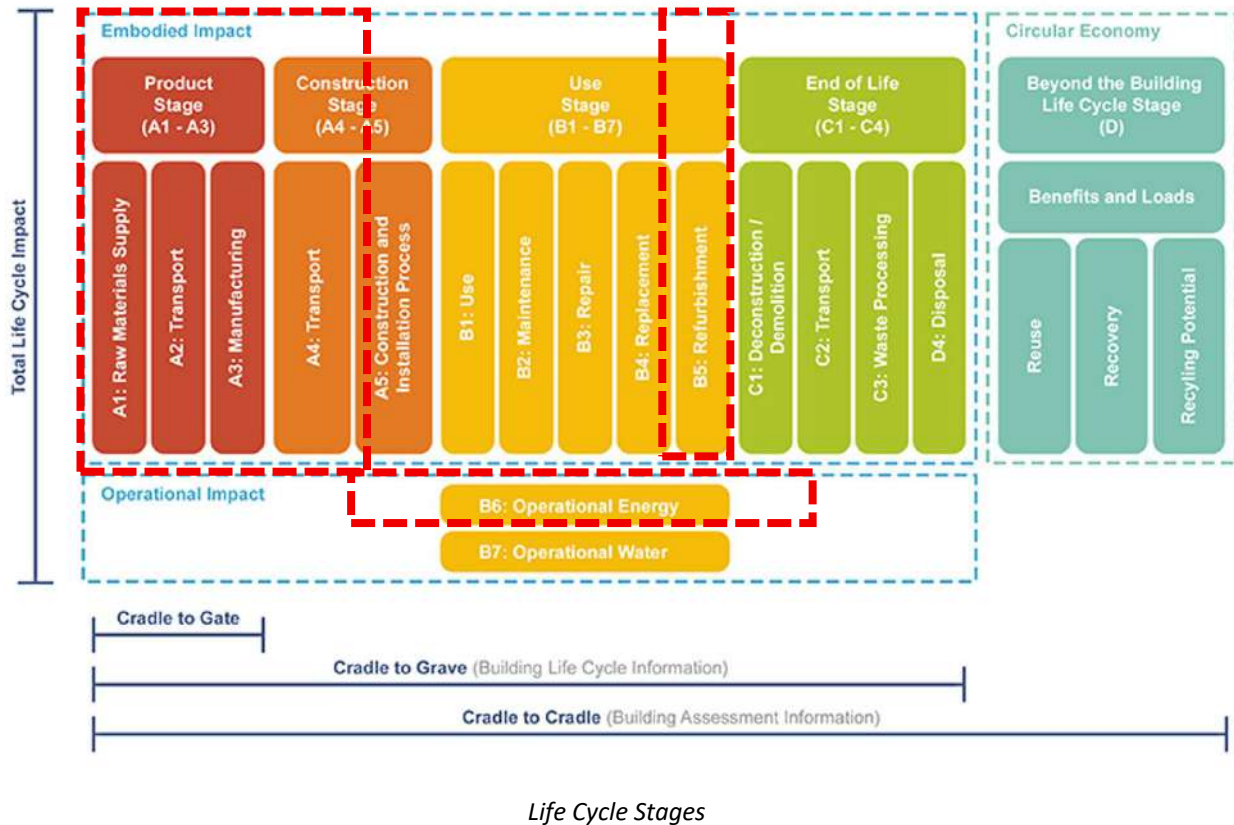
Option 1: Decarbonisation at Building/ Project Level through Whole Building Life Cycle Analysis (2 points)

Perform Whole Building Life Cycle Analysis (LCA) to estimate greenhouse gas emissions (GHG) as per ISO standard 14040, and report the following for the overall built-up area of the project:

- Embodied carbon in kg CO₂e per square meter of Built-up area (kg CO₂e/m² BUA)
- Operational carbon in kg CO₂e per year considering a minimum building lifespan 50 years.

Notes:

- *LCA Study Period: 50 years*
- *Life Cycle Stages to be included:*
 - **Module A1–A3:** Product stage (raw material supply, transport, manufacturing),
 - **Module A4:** Construction process stage (transport to site)
 - **Module B4:** Replacement
 - **Module B6:** Operational Energy
- *The proposed case greenhouse gas (GHG) emissions (in kg of CO₂e per square meter of built-up area) shall be calculated considering all the proposed civil materials as per the Bill of Quantities (BOQ). Refer to Building Elements defined in BMR Credit 3.*
- *Life Cycle Embodied carbon/GHG emissions can be considered from BMR Credit 3. The project team under these criteria needs to further calculate the GHG emissions due to replacement of materials/products within study period of building life (Module B4) and the building's total operational GHG emission from consumption of energy (Module B6) under this credit.*
- *Operational carbon (Module B6) shall include electricity and fuel consumption (such as petrol, diesel, CNG, LPG etc.) in building operations and its associated environment within the project boundary.*
- *The LCA shall be carried out using a standard recognised software tool with 'data-source' defined in BMR Credit 3.*
- *Refer the building elements and data source from BMR Credit 3.*



Life Cycle Stages

Methodology for Decarbonisation Roadmap

❖ Goal and Scope

- Define what the decarbonisation plan intends to achieve and its boundaries.
- Set climate goals (e.g., Net Zero by 2040)

❖ Decarbonisation Strategy

Based on the LCA, develop targeted carbon reduction interventions. The mitigation strategies can include, but not limited to:

- Renewable energy integration
- Operational efficiency, green transport, cleaner fuel, etc.
- Carbon Offsets
- Low-carbon materials for renovation/ operation or circular economy approaches

❖ Action Plan

Provide a detailed action plan with strategies to reduce the GHG emission intensity (e.g. kgCO₂/ tonne of material handled, kg CO₂/ revenue generated) scope 1, 2 & 3* emissions by atleast 5% from the present year in-lieu of various mitigation actions, over the next three years (financial / calendar year).

Note: *Scope 3 emissions is optional.

(Or)

Option 2: GHG Inventorisation and Decarbonisation at Organisation Level (2 points)

The organization that owns the registered building shall demonstrate a comprehensive GHG inventory and a decarbonization roadmap that includes quantified targets, defined strategies, and transparent reporting mechanisms.

❖ **GHG Inventorisation - Quantify tentative Scope 1, 2 and 3* emissions**

The organization shall establish a detailed GHG inventory in accordance with the GHG Protocol Corporate Standard and other applicable frameworks (e.g., ISO 14064, IPCC Guidelines).

The inventory must include:

- Scope 1 and Scope 2 emissions (direct and indirect energy-related).
- Scope 3 emissions across relevant categories, along with clear explanations for any excluded categories (as applicable).
- Defined base year and inventory for Scope 1, 2, and 3* for trend tracking.
- Documented methodology and data sources used for emission quantification.
- Annual tracking of both absolute emissions and emission intensity (tCO₂e/unit metric).
- Public disclosure of GHG data (e.g., in ESG, sustainability, or CDP reports).

❖ **Decarbonization Strategy and Targets**

Establish measurable and time-bound emission reduction targets through the following:

- Define a Net Zero target year.
- Organisation policy specifying short-term (by 2030) and long-term (by 2050) emission reduction goals.
- Ensure targets are aligned with the requirements and validated (or in progress) by third party.
- Demonstrate organizational commitment in alignment with recognized third-party initiatives.
- Ensure public disclosure of GHG targets and progress (through annual reports, ESG disclosures, or corporate websites).

*Note: *Scope 3 emissions is optional.*

Environmental and Social Impact Drivers

ID Credit 3

Points: 4

Intent:

Promote long-term environmental resilience and social value, aligning the business growth with sustainable development goals (SDGs).

Compliance Options:

Demonstrate that the project/ organisation has implemented at least four of the following measures (as applicable). *(1 point for each measure).*

ID Credit 3.1: Sustainable Supply Chain Framework

Intent

To promote responsible sourcing, ethical practices, and environmental stewardship across the supply chain by integrating sustainability principles into procurement, production, distribution, and end-of-life processes to minimize negative social and environmental impacts, enhance transparency, and support long-term economic resilience.

Compliance Option:

The organization/ project shall design, adopt, and implement a Sustainable Supply Chain Framework (SSCF) that embeds environmental, social, and governance (ESG) considerations across its sourcing and procurement activities. The framework must demonstrate that the organization:

- Evaluate environmental, social, and governance practices of its suppliers.
- Integrate sustainability criteria and KPIs into procurement decisions.
- Monitor, audit, and disclose ESG performance across the supply chain.
- Aligns approach with global ESG standards and investor expectations.

Steps to Build a Sustainable Supply Chain ESG Framework

- Map the Supply Chain
- Identify Tier 1 suppliers, key vendors, and critical supply chain dependencies.
- Map material and product flows to identify potential ESG risk points (environmental impacts, labor conditions, ethical concerns, etc.).
- Conduct risk assessment by geography, category, or material type.
- Develop ESG Criteria
- Establish ESG policies and codes of conduct for suppliers covering:
 - Environmental management (energy, emissions, waste, and water)
 - Labor rights, diversity, and occupational safety
 - Anti-corruption and business ethics
- Define minimum performance requirements and preferred certifications (e.g., ISO 14001, SA8000, FSC, Fair Trade).

- Integrate ESG into Procurement
 - Embed sustainability clauses and scoring criteria in procurement policies and RFPs.
 - Apply ESG ratings, prequalification scores, or certification-based screening during supplier selection.
 - Define Key Performance Indicators (KPIs) for supplier ESG performance tracking.

- Monitor and Audit
 - Implement regular supplier self-assessments, third-party audits, or site visits to verify compliance.
 - Establish a grievance redressal and corrective action mechanism for non-compliance.
 - Encourage supplier capacity-building through training and improvement programs.

- Disclose Transparently
 - Report supply chain ESG performance metrics in sustainability or ESG disclosures.
 - Highlight key risks, mitigation strategies, and improvement progress.
 - Align reporting with frameworks such as GRI 308 (Supplier Environmental Assessment) and GRI 414 (Supplier Social Assessment).

- Engage and Improve
 - Develop long-term supplier engagement programs to enhance sustainability performance.
 - Promote local sourcing, circular material flows, and shared value partnerships.
 - Recognize and incentivize high-performing suppliers on ESG metrics.

The framework should align with one or more global standards or principles such as:

- *UN Global Compact (Principles 1–10)*
- *OECD Guidelines for Multinational Enterprises*
- *ISO 20400: Sustainable Procurement*
- *GRI 308 / 414 (Supplier Environmental & Social Assessment)*
- *CDP Supply Chain Program*

ID Credit 3.2: Climate Resilience

Intent

Ensure that buildings are designed, constructed, and operated to withstand, adapt to, and recover from the impacts of climate change and extreme weather events — while continuing to provide safety, functionality, and comfort for occupants over building’s entire life cycle.

Compliance Option:

The project shall demonstrate the integration of climate resilience strategies addressing both physical and transition risks of climate change. Demonstrate compliance for any 3 features of the following:

Aspect	Description/ Example
Structural Resilience	<p>Design buildings to withstand physical climate hazards, including</p> <ul style="list-style-type: none"> • High wind loads, intense rainfall, flooding, and seismic activity • Implementation of resilient foundations, flood barriers, and structural anchoring systems as per local hazard maps and building codes
Thermal Resilience	<p>Maintain comfortable indoor environments during heatwaves and cold spells by:</p> <p>Incorporating design strategies such as enhanced insulation, shading, reflective roofs, and natural ventilation.</p>
Water Resilience	<p>Implement effective water management strategies to reduce vulnerability to droughts and flooding, such as:</p> <ul style="list-style-type: none"> • Rainwater harvesting, permeable paving, greywater recycling, and effective site/ flood drainage systems. • On-site storage or reuse capacity for critical operations.
Energy Resilience	<p>Reduce reliance on vulnerable energy grids by</p> <ul style="list-style-type: none"> • Integrating renewable energy (e.g., solar PV), energy storage systems, and demand-response mechanisms. • Ensuring redundancy and backup systems for critical energy loads.
Material Resilience	<p>Select durable and low-maintenance materials that resist climate-induced stresses:</p> <p>Use corrosion-resistant steel, treated timber, moisture-resistant composites, and locally appropriate materials that endure high humidity, salinity, or temperature variation</p>
Operational Resilience	<p>Ensure continuity of operations during adverse events by:</p> <ul style="list-style-type: none"> • Establishing emergency preparedness measures and response plans • Incorporating redundant systems for water, power, and communication. • Training facility teams for resilience and crisis management.
Social & Functional	<p>Design to maintain safety, accessibility, and functionality during and after extreme climate events:</p>

	<ul style="list-style-type: none"> • Ensure universal access routes, safe refuge areas, and clear evacuation strategies. • Prioritize occupant well-being and community integration during recovery phases.
Climate Risk and Opportunity Assessment	<p>To demonstrate comprehensive climate resilience, the organization or project proponent shall also ensure the following</p> <p>Conduct a climate risk assessment identifying both physical (acute and chronic) and transition risks.</p> <p>Outline corresponding adaptation and mitigation opportunities to address identified vulnerabilities.</p>

Compliance paths for Climate Resilience

ID Credit 3.3: Green Finance Framework

Intent

Integrate sustainability into financial and investment decision-making by establishing a structured Green / Sustainable Finance Framework.

Compliance Option:

Develop a framework to facilitate channelling of capital towards projects that contribute to environmental, social, and governance (ESG) goals, including climate action, resource efficiency, social well-being, and green building performance, while enhancing access to sustainable financial instruments such as green bonds, green loans, or sustainability-linked loans

To achieve this credit, the organization shall develop and implement a Sustainable Finance Framework that aligns with any globally recognized principles or standards, such as:

- ICMA Green Bond Principles (GBP)
- ICMA Sustainability-Linked Bond Principles (SLBP)
- LMA Green Loan Principles (GLP) or Sustainability-Linked Loan Principles (SLLP)
- UNEP FI Principles for Responsible Banking (PRB) or Principles for Responsible Investment (PRI)

The framework shall clearly outline the following components:

Use of Proceeds	Define eligible green project categories, including but not limited to energy-efficient buildings, renewable energy, water conservation, waste reduction, sustainable mobility, biodiversity enhancement, and climate resilience measures
Process for Project Evaluation and Selection	Establish criteria and governance structure for identifying, selecting, and approving projects financed through green or sustainability-linked instruments.
	Ensure alignment with the organization's ESG or sustainability strategy.

Management of Proceeds	Define transparent procedures to track, allocate, and manage proceeds from green financing instruments to eligible projects or assets.
Reporting and Transparency	Commit to annual reporting on the allocation of proceeds, environmental and social impact metrics, and key performance indicators (KPIs).
	Disclose performance through sustainability or ESG reports accessible to stakeholders.
External Review and Verification (Optional)	Obtain an independent Second Party Opinion (SPO) or external verification to ensure alignment of the framework with global standards and to enhance credibility.

ID Credit 3.4: Assurance

Intent

Implement 3rd party assurance to enhance the credibility, transparency, and reliability of environmental, social, and governance (ESG) data and sustainability disclosures of a company to further enhance credibility with stakeholders, reduce reputational risk, and help companies improve their internal data governance.

Compliance Option:

Implement an independent third-party assurance process for verifying ESG or sustainability-related disclosures associated with the project, portfolio, or organization. The assurance shall:

- Cover relevant ESG metrics, including but not limited to energy, water, waste, GHG emissions, health & safety, and social performance.
- Evaluate the accuracy, completeness, and consistency of reported data against established standards or frameworks.
- Be conducted by a qualified, independent assurance provider (e.g., accredited auditing or sustainability assurance firm).
- Result in a formal assurance statement or report published alongside the ESG or sustainability report in the last 2 years.

The project or organization shall demonstrate any one of the following approaches:

S. No.	Type of Assurance	Parameters
1	Limited Assurance	<ul style="list-style-type: none"> • Engage an independent third party to perform limited assurance on ESG data and reporting processes. • The assurance statement must specify: <ul style="list-style-type: none"> ○ Scope of data verified. ○ Methodology or assurance standard used (e.g., ISAE 3000, AA1000AS v3, GRI 13:2022) ○ Level of assurance and key findings
2	Reasonable Assurance	<ul style="list-style-type: none"> • Obtain reasonable assurance, indicating a higher level of scrutiny and confidence in data accuracy.

		<ul style="list-style-type: none"> The assurance should include on-site or system-based verification of data collection and management systems.
3	Comprehensive ESG Assurance	<ul style="list-style-type: none"> Secure assurance covering environmental, social, and governance domains comprehensively, along with assurance on taxonomy alignment (e.g., EU Taxonomy, SEBI BRSR Core, or other national frameworks). Demonstrate that the assurance process has led to improved internal controls and data governance enhancements.

ID Credit 3.5: Green Lease

Intent

Promote collaboration between building owners and tenants in achieving energy efficiency, water conservation, and improved indoor environmental quality through lease agreements that align with the building's sustainability goals.

Compliance Option:

Incorporate at least 4 measures from the list given below under the Green Lease Agreement:

S. No.	Measures	Parameters
1	Utility Accountability	<ul style="list-style-type: none"> Tenants shall be responsible for paying their electric, non-electric energy and water consumption to encourage efficient resource use. The lease shall include a cost-recovery clause that allows the Owner to recover verified costs of energy-efficiency upgrades that directly benefit tenants.
2	Energy and Water Submetering	<ul style="list-style-type: none"> Energy & Water: Submeter or metring all tenant spaces for electricity & water use.
3	Disclosure and Transparency	<ul style="list-style-type: none"> The Owner shall disclose to tenants' common area energy use, peak energy demand and common area water use. Tenants shall annually disclose their energy and water consumption data to the Owner to support whole-building performance monitoring.
4	Energy Efficiency and Cost Recovery	<ul style="list-style-type: none"> Tenants' fit-out design and equipment shall exceed or meet the EEMR2: Minimum Energy Efficiency requirement.
5	Water Efficiency	<ul style="list-style-type: none"> Tenant fit-outs shall demonstrate improvement beyond WC MR2: Water Efficient Plumbing Fixtures through installation of low-flow fixtures and efficient appliances.

ID Credit 3.6: Basic Facilities for Service Staff

Intent

Promote welfare of the staff by providing safe and healthy work conditions.

Compliance Option:

Provide atleast 3 of the following basic facilities for service staff to ensure dignity, well-being, and functionality for service personnel.

S. No.	Measures	Parameters
1	Dedicated Rest Area	A clean, ventilated space where staff can rest during breaks
2	Toilet Facilities	Separate, hygienic restrooms for service staff, accessible during working hours
3	Changing Room/Locker Area	Secure area for changing clothes and storing personal belongings
4	Drinking Water Facility	Access to clean and safe drinking water
5	Dining Space or Pantry Access	A designated area where staff can eat meals comfortably.

ID Credit 3.7: Green Measures Beyond the Fence**Intent**

Encourage green measures beyond the fence for social and well-being of occupants in nearby communities and villages, thereby improving the standard of living and reducing the associated negative environmental impacts.

Compliance Option:

Demonstrate that the project/ organisation has implemented at least one of the following green measures beyond the fence within 250 km radial distance from the project site.

S. No.	Measures	Parameters
1	Rainwater Harvesting	Install rainwater harvesting system in any public building such as government school / college, community centre, etc. to capture 100% of the runoff from roof areas of respective building. Note: The approach and methodology to demonstrate compliance shall be as defined in WC MR1: Rainwater harvesting, Roof.
2	Sewage Treatment Plant	Install sewage treatment plant and maintain for a period of at least one year in any public building such as government school/ college, community centre, etc. to treat 100% of the wastewater generated in the respective building.
3	Renewable Energy	Install renewable energy systems such as solar PVs, wind turbines, biogas plant, etc. in any public building such as government school/ college, community centre, etc., equivalent to or more than the total annual energy consumption of the respective building.
4	Basic Facilities	Provide basic amenities such as solar street lighting, bio toilets or organic waste converter at any government school/ village.

Notes:

- *To demonstrate compliance for this credit, the green measures considered for one project cannot be shown for another project, unless the measures/ impacts are significantly higher than the credit requirement.*
- *In case the project/ organisation has already implemented green measures, document only those measures which have been implemented in the last 3 years from the date of project registration with IGBC.*

ID Credit 3.8: In-house canteen with nutrition-based diet

Intent

Encourage increased consumption of healthy nutritional options for improved health and well-being of the occupants.

Compliance Option:

The project team can provide the following:

- Provide healthy nutritional options as part of the menu, if the facility has a canteen.
- Eliminate food items having Trans fats
- Display nutritional facts of the food items provided/ sold

ID Credit 3.9: Creche Facility

Intent

Provide safe, accessible, and inclusive childcare facilities within the building premises to support the working parents within the building, thereby promoting well-being, better work-life balance, and foster a more inclusive and family-friendly environment, particularly benefiting women in the workforce.

Compliance Option:

Establish a crèche (daycare) facility within the same campus/ building to accommodate employees' children. This facility should comply with all relevant statutory and welfare regulations, such as those outlined under the Maternity Benefit (Amendment) Act, 2017 in India, or any applicable local labour laws.

Key Requirements are outlined below:

- **Location & Accessibility:**
The crèche should be located within the office premises or building for easy access by employees. It should be safe, secure, and easily reachable for parents during working hours.
- **Capacity & Age Group:**
The crèche must have sufficient capacity to accommodate the children of eligible employees. Typically, it should cater to children aged 6 months to 6 years.
- **Infrastructure & Safety:**
The facility should include well-ventilated rooms, child-safe furniture, adequate lighting, sanitation, and play areas. All safety measures such as childproof locks, first-aid kits, fire safety equipment, and CCTV surveillance should be in place.

- **Staffing:**
The crèche must be managed by qualified caregivers and trained attendants. Adequate staff-to-child ratios must be maintained (for example, one attendant per 10 children).
- **Hygiene & Health:**
Maintain high standards of cleanliness, hygiene, and sanitation.
Provide healthy meals or snacks as per the organization's policy.
- **Operational Guidelines:**
The facility should operate during office working hours and parents should be allowed periodic visits to check on their children.
Records of attendance, health, and incidents should be properly maintained.
- **Alternate Arrangement (if on-site is not feasible):**
If physical space constraints exist, the organization may tie up with an accredited external crèche located within 500m from the office premises, ensuring that the facility meets prescribed standards.

ID Credit 3.10: Safety & Security Enhancements

Intent

Ensuring that a building is safe and secure while directly impacting the well-being of occupants, visitors, and the surrounding community.

Compliance Option:

The project team can provide the following:

- Adequate Outdoor Lighting
- Well-lit pathways, parking areas, entrances, and common outdoor spaces.
- **CCTV and Surveillance (With Privacy Protections)**
 - Cameras in common areas to help monitor safety and deter crime.
 - Clear signage informing occupants that CCTV is being used supports transparency.
 - CCTV surveillance room to monitor
- **Secure Entry and Access Control**
 - Systems such as key cards, biometric access, or security codes to prevent unauthorized entry.
 - Visitor management systems help track who enters the building.
 - Emergency access provisions should be in place for fire services and medical responders.
- **Safety Presence**
 - Trained security personnel onsite to offer assistance, respond to incidents, and support evacuation procedures

IGBC Accredited Professional

ID Credit 4

Point: 1

Intent:

Support and encourage involvement of IGBC Accredited Professional in the project, to integrate appropriate design, construction & operational measures and streamline the certification process.

Compliance Options:

At least three participants involved in the project from different teams (listed below) shall be IGBC Accredited Professional.

- Developer Team
- Green Building Consultant
- MEP team

Acronyms

IGBC	Indian Green Building Council
AC	Alternating current
AHRI	Air-Conditioning, Heating, and Refrigeration Institute
AHU	Air Handling Unit
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
BAPV	Building-applied Photovoltaics
BEE	Bureau of Energy Efficiency
BIPV	Building Integrated Photovoltaics
BIS	Bureau of Indian Standards
BLDC	Brushless Direct Current motor
BOQ	Bill of Quantities
BRSR	Business Responsibility and Sustainability Reporting
BTU	British Thermal Unit
BUA	Built-up area
C&D waste	Construction and Demolition waste
CC	Commencement certificate
CCS	Combined Charging System
CCT	Correlated Colour Temperature
CCTV	Closed-Circuit Television
CDP	Carbon Disclosure Project
CG	Connector guns
CHAdEMO	Charge de Move
CII	Confederation of Indian Industry
CIR	Credit Interpretation Ruling
CNG	Compressed Natural Gas
CO ₂	Carbon Dioxide
COP	Coefficient of Performance
CPCB	Central Pollution Control Board
CRI	Color Rendering Index
CRIS	Customized Rainfall Information System

DC	Direct current
DG	Diesel Generator
ECSBC	Energy Conservation and Sustainable Building Code
EER	Energy Efficiency Ratio
EIA	Environmental Impact Assessment
EPD	Equipment Power Density
EPDs	Environmental Protection Declarations
ESG	Environmental, Social, and Governance
ESS	Energy Storage Systems
EV	Electric Vehicle
FAO	Food and Agricultural Organization
FPM	Feet per Minute
FSC	Forest Stewardship Council
FTE	Full Time Equivalent
GBP	Green Bond Principles
GHG	Green House Gas
GI	Galvanized Iron
GLP	Green Loan Principles
GRI	Global Reporting Initiative
GWP	Global Warming Potential
HDD	Heating Degree Days
HFO	Hydrofluoroolefin
HVAC	Heating, Ventilating, and Air Conditioning
IAQ	Indoor Air Quality
ICMA	Institute of Certified Management Accountants
IE3	International Efficiency Class 3
IE4	International Efficiency Class 4
IEQ	Indoor Environmental Quality
IES	Illuminating Engineering Society
IoT	Internet of Things
IPCC	Intergovernmental Panel on Climate Change
IS code	Indian Standard Code
ISEER	Indian Seasonal Energy Efficiency Ratio
ISO	International Organization for Standardization
IT	Information Technology

KPI	Key Performance Indicators
LCA	Life Cycle Assessment
LMA	Loan Market Association
LPD	Lighting Power Density
LPG	Liquefied petroleum gas
MEP	Mechanical, Electrical and Plumbing
MERV	Minimum Efficiency Reporting Value
MNRE	Ministry of New and Renewable Energy
MoEF	Ministry of Environment and Forests
NABL	National Accreditation Board for Testing and Calibration Laboratories
NBC	National Building Code
ODP	Ozone Depletion Potential
OEDC	Organization for Economic Co-operation and Development
PE film	Polyethylene film
PM	Particulate Matter
PRB	Principles for Responsible Banking
PRI	Principles for Responsible Investment
PVC	Polyvinyl Chloride
RE	Renewable Energy
RECs	Renewable Energy Certificates
RFPs	Request for proposals
RH	Relative humidity
SDG	Sustainable Development Goals
SEBI	The Securities and Exchange Board in India
SEIAA	State Environment Impact Assessment Authority
SHGC	Solar Heat Gain Coefficient
SLBP	Sustainability-Linked Bond Principles
SLLP	Sustainability-Linked Loan Principles
SPCB	State Pollution Control Board
SPO	Second Party Opinion
sq.m	Square meter
SRI	Solar Reflectance Index
SSCF	Sustainable Supply Chain Framework
STP	Sewage Treatment Plant
TVOCs	Total Volatile Organic Compounds
UDI	Useful Daylight Illuminance

UFAD	Under-floor Air distribution
ULR	Upward Light Ratio
UNEP FI	United Nations Environment Programme Finance Initiative
UPVC	Unplasticized Polyvinyl Chloride
UV	Ultraviolet
VFD	Variable Frequency Drive
VLT	Visible Light Transmittance
VOC	Volatile Organic Compounds
VRF	Variable Refrigerant Flow
W/m ² .K	Watt per square meter Kelvin
WTP	Water Treatment Plant
WWR	Window-to-Wall Ratio



**ANNEXURE
DOCUMENTATION
REQUIRED**

General Documents (Project Information)

Precertification

- Covering letter with Project Registration number, payment details (Cheque/ DD/ NEFT), Owner & Green building consultant contact details
- General information about project, including
 - Project brief stating project type, different type of spaces, occupancy & FTE calculations, number of floors, area statement, etc.,
 - General drawings (in PDF format only):
 - Master/ Site plan, Landscape Plan, Parking plans, Floor plans, Elevations, Sections
 - Photographs/ Rendered views
- Project Checklist with Attempted and Not Attempted points
- Narratives and supporting documentation such as conceptual drawings, estimate / tentative calculations (in excel sheets), declarations from the owner, etc., for each of the mandatory requirement and credit

Module 1: Site Selection and Planning (SSP)

SSP Mandatory Requirement 1: Local Building Regulations

Precertification

- Project drawings (site plan, floor plans, parking plans, elevations, sections, etc.) including detailed area & parking statement approved by local Government authority.

Note: If the project is part of a large campus, please submit the approved master plan, clearly highlighting the virtual boundary considered for compliance.

- Project commencement certificate (CC) issued by local Government authority. *Note: In case if the building plans are under approval process, then kindly submit the following:*
 - *Challan/ acknowledgement receipt issued by local Government authority.*
 - *Declaration letter from the Architect stating that the drawings submitted for IGBC assessment are same as the drawings submitted for approval process with the local Government authority.*
 - *Project drawings (site plan, floor plans, parking plans, elevations, sections, etc.) including detailed area & parking statement signed & stamped by Principal Architect.*
 - *If the commencement certificate is in the local language, kindly also submit its English-translated copy*

- Buildings with 20,000 sq.m. built-up area or more shall submit a submit 'Environmental Clearance Certificate' or 'Environmental Impact Assessment (EIA) Study Report', as applicable, approved by Ministry of Environment & Forests (MoEF) or State Environment Impact Assessment Authority (SEIAA) to show compliance for certification.

Note: In case if the 'Environmental Clearance Certificate' or 'Environmental Impact Assessment (EIA) Study Report' are under approval process, then kindly submit a copy of application submitted for approval of environmental clearance certificate or Environmental Impact Assessment (EIA) Study Report approved by Ministry of Environment & Forests (MoEF) or State Environment Impact Assessment Authority (SEIAA).

Certification

- As-built drawings (site plan, floor plans, parking plans, elevations, sections, etc.) approved by local Government authority.

Note: If the project is part of a large campus, please submit the approved master plan, clearly highlighting the virtual boundary considered for compliance.

- Occupancy certificate issued by local Government authority.

Note (for extra FAR/ FSI projects only): In case if the Occupancy certificate is under approval process, then kindly submit following:

- Completion certificate signed & stamped by project Architect*
 - Signed & stamped declaration letter issued by Developer/ Project team indicating that as per the local byelaws, the project will get Completion certificate / Occupancy certificate after receiving the final green building certificate of the project and the same shall be submitted to IGBC.*
 - If the Completion certificate/ Occupancy certificate is in the local language, kindly also submit its English-translated copy.*
- Geotag & time stamped photographs of the site and building taken at various stages of construction.

SSP Mandatory Requirement 2: Site Management, During Construction

Precertification

Case A: Erosion and Sedimentation Control

- Narrative describing the Erosion and Sedimentation Control (ESC) measures proposed in the project as prescribed in NBC, during construction and post occupancy. Narrative shall include, but not limited to, the following ESC measures:
 - Pre and During Construction: Topsoil preservation, preservation of existing vegetation/ trees, sedimentation pit/ basin, swales/ temporary storm water drains, mulching, temporary vegetation, etc.
 - Post Construction: Storm water channels, sediment pit/ basin, rainwater harvesting, vegetation, soil stabilisers, etc.
 - Conceptual site drawings highlighting ESC measures proposed on-site, during construction and post occupancy.
 - Declaration from developer/owner indicating different proposed ESC Measures.
 - Geotag & time stamped photographs showing ESC measures taken at various stages of construction, before construction and during construction, as applicable based on current status of project.
 - If project team has donated fertile soil to plant nursery /any other, then kindly submit declaration letter/ equivalent proof from concern authority, as applicable based on status of project.

Note: Declaration letter must include project name, location and quantity of donated soil.

Case B: Basic Facilities for Construction Workforce

- Narrative describing the basic facilities proposed in the project for construction workforce.
- Tentative calculations indicating the total number of construction workers and the total number of toilet seats & urinals proposed in the project, for men and women.
- Conceptual drawings highlighting the basic facilities proposed in the project for construction workforce.
- Extract of the construction contract agreement highlighting the facilities proposed (or) Declaration letter signed by the project owner listing the facilities proposed in the project, in case the provision of facilities is in owner's scope.
- Geotag & time stamped photographs showing all the measures implemented, if the construction work is in progress.

Certification**Case A: Site Management, During Construction**

- Narrative describing the Erosion and Sedimentation Control (ESC) measures implemented, during construction and post occupancy. Narrative shall include, but not limited to, the following ESC measures:
 - Pre and During Construction: Topsoil preservation, preservation of existing vegetation/ trees, Barricade of site, wheel washing, sedimentation pit/ basin, swales/ temporary storm water drains, mulching, temporary vegetation
 - Post Construction: Storm water channels, sediment pit/ basin, rainwater harvesting, vegetation, soil stabilisers
- Site drawings highlighting ESC measures implemented on-site, during construction and post occupancy
- Geotag & time stamped photographs showing ESC measures taken at various stages of construction, before construction, during construction and post occupancy.
- If project team has donated fertile soil to plant nursery /any other, then kindly submit declaration letter/ equivalent proof from concern authority

Note: Declaration letter must include project name, location and quantity of donated soil.

Case B: Basic Facilities for Construction Workforce

- Narrative describing the basic facilities provided in the project for construction workforce.
- Calculations indicating the total number of construction workers and the total number of toilet seats & urinals provided in the project, for men and women.
- Drawings highlighting the basic facilities provided for construction workforce.
- Extract of the construction contract agreement highlighting the facilities provided.
- Geotag & time stamped photographs showing all the measures implemented.

SSP Mandatory Requirement 3: Differently Abled Friendly Design**Precertification**

- Narrative describing the measures proposed in building for differently abled people and senior citizens.
- Tentative calculations indicating the total number of preferred car park spaces (for differently abled people and senior citizens) to the total number of car park spaces.
- Tentative calculations indicating the total number of rest rooms (toilets) provided in the common areas (for differently abled people and senior citizens), of each building.
- Conceptual drawings (along with dimensions) highlighting the measures proposed for differently abled people and senior citizens.
 - Parking layout for differently abled parking
 - Floor plan highlighting the non-slippery ramps (with handrails at least on one side) at all the main entrances and easy access to main entrance of building along with sectional layout highlighting the slope of ramp.
 - Interior layout (plan and section) of the differently abled toilet.
- Declaration letter from project owner indicating different proposed measures for differently abled people and senior citizens.

Certification

- Narrative describing the measures implemented in the building for differently abled people and senior citizens.
- Calculations indicating the total number of preferred car park spaces (for differently abled people and senior citizens) to the total number of car park spaces.
- Calculations indicating the total number of rest rooms (toilets) provided in the common areas (for differently abled people and senior citizens), of each building.

- Drawings (along with dimensions) highlighting the measures implemented for differently abled people and senior citizens.
 - Parking layout for differently abled parking
 - Floor plan highlighting the non-slippery ramps (with handrails at least on one side) at all the main entrances and easy access to main entrance of building along with sectional layout highlighting the slope of ramp.
 - Interior layout (plan and section) of the differently abled toilet.
- Geotag & time stamped photographs showing all the measures implemented along with permanent signage.

SSP Credit 1: Access to Amenities and Transport

Precertification

Option 1: Basic Amenities

- Site vicinity map (with scale) highlighting pedestrian access from the project to the basic amenities within 800 m from project.

Option 2: Transit Connectivity

- Site vicinity map (with scale) highlighting pedestrian access from the project to the nearest intra-city railway station/ metro (or) a bus-stop (or) other modes of public transport, within 800 meters from project.

(Or)

In case, shuttle services are proposed, kindly submit,

- Declaration from project owner/ developer indicating non-fossil fuel-based shuttle service will be provided in the project.

Certification

Option 1: Basic Amenities

- Site vicinity map (with scale) highlighting pedestrian access from the project to the basic amenities within 800 m from project.
- Geotag photographs of the basic amenities.

Option 2: Transit Connectivity

- Site vicinity map (with scale) highlighting pedestrian access from the project to the nearest intra-city railway station/ metro (or) a bus-stop (or) other modes of public transport, within 800 meters from project.

- Geotag photographs showing the intra-city railway station/ metro (or) a bus-stop (or) other modes of public transport.

(Or)

In case, shuttle services are used, kindly submit,

- Copy of contract agreement signed between the project owner and the shuttle service provider for non-fossil fuel-based vehicles.
- Details of shuttle services - type and number of non-fossil fuel-based vehicles, frequency (peak and non-peak hours), seating capacity, route details (boarding & destination points), etc.,
- Site plan showing the alighting point of shuttle services.
- Geotag & time stamped photographs of shuttle services.

SSP Credit 2: Electric Vehicle Charging

Precertification

Option 1: Electric Vehicle Charging Equipment

- Narrative describing the type of charging equipment that will be provided in the project, along with details on how the parking area will be prepared to support EV infrastructure, as applicable.
- Tentative calculations indicating the total number of electric vehicles catered with the electric charging facilities provided in the project, in percentage.
- Tentative calculations indicating the total number of parking spaces that will be provided with EV ready infrastructure.
- Tentative calculations indicating the estimated connected load for EV chargers, existing transformer rating and spare capacity.

Note: If, as per local bylaws, the project has ECS parking, please recalculate the ECS into the equivalent number of car and two-wheeler parking spaces. Share the calculations accordingly.

- Conceptual parking layouts highlighting the location of preferred parking spaces with electric charging facilities, along with directional signages.
- Conceptual parking layouts highlighting the location of preferred parking spaces earmarked for future expansion of charging stations.
- Tentative manufacturer cut sheet/ brochure/ specification sheet of the electric charging equipment.

- Declaration project owner/ developer indicating the total number of electric charging facilities that will be provided in the project and EV infra readiness proposed in the project, as applicable.

Option 2: Electric Vehicle Infra Ready

- Narrative describing the details on how the parking area will be prepared to support EV infrastructure.
- Tentative calculations indicating the total number of parking spaces that will be provided with EV ready infrastructure.
- Tentative calculations indicating the estimated connected load for EV chargers and existing transformer rating and spare capacity.
- Conceptual parking layouts highlighting the location of preferred parking spaces earmarked for future expansion of charging stations.
- Declaration letter from project owner/ developer indicating EV infra readiness proposed in the project.

Certification

Option 1: Electric Vehicle Charging Equipment

- Narrative describing the type of charging equipment that will be provided in the project, along with details on how the parking area will be prepared to support EV infrastructure, as applicable.
- Calculations indicating the total number of electric vehicles catered with the electric charging facilities provided in the project, in percentage.
- Calculations indicating the total number of parking spaces that will be provided with EV ready infrastructure.
- Calculations indicating the estimated connected load for EV chargers, existing transformer rating and spare capacity.

Note: If, as per local bylaws, the project has ECS parking, please recalculate the ECS into the equivalent number of car and two-wheeler parking spaces. Share the calculations accordingly.

- Parking layouts highlighting the location of preferred parking spaces with electric charging facilities, along with directional signages.
- Parking layouts highlighting the location of preferred parking spaces earmarked for future expansion of charging stations.

- Manufacturer cut sheet/ brochure/ specification sheet of the electric charging equipment.
- Purchase invoice indicating total no. of installed electric charging facilities in the project.
- Geotag & time stamped photographs showing electric charging facilities with signage & directional signage and EV infra ready provisions, provided in the project, as applicable.

Option 2: Electric Vehicle Infra Ready

- Narrative describing the details on how the parking area will be prepared to support EV infrastructure.
- Calculations indicating the total number of parking spaces that will be provided with EV ready infrastructure.
- Calculations indicating the estimated connected load for EV chargers and existing transformer rating and spare capacity.
- Parking layouts highlighting the location of preferred parking spaces earmarked for future expansion of charging stations.
- Geotag & time stamped photographs showing the EV infra ready provisions, provided in the project, as applicable

SSP Credit 3: Sustainable Landscape

Precertification

Case A: Site Preservation

- Narrative describing the strategies proposed to retain the existing water bodies, existing natural rocks, existing topography/ landscape, and to integrate existing trees with new development in the project, as applicable.
- Conceptual site survey plan/ Sectional drawings/ Satellite images highlighting the retention/ preservation measures for each of the site features, before and after development, as applicable:
 - Existing water bodies and channels
 - Existing natural rocks
 - Existing landscape, without any disturbance whatsoever
 - Integration of existing trees with new development
- Tentative calculations indicating the site features retained/ preserved, before and after development, in percentage.
- Declaration from project owner stating that retention/ preservation site features will be maintained remain untouched.

- Geotag & time stamped photographs showing the existing site features to be retained/ preserved, before construction.

Case B: Landscape Design

Option 1: Vegetation over Ground/ Built Structures:

- Conceptual site drawing highlighting the area with vegetation (along with legend).
- Tentative calculations indicating the total area with vegetation on ground/ over built structures to the total site area, in percentage.
- Tentative list of turf, drought tolerant, native and adaptive species proposed in the project.
- Declaration letter from project owner indicating area of vegetation proposed on the ground/ over built structures.

Option 2: Preservation or Plantation of Tree Saplings

- Narrative describing the strategies proposed to plant new saplings, within the project site.
- Conceptual landscape drawing highlighting the tree saplings.
- Tentative calculations indicating the total site area (in acres), tree saplings.
- Tentative list of the native plant species which can mature into grown up trees for shading, within the next 5 years.
- Declaration letter from project owner indicating total no. of proposed trees in the project.

Option 3: Landscape Design

- Conceptual landscape plan(s) highlighting landscaped area covered with turf, drought tolerant species, native, adaptive & other plant species on the ground and over built structures.
- Tentative calculations indicating the total landscape area (on the ground and over built structures) to the total site area, in percentage.
- Tentative list of turf, drought tolerant, native and adaptive species proposed in the project.
- Declaration letter from project owner indicating total area for turf and drought tolerant species/ native/ adaptive species proposed in the project.

Certification

Case A: Site Preservation

- Narrative describing the strategies implemented to retain the existing water bodies, existing natural rocks, existing landscape, and to integrate existing trees with new development in the project, as applicable.
- Site survey plan/ Sectional drawings/ Satellite images showing the retention/ preservation measures for each of the following site features, before and after development, as applicable:
 - Existing water bodies and channels
 - Existing natural rocks
 - Existing topography/ landscape, without any disturbance whatsoever
 - Integration of existing trees with new development
- Detail calculations indicating the site features retained/ preserved, before and after development, in percentage.
- Geotag & time stamped photographs showing the site features retained/ preserved, before and after development.

Case B: Landscape Design

Option 1: Vegetation over Ground/ Built Structures:

- Site drawing highlighting the area with vegetation (along with legend).
- Calculations indicating the total area with vegetation on ground/ over built structures to the total site area, in percentage.
- Tentative list of turf, drought tolerant, native and adaptive species proposed in the project.
- Geotag & time stamped photographs showing the site area with vegetation on ground/ over built structures.

Option 2: Preservation or Plantation of Tree Saplings

- Narrative describing the strategies proposed to plant new saplings, within the project site.
- Landscape drawing highlighting the tree saplings.
- Calculations indicating the total site area (in acres), tree saplings.
- List of the native plant species which can mature into grown up trees for shading, within the next 5 years.
- Geotag & time stamped photographs showing the tree saplings (after construction).

Option 3: Landscape Design

- Landscape plan(s) highlighting the area covered with turf, drought tolerant species & other plant species, on the ground and over built structures.
 - Calculations indicating the total landscape area (on the ground and over built structures) to the total site area, in percentage.
- List of turf, drought tolerant, native and adaptive species used in the project.
- Geotag & time stamped photographs showing the landscaped areas.

SSP Credit 4: Heat Island Reduction, Non-roof and Roof**Precertification****Case A: Non-roof Impervious Areas**

- Narrative describing the proposed strategies to reduce heat island effect from non-roof areas.
- Conceptual site drawing (along with legend) highlighting the non-roof impervious (hardscape) areas and the areas covered with shade from tree cover within 5 years, (and/ or) open grid pavers, including grass pavers (and/ or) hardscape materials with SRI of atleast 29 (and not higher than 64).
- Tentative calculations indicating the area covered with shade from tree cover, (and/ or) open grid pavers, including grass pavers (and/ or) hardscape materials with SRI of atleast 29 (and not higher than 64) to the total exposed non-roof impervious area, in percentage.
- Tentative list of the existing trees/ plant species which can mature into grown up trees for shading, within the next 5 years.
- Manufacturer brochures indicating the Solar Reflective Index (SRI) of the reflective materials.

Case B: Roof Areas

- Narrative describing the proposed strategies to reduce heat island effect from roof areas.
- Tentative roof area calculations indicating the area covered with high reflective roof materials (and/or) vegetation to the total exposed roof area (excluding service & utility areas), in percentage.
- Conceptual roof plans (along with legend) highlighting the area to be covered with high reflective roof materials and/ or vegetation installed in the project, as applicable.
- List of the high reflective materials (make & model) proposed in the project.
- Tentative list of the native/ drought tolerant plant species proposed on the roof.
- Declaration letter from project owner indicating percentage of high reflective material and vegetated area proposed in the project.

Certification

Case A: Non-roof Impervious Areas

- Narrative describing the proposed strategies to reduce heat island effect from non-roof areas.
- Site drawing (along with legend) highlighting the non-roof impervious (hardscape) areas and the areas covered with shade from tree cover within 5 years, (and/ or) open grid pavers, including grass pavers (and/ or) hardscape materials with SRI of at least 29 (and not higher than 64).
- Calculations indicating the area covered with shade from tree cover, (and/ or) open grid pavers, including grass pavers (and/ or) hardscape materials with SRI of at least 29 (and not higher than 64) to the total exposed non-roof impervious area, in percentage.
- List of the existing trees/ plant species which can mature into grown up trees for shading, within the next 5 years.
- Manufacturer brochures/ Test Report indicating the Solar Reflective Index (SRI) of the reflective materials.
- Purchase invoice/ Payment receipt of the high reflective roof materials sourced for the project.
- Geotag & time stamped photographs showing the measures to reduce heat island effect from non-roof areas.

Case B: Roof Areas

- Narrative describing the proposed strategies to reduce heat island effect from roof areas.
- Roof area calculations indicating the area covered with high reflective roof materials (and/or) vegetation to the total exposed roof area (excluding service & utility areas), in percentage.
- Roof plans (along with legend) highlighting the area to be covered with high reflective roof materials and/ or vegetation installed in the project, as applicable.
- List of the high reflective materials (make & model) proposed in the project.
- List of the native/ drought tolerant plant species proposed on the roof.
- Purchase invoice/ Payment receipt of the high reflective roof materials sourced for the project.
- Geotag & time stamped photographs showing the measures to reduce heat island effect from roof areas.

SSP Credit 5: Outdoor Light Pollution Reduction

Precertification

- Narrative describing the design strategies proposed for outdoor light pollution reduction and exterior LPD.
- Tentative manufacturer data sheets highlighting the proposed exterior lighting fixtures along with the respective photometric data. The data sheet shall include the Upward Light Ratio, Colour Temperature and adjustable angle of the light fixture
- Conceptual exterior lighting layout highlighting the type of light fixtures.
- Declaration from developer indicating the type of exterior lighting that will be used in the project.

Certification

- Narrative describing the design strategies proposed for outdoor light pollution reduction and exterior LPD.
- Manufacturer data sheets highlighting the proposed exterior lighting fixtures along with the respective photometric data. The data sheet shall include the Upward Light Ratio, Colour Temperature and adjustable angle of the light fixture
- Exterior lighting layout highlighting the type of light fixtures.
- Purchase invoice of the installed exterior lighting fixtures.
- Geotag & time stamped photographs showing the typical exterior lighting fixtures.

SSP Credit 6: Sustainability Initiatives

Precertification

Design and Construction Stage

Case A: Integrated Design Approach

- List of all the project team members along with their specific role related to the project.
- Narrative describing the strategies adopted by the project team from multidisciplinary fields to influence and enhance the performance of building(s) during design and construction stage.
- Document shall include initial and proposed green design strategies with emphasis on synergy between interdisciplinary teams

Case B: Awareness Sessions for Labors and Sustainability training for Employees & Vendor Project**Team**

- Narrative and Declaration from project owner describing the strategies adopted for providing the following:
 - Awareness sessions for construction workforce on health, safety, environmental protection, and social responsibility standards applicable to project activities
 - Awareness session for project team and vendors on green product procurement and sustainability principles, including resource efficiency, water & waste reduction, energy conservation, etc.

Post Occupancy Stage

- Narrative describing the measures that will be implemented for Green Education program.
- Declaration from project owner indicating implementation of the following:
 - Promotional material and signage & posters placed in the project showing green concepts.
 - Presentation on green features of the project and how the green features will be incorporated, for occupants and visitors training programme.
- Draft copy of the green building guidelines providing information which helps the building occupants to implement and utilise the green features, post occupancy.

Certification**Design and Construction Stage****Case A: Integrated Design Approach**

- List of all the project team members along with their specific role related to the project.
- Narrative describing the strategies adopted by the project team from multidisciplinary fields to influence and enhance the performance of building(s) during design and construction stage.
 - Document shall include initial and proposed green design strategies with emphasis on synergy between interdisciplinary teams
- Minutes of Meeting (MoM) of at least three meetings held at different stages of the project, on green building design and construction aspects.
- Time stamped photographs of the meetings held at different stages of the project.

Case B: Awareness Sessions for Labors and Sustainability training for Employees & Vendor Project**Team**

- Narrative from project owner describing the strategies adopted for training of Employees & Vendor Project Team.
- Photographs of the Awareness sessions conducted for construction workforce on health, safety, environmental protection, and social responsibility standards applicable to project activities.
- Photographs of the Awareness session conducted for project team and vendors on green product procurement and sustainability principles, including resource efficiency, water & waste reduction, energy conservation, etc.

Post Occupancy Stage

- Narrative describing the measures implemented for Green Education program.
- Details of promotional material and photographs showing signage and posters placed in the project showing green concepts.
- Presentation on green features of the project and how the green features were incorporated, for occupants and visitors training programme.
- Copy of the green building guidelines providing information which helps the building occupants to implement and utilise the green features, post occupancy.
- Copy of project specific green building renovation guidelines providing information which helps the facilities team to implement the green features, during building renovation process.

Module 2: Water Conservation (WC)

WC Mandatory Requirement 1: Rainwater Harvesting, Roof & Non-roof

Precertification

Case A: Rainwater Harvesting, Roof & Non-roof

- Narrative describing the strategies proposed to capture/ harvest rainwater from roof & non-roof areas.
 - Tentative calculations indicating the run-off volume captured/ harvested from roof and non-roof.

Note: If the project team has proposed pits, kindly reflect the filtration media/void ratio for the calculations.

- Conceptual external storm water drain layout highlighting the location of rainwater harvesting - ponds, pits, storage tanks, etc., as applicable.
- Conceptual plan & sectional drawing of proposed rainwater harvesting systems with dimensions.
- If the project team has considered percolation rate for RWH pits then kindly provide a project-specific hydrogeological/ soil test report, signed and stamped by third party indicating the water percolation rate.

Case B: High Ground Water Table

Hydrology report (approved by third-party) indicating the level of water table, at different locations within the project site.

Certification

Case A: Rainwater Harvesting, Roof & Non-roof

- Narrative describing the strategies implemented to capture/ harvest rainwater from roof & non-roof areas.
- Calculations indicating the run-off volume captured/ harvested from roof and non-roof.

Note: If the project team has proposed pits, kindly reflect the filtration media/void ratio for the calculations.

- External storm water drain layout highlighting the location of rainwater harvesting - ponds, pits, storage tanks, etc., as applicable.
- Plan & sectional drawing of proposed rainwater harvesting systems with dimensions.

- If the project team has considered percolation rate for RWH pits then kindly provide a project-specific hydrogeological/ soil test report, signed and stamped by third party indicating the water percolation rate.
- Geotag & time stamped photographs of rainwater harvesting systems, taken during and after construction.

Case B: High Ground Water Table

Hydrology report (approved by third-party) indicating the level of water table, at different locations within the project site.

WC Mandatory Requirement 2: Water Efficient Plumbing Fixtures

Precertification

- List of plumbing fixtures (flow and flush) proposed in the project, with respective make & model and flow rates.
- Tentative FTE occupancy calculations for the building occupants and visitors.

Note: If the project includes multiple spaces / typologies (e.g., offices, shops, service apartments, etc.), then kindly provide FTE occupancy calculations for each typology separately.

- Tentative water use reduction calculation indicating the percentage reduction in water use over baseline.

Note: If the project includes multiple spaces / typologies (e.g., offices, shops, service apartments, etc.) then kindly provide water use reduction calculations for each typology separately.

- Tentative manufacturer cut sheets/ brochures/ letters indicating the proposed flow rates of the plumbing fixtures (flow and flush) at 3 bar flowing water pressure.

In case, cutsheets do not indicate flow rates at 4 bar pressure, the project team can submit letters at 3 bar pressure and submit calculations for conversion of flow rates from 4 bar to 3 bar pressure.

- Declaration letter from project owner indicating the proposed flow rates of the plumbing fixtures (flow and flush) at 3 bar flowing water pressure.

Note: For tenant-occupied buildings, if plumbing fixtures fall within the tenant's scope, then kindly submit draft tenant lease agreement specifying the flow rates of the plumbing fixtures (flow and flush) at 3 bar flowing water pressure.

Certification

- List of plumbing fixtures (flow and flush) installed in the project, with respective make & model and flow rates.

- FTE occupancy calculations for the building occupants and visitors.

Note: If the project includes multiple spaces / typologies (e.g., offices, shops, service apartments, etc.), then kindly provide FTE occupancy calculations for each typology separately.

- Water use reduction calculation indicating the percentage reduction in water use over baseline.

Note: If the project includes multiple spaces / typologies (e.g., offices, shops, service apartments, etc.), then kindly provide water use reduction calculations for each typology separately.

- Manufacturer cut sheets/ brochures/ letters indicating the flow rates of the plumbing fixtures (flow and flush) at a 4-bar flowing water pressure.

Note: The manufacturer letters should be project specific. In case, letters are not available for 4 bar pressure, the project team can submit letters at 3 bar pressure and submit calculations for conversion of flow rates from 4 bar to 3 bar pressure.

- Purchase invoice of installed plumbing fixtures (flow and flush) with make & model.

Note: For tenant-occupied buildings, if plumbing fixtures fall within the tenant's scope, then kindly submit the tenant lease agreement specifying the flow rates of the plumbing fixtures (flow and flush) at 3 bar flowing water pressure.

WC Credit 1: Water Use Reduction for Construction

Precertification

- Narrative describing the strategies proposed to reduce potable water consumption for construction activities (concrete mixing, plastering works and curing).

Note: Use of gunny bags, ponding, etc., are conventional curing practices and would not be considered to demonstrate compliance.

- Tentative calculations indicating the reduction in potable water requirement for construction activities through the use of treated wastewater and admixtures & curing compounds to the total potable water requirement, in percentage.

- If treated wastewater is proposed for use, specify the source and quality standards/ test results. Also, provide a single line diagram showing the source of treated wastewater to the project location.

If admixtures & curing compounds are proposed for use, provide manufacturer brochures/ cut-sheets. Specify the areas of application (e.g. slabs, beams, columns, etc.) of admixtures & curing compounds.

- Declaration from the project owner stating that the project would be using treated water/ admixtures & curing compounds to reduce the potable water consumption for construction activities.
- Other supporting documents if applicable.

Certification

- Narrative describing the strategies implemented to reduce potable water consumption for construction activities (concrete mixing, plastering works and curing).

Note: Use of gunny bags, ponding, etc., are conventional curing practices and would not be considered to demonstrate compliance.

- Calculations indicating the reduction in potable water requirement for construction activities through the use of treated wastewater and admixtures & curing compounds to the total potable water requirement, in percentage.

If treated wastewater is used, specify the source and quality standards/ test results. Also, provide a single line diagram showing the source of treated wastewater to the project location (or) gate passes for sourcing treated wastewater.

- If admixtures & curing compounds are used, provide test reports, purchase invoices and manufacturer brochures/ cut-sheets, as applicable. Specify the areas of application (e.g. slabs, beams, columns, etc.) of admixtures & curing compounds.
- Other supporting documents if applicable.

WC Credit 2: Rainwater Harvesting, Roof & Non-roof

Precertification

Case A: Rainwater Harvesting, Roof & Non-roof

- Narrative describing the strategies proposed to capture/ harvest rainwater from roof & non-roof areas.
 - Tentative calculations indicating the run-off volume captured/ harvested from roof and non-roof.

Note: If the project team has proposed pits, kindly reflect the filtration media/void ratio for the calculations.

- Conceptual external storm water drain layout highlighting the location of rainwater harvesting - ponds, pits, storage tanks, etc., as applicable.
- Conceptual plan & sectional drawing of proposed rainwater harvesting systems with dimensions.
- If the project team has considered percolation rate for RWH pits then kindly provide a project-specific hydrogeological/ soil test report, signed and stamped by third party indicating the water percolation rate.

Case B: High Ground Water Table

- Hydrology report (approved by third-party) indicating the level of water table, at different locations within the project site.
- Narrative describing the strategies proposed to capture/ harvest rainwater from roof areas.
 - Tentative calculations indicating the run-off volume captured/ harvested from roof.
- Conceptual external storm water drain layout highlighting the location of rainwater harvesting - ponds, storage tanks, etc., as applicable.
- Conceptual plan & sectional drawing of proposed rainwater harvesting systems with dimensions.

Certification

Case A: Rainwater Harvesting, Roof & Non-roof

- Narrative describing the strategies implemented to capture/ harvest rainwater from roof & non-roof areas.
- Calculations indicating the run-off volume captured/ harvested from roof and non-roof.

Note: If the project team has proposed pits, kindly reflect the filtration media/void ratio for the calculations.

- External storm water drain layout highlighting the location of rainwater harvesting - ponds, pits, storage tanks, etc., as applicable.
- Plan & sectional drawing of proposed rainwater harvesting systems with dimensions.

- If the project team has considered percolation rate for RWH pits then kindly provide a project-specific hydrogeological/ soil test report, signed and stamped by third party indicating the water percolation rate.
- Geotag & time stamped photographs of rainwater harvesting systems, taken during and after construction.

Case B: High Ground Water Table

- Hydrology report (approved by third-party) indicating the level of water table, at different locations within the project site.
- Narrative describing the strategies implemented to capture/ harvest rainwater from roof areas.
- Calculations indicating the run-off volume captured/ harvested from roof.

Note: If the project team has proposed pits, kindly reflect the filtration media/void ratio for the calculations.

- External storm water drain layout highlighting the location of rainwater harvesting - ponds, storage tanks, etc., as applicable.
- Plan & sectional drawing of proposed rainwater harvesting systems with dimensions.
- Geotag & time stamped photographs of rainwater harvesting systems, taken during and after construction.

WC Credit 3: Water Efficient Plumbing Fixtures

Precertification

Please refer to the 'Documentation required' under WC Mandatory Requirement 2 – Water Efficient Plumbing Fixtures.

Certification

Please refer to the 'Documentation required' under WC Mandatory Requirement 2 – Water Efficient Plumbing Fixtures.

WC Credit 4: Irrigation Water Reduction

Precertification

- Narrative describing the water efficient irrigation systems and techniques proposed in the project.
- Tentative calculations indicating the reduction in water requirement for irrigation through the use of efficient landscape design and irrigation systems to the total water requirement, in percentage.
- Conceptual landscape plan highlighting location of the implemented irrigation systems such as central shut-off valve, soil moisture sensors, drip irrigation layout, pressure regulating device(s) etc.
 - Snapshot of the evapotranspiration rate considered for calculations.
 - Declaration letter from project owner indicating proposed irrigation system.

Certification

- Narrative describing the water efficient irrigation systems and techniques proposed in the project.
- Calculations indicating the reduction in water requirement for irrigation through the use of efficient landscape design and irrigation systems to the total water requirement, in percentage.
- Landscape plan highlighting location of the implemented irrigation systems such as central shut-off valve, soil moisture sensors, drip irrigation layout, pressure regulating device(s) etc.
- Snapshot of the evapotranspiration rate considered for calculations.
 - Geotag & time stamped photographs showing the installed irrigation systems and techniques.

WC Credit 5: Wastewater Treatment

Precertification

- Narrative describing the on-site wastewater treatment system proposed in the project, along with quality standards of the treated wastewater.

Note: If the project team is diverting the generated wastewater to a common wastewater treatment facility, submit details of wastewater generated from other buildings, along with supporting documents.

- Site plan highlighting the location of on-site wastewater treatment system, proposed in the project.
- Declaration letter from project owner indicating capacity of proposed wastewater treatment system.

Certification

- Narrative describing the on-site wastewater treatment system proposed in the project, along with quality standards of the treated wastewater.

Note: If the project team is diverting the generated wastewater to a common wastewater treatment facility, submit details of wastewater generated from other buildings, along with supporting documents.

- Site plan highlighting the location of on-site wastewater treatment system, proposed in the project.
- Technical data sheet of on-site wastewater treatment system proposed in the project.
- Purchase invoice/ commissioning report highlighting capacity of installed wastewater treatment system.
- Geotag & time stamped photographs showing the on-site wastewater treatment system installed.

WC Credit 6: Alternate Water Use

Precertification

- Tentative calculations indicating the water requirement for various applications including domestic, irrigation, cooling tower & water-cooled DG make-up water etc., as applicable.
- Tentative daily and annual water balance of the project.

Note:

- *The water balance shall include calculations (approximate) showing water demand for various applications including domestic (includes flushing), irrigation, water cooled DG make-up water and air-conditioning cooling tower make-up water (if the project uses water-cooled chillers), and quantity of wastewater reused for such applications.*
- *If the project team is using treated wastewater sourced from other sites / local authorities, it must be through permanent piped connections.*

- *If the project team is reusing the treated water from a common wastewater treatment facility, submit details of wastewater reuse for other buildings, along with supporting documents.*
- Schematic drawing showing proposed plumbing lines connected to flush fixtures, cooling tower, landscaping, etc., if treated wastewater is reused for these applications from treated water tank, rainwater tank, condensate water tank, etc., as applicable.
 - Declaration letter from project owner indicating generated wastewater would be reuse for landscaping, flushing, air-conditioning cooling tower make-up water, etc. (as applicable).

Option 2: Roadmap towards Net Zero Water

Draft roadmap including proposed strategies along with timelines for different water use applications that will be implemented to achieve net zero water signed and stamped on the company letterhead.

Certification

- Calculations indicating the water requirement for various applications including domestic, irrigation, cooling tower & water-cooled DG make-up water etc., as applicable.
- Daily and annual water balance of the project.

Note:

- *The water balance shall include calculations (approximate) showing water demand for various applications including domestic (includes flushing), irrigation, water cooled DG make-up water and air-conditioning cooling tower make-up water (if the project uses water-cooled chillers), and quantity of wastewater reused for such applications.*
- *If the project team is using treated wastewater sourced from other sites / local authorities, it must be through permanent piped connections.*
- *If the project team is reusing the treated water from a common wastewater treatment facility, submit details of wastewater reuse for other buildings, along with supporting documents.*
- Schematic drawing showing proposed plumbing lines connected to flush fixtures, cooling tower, landscaping, etc., if treated wastewater is reused for these applications from treated water tank, rainwater tank, condensate water tank, etc., as applicable.
- Geotag & time stamped photographs of plumbing lines connected to flush fixtures, cooling tower, landscaping, etc., as applicable, if treated wastewater is reused for these applications.

Option 2: Roadmap towards Net Zero Water

Detailed roadmap including proposed strategies along with timelines for different water use applications that will be implemented to achieve net zero water signed and stamped on the company letterhead.

WC Credit 6: Water Metering and Management**Precertification****Option 1: Water Metering**

- Narrative describing the list of building and /or tenant level water meters, proposed in the project.

Note: Tenant-level Metering is applicable only for Tenant-occupied buildings

- Declaration letter from project owner indicating the list of building and /or tenant level water meters, proposed in the project.

Option 2: Water Management System

- Narrative describing the water management system installed in the project, to control and monitor systems.
- Cutsheet of the proposed water management system.
- Declaration letter from the project owner/ developer stating that the project will provide the water management system.

Certification**Option 1: Water Metering**

- Narrative describing the list of building and /or tenant level water meters, installed in the project.

Note: Tenant-level Metering is Applicable only for Tenant-occupied buildings

- SLD showing the location of water meters, installed in the project.
- Manufacturer cut sheets/ brochures of the installed water meters.
- Geotag & time stamped photographs of water meters installed in the project.

Option 2: Water Management System

- Narrative describing the building management system installed in the project, to control and monitor equipment and systems.
- Cutsheet of the proposed water management system.
- Geotag & time stamped photographs showing the installed water management system and the systems controlled with the WMS.

Module 3: Energy Efficiency (EE)

EE Mandatory Requirement 1: Eco-friendly Refrigerants & Halon-free Systems

Precertification

Eco-Friendly Refrigerants

- Narrative stating the type of refrigerant proposed in the HVAC systems.
- Manufacturer cut sheet of the proposed HVAC system in the project.

Halon-free Fire Suppression Systems

Declaration letter signed by the developer/ MEP consultant stating the proposed fire suppression systems proposed in the project.

Certification

Eco-Friendly Refrigerants

- Narrative stating the type of refrigerant proposed in the HVAC systems.
- Manufacturer cut sheet of installed HVAC system in the project.
- Geotagged and time stamped photographs of the nameplate indicating the refrigerant used in the HVAC system.

Halon-free Fire Suppression Systems

Geotagged and time stamped photographs indicating the type of fire suppression systems installed in the project.

EE Mandatory Requirement 2: Minimum Energy Efficiency

Precertification

Option 1: Performance Based Approach / Whole Building Simulation:

- Narrative stating the location of the project, proposed Energy Conservation Measures (ECMs) and the overall % savings in the project.
- Energy simulation report indicating:
 - Area statement indicating the total built up area and the conditioned area in the building.
 - Comparison Table highlighting the Input parameters for base and proposed case (U-value of the wall & roof assemblies, Exterior surface reflectance, U-value & SHGC for glazing system, WWR, Interior LPD, Exterior LPD, EPD, HVAC system details-High side and low side, System COP, Fresh Air system, RE capacity).

- Snapshots indicating the thermal zoning for each floor.
- Snapshots of the energy model indicating the WWR distribution for both base and proposed case.
- Cooling load calculations for baseline and proposed case for system selection.
- Snapshot of PV Watt calculator/ solar report highlighting the solar energy generation capacity in the proposed case.
- End Use Summary for base case (For 4 orientations) & proposed case indicating % savings in the proposed case from the baseline performance as per ASHRAE 90.1.2022 or ECSBC 2024.
- Software snapshots indicating schedules for occupancy, interior lighting, exterior lighting, EPD, thermostat set-point, HVAC system on & off, Fans, etc., for both weekdays and weekend.
- **Envelope:**
 - Manufacturers cutsheet highlighting specifications of glazing (SHGC value, U-value and VLT, as applicable).
 - Sectional drawings of the wall assembly proposed (including wall insulation material, etc.), along with the U-value calculations of the overall wall assembly.
 - Sectional drawings of the roof assembly proposed (including roof insulation material, etc.), along with the U-value calculations of the overall roof assembly.
 - References highlighting R values considered for proposed wall and roof assembly.
 - WWR calculations for base and proposed case.
- **Lighting:**
 - Details of the lighting systems and controls proposed - List of interior and exterior lighting fixtures with make & model and wattage.
 - Conceptual interior and exterior lighting layout.
 - Manufacturer cutsheet indicating the make & model and wattage along with photometric data.
 - LPD calculations, as per 'Building Area Method' or 'Space-by-Space method / Space function method'.
- **Heating, Ventilation and Air Conditioning System:**
 - Manufacturer cutsheet of the proposed air-conditioning system indicating the COP/ EER values.
 - Manufacturer cutsheet of the high and low side systems (Chiller, Cooling Towers, AHU, FCUs, CSUs, Fans, Pumps, VRF units, Terminal units as applicable)
 - Manufacturer cutsheet of the space heating system proposed indicating the COP/ EER values.
 - Manufacturer cutsheet of the Fresh Air system proposed indicating the Total supply CFM.
 - Tentative HVAC layout for all floors.
 - Tentative calculations of pump power, fan power, GPM calculations, as applicable.

- Details of solar water heating system such as calculations, plans showing location of solar water heating system.
- Manufacturer cutsheet of any other innovative system installed in the project.
- Input and output reports indicating the modelled parameters (i.e. Conditioned area, Envelope parameters, WWR, LPD, EPD, Schedules, Total cooling load of the system, HVAC details, Energy end use summary and Unmet hours).

In tenant occupied buildings, in case the systems are not in owners' scope,

- Draft tenant agreement copy signed by the project developer mandating the LPD values, Type of HVAC system (COP, fan power as applicable) and integration of fresh air with the HVAC system in tenant scope areas.

Option 2: Prescriptive Approach:

- Narrative stating the climate zone and the list of Energy Conservation Measures (ECMs) implemented in the project.
- **Envelope:**
 - Manufacturers cutsheet highlighting specifications of glazing (SHGC value, U-value and VLT, as applicable).
 - Sectional drawings of the wall assembly proposed (including wall insulation material, etc.), along with the U-value calculations of the overall wall assembly.
 - Sectional drawings of the roof assembly proposed (including roof insulation material, etc.), along with the U-value calculations of the overall roof assembly.
 - References highlighting R values considered for proposed wall and roof assembly.
- **Lighting:**
 - Details of the lighting systems and controls proposed - List of interior and exterior lighting fixtures with make & model and wattage.
 - Conceptual interior and exterior lighting layout.
 - Manufacturer cutsheet indicating the make & model and wattage along with photometric data.
 - LPD value meeting the requirement outlined in the Building Area Method (under Chapter 7, Table 7.1) or Space by Space Method (under Chapter 7, Table 7.4) and exterior & parking areas (under Chapter 7, Table 7.7) of ECSBC 2024.
- **Space Conditioning Systems:**
 - Unitary, Split and packaged air conditioners
 - Manufacturer cutsheets of unitary, split and packaged air conditioner (as applicable) proposed in the project.
 - HVAC plans for all floors.
 - Variable refrigerant flow (VRF):

- Manufacturer cutsheets of proposed VRF units in the project.
- HVAC plans for all floors.
- **Fans:**
 - Manufacturer cutsheet of proposed BEE 3 star rated fans.

Certification

Option 1: Performance Based Approach / Whole Building Simulation:

- Narrative stating the location of the project, proposed Energy Conservation Measures (ECMs) and the overall % savings in the project.
- Energy simulation report indicating:
 - Area statement indicating the total built up area and the conditioned area in the building.
 - Comparison Table highlighting the Input parameters for base and proposed case (U-value of the wall & roof assemblies, Exterior surface reflectance, U-value & SHGC for glazing system, WWR, Interior LPD, Exterior LPD, EPD, HVAC system details-High side and low side, System COP, Fresh Air system, RE capacity).
 - Snapshots indicating the thermal zoning for each floor.
 - Snapshots of the energy model indicating the WWR distribution for both base and proposed case.
 - Cooling load calculations for baseline and proposed case for system selection.
 - Snapshot of PV Watt calculator/ solar report highlighting the solar energy generation capacity in the proposed case.
 - End Use Summary for base case (For 4 orientations) & proposed case indicating % savings in the proposed case from the baseline performance as per ASHRAE 90.1.2022 or ECSBC 2024.
 - Software snapshots indicating schedules for occupancy, interior lighting, exterior lighting, EPD, thermostat set-point, HVAC system on & off, Fans, etc., for both weekdays and weekend.
- **Envelope:**
 - Manufacturers cutsheet highlighting specifications of glazing (SHGC value, U-value and VLT, as applicable).
 - Sectional drawings of the wall assembly proposed (including wall insulation material, etc.), along with the U-value calculations of the overall wall assembly.
 - Sectional drawings of the roof assembly proposed (including roof insulation material, etc.), along with the U-value calculations of the overall roof assembly.
 - References highlighting R values considered for proposed wall and roof assembly.
 - WWR calculations for base and proposed case.

- Geo tagged and time stamped photographs of the envelope highlighting the glazing unit, roof & wall insulation etc.
- **Lighting:**
 - Details of the lighting systems and controls proposed - List of interior and exterior lighting fixtures with make & model and wattage.
 - Interior and exterior lighting layout.
 - Manufacturer cutsheet indicating the make & model and wattage along with photometric data.
 - LPD calculations, as per 'Building Area Method' or 'Space-by-Space method / Space function method'.
 - Geo tagged and time stamped photographs of the lighting fixtures.
- **Heating, Ventilation and Air Conditioning System:**
 - Manufacturer cutsheet of the proposed air-conditioning system indicating the COP/ EER values.
 - Manufacturer cutsheet of the high and low side systems (Chiller, Cooling Towers, AHU, FCUs, CSUs, Fans, Pumps, VRF units, Terminal units as applicable)
 - Manufacturer cutsheet of the space heating system proposed indicating the COP/ EER values.
 - Manufacturer cutsheet of the Fresh Air system indicating the Total supply CFM.
 - HVAC layout for all floors.
 - Calculations of pump power, fan power, GPM calculations, as applicable.
 - Geo tagged and time stamped photographs of the installed HVAC systems in the project highlighting the nameplate.
- Details of solar water heating system such as calculations, plans showing location of solar water heating system.
- Manufacturer cutsheet of any other innovative system installed in the project, along with photographs.
- Input and output reports indicating the modelled parameters (i.e. Conditioned area, Envelope parameters, WWR, LPD, EPD, Schedules, Total cooling load of the system, HVAC details, Energy end use summary and Unmet hours).
- Purchase invoices of energy conservation measures implemented in the project such as glass, wall and roof insulation, lighting systems, chillers, heat recovery wheel, solar hot water system, etc., as applicable.

In tenant occupied buildings, in case the systems are not in owners' scope,

- Tenant lease agreement copies for more than 50% of the tenant occupied areas signed by the project developer mandating the LPD values, Type of HVAC system (COP, fan power as applicable) and integration of fresh air with the HVAC system in tenant scope areas.

Option 2: Prescriptive Approach:

- Narrative stating the climate zone and the list of Energy Conservation Measures (ECMs) implemented in the project.
- **Envelope:**
 - Manufacturers cutsheet highlighting specifications of glazing (SHGC value, U-value and VLT, as applicable).
 - Sectional drawings of the wall assembly proposed (including wall insulation material, etc.), along with the U-value calculations of the overall wall assembly.
 - Sectional drawings of the roof assembly proposed (including roof insulation material, etc.), along with the U-value calculations of the overall roof assembly.
 - References highlighting R values considered for proposed wall and roof assembly.
 - Geo tagged and time stamped photographs of the envelope highlighting the glazing unit, roof & wall insulation etc.
- **Lighting:**
 - Details of the lighting system: List of interior and exterior lighting fixtures with make & model and wattage.
 - Interior and exterior lighting layout.
 - Manufacturer cutsheet indicating the make & model and wattage along with photometric data.
 - LPD calculations indicating compliance as per Building Area Method (under Chapter 7, Table 7.1) or Space by Space Method (under Chapter 7, Table 7.4) and exterior & parking areas (under Chapter 7, Table 7.7) of ECSBC 2024.
 - Geotagged and time stamped photographs of the different types of lighting fixtures installed in the building.
- **Lighting Controls:**
 - Narrative stating the type of lighting control system installed in the project.
 - Manufacturer cutsheet of the lighting control installed in the building.
 - Lighting layout highlighting the location of the controls.
 - Geo tagged and time stamped photographs of the lighting control sensors installed in the project.
- **Space Conditioning Systems:**
 - Unitary, Split and packaged air conditioners:
 - Manufacturer cutsheets of unitary, split and packaged air conditioner (as applicable) in the project.
 - Geo tagged and time stamped photographs of the installed system highlighting the capacity and EER /COP rating.

- HVAC plans for all floors.
- Variable refrigerant flow (VRF):
 - Manufacturer cutsheets of VRF units installed in the project.
 - Geo tagged and time stamped photographs of the VRF system highlighting the capacity and ISEER rating.
 - HVAC plans for all floors.
- **Fans:**
 - Manufacturer cutsheet of the installed BEE 3 star rated fans.
 - Geotagged and time stamped photographs of the installed BEE 5 -star rated fans in the project.

EE Mandatory Requirement 3: Commissioning Plan for Building Equipment & Systems

Note: As per the IGBC NB reference guide, consultants involved the design shall not perform the commissioning activities for the project.

Precertification

Case 1 (a) - Air-conditioned Buildings (with built-up area < 2,000 sq.m)

- Narrative describing the experience of the commissioning authority, on similar projects.
- Owners brief in terms of performance expectations from the building.
- Draft commissioning plan describing how the building would be audited for its green building performance after occupancy, regarding the equipment and systems.

Case 1 (b) - Air-conditioned Buildings (with built-up area > 2,000 sq.m)

- Copy of an agreement signed between the owner and the third-party commissioning authority along with detailed scope of work.

Note: The project may choose not to disclose the financials.

- ISHRAE/ ASHRAE Commissioning professional certificate (as and when applicable).
- Narrative describing the experience of the commissioning authority, on similar projects.
- Owners brief in terms of performance expectations from the building (OPR) or Design Basis Report.
- Draft Pre functional checklists
- Draft Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.
- Draft Measurement & verification plan for yearly reporting.

Case 2 - Non-air-conditioned Buildings

- Narrative describing the experience of the commissioning authority, on similar projects.
- Owners brief in terms of performance expectations from the building.
- Draft Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.
- Draft Measurement & verification plan for yearly reporting.

Certification**Case 1 (a) - Air-conditioned Buildings (with built-up area < 2,000 sq.m)**

- Narrative describing the experience of commissioning authority, on similar projects.
- Owners brief in terms of performance expectations from the building.
- Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.
- Report specific observations and variations identified by commissioning authority to the project owner, for each equipment and system with respect to commissioning plan and how they were addressed.
- Measurement & verification plan for yearly reporting.
- Post-occupancy survey to verify occupants comfort (lighting levels, temperature, relative humidity, noise levels, etc.,).
- Functional test reports of the equipment & systems listed in commissioning plan.

Case 1 (b) - Air-conditioned Buildings (with built-up area > 2,000 sq.m)

- Copy of an agreement signed between the owner and the third-party commissioning authority along with detailed scope of work.

Note: The project may choose not to disclose the financials.

- ISHRAE/ ASHRAE Commissioning professional certificate (as and when applicable).
- Narrative describing the experience of commissioning authority, on similar projects.
- Owners brief in terms of performance expectations from the building (OPR) or Design Basis Report.
- Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.
- Commissioning Report indicating specific observations and variations identified by commissioning authority to the project owner, for each equipment and system with respect to commissioning plan and how they were addressed.
- Functional test reports of the equipment & systems listed in commissioning plan.

- Measurement & verification plan for yearly reporting for continuous monitoring and recording of energy consumption, corrective measures, re-calibration of measuring equipment, corrective actions if the savings are not achieved, etc.
- Post-occupancy survey to verify occupants comfort (lighting levels, temperature, relative humidity, noise levels, etc.,).

Case 2 - Non-air-conditioned Buildings

- Narrative describing the experience of commissioning authority, on similar projects.
- Owners brief in terms of performance expectations from the building.
- Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.
- Report specific observations and variations identified by commissioning authority to the project owner, for each equipment and system with respect to commissioning plan and how they were addressed.
- Measurement & verification plan for yearly reporting.
- Post-occupancy survey to verify occupants comfort (lighting levels, temperature, relative humidity, noise levels, etc.,).
- Functional test reports of the equipment & systems listed in commissioning plan.

EE Credit 1: Passive Design

Precertification

Option 1: Simulation Approach

- Narrative:
 - Summary Table indicating baseline and proposed energy and % reduction in the total energy consumption of the project.
 - Description of passive design strategies proposed in the building.
- Climate analysis report (i.e. Dry Bulb Temperature, Relative Humidity, Solar radiation analysis, Sky Cover, Wind pattern and Rainfall data summary) and/or Graphical outputs (i.e. Psychometric charts, Sun path diagrams etc.)
- Summary report indicating the baseline model inputs (Envelope, Internal loads, HVAC) and identified passive design strategies.
- Parametric analysis report in accordance with the identified passive strategies, demonstrating the individual impact of each strategy on performance reduction metrics.
- Proposed case model inputs (Envelope, Internal loads, HVAC).

- Output reports demonstrating the energy performance improvements and load reduction achieved through the implementation of the proposed passive design strategies.
- Conceptual drawings/ rendered images (such as site plan, floor plans, sections & elevations, 3D model images, as applicable) showing the passive architectural features.

Notes:

- a. The energy savings shall be documented through passive architectural concepts only and not through materials. E.g. for concepts - Hollow brick wall (or) double brick wall*
- b. The type of active systems shall be same in both base case and proposed case; however, the end use energy consumption for active systems may vary in the proposed case from base case, based on the impact of passive architectural features.*

Option 2: Prescriptive Approach

- Narrative describing the strategies proposed to design passive architecture measures, as applicable.
- **Orientation & Thermal zoning**
 - Site plan indicating north along with sun path diagram.
 - Floor plans indicating the concept adopted for zoning regularly and non-regularly occupied areas.
- **Skylights:**
 - Narrative demonstrating compliance with maximum U-factor and maximum SHGC requirements as prescribed in Energy Conservation Sustainable Building Code 2024 (ECSBC), Section 5.3.4-Skylights, Table 5.15: Skylight U-Factor and SHGC Requirements.
 - Calculations indicating the roof area with skylights to the total roof area, in percentage.
 - Roof plan highlighting the skylight area.
 - Manufacturer brochure/ cut-sheet/ letter of the skylight installed in the project showing the U – factor and SHGC.
- **Courtyard:**
 - Floor plans and sections highlighting the courtyard dimensions.
- **Shading Corridors:**
 - Floor plans and sections highlighting the shaded corridors.
 - Shadow analysis demonstrating 75% shading during daytime.
- **Exterior Openings (Projection Factor):**
 - Calculations indicating the number of exterior openings (fenestration) having a Projection Factor of 0.3 or more to the total number of the exterior openings (fenestration), in percentage.
 - Projector factor calculations.

- Elevations and Sections highlighting the dimensions of the window and projection factor, along with window schedule.
- **Windows (Punched/Bay):**
 - Calculations indicating the of punched/ bay windows to the total number of the windows, in percentage.
 - Elevations and Sections highlighting the punched/ bay windows, along with window schedule.
- **Light Shelves:**
 - Calculations indicating number of windows with light shelves to the total number of the windows, in percentage.
 - Sections highlighting the light shelves along with dimensions.
 - Manufacturer data sheet for the light shelves indicating its reflectivity, etc.
- **Walls:**
 - Narrative describing the type of wall.
 - Calculations indicating the total surface area of the wall and thermally efficient passive walls, in percentage.
 - Floor plans highlighting the type of walls.
 - Sections of the thermally efficient passive walls, with dimensions.
- **Cross Ventilation:**
 - Floor plans with door and window schedule.
 - Calculations indicating the regularly occupied spaces compliant with cross ventilation.
 - Sections drawings highlighting cross ventilation in the building.
- **Passive Cooling / Heating Technologies:**
 - Narrative describing the passive cooling / heating technologies proposed in the project, along with conceptual drawings and other supporting documents.

Certification

Option 1: Simulation Approach

- Narrative:
 - Summary Table indicating baseline and proposed energy and % reduction in the total energy consumption of the project.
 - Description of passive design strategies proposed in the building.
- Climate analysis report (i.e. Dry Bulb Temperature, Relative Humidity, Solar radiation analysis, Sky Cover, Wind pattern and Rainfall data summary) and/or Graphical outputs (i.e. Psychometric charts, Sun path diagrams etc.)

- Summary report indicating the baseline model inputs (Envelope, Internal loads, HVAC) and identified passive design strategies.
- Parametric analysis report in accordance with the identified passive strategies, demonstrating the individual impact of each strategy on performance reduction metrics.
- Proposed case model inputs (Envelope, Internal loads, HVAC).
- Output reports demonstrating the energy performance improvements and load reduction achieved through the implementation of the proposed passive design strategies.
- Drawings/ rendered images (such as site plan, floor plans, sections & elevations, 3D model images, as applicable) showing the passive architectural features.
- Geotagged and time stamped photographs of the implemented passive strategies in the building.

Notes:

- *The energy savings shall be documented through passive architectural concepts only and not through materials. E.g. for concepts - Hollow brick wall (or) double brick wall*
- *The type of active systems shall be same in both base case and proposed case; however, the end use energy consumption for active systems may vary in the proposed case from base case, based on the impact of passive architectural features.*

Option 2: Prescriptive Approach

- Narrative describing the strategies proposed to design passive architecture measures, as applicable.
- **Orientation & Thermal zoning**
 - Site plan indicating north along with sun path diagram.
 - Floor plans indicating the concept adopted for zoning regularly and non-regularly occupied areas.
 - Geotagged and time stamped photographs
- **Skylights:**
 - Narrative demonstrating compliance with maximum U-factor and maximum SHGC requirements as prescribed in Energy Conservation Sustainable Building Code 2024 (ECSBC), Section 5.3.4-Skylights, Table 5.15: Skylight U-Factor and SHGC Requirements.
 - Calculations indicating the roof area with skylights to the total roof area, in percentage.
 - Roof plan highlighting the skylight area.
 - Manufacturer brochure/ cut-sheet/ letter of the skylight installed in the project showing the U – factor and SHGC.

- **Courtyard:**
 - Floor plans and sections highlighting the courtyard dimensions.
 - Geotagged and time stamped photographs of the courtyard.
- **Shading Corridors:**
 - Floor plans and sections highlighting the shaded corridors.
 - Shadow analysis demonstrating 75% shading during daytime.
 - Geotagged and time stamped photographs of the shaded corridors.
- **Exterior Openings (Projection Factor):**
 - Calculations indicating the number of exterior openings (fenestration) having a Projection Factor of 0.3 or more to the total number of the exterior openings (fenestration), in percentage.
 - Projector factor calculations.
 - Elevations and Sections highlighting the dimensions of the window and projection factor, along with window schedule.
 - Geotagged and time stamped photographs of the projections.
- **Windows (Punched/Bay):**
 - Calculations indicating the of punched/ bay windows to the total number of the windows, in percentage.
 - Elevations and Sections highlighting the punched/ bay windows, along with window schedule.
 - Geotagged and time stamped photographs of the punched windows.
- **Light shelves:**
 - Calculations indicating number of windows with light shelves to the total number of the windows, in percentage.
 - Sections highlighting the light shelves along with dimensions.
 - Manufacturer data sheet for the light shelves indicating its reflectivity, etc.
 - Geotagged and time stamped photographs of the light shelves.
- **Walls:**
 - Narrative describing the type of wall.
 - Calculations indicating thermally efficient passive walls to the total surface area of the wall, in percentage.
 - Floor plans highlighting the type of walls.
 - Sections of the thermally efficient passive walls, with dimensions.
 - Geotagged and time stamped of the of the thermally efficient wall system during construction.

- **Cross Ventilation:**
 - Floor plans with door and window schedule.
 - Calculations indicating the regularly occupied spaces compliant with cross ventilation.
 - Sections drawings highlighting cross ventilation in the building.
 - Geotagged and time stamped photographs indicating the regularly occupied spaces for cross ventilation.
- **Passive Cooling / Heating Technologies:**
 - Narrative describing the passive cooling / heating technologies proposed in the project, along with conceptual drawings and other supporting documents.
 - Geotagged and time stamped photographs of the installed system with the nameplate indicating the capacity and efficiency.

EE Credit 2: Enhanced Energy Efficiency

Precertification

Case 1 – Air-conditioned Buildings Performance Based Approach / Whole Building Simulation:

Please refer to the 'Documentation required' under EE Mandatory Requirement 2 – Minimum Energy Efficiency: Case 1 – Air-conditioned Buildings, Option 1-Performance Based Approach (Whole Building Simulation)

Case 2 – Non-Air-conditioned Buildings (through Prescriptive Approach)

Option 2: Prescriptive Approach:

- Narrative stating the climate zone and the list of Energy Conservation Measures (ECMs) implemented in the project.
- **Envelope:**
 - Manufacturers cutsheet highlighting specifications of glazing (SHGC value, U-value and VLT, as applicable).
 - Sectional drawings of the wall assembly proposed (including wall insulation material, etc.), along with the U-value calculations of the overall wall assembly.
 - Sectional drawings of the roof assembly proposed (including roof insulation material, etc.), along with the U-value calculations of the overall roof assembly.
 - References highlighting R values considered for proposed wall and roof assembly.
- **Lighting:**
 - Details of the lighting system: List of interior and exterior lighting fixtures with make & model and wattage.
 - Interior and exterior lighting layout.

- Manufacturer cutsheet indicating the make & model and wattage along with photometric data.
- LPD calculations indicating reduction as per Building Area Method (under Chapter 7, Table 7.1) or Space by Space Method (under Chapter 7, Table 7.4) and exterior & parking areas (under Chapter 7, Table 7.7) of ECSBC 2024.
- **Lighting Controls:**
 - Narrative stating the proposed type of lighting control system in the project.
 - Manufacturer cutsheet of the lighting control installed in the building.
 - Tentative lighting layout highlighting the location of the controls.
- **Space Conditioning Systems:**
 - Unitary, Split and packaged air conditioners:
 - Manufacturer cutsheets of unitary, split and packaged air conditioner proposed (as applicable) in the project.
 - HVAC plans for all floors.
 - Variable refrigerant flow (VRF):
 - Manufacturer cutsheets of VRF units proposed in the project.
 - HVAC plans for all floors.
- **Low Energy comfort system:**
 - Manufacturer cutsheet of proposed low energy comfort system.
 - HVAC plans for all floors.
- **Hot Water production (For Heating/reheating in HVAC system)**
 - Manufacturer cutsheets of proposed solar water heater indicating compliance with IS 12976.
- **Fans:**
 - Manufacturer cutsheet of the proposed BEE 5 star rated fans.

Certification

Case 1 – Air-conditioned Buildings Performance Based Approach (Whole Building Simulation):

Please refer to the 'Documentation required' under EE Mandatory Requirement 2 – Minimum Energy Efficiency: Case 1 – Air-conditioned Buildings, Option 1-Performance Based Approach (Whole Building Simulation).

Case 2 – Non-Air-conditioned Buildings (through Prescriptive Approach)

Option 2: Prescriptive Approach:

- Narrative stating the climate zone and the list of Energy Conservation Measures (ECMs) implemented in the project.

- **Envelope:**
 - Manufacturers cutsheet highlighting specifications of glazing (SHGC value, U-value and VLT, as applicable).
 - Sectional drawings of the wall assembly proposed (including wall insulation material, etc.), along with the U-value calculations of the overall wall assembly.
 - Sectional drawings of the roof assembly proposed (including roof insulation material, etc.), along with the U-value calculations of the overall roof assembly.
 - References highlighting R values considered for proposed wall and roof assembly.
 - Geo tagged and time stamped photographs of the envelope highlighting the glazing unit, roof & wall insulation etc.
- **Lighting:**
 - Details of the lighting system: List of interior and exterior lighting fixtures with make & model and wattage.
 - Interior and exterior lighting layout.
 - Manufacturer cutsheet indicating the make & model and wattage along with photometric data.
 - LPD calculations indicating reduction as per Building Area Method (under Chapter 7, Table 7.1) or Space by Space Method (under Chapter 7, Table 7.4) and exterior & parking areas (under Chapter 7, Table 7.7) of ECSBC 2024.
 - Geotagged and time stamped photographs of the different types of lighting fixtures installed in the building.
- **Lighting Controls:**
 - Narrative stating the type of lighting control system installed in the project.
 - Manufacturer cutsheet of the lighting control installed in the building.
 - Lighting layout highlighting the location of the controls.
 - Geo tagged and time stamped photographs of the lighting control sensors installed in the project.
- **Space Conditioning Systems:**
 - Unitary, Split and packaged air conditioners:
 - Manufacturer cutsheets of unitary, split and packaged air conditioner (as applicable) in the project.
 - Geo tagged and time stamped photographs of the installed system highlighting the capacity and EER /COP rating.
 - HVAC plans for all floors.
 - Variable refrigerant flow (VRF):
 - Manufacturer cutsheets of VRF units installed in the project.

- Geo tagged and time stamped photographs of the VRF system highlighting the capacity and ISEER rating.
 - HVAC plans for all floors.
- **Low Energy comfort system:**
 - Manufacturer cutsheet of installed low energy comfort system.
 - Geo tagged and time stamped photographs of the nameplate highlighting the capacity and efficiency of the installed system.
 - HVAC plans for all floors.
- **Hot Water production (For Heating/reheating in HVAC system)**
 - Manufacturer cutsheets of solar water heater indicating compliance with IS 12976.
 - Geo tagged and time stamped photographs of solar water heater highlighting the nameplate for BEE star rating.
- **Fans:**
 - Manufacturer cutsheet of the installed BEE 5 star rated fans.
 - Geotagged and time stamped photographs of the installed BEE 5 -star rated fans in the project.

EE Credit 3: Renewable Energy

Precertification

Option 1: On-site Renewable Energy

- Narrative describing the on-site renewable energy systems proposed in the project along with the details of capacity of the renewable energy system (kW).
- Tentative calculations indicating the total annual energy generation from the on-site renewable energy systems (kWh) to the total annual energy consumption (kWh) of the building (interior & exterior areas), in percentage.
- PV generation report indicating the annual energy generation from the on-site renewable energy systems (kWh).
- Conceptual drawing highlighting the location of the renewable energy systems.
- Declaration letter from project owner/ developer indicating proposed capacity of renewable energy systems

Option 2: Off-site Renewable Energy

- Extract copy of contract agreement signed between the project owner/ developer and the green power developer.

(Or)

- Extract copy from Organisation policy/ annual report, signed by the top management, highlighting the organisation's policy on off-site renewable energy.
- Tentative calculations indicating the total annual energy generation from the off-site renewable energy systems (kWh) to the total annual energy consumption (kWh) of the building (interior & exterior areas), in percentage.
- Feasibility study report with technical details of the off-site renewable energy systems.
- Additional documents (if applicable)

Option 3: Combination of On-site Renewable & Off-site Renewable Energy

- Narrative describing the on-site renewable energy systems and off-site renewable energy systems proposed in the project along with the details of capacity of the renewable energy system (kW) proposed in the project along with the details of capacity of the renewable energy system (kW).
- Extract copy of contract agreement signed between the project owner/ developer and the green power developer.
(Or)
- Extract copy from Organisation policy/ annual report, signed by the top management, highlighting the organisation's policy on off-site renewable energy.
- Tentative calculations indicating the total annual energy generation from the on-site & off-site renewable energy systems (kWh) to the total annual energy consumption (kWh) of the building (interior & exterior areas), in percentage.
- PV generation report indicating the annual energy generation from the on-site renewable energy systems (kWh).
- Feasibility study report with technical details of the off-site renewable energy systems.
- Conceptual drawing highlighting the location of the renewable energy systems.
- Declaration letter from project owner/ developer indicating proposed capacity of on-site & off-site renewable energy systems

Certification

Option 1: On-site Renewable Energy

- Narrative describing the on-site renewable energy systems proposed in the project along with the details of capacity of the renewable energy system (kW).
- Calculations indicating the total annual energy generation from the on-site renewable energy systems (kWh) to the total annual energy consumption (kWh) of the building (interior & exterior areas), in percentage.
- PV generation report indicating the annual energy generation from the on-site renewable energy systems (kWh).
- Plan highlighting the location of the renewable energy systems.

- Purchase invoice/ Payment receipts of highlighting capacity of installed renewable energy systems.
- Geotag & time stamped photographs showing the renewable energy systems.

Option 2: Off-site Renewable Energy Investments

- Extract copy of contract agreement signed between the project owner/ developer and the green power developer.
- Calculation indicating the total annual energy generation from the off-site renewable energy systems (kWh) to the total annual energy consumption (kWh) of the building (interior & exterior areas), in percentage.
- Feasibility study report with technical details of the off-site renewable energy systems.
- Agreement (minimum one-year) with the Electricity Board for the purchase of Green Power (as applicable).

Option 3: Combination of On-site Renewable & Off-site Renewable Energy

- Narrative describing the on-site renewable energy systems and off-site renewable energy systems proposed in the project along with the details of capacity of the renewable energy system (kW) proposed in the project along with the details of capacity of the renewable energy system (kW).
- Extract copy of contract agreement signed between the project owner/ developer and the green power developer.
- Calculations indicating the total annual energy generation from the on-site & off-site renewable energy systems (kWh) to the total annual energy consumption (kWh) of the building (interior & exterior areas), in percentage.
- PV generation report indicating the annual energy generation from the on-site renewable energy systems (kWh).
- Feasibility study report with technical details of the off-site renewable energy systems.
- Agreement (minimum one-year) with the Electricity Board for the purchase of Green Power (as applicable).
- Plan highlighting the location of the renewable energy systems.
- Purchase invoice/ Payment receipts of highlighting capacity of installed renewable energy systems.
- Geotag & time stamped photographs showing the renewable energy systems.
- Declaration letter from project owner/ developer indicating proposed capacity of on-site & off-site renewable energy systems.

EE Credit 4: Enhanced Commissioning for Equipment & Systems

Precertification

Refer to the documentation required under EE MR3.

Certification

- Report specific observations and variations vis-à-vis the plan drawn under 'EC MR 3 – Commissioning Plan for Building Equipment & Systems', identified during post occupancy commissioning and report how they were addressed.
- Recommissioning Plan designed for the project.
- Refer to the documentation required under EE MR3.

EE Credit 5: Energy Metering and Management

Precertification

Case A: Energy Metering

- Narrative stating the list of energy meters proposed for five different energy use applications in the project.
- Conceptual single line drawing showing the proposed energy meters.
- Declaration letter from the developer stating that the project will provide energy meters for at least 5 energy use applications in the project.

Case B: Building Management System

- Narrative describing the building management system installed in the project, indicating the equipment & systems that are controlled and monitored.
- Declaration letter from the project owner/ developer stating that the project will provide BMS system.

Certification

Case A: Energy Metering

- Narrative describing the energy meters installed in the project.
- Single line drawing showing the installed energy meters.
- Geotag & time stamped photographs of the installed energy meters along with signage es indicating the metering of end use applications.

Case B: Building Management System

- Narrative describing the building management system installed in the project, indicating the equipment & systems that are controlled and monitored.

- Geotag & time stamped photographs: BMS home screen indicating the different types of systems monitored in the project.
- Declaration letter from the project owner/ developer stating that the project will provide the annual total building energy consumption data to IGBC.

Module 4: Building Materials and Resources (BMR)

BMR Mandatory Requirement 1: Waste Management, Post Occupancy

Precertification

- Narrative describing the strategies proposed for segregation and diversion of dry & recyclable waste, Biodegradable & Organic Waste and sanitary & medical waste from floor level (and) special care waste from centralised waste area for recycling
- Conceptual floor plans showing the location of waste bins at floor level and centralised facility, as applicable.

Certification

- Narrative describing the strategies proposed for segregation and diversion of dry & recyclable waste, Biodegradable & Organic Waste and sanitary & medical waste from floor level (and) special care waste from centralised waste area for recycling.
- Plans showing the location of waste bins at floor level and centralised facility, as applicable.
- List of vendors / recyclers identified to collect the segregated waste generated in the building.
- Geotag & time stamped photographs showing the waste bins provided at floor level and centralised facility with permanent signages.

BMR Mandatory Requirement 2: Organic Waste Management, Post-occupancy

Precertification

- Narrative describing the strategies proposed to handle on-site organic wet waste generated in the project.
- Conceptual site plan highlighting the location of on-site organic waste treatment system proposed in the project.
- Tentative calculations indicating the quantity of organic waste treated in the project (including tenant-occupied areas) to the total quantity of organic waste generated, in percentage.

- Tentative manufacturer brochure/ cut-sheet of the organic waste treatment system proposed in the project.

Note: If the project is having an organic waste convertor in an enclosed room, submit tentative details of self-closing door and exhaust system (with negative pressure maintained/ air changes/ exhaust rate).

- Declaration letter from project owner/ developer indicating proposed capacity of Organic Waste Management system.

Certification

- Narrative describing the strategies proposed to handle on-site organic wet waste generated in the project.
- Site plan highlighting the location of on-site organic waste treatment system proposed in the project.
- Calculations indicating the quantity of organic waste treated in the project (including tenant-occupied areas) to the total quantity of organic waste generated, in percentage.

Note: If the project is having an organic waste convertor in an enclosed room, submit geotag & time stamped photographs showing exhaust system, self-closing door, deck-to-deck partition/ hard ceiling and details of exhaust system such as negative pressure maintained/ air changes/ exhaust rate.

- Manufacturer brochure/ cut-sheet of the organic waste treatment system proposed in the project highlighting the capacity of the selected unit.
- Purchase invoice/ payment receipts of the installed organic waste treatment system highlighting installed capacity OWC system.
- Geotag & time stamped photographs showing the installed organic waste treatment system, curing racks, and the nameplate highlighting the installed capacity of the system.

BMR Credit 1: Sustainable Material Reuse and Procurement

Precertification:

Option 1: Material Reuse:

- Narrative describing the strategies proposed to retain the structural and/or non-structural elements in the building.

Note: The narrative shall also include a tentative list of structural and/or non-structural elements that will be retained.

- Tentative calculations indicating the structural and/or non-structural elements retained in the building (in terms of area) to the total structural and/or non-structural elements, in percentage.

- Photographs showing the structural and/or non-structural elements retained, before refurbishment of the existing building.

Option 2: Green Materials Procurement:

- Narrative describing the strategies to source green building materials, products, and equipment that are certified by CII under Green Product Certification Programme (GreenPro) or any other Ecolabel.
- Valid GreenPro certificates/ Third party approved certificate for the selected tentative green building materials, products, and equipment that are certified by CII under Green Product Certification Programme (GreenPro) or any other Type 1 Ecolabel.

Certification:

Option 1: Material Reuse:

- Narrative describing the strategies implemented to retain the structural and/or non-structural elements in the building.

Note: The narrative shall also include the list of structural and/or non-structural elements retained.

- Calculations indicating the structural and/or non-structural elements retained in the building (in terms of area) to the total structural and/or non-structural elements, in percentage.
- Geotag & time stamped photographs showing the structural and/or non-structural elements retained (before & after construction).

Option 2: Green Materials Procurement:

- Narrative listing the green building materials, products, and equipment that are certified by CII under Green Product Certification Programme (GreenPro) or any other Ecolabel.
- Valid GreenPro certificates/ Third party approved certificate for the list of green building materials, products, and equipment that are certified by CII under Green Product Certification Programme (GreenPro) or any other Type 1 Ecolabel.
- Purchase Invoices of the green building materials, products, and equipment.

BMR Credit 2: Embodied Carbon Footprint

Precertification

- Narrative indicating the strategies adopted for reducing the carbon emissions in the design & construction phase of the building and the list of materials proposed in the project considered for embodied carbon calculations.
- Tentative BOQ for structural & architectural materials and MEP systems (as applicable).

- Tentative manufacturer letters/ cut-sheets/ brochures of the proposed materials.
- LCA report of the project by considering the Life Cycle stages A1 - A3 and A4 indicating total calculated embodied carbon associated with the building's materials & products portfolio.
- Software-generated LCA summary output reports.

Certification

- Narrative indicating the strategies adopted for reducing the carbon emissions in the design & construction phase of the building and the list of materials used in the project considered for embodied carbon calculations.
- Approved GFC drawings.
- Detailed BOQ for structural & architectural materials and MEP systems (as applicable).
- Manufacturer letters/ cut-sheets/ brochures of the proposed materials.
- LCA report of the project by considering the Life Cycle stages A1 - A3 and A4 indicating total calculated embodied carbon associated with the building's materials & products portfolio.
- Software-generated LCA summary output reports.
- Purchase invoice/ payment receipts of the materials used in the project.

BMR Credit 3: Organic Waste Management, Post-occupancy

Precertification

Option 1: On-site Waste Management Plant

- Narrative describing the strategies proposed to handle on-site organic wet waste and landscape waste generated in the project.
- Conceptual site plan highlighting the location of on-site organic waste treatment system proposed in the project.
- Tentative calculations indicating the quantity of organic & landscape waste treated in the project (including tenant-occupied areas) to the total quantity of organic & landscape waste generated, in percentage.
- Tentative manufacturer brochure/ cut-sheet of the organic waste treatment system proposed in the project.

Note: If the project is having an organic waste convertor in an enclosed room, submit tentative details of self-closing door and exhaust system (with negative pressure maintained/ air changes/ exhaust rate).

- Declaration letter from project owner/ developer indicating proposed capacity of Organic Waste Management system.

Option 2: Waste to Energy Plant

- Narrative describing the strategies proposed for waste to energy plant to handle organic wet waste and landscape waste generated in the project.
- Tentative calculations indicating the quantity of organic & landscape waste treated in the project (including tenant-occupied areas) to the total quantity of organic & landscape waste generated, in percentage.
- Conceptual site plan highlighting the location of on-site Biogas plant/ any other strategy proposed in the project.
- Tentative manufacturer brochure/ technical cut-sheet of the biogas plant/ any other strategy proposed in the project highlighting the capacity of the proposed unit.
- Declaration letter from project owner/ developer indicating proposed capacity of the Biogas Plant/ Other strategy adopted for waste to energy plant.

Certification**Option 1: On-site Waste Management Plant**

- Narrative describing the strategies proposed to handle on-site organic wet waste and landscape generated in the project.
- Site plan highlighting the location of on-site organic waste treatment system proposed in the project.
- Calculations indicating the quantity of organic & landscape waste treated in the project (including tenant-occupied areas) to the total quantity of organic & landscape waste generated, in percentage.

Note: If the project is having an organic waste convertor in an enclosed room, submit geotag & time stamped photographs showing exhaust system, self-closing door, deck-to-deck partition/ hard ceiling and details of exhaust system such as negative pressure maintained/ air changes/ exhaust rate.

- Manufacturer brochure/ cut-sheet of the organic waste treatment system proposed in the project highlighting the capacity of the selected unit.
- Purchase invoice/ payment receipts of the installed organic waste treatment system highlighting installed capacity OWC system.
- Geotag & time stamped photographs showing the installed organic waste treatment system, shredder, curing racks, and the nameplate highlighting the installed capacity of the system.

Option 2: Waste to Energy Plant

- Narrative describing the strategies proposed for waste to energy plant to handle organic wet waste and landscape waste generated in the project.

- Calculations indicating the quantity of organic & landscape waste treated in the project (including tenant-occupied areas) to the total quantity of organic & landscape waste generated, in percentage.
- Site plan highlighting the location of on-site Biogas plant/ any other strategy installed in the project.
- Manufacturer brochure/ technical cut-sheet of the biogas plant/ any other strategy proposed in the project highlighting the capacity of the selected unit.
- Purchase invoice/ payment receipts of the installed biogas plant/ other strategy highlighting the installed capacity.
- Geotag & time stamped photographs showing the installed biogas plant/ other strategy adopted for waste to energy plant.

BMR Credit 4: Towards Zero Waste to Landfill

Precertification

Option 1: Segregation and Management of Construction Waste, During Construction

- Narrative describing the strategies proposed to handle construction waste.
Note: The narrative shall also include the following:
 - *List of construction waste materials likely to be generated and diverted for reuse, recycle & landfill.*
 - *Proposed applications of construction waste materials diverted for reuse, within or outside the project.*
- Innovative methods used for reusing the waste materials within or any other project
- Site plan highlighting the proposed construction waste management yard.
- Tentative calculations indicating 75% of the total quantity of construction waste generated is reused, recycled and sent to landfill.
- Declaration letter from project owner/ developer that that generated waste materials would be segregated and diverted for reuse, recycle & landfill.

Option 2: Roadmap towards Zero Waste to Landfill, Post Occupancy

- Draft roadmap to guide the project toward achieving net zero waste, outlining clear objectives, phased actions, defined responsibilities, and measurable targets for waste reduction, reuse, recycling, and recovery across all stages of the project signed and stamped by the project head.

Certification

Option 1: Segregation and Management of Construction Waste, During Construction

- Narrative describing the strategies proposed to handle construction waste.

Note: The narrative shall also include the following:

- *List of construction waste materials likely to be generated and diverted for reuse, recycle & landfill.*
- *Proposed applications of construction waste materials diverted for reuse, within or outside the project.*
- Site plan highlighting the proposed construction waste management yard.
- Tentative calculations indicating 75% of the total quantity of construction waste generated is reused, recycled and sent to landfill.
- Letters from scrap dealers stating the type and quantity of construction waste received/ reused from the project site, for recycling/ reuse.
- Geotag & time stamped photographs taken at various stages of the project showing the construction waste management yard and waste reused on site.

Option 2: Roadmap towards Zero Waste to Landfill, Post Occupancy

- Detailed roadmap to guide the project toward achieving net zero waste, outlining clear objectives, phased actions, defined responsibilities, and measurable targets for waste reduction, reuse, recycling, and recovery across all stages of the project signed and stamped by the project head.
- List of identified recyclers to divert the waste.
- Draft/ Final copy of the Formal contracts with authorized waste management agencies to ensure effective collection, and daily diversion of all recyclable and reusable waste streams.

Module 5: Indoor Environmental Quality (IEQ)

IEQ MR1: Minimum Fresh Air Ventilation

Precertification

Option 1: Mechanically Ventilated Spaces

- Narrative describing the building fresh air ventilation design proposed in the project
- Tentative calculations indicating fresh air intake volumes in all regularly occupied spaces, for each zone, as per Ventilation Rate Procedure prescribed in ASHRAE Standard 62.1 - 2010.
- Conceptual HVAC layouts indicating the location of HVAC systems (high side & low side), fresh air system/ louvers and cfm for each zone.
- Tentative technical cutsheet of the fresh air system indicating the make & model and cfm.
- Draft tenant lease agreement mandating the cfm as per ASHRAE 62.1, the type of system, and integration of the fresh air system with the HVAC system. (If the installation of fresh air system is under tenants scope)

Option 2: Naturally Ventilated Spaces

- Conceptual floor plans with window and door schedule.
- Conceptual building elevations showing operable windows and doors.
- Tentative calculations indicating the openable area of windows and doors to the carpet area, for each of the regularly occupied spaces, in percentage.

Certification

Option 1: Mechanically Ventilated Spaces

- Narrative stating the building's fresh air ventilation design in the project.
- Calculations indicating fresh air intake volumes in all regularly occupied spaces, for each zone, as per Ventilation Rate Procedure prescribed in ASHRAE Standard 62.1 - 2010.
- HVAC layouts indicating the location of HVAC systems (high side & low side), fresh air system/ louvers and cfm for each zone.
- Technical cutsheet of the fresh air system indicating the make & model and cfm.
- Purchase invoice of the fresh air system indicating the make & model.
- Geotagged and timestamped photographs of the fresh air system.

- Signed tenant lease agreement mandating the cfm as per ASHRAE 62.1, the type of system, and integration of the fresh air system with the HVAC system. (If the installation of fresh air system is under tenant's scope).

Option 2: Naturally Ventilated Spaces

- Floor plans with window and door schedule.
- Building elevations showing operable windows and doors.
- Calculations indicating the openable area of windows and doors to the carpet area, for each of the regularly occupied spaces in percentage.
- Geotagged and timestamped photographs showing the operable windows and doors to the exteriors, in all the regularly occupied areas.

IEQ MR 2: Tobacco Smoke Control

Precertification

Option 1: No Smoking

- Narrative describing the strategies proposed (eg. signages, posters, brochures, building guidelines, etc.) to communicate 'no smoking policy' to all the building occupants and visitors.
- Declaration letter from the project owner/ developer stating that 'smoking' will be prohibited in the project.

Option 2: Outdoor Smoking Areas

- Narrative describing the strategies proposed (eg. signages, posters, brochures, building guidelines, etc.) to communicate 'no smoking policy' to all the building occupants and visitors.
- Declaration letter from the project owner/ developer highlighting that smoking is allowed in designated outdoor smoking areas only.

Option 3: Designated Smoking Rooms

- Narrative describing the strategies proposed (eg. signages, posters, brochures, building guidelines, etc.) to communicate 'designated smoking rooms' to all the building occupants and visitors.
- Tentative design details of the designated smoking rooms.

Certification

Option 1: No Smoking

- Narrative describing the strategies (eg. signages, posters, brochures, building guidelines, etc.) to communicate 'no smoking policy' to all the building occupants/tenants and visitors.
- Copy of organisation's policy on 'no smoking' (or) Declaration letter from the project owner/ developer stating that 'smoking' will be prohibited in the project.
- Plan highlighting location of 'no smoking' signages.
- Photographs showing 'no smoking' signages installed in the project.

Option 2: Outdoor Smoking Areas

- Copy of organisation's policy highlighting that smoking is allowed in designated outdoor smoking areas only.
- Narrative describing the strategies (eg. signages, posters, brochures, building guidelines, etc.) to communicate 'outdoor smoking areas' to all the building occupants and visitors.
- Plan highlighting location of outdoor smoking area
- Photographs of the designated outdoor smoking areas.

Option 3: Designated Smoking Rooms

- Narrative describing the strategies (eg. signages, posters, brochures, building guidelines, etc.) to communicate 'designated smoking rooms' to all the building occupants and visitors.
- Plan highlighting location of designated smoking room
- Design details of the designated smoking rooms.
- Photographs showing designated smoking rooms in the project.

IEQ Credit 1: Air Quality Management, During Construction

Precertification

Case A: Outdoor Air Quality Management during Construction

- Narrative describing the outdoor air quality management measures that will be implemented in the building, during construction.
- Declaration letter from owner/ developer stating that outdoor air quality management measures that will be implemented in the building, during construction.

Case B: Indoor Air Quality Management during Construction

- Indoor Air Quality management plan describing the strategies proposed (during construction and pre-occupancy phase) addressing – scheduling, equipment & systems protection, housekeeping, isolating clean areas and source control.
- Declaration letter from owner/ developer stating that indoor air quality management measures that will be implemented in the building, during construction.

Certification**Case A: Outdoor Air Quality Management during Construction**

- Narrative describing the outdoor air quality management measures implemented in the building, during construction.
- Geotagged and timestamped photographs of the outdoor air quality management measures taken at various stages of the construction.

Case B: Indoor Air Quality Management during Construction

- Indoor Air Quality management plan describing the strategies implemented (during construction and pre-occupancy phase) addressing – scheduling, equipment & systems protection, housekeeping, isolating clean areas and source control.
- Geotagged and timestamped photographs addressing IAQ measures taken at various stages of the project - construction, installation, commissioning and before occupancy of the building.

IEQ Credit 2: Low-emitting Materials**Precertification****Option 1: Paints & Coatings**

- Declaration letter from the project owner/ developer stating that the project will use low or no VOC content paints & coatings.
- List of proposed low or no VOC content paints & coatings (with make & model) proposed in the building interiors, along with the VOC content (in g/L, less water).
- Tentative manufacturer cut sheets/ brochures/ GreenPro certificate / Materials Safety Data Sheet (MSDS) indicating the VOC content (in g/l, less water) of the paints & coatings proposed to be sourced.

Option 2: Adhesives & Sealants

- Declaration letter from the project owner/ developer stating that the project will use low or no VOC content adhesives.
- List of the proposed low or no VOC content adhesives (with make & model) proposed in the building interiors, along with the VOC content (in g/L, less water).

- Tentative manufacturer cut sheets/ brochures/ GreenPro certificate / Materials Safety Data Sheet (MSDS) indicating the VOC content (in g/L, less water) of the adhesives proposed to be sourced.

Option 3: Carpets

- Declaration letter from the project owner/ developer stating that the project will use CRI Green Label Plus compliant carpet.
- Floor plans highlighting the location of the carpet in the project.
- Certificate stating that the carpet is compliant with CRI Green Label Programme or equivalent.
- Tentative calculations (with break-up of areas) indicating the area of the carpet proposed in the project to the total carpet area, in percentage.

Certification

Option 1: Paints & Coatings

- List of low or no VOC content paints & coatings (make & model) used in the building interiors, along with the VOC content (in g/L, less water).
- Test certificate (or) Manufacturer cut sheets/ brochures/ GreenPro certificate/ Materials Safety Data Sheet (MSDS), indicating the VOC content (in g/L, less water) of the paints & coatings sourced.
- Purchase invoice of paints & coatings.

Option 2: Adhesives & Sealants

- List of low or no VOC content adhesives (make & model) used in the building interiors, along with the VOC content (in g/L, less water).
- Test certificate (or) Manufacturer cut sheets/ brochures/ GreenPro certificate/ Materials Safety Data Sheet (MSDS), indicating the VOC content (in g/L, less water) of the adhesives sourced.
- Purchase invoice of the adhesives & sealants.

Option 3: Carpets

- Floor plans highlighting the location of the carpet in the project.
- Calculations indicating the area of the carpet proposed in the project to the total carpet area, in percentage.
- Certificate stating that the carpet is compliant with CRI Green Label Programme or equivalent.
- Purchase invoice of the carpet procured with make & model.
- Geotagged and timestamped photographs showing the carpet installed in the project.

IEQ Credit 3: Indoor Environmental Quality Monitoring

Precertification

Option 1: IEQ Monitoring during Occupancy

- Narrative describing the IEQ parameters that will be monitored in the building along with threshold limits, monitoring frequency, and methodology.
- Calculations indicating the percentage of regularly occupied area with IEQ sensors to the total regularly occupied areas.
- Conceptual floor plans / sensor layout drawings highlighting the location of sensors.
- Tentative technical cut sheet of the sensors/ equipment indicating parameters such as measurement range and data logging interval.
- Declaration from developer indicating the installation of sensors.
- Draft tenant lease agreement mandating the installation of sensors in at least 50% of the regularly occupied spaces in tenant areas. (If the installation of sensors is under tenant's scope)

Option 2: Thermal Comfort - Indoor Temperature & RH

- Narrative describing methodology, threshold limits and frequency, to monitor the thermal comfort parameters such as temperature and humidity.
- Calculations indicating the percentage of regularly occupied area with temperature and RH sensors to the total regularly occupied areas.
- Conceptual floor plans / sensor layout drawings highlighting the location of sensors.
- Tentative technical cut sheet of the sensors/ equipment indicating parameters such as measurement range and data logging interval.
- Declaration from developer indicating the installation of sensors.
- Draft tenant lease agreement mandating the installation of sensors in at least 50% of the regularly occupied spaces in tenant areas. (If the installation of sensors is under tenant's scope)

Certification

Option 1: IEQ Monitoring during Occupancy

- Narrative describing the IEQ parameters that will be monitored in the building along with threshold limits, monitoring frequency, and methodology.
- Calculations indicating the percentage of regularly occupied area with IEQ sensors to the total regularly occupied areas.
- Floor plans highlighting the location of sensors.

- Technical cut sheet of the sensors/ equipment indicating parameters such as measurement range and data logging interval.
- Purchase invoice of sensors/ equipment.
- Geotagged and timestamped photographs showing the sensors/ equipment.
- Signed tenant lease agreement mandating the installation of sensors in at least 50% of the regularly occupied spaces in tenant areas. (If the installation of sensors is under tenant's scope)

Option 2: Thermal Comfort - Indoor Temperature & RH

- Narrative describing methodology, threshold limits and frequency, to monitor the thermal comfort parameters such as temperature and humidity.
- Calculations indicating the percentage of regularly occupied area with temperature and RH sensors to the total regularly occupied areas.
- Floor plans highlighting the location of sensors.
- Technical cut sheet of the sensors/ equipment indicating parameters such as measurement range and data logging interval.
- Purchase invoice of sensors/ equipment.
- Geotagged and timestamped photographs showing the sensors/ equipment.
- Signed tenant lease agreement mandating the installation of sensors in at least 50% of the regularly occupied spaces in tenant areas. (If the installation of sensors is under tenant's scope)

IEQ Credit 4: Minimise Indoor and Outdoor Pollutants

Precertification

- Narrative describing the strategies implemented to minimise indoor and outdoor pollutants along with declaration from owner/ developer.

Option 1: Entryway Systems

- Conceptual floor plans highlighting the location of entryway systems at the building main entrance(s) with dimensions.

Option 2: Chemical Storage Rooms/ Janitor Rooms

- Conceptual floor plans highlighting the location of printer/copier rooms, chemical storage room, janitor rooms, as applicable.

Option 3: Air Filtering Media

- Declaration from the project owner/ developer/ HVAC consultant stating that MERV 13 or EU 7 filters or higher gradation shall be installed in all fresh air units.

- Conceptual HVAC layouts highlighting the location of fresh air units.
- Tentative technical cut sheets of the MERV 13 or EU 7 filters or higher gradation.

Option 4: Germicidal or UV Lamps

- Declaration from the project owner/ developer/ HVAC consultant stating that germicidal/ UV lamps shall be installed at all AHUs/fresh air units.
- Conceptual floor plans highlighting the location of AHUs/fresh air units.
- Tentative technical cut-sheets of the germicidal/ UV lamps.

Certification

- Narrative describing the strategies implemented to minimise indoor and outdoor pollutants.

Option 1: Entryway Systems

- Floor plans highlighting the location of entryway systems at the building main entrance(s) with dimensions.
- Geotagged and timestamped photographs showing the entryway mats at all main entrances.

Option 2: Chemical Storage Rooms and Janitor Rooms

- Floor plans highlighting the location of printer/copier rooms, chemical storage room, janitor rooms, as applicable.
- Details of exhaust system such as negative pressure maintained/ air changes/ exhaust rate.
- Geotagged and timestamped photographs showing janitor room with permanent signage along with exhaust system, self-closing door, deck-to-deck partition/ hard ceiling.

Option 3: Air Filtering Media

- Purchase invoice of the MERV 13 or EU 7 filters or higher gradation.
- HVAC layouts highlighting the location of fresh air/ AHU units.
- Technical cut sheets of the MERV 13 or EU 7 filters or higher gradation.
- Geotagged and timestamped photographs showing the nameplate indicating MERV 13/ EU 7 filters or higher gradation.

Option 4: Germicidal or UV Lamps

- Purchase invoice and technical cut sheets of the germicidal/ UV lamps.
- Floor plans highlighting the location of AHU/ fresh air units.
- Geotagged and timestamped photographs showing germicidal/ UV lamps.

IEQ Credit 5: Daylighting and Controls

Precertification

Option 1: Daylighting

- Daylight simulation report with sky conditions (such as location, date & month; time; ambient Lux levels) and wall, floor & roof reflectance properties, for all the regularly occupied spaces in the building. During simulation, consider shading devices and 'shadow effect' of adjacent buildings.
- Site/ master plan showing all the buildings.
- Tentative manufacturer brochure/ cut-sheet/ letter of the glass proposed in the project showing the Visual Light Transmittance (VLT).

Option 2: Lighting Controls

- Narrative describing the sequence of operation for the daylight sensors.
- Tentative calculations indicating the percentage of regularly occupied areas catered through daylight sensors.
- Conceptual lighting layout highlighting the location of the daylight sensors.
- Tentative technical specifications of the proposed daylight sensors indicating the lux range, sensor type, dimming protocol, minimum / maximum dim limits and Off-at-threshold capability.

Certification

Option 1: Daylighting

- Daylight simulation report with sky conditions (such as date & month; time; ambient Lux levels) and wall, floor & roof reflectance properties, for all the regularly occupied spaces in the building. During simulation, consider shading devices and 'shadow effect' of adjacent buildings.
- Site/ master plan showing all the buildings.
- Manufacturer brochure/ cut-sheet/ letter of the glass installed showing the Visual Light Transmittance (VLT).
- Geotagged and timestamped photographs showing the building elevations (all sides) and interiors spaces at different floors.

Option 2: Lighting Controls

- Narrative describing the sequence of operation for the daylight sensors.
- Calculations indicating the percentage of regularly occupied areas catered through daylight sensors.
- Lighting layout highlighting the location of daylight sensors.

- Technical specifications of the proposed daylight sensors indicating parameters such as lux range, sensor type, dimming protocol, minimum / maximum dim limits and Off-at-threshold capability.
- Daylight harvesting functional test reports.
- Purchase invoice of the daylight sensors indicating the make & model.
- Geotagged and timestamped photographs showing the installed daylight sensors.

IEQ Credit 6: Outdoor Views

Precertification

- Site/ master plan showing all the buildings.
- Conceptual floor plan highlighting the regularly occupied areas achieving views on all the floors.
- Draft sectional drawings indicating the direct line of sight to vision glazing, for each typical floor.
- Tentative calculations (floor-wise) indicating the regularly occupied spaces having access to outdoor views to the total regularly occupied spaces.

Certification

- Site/ master plan showing all the buildings.
- Tentative furniture layouts of all the floors highlighting the regularly occupied areas achieving views on all the floors.
- Sectional drawings indicating the direct line of sight to vision glazing, for each typical floor.
- Calculations (floor-wise) indicating the regularly occupied spaces having access to outdoor views to the total regularly occupied spaces.
- Geotagged and timestamped photographs showing the outdoor views, for all the floors.

IEQ Credit 7: Occupant Well-being Facilities

Precertification

- List of occupant well-being facilities (such as gymnasium, aerobics, yoga, meditation or any indoor / outdoor games) proposed in the project, with the location details.
- Conceptual site/ floor plans highlighting the location of occupant well-being facilities.

- Tentative calculations indicating the number of building occupants catered through occupant well-being facilities to the total number of building occupants, in percentage.

Certification

- List of occupant well-being facilities (such as wellness room, library or any indoor games) provided in the project, with the location details.
- Site/ floor plans highlighting the location of occupant well-being facilities.
- Calculations indicating the number of building occupants catered through occupant well-being facilities to the total number of building occupants, in percentage.
- Geotagged and timestamped photographs showing the occupant well-being facilities.

Module 6: Innovation and Decarbonisation in Buildings

ID Credit 1: Innovation in Design

Precertification

Case A: Innovation in Design

- Narrative describing intent, requirements, potential strategies and technologies proposed to achieve the innovation credit. Strategies adopted must be significantly better than standard sustainable design practices.
- Tentative calculations indicating tentative quantitative performance improvements, comparing baseline and design case.
- Other supporting tentative documents such as drawings, illustrations, datasheets, test reports, photographs, etc., as applicable.

Case B: Exemplary Performance:

- Narrative describing the strategies proposed to achieve exemplary performance in the respective base credit.

Note: Provide supporting documents in the respective base credit folder.

Certification

Case A: Innovation in Design

- Narrative describing intent, requirements, potential strategies and technologies proposed to achieve the innovation credit. Strategies adopted must be significantly better than standard sustainable design practices.
- Calculations indicating tentative quantitative performance improvements, comparing baseline and design case.
- Other supporting documents such as drawings, illustrations, datasheets, test reports, photographs, etc., as applicable.

Case B: Exemplary Performance:

- Narrative describing the strategies proposed to achieve exemplary performance in the respective base credit.

Note: Provide supporting documents in the respective base credit folder.

ID Credit 2: GHG Inventorisation and Roadmap

Precertification

Option 1: Decarbonisation at Building/ Project Level through Whole Building Life Cycle Analysis

- Narrative indicating the strategies adopted for reducing the carbon emissions in the design, construction and operational phase of the building.
- Tentative BOQ for structural & architectural materials and MEP systems (as applicable).
- Tentative manufacturer letters/ cut-sheets/ brochures of the proposed materials.
- LCA report of the project by considering the Life Cycle stages A1 - A3 and A4 indicating total calculated embodied carbon associated with the building's materials & products portfolio.
- Software-generated LCA summary output reports.
- Draft action plan with strategies to reduce the GHG emission intensity by atleast 5% from the present year in-lieu of various mitigation actions, over the next three years.

Option 2: GHG Inventorisation and Decarbonisation at Organisation Level

- Draft GHG inventory and decarbonisation roadmap including quantified targets, defined strategies, and transparent reporting mechanisms.
- Validation report by third party on the emission reduction target.
- Company annual reports or ESG disclosures or corporate website highlighting the GHG targets.

Certification

Option 1: Decarbonisation at Building/ Project Level through Whole Building Life Cycle Analysis

- Narrative indicating the strategies adopted for reducing the carbon emissions in the design, construction and operational phase of the building.
- Tentative BOQ for structural & architectural materials and MEP systems (as applicable).
- Tentative manufacturer letters/ cut-sheets/ brochures of the proposed materials.
- LCA report of the project by considering the Life Cycle stages A1 - A3, A4, B5 and B6 indicating total calculated embodied carbon associated with the building's materials & products portfolio.
- Software-generated LCA summary output reports.
- Approved GFC drawings
- Detailed BOQ for structural & architectural materials and MEP systems (as applicable).

- Manufacturer letters/ cut-sheets/ brochures of the proposed materials.
- LCA report of the project by considering the Life Cycle stages A1 - A3, A4, B5 and B5 indicating total calculated embodied carbon and operational carbon.
- Software-generated LCA summary output reports.
- Purchase invoice/ payment receipts of the materials used in the project.
- Energy simulation report highlighting the total annual energy consumption of the building.
- Signed and stamped action plan with strategies to reduce the GHG emission intensity by atleast 5% from the present year in-lieu of various mitigation actions, over the next three years.

Option 2: GHG Inventorisation and Decarbonisation at Organisation Level

- GHG inventory and decarbonisation roadmap including quantified targets, defined strategies, and transparent reporting mechanisms.
- Validation report by third party on the emission reduction target.
- Company annual reports or ESG disclosures or corporate website highlighting the GHG targets.

ID Credit 3: Environmental and Social Impact Drivers

Precertification

ID Credit 3.1: Sustainable Supply Chain Framework

- Draft Sustainable Supply Chain Policy of the organisation.
- ESG report highlighting the supply chain ESG performance metrics in sustainability.

ID Credit 3.2: Climate Resilience

- Narrative describing the climate resilience strategies implemented in the buildings design.
- Other supporting documents such as drawings, illustrations, datasheets, test reports, etc., as applicable describing the measures implemented.

ID Credit 3.3: Green Finance Framework

- Draft Sustainable Finance Framework of the organisation
- Draft list of projects financed through green or sustainability-linked instruments
- ESG report

ID Credit 3.4: Assurance

- 3rd party assurance report of the environmental, social, and governance (ESG) data at organisation level.
- Published ESG or Sustainability Report

ID Credit 3.5: Green Lease

- Narrative describing the measures that will be incorporated in the green lease agreement.
- Draft green lease agreement indicating the green measures incorporated aligning with the building's sustainability goals.

ID Credit 3.6: Basic Facilities for Service Staff

- Narrative describing the basic facilities incorporated for the service staff.
- Conceptual floor plans highlighting the location of basic facilities provided in the building.
- Declaration from project owner/ developer indicating the basic facilities that will be provided for the service staff.

ID Credit 3.7: Green Measures Beyond the Fence

- Narrative describing the strategies adopted to implement green measures beyond the fence.
- Site vicinity map highlighting the radial distance from the project site to site where green measures are implemented.
- Other supporting documents such as drawings, illustrations, datasheets, test reports, etc., as applicable describing the measures implemented
- Organisation policy/ Declaration from project owner/ developer highlighting the involvement of the Project/ Organisation to implement the green measures, along with scope of work.

ID Credit 3.8: In-house canteen with nutrition-based diet

- Narrative describing the strategies adopted to implement in-house canteen with nutrition-based diet.
- Conceptual plan highlighting the location of the in-house canteen.
- Declaration from project owner/ developer indicating that nutritional options will be provided in the in-house canteen.

ID Credit 3.9: Creche Facility

- Conceptual plan highlighting the location of the creche facility.
- Declaration from project owner/ developer indicating that creche with all facilities will be provided in the project.

In case the creche facility is not provided within the building premise,

- Declaration from project owner/ developer indicating that organization will tie up with an accredited external crèche located within 500m from the office premises.
- Site vicinity map highlighting location of a creche facility within 500m from the office premises.

ID Credit 3.10: Safety & Security Enhancements

- Narrative describing the strategies adopted to enhance safety and security within the site/ building premise.
- Declaration from project owner/ developer indicating the strategies adopted to enhance safety and security within the site/ building premise.

Certification

ID Credit 3.1: Sustainable Supply Chain Framework

- Sustainable Supply Chain Policy of the organisation.
- ESG report highlighting the supply chain ESG performance metrics in sustainability.

ID Credit 3.2: Climate Resilience

- Narrative describing the climate resilience strategies implemented in the buildings design.
- Other supporting documents such as drawings, illustrations, datasheets, test reports, work orders, geotag & time stamped photograph, etc., as applicable describing the measures implemented.

ID Credit 3.3: Green Finance Framework

- Draft Sustainable Finance Framework of the organisation
- List of projects financed through green or sustainability-linked instruments
- Published ESG report

ID Credit 3.4: Assurance

- 3rd party assurance report of the environmental, social, and governance (ESG) data at organisation level.
- Published ESG or Sustainability Report

ID Credit 3.5: Green Lease

- Narrative describing the measures that will be incorporated in the green lease agreement.
- Signed green lease agreement indicating the green measures incorporated aligning with the building's sustainability goals.

○

ID Credit 3.6: Basic Facilities for Service Staff

- Narrative describing the basic facilities incorporated for the service staff.
- Floor plans highlighting the location of basic facilities provided in the building.
- Geotag & time stamped photographs of the basic facilities that will be provided for the service staff.

ID Credit 3.7: Green Measures Beyond the Fence

- Narrative describing the strategies adopted to implement green measures beyond the fence.
- Site vicinity map highlighting the radial distance from the project site to site where green measures are implemented.
- Other supporting documents such as drawings, illustrations, datasheets, test reports, work orders, geotag & time stamped photographs etc., as applicable describing the measures implemented
- Organisation policy highlighting the involvement of the Project/ Organisation to implement the green measures, along with scope of work.

ID Credit 3.8: In-house canteen with nutrition-based diet

- Narrative describing the strategies adopted to implement in-house canteen with nutrition-based diet.
- Plan highlighting the location of the in-house canteen.
- Details of the nutritional options provided as part of the menu
- Geotag & time stamped photographs of the in-house canteen provided in the project along with signages highlighting nutritional facts, if available.
- Declaration from project owner/ developer indicating that nutritional options will be provided in the in-house canteen and that food items having Trans fats shall be eliminated.

ID Credit 3.9: Creche Facility

- Plan highlighting the location of the creche facility.
- Geotag & time stamped photographs of the crèche facility provided in the project.

In case the creche facility is not provided within the building premise,

- Agreement with an accredited external crèche for period of atleast 1 year.
- Site vicinity map highlighting location of a creche facility within 500m from the office premises.
- Geotag & time stamped photographs of the external crèche facility.

ID Credit 3.10: Safety & Security Enhancements

- Narrative describing the strategies adopted to enhance safety and security within the site/ building premise.
- Geotag & time stamped photographs highlighting the strategies adopted to enhance safety and security within the site/ building premise.

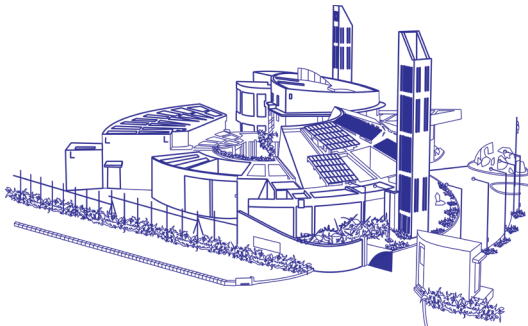
ID Credit 4: IGBC Accredited Professional

Precertification

- IGBC Accredited Professional certificate of the principal participants involved in the project from Developer Team, Green Building Consultant, MEP or any other team.

Certification

- IGBC Accredited Professional certificate of the principal participants involved in the project from Developer Team, Green Building Consultant, MEP or any other team.



Indian Green Building Council

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