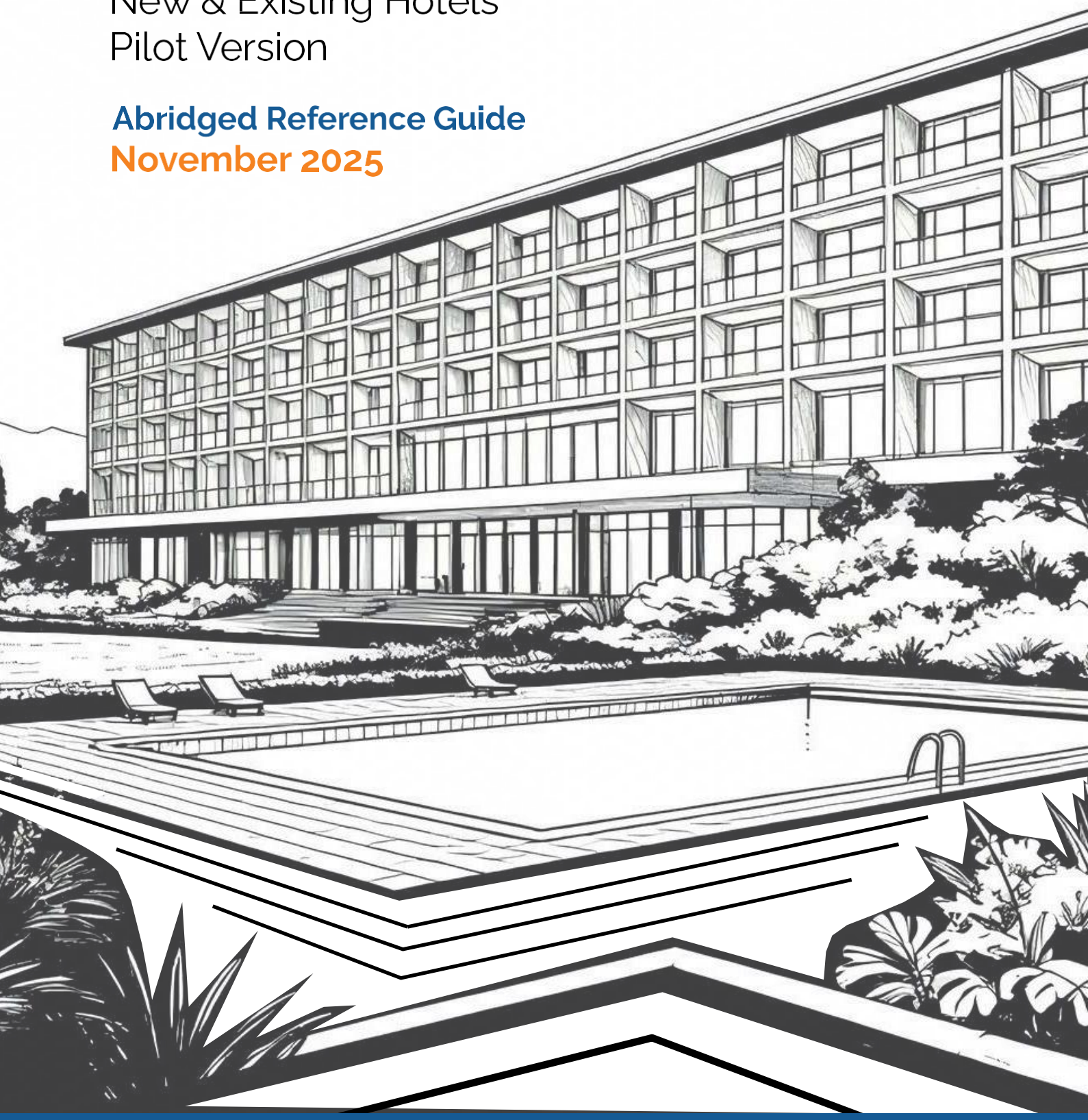
IGBC

Confederation of Indian Industry

Green Hotels Rating System

New & Existing Hotels
Pilot Version

Abridged Reference Guide
November 2025



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ENHANCED GUEST EXPERIENCE

Foreword

The global hospitality sector is undergoing a significant transition as the imperatives of environmental stewardship, resource efficiency, and sustainable tourism gain prominence. Across international markets, hotels and resorts are increasingly expected to demonstrate responsible operational practices that minimise ecological impact while maintaining high standards of guest comfort and service excellence.

Responding to these evolving expectations, the industry is adopting advanced technologies, efficient management systems, and sustainable design strategies that support long-term resilience. In this environment, structured certification frameworks have emerged as essential instruments for guiding hospitality establishments toward verifiable and performance-based sustainability outcomes aligned with global best practices.

The **Green Hotels Rating System (Pilot Version)** has been developed to provide a comprehensive and methodical framework for evaluating and enhancing the environmental performance of hospitality facilities. The rating system establishes clear criteria to support reductions in resource consumption, improvements in operational efficiency, enhanced guest health and well-being, and a strengthened commitment to ecological preservation and community impact.

This framework seeks to assist the hospitality sector in integrating sustainability as a core component of its operations, thereby contributing to the advancement of responsible tourism and reinforcing the industry's role in global environmental leadership.

Acknowledgements

The Green Hotels Rating System (pilot version) has been made possible through the efforts of many dedicated experts from hospitality industry

All the stakeholders who have directly & indirectly contributed towards the development of Green Hotels Rating System (pilot version) are profoundly acknowledged.

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Introduction

The Indian hospitality industry has emerged as a key contributor to the nation's economic growth, accounting for nearly 5% of the GDP and and supporting millions of livelihoods across the country. With India's diverse cultural heritage, architectural richness, and wide range of ecological and geographical attractions, the hotel sector continues to expand rapidly to cater to domestic and international travellers alike.

As the sector grows, it faces increasing environmental challenges—rising energy and water consumption, waste generation, and the overall ecological impact of large-scale operations. These concerns highlight the need for responsible development practices that ensure business growth while safeguarding natural resources. Hotels, being significant consumers of energy and water, have an important role to play in integrating sustainability into every stage of their lifecycle—from design and construction to daily operations and maintenance.

This has reiterated the need for a more responsible planning and management of this industry in order to minimize its negative impacts by addressing issues like water conservation, energy efficiency and handling of waste. Also maximise its potential for a sustainable development along with enhancing the guests' experience and well- being.

Against this background, the Green Hotels Rating System® is launched to guide and evaluate the adoption of sustainable practices in the hospitality sector. This framework serves as a comprehensive tool for hotel developers, designers, and operators to integrate measurable green strategies that reduce environmental impacts while enhancing operational performance, guest experience, and overall sustainability outcomes.

Benefits of Green Hotels

With the global emphasis on sustainability and combating climate change, the Green Hotels Rating System creates a major opportunity to position the hospitality sector experience as a unique guests' takeaway in a low-impact way. Green Hotels can offer tremendous benefits, both tangible and intangible. The most tangible benefits include a 10–20% reduction in energy consumption and 10–20% reduction in water consumption, leading to substantial savings in operational costs from the very first day of occupancy. In addition, effective waste management practices ensure over 75% waste diversion from landfills, while efforts to use local resources and green landscaping contribute to the local economy and biodiversity enhancement. Intangible benefits of Green Hotels include enhanced guest comfort and experience, improved indoor environmental quality, strengthened brand value, and the ability to attract environmentally conscious travellers from across the globe.

National Priorities Addressed in the Rating System

The Green Hotels Rating System addresses the most important National priorities which include water conservation, handling waste, energy efficiency, reduced use of fossil fuels 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/ State PCB guidelines and all local regulations. The overarching objective is to be better than the national standards so as to create new benchmarks. The overarching objective is to better the National standards so as to create new benchmarks.

1. **Water Conservation:**

   The Green Hotels Rating System encourages use of water in a self-sustainable manner through reduce, recycle, and reuse strategies. By adopting this rating programme, green hotels can save potable water to an extent of 10 - 20%.

2. **Handling of Waste:**

   Handling waste in hotels is extremely difficult as most of the waste generated is not segregated at source and has a high probability of going to land-fills. This continues to be a challenge to the municipalities which needs to be addressed. The intent is to address this by encouraging hotels to segregate the waste generated and creating a circular economy.

3. **Energy Efficiency:**

   The Hospitality sector is a large consumer of electrical energy. The energy savings that can be realized by adopting this rating program can be to the tune of 10 – 20%.

4. **Reduced Use of Fossil Fuels:**

   Fossil fuel is a slowly depleting resource, world over. The use of fossil fuel for transportation has been a major source of pollution. The rating system encourages the use of alternate fuels for transportation and renewable energy.

5. **Health and Well-being of Occupants:**

   Health and well-being of occupants is the most important aspect of the Green Hotels Rating System. The rating system ensures facilities to enhance health and occupant well-being which are critical in a Hotel.

Key Features

The Green Hotels Rating System is a voluntary and consensus based programme. The rating system has been developed based on materials and technologies that are presently available. The objective of the Green Hotels Rating System is to facilitate a holistic approach to create environment friendly hotels, through sustainable architectural design, water efficiency, effective handling of waste, energy efficiency and focus on guests' comfort & well-being.

The rating system evaluates certain mandatory requirements & credit points using a prescriptive approach and others on a performance based approach. The rating system is evolved so as to be comprehensive and at the same time user-friendly. The programme is fundamentally designed to address National priorities and quality of life for occupants. Some of the unique aspects addressed in this rating system are as follows:

- Sustainable site planning to minimize environmental impact and enhance climate resilience of the hotel premises
- Optimization of water use during both construction and operational phases through innovative conservation strategies
- Energy efficiency measures to reduce consumption and promote the use of renewable energy sources
- Efficient waste management systems ensuring maximum waste diversion and recycling
- Advancing overall carbon neutrality in hotel operations
- Enhancement of guest wellness and comfort through improved indoor environmental quality, healthy F&B choices, and green housekeeping practices
- Encouragement of innovation in sustainable design to continuously elevate environmental performance and guest experience

Scope of Green Hotels Rating

The Green Hotels Rating System ® is designed for hotels, both existing and newly built of any size or Hotel category.

Validity

The rating awarded for the hotels would be valid for a period of 3 years. Thereafter, the hotels have to apply for re-certification with the prevailing version. The hotels can also apply for re-certification within 3 years of award of the rating for a superior rating, if new green features are implemented or existing green features are enhanced in the hotels.

The Future of Green Hotels rating system

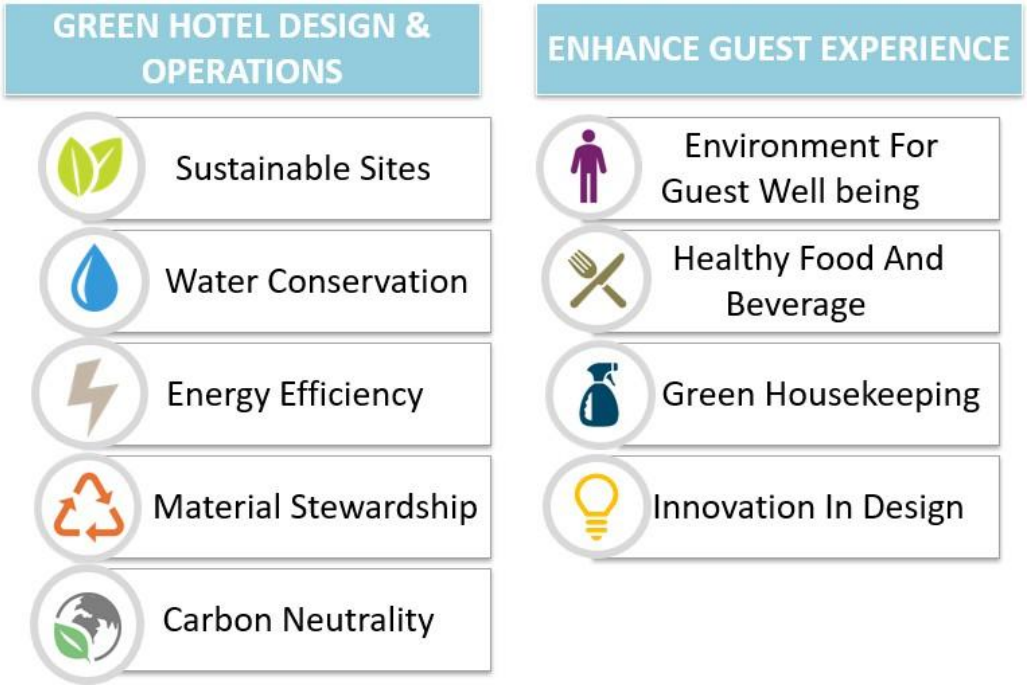
Many new green building materials, equipment and technologies are being introduced in the market. With continuous up-gradation and introduction of new green technologies and products, it is important that the rating programme also keeps pace with current standards and technologies.

Therefore, the rating programme will also undergo periodic revisions to incorporate the latest advances and changes. It is important to note that project teams applying for the Green Hotels 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.

The certification body will highlight new developments on its website (www.igbc.in).

Overview and Process

The Green Hotels Rating System addresses two main focus areas as follows:



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

The various levels of rating awarded are:

Certification Level	Recognition
Certified	Best Practices
Silver	Outstanding Performance
Gold	National Excellence
Platinum	Global Leadership

A. When to use Green Hotels Rating System

The Green Hotels Rating System is designed primarily for both new and existing Hotels. The project team can evaluate all the possible points to apply under the rating system using a suitable checklist (New Hotels and Existing Hotels). The project can apply for the Green Hotels Rating System, if it can meet all mandatory requirements and achieve the minimum required points.

B. Registration

Project teams interested in the Green Hotels Rating System for their project must first register. Projects can be registered on IGBC website (www.igbc.in) under the Green Hotels Rating System. The website includes information on registration fee for member companies as well as non-members.

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

The web site will have all important details on the Green Hotels Rating System registration & certification - process, schedule and fee.

C. Certification

To achieve the Green Hotels Rating System, 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:

1. General information of project including
    a) Project brief stating project type, different type of spaces, occupancy, number of buildings, area statement, etc.,
    b) General drawings (in PDF format only):
        i. Master/ Site plan
        ii. Landscape plan
        iii. Storm water drain layout
        iv. Parking plans
        v. Photographs/ Rendered images
2. Filled-in Templates (in excel format)
3. Narratives and supporting documentation such as drawings, calculations (in excel sheets), declarations/ contract documents, purchase invoices, manufacturer cut- sheets/ letters/ material test reports, etc., for each mandatory requirement/ credit.

A certificate and mountable plaque is provided to projects on achieving certification.

D. Precertification

Projects by owners/ developers can register for Precertification. This is an option provided for projects aspiring to get precertified at the design stage. Precertification also gives the developer a unique advantage to market the project to potential buyers.

The documentation submitted for precertification must detail the project design features which will be implemented. The rating awarded under precertification is based on the project's intention to conform to the requirements of the Green Hotels Rating System. It is important to note that the precertification rating awarded need not necessarily correspond to the final rating.

Precertified projects are required to provide the status of the project to the certification body, in relation to the rating, once in every six months until the award of the final rating.

Those projects which seek precertification need to submit the following documentation:

1. General information about project, including
   a) Project brief stating project type, different type of spaces, occupancy, number of floors, area statement, etc.,
   b) General drawings (in PDF format only):
      i. Master/ Site plan
      ii. Landscape plan
      iii. Storm water drain layout
      iv. Parking plans
      v. Photographs/ Rendered images
2. Filled-in templates
3. 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

A certificate is awarded to projects on 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) continue to submit construction progress reports once in six months to get an extension certificate for Precertification rating.

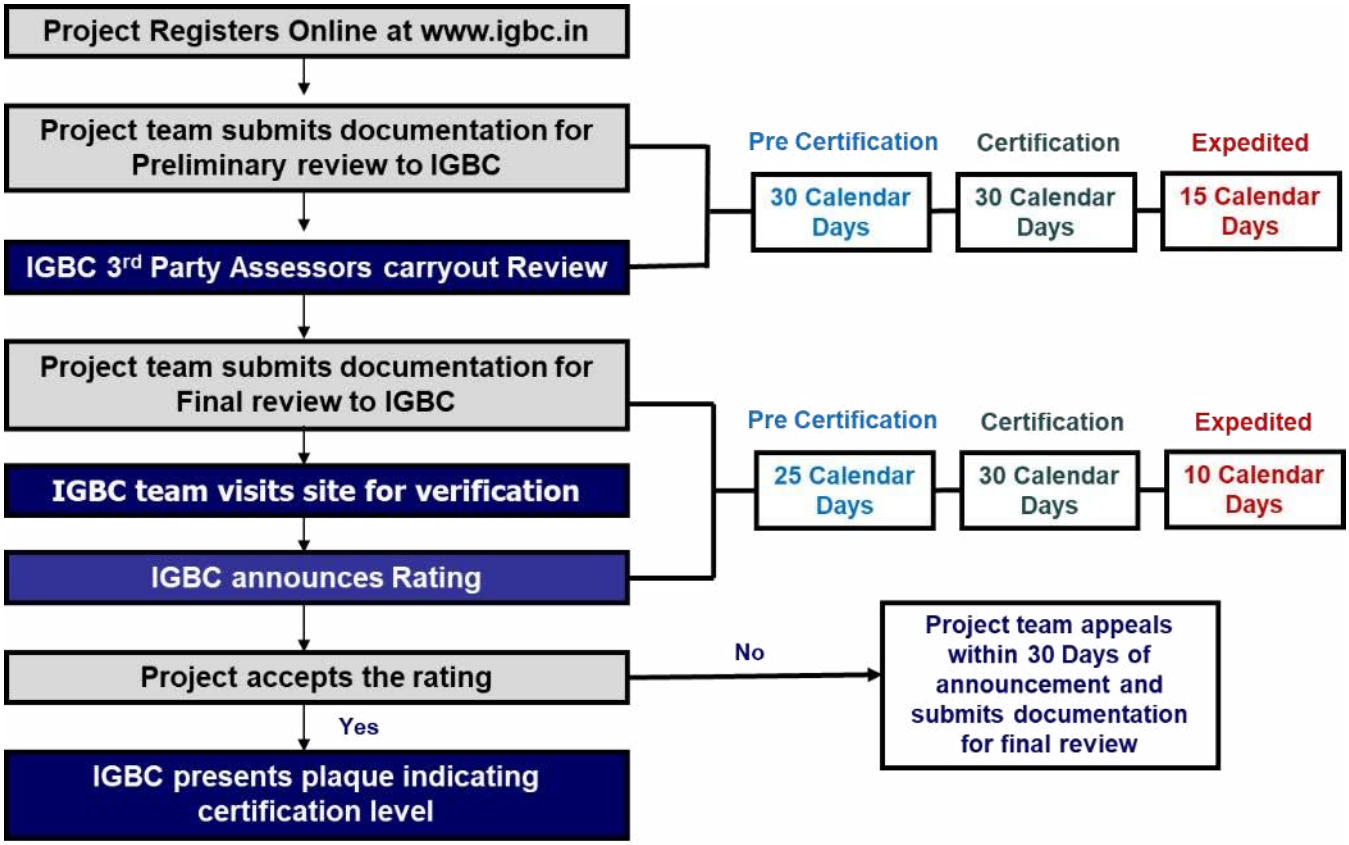
The project documentation is submitted in two phases – preliminary submittal and final submittal:

- Preliminary submission involves all mandatory requirements and minimum number of credits. After the preliminary submission, review is done by third party assessors and review comments would be provided within 30 days. The next phase involves submission of clarifications to preliminary review queries and final submittal. This review will also be provided within 30 days, after which the rating is awarded.
- It is important to note that the mandatory requirements and credits earned at the preliminary review are only considered as anticipated. These mandatory requirements and credits are not awarded until the final documents are submitted, along with additional documents showing implementation of design features. If there are changes in any 'credit anticipated' aspects after preliminary review, these changes need to be documented and resubmitted during the final review.

The threshold criteria for Certification & Precertification are as under:

Certification Level	New Hotel	Existing Hotel	Recognition
Certified	50 – 59	50 – 59	Best Practices
Silver	60 – 69	60 – 69	Outstanding Performance
Gold	70 – 79	70 – 79	National Excellence
Platinum	80 – 100	80 – 100	Global Leadership

Certification Process



E. Credit Interpretation Ruling (CIR)

In some instances, the design team can face 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 resolve 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 faces a problem:

- Refer the Abridged Reference Guide for description of the credit intent, compliance options and approach & methodologies.
- 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 CIRs on the relevant mandatory requirement or credit. All projects registered under the Green Hotels 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 CIRs. Two CIRs are answered without levying any fee, and for any CIR beyond the first two CIRs, a fee is levied.

F. 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 Certification body for reassessment of denied mandatory requirements or credits. The documentation for the mandatory requirements or credits seeking appeal may be resubmitted to the certification team along with necessary fee. The timeline to review such documentation is 30 days. If an appeal is pursued, please note that a different review team will be assessing the appeal documentation. The following documentation should be submitted:

1. General information of project including
   a) Project brief stating project type, different type of spaces, occupancy, number of buildings, area statement, etc.,
   b) General drawings (in PDF format only):
      i. Master/ Site plan
      ii. Landscape plan
      iii. Storm water drain layout
      iv. Parking plans

v. Photographs/ Rendered views

2. Filled-in Template for respective mandatoryrequirement/ credit
3. Resubmittal and appeal submittal documentation for only those mandatory requirement/ credits that the project is appealing for. Also, include a narrative for each appealed mandatory requirement/ credit to describe how the documents address the reviewers` comments and concerns.

G. Fee

Registration, Certification and CIR fee details are available on IGBC website (www.igbc.in) or can be obtained from IGBC (igbc@cii.in).

H. 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. These additions will be incorporated in the next version of the rating system.

Project Checklist

Green Hotel Certification		Credit Points Available	
		New Hotels	Existing Hotels
Sustainable Hotel Design & Operations		**68**	**68**
Sustainable Sites		**7**	**6**
SS MR 1	Statutory Compliances	Required	Required
SS MR 2	Soil Erosion Control	Required	Required
SS MR 3	Universal Design	Required	Required
SS Credit 1	Sustainable Landscape	2	2
SS Credit 2	Heat Island Reduction, Roof & Non-roof	2	2
SS Credit 3	Nocturnal Environment Protection	1	1
SS Credit 4	Climate Resilience and Mitigation	2	1
Water Conservation		**18**	**19**
WC MR 1	Rainwater Harvesting	Required	Required
WC MR 2	Water Efficiency	Required	Required
WC Credit 1	Enhanced Rainwater Harvesting	3	3
WC Credit 2	Enhanced Water Efficiency	4	4
WC Credit 3	Water Efficient Dishwashing System	2	2
WC Credit 4	Water Efficient Laundry System	2	2
WC Credit 5	Irrigation Management	1	1
WC Credit 6	Waste Water Treatment	1	1
WC Credit 7	Alternative Water Performance	3	3
WC Credit 8	Water Metering and Management	2	3

Energy Efficiency		**21**	**24**
EE MR 1	Eco Friendly Refrigerant	Mandatory	Mandatory
EE MR 2	Minimum Energy Performance	Mandatory	Mandatory
EE MR 3	Commissioning Plan for Building Equipment & Systems	Mandatory	NA
EE Credit 1	Enhanced Eco-Friendly Refrigerant	1	1
EE Credit 2	Enhanced Energy Performance	8	8
EE Credit 3	Energy Efficient Kitchen System	3	3
EE Credit 4	Energy Efficient Cold Room	1	1
EE Credit 5	Domestic Hot Water System	2	2
EE Credit 6	Energy Efficient Laundry System	1	1
EE Credit 7	Energy Efficient Dish Washing System	1	1
EE Credit 8	Energy Recovery Systems	2	2
EE Credit 9	Periodic Energy Assessment	NA	2
EE Credit 10	Energy Performance	2	3
Material Stewardship		**8**	**8**
MS MR 1	Waste Segregation & Circularity	Required	Required
MS Credit 1	Sustainable Procurement	2	2
MS Credit 2	Waste Footprint Reduction	2	2
MS Credit 3	Green Products	2	2
MS Credit 4	Organic Waste Management	2	2
Carbon Neutrality		**14**	**11**
CN Credit 1	Embodied Carbon optimization	4	NA
CN Credit 2	Green Power	5	5

CN Credit 3	Promotion of Local Economy	1	2
CN Credit 4	Sustainable Transportation	2	2
CN Credit 5	GHG Inventorisation and Roadmap	2	2
ENHANCED GUEST EXPERIENCE		**32**	**32**
Environment for Guest Wellbeing		**14**	**13**
EGW MR 1	Minimum Fresh Air Ventilation	Required	Required
EGW MR 1	Tobacco Smoke Control	Required	Required
EGW Credit 1	Daylighting	1	1
EGW Credit 2	Connectivity with Nature	1	1
EGW Credit 3	Low Emitting Materials	1	NA
EGW Credit 4	Wellbeing Facilities	3	3
EGW Credit 5	Vernacular Art and Culture	1	1
EGW Credit 6	Inclusive Guest Experience	1	1
EGW Credit 7	IEQ Monitoring and Management	3	3
EGW Credit 8	Guest Comfort Feedback	1	1
EGW Credit 9	Green Education	2	2
Healthy Food and Beverages		**6**	**6**
HFB Credit 1	Drinking Water Quality	1	1
HFB Credit 2	Responsible Sourcing of Food & Beverage	2	2
HFB Credit 3	Wellness Menu	3	3
Green Housekeeping		**6**	**7**
GH Credit 1	Chemical Footprint Reduction	1	2
GH Credit 2	Sustainable Linen Policy	1	1

GH Credit 3	Wellness Toiletries	2	2
GH Credit 4	Swimming Pool for Guest Wellness	1	1
GH Credit 5	Organic Fertilizers	1	1
Innovation and Exemplary Performance		**6**	**6**
INN Credit 1	Innovation in Design Process	4	4
INN Credit 2	IGBC Accredited Professional	2	2
	Total	100	100

Certification Level	New Hotels	Existing Hotels	Recognition
Certified	50 – 59	50 – 59	Best Practices
Silver	60 – 69	60 – 69	Outstanding Performance
Gold	70 – 79	70 – 79	National Excellence
Platinum	80 – 100	80 – 100	Global Leadership

GREEN HOTELS DESIGN & OPERATIONS

SUSTAINABLE SITES

WATER CONSERVATION

ENERGY EFFICIENCY

MATERIAL STEWARDSHIP

CARBON NEUTRALITY

SUSTAINABLE SITES

Statutory Compliances

SS Mandatory Requirement 1

New Hotel	Existing Hotel

Intent:

Ensure that the building(s) 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:

- **Option 1: Building Approvals**
  - Approved site plan (and/ or) building plans for construction, as applicable
  - Occupancy certificate from Local Authority
  - Pollution Control Board (PCB) License - Consent to Establish (CTE) and Consent to Operate (CTO)
  - Environmental clearance certificate, if applicables
  - CRZ clearance from MoEFCC, if applicable

(AND)

- **Option 2: Food Service**
  - Food Safety and Standards Authority of India (FSSAI) License

(AND)

- **Option 3: Hotel Star Classification**
  - Project approval or classification/reclassification certificate issued by the Ministry of Tourism, Government of India, if applicable.

Note:

- *Hotel project 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 & Climate Change (MoEFCC) [DG1] or State Environment Impact Assessment Authority (SEIAA) to show compliance for certification*
- *If the hotel project is located within a notified Coastal Regulation Zone shall the Coastal Regulation Zone clearance* from MoEFCC

Documentation Required:

Precertification

i. Site plan/ Building plan approved by local Government authority.
ii. Project commencement certificate issued by local Government authority.
iii. Environmental Clearance Certificate and/or EIA Study Report approved by MoEFCC or SEIAA, if applicable.
iv. Pollution Control Board (PCB) – Consent to Establish (CTE)

v. CRZ clearance from MoEFCC, if applicable
vi. Project Approval by the Ministry of Tourism, Government of India, if applicable.
vii. Declaration from Project Owner confirming that all statutory approvals applicable at the design stage are valid and/or under process.
viii. Photographs of the site and building taken at various stages of construction.

Certification

i. As-built drawings (site plan, floor plans, elevations, sections, etc.,) approved by local Government authority.
ii. Occupancy certificate from Local Authority.
iii. Environmental Clearance Certificate and/or EIA Study Report approved by MoEFCC or SEIAA, if applicable.
iv. CRZ clearance from MoEFCC, if applicable
v. Valid Pollution Control Board (PCB) Consents – Consent to Establish (CTE) and Consent to Operate (CTO).
vi. Food Safety and Standards Authority of India (FSSAI) License, where food service facilities are operational.
vii. Project classification or reclassification certificate issued by the Ministry of Tourism, Government of India, if applicable.

Soil Erosion Control

New Hotel	Existing Hotel

SS Mandatory Requirement 2

Intent:

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

Compliance Options:

❖ **Option 1: Construction-Phase Erosion & Sediment Control**

Implement the following measures during construction, as applicable:

- Soil erosion control measures taken during and after construction (post-occupancy) must conform to the best management practices highlighted in the 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.*

(AND)

❖ **Option 2: Post-Construction Erosion Stabilisation & Control**

- 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

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 and farmers.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the Erosion and Sedimentation Control (ESC) measures proposed in the project, during construction and post occupancy
ii. Conceptual site drawings highlighting ESC measures proposed on-site during construction and post occupancy
iii. Photographs showing ESC measures taken at various stages of construction, before construction and during construction, as applicable based on current status of project.

Certification

New Hotels

i. Narrative describing the Erosion and Sedimentation Control (ESC) measures implemented, during construction and post occupancy
ii. Site drawings highlighting ESC measures implemented on-site, during construction and post occupancy
iii. Photographs showing ESC measures taken at various stages of construction, before construction, during construction and post occupancy

Existing Hotels

i. Narrative describing the Erosion and Sedimentation Control (ESC) measures implemented post occupancy
ii. Site drawings highlighting ESC measures implemented on-site, post occupancy
iii. Photographs showing ESC measures taken at post occupancy
iv. Copy of ESC policy/measures to be implemented during future construction/ renovation work in the project which must include pre-construction, during construction and post occupancy measures proposed to control soil erosion and sedimentation.

New Hotel	Existing Hotel

Universal Design

SS Mandatory Requirement 3

Intent:

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

Compliance Options:

Design the hotel to provide the following measures for differently abled and senior citizens in accordance with the guidelines of the National Building Code (NBC) of India 2016.

- 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,

  - Number of Designated Accessible Parking Spaces shall be provided as per Annex B-3.2
  - Dedicated parking shall be accessible within 30m of the main entrance.
  - Signages shall be installed for dedicated differently abled parking
  - Symbol of accessibility shall be painted on floor surface as per NBC 2016
  - Provide accessible drop-off zones adjacent to the main entrance with barrier-free access and clear signage
- Easy access to the main entrance of the building.
- Non-slippery ramps, with handrails on at least one side (as applicable).
- Braille and audio assistance in lifts for visually impaired people.
- Uniformity in floor level for hindrance-free movement in common areas & exterior areas.
- Provide minimum one unisex wheelchair user accessible restroom that shall conform to NBC 2016
- Main walkways / pathways with adequate width in exterior areas.
- Visual warning signage in common areas & exterior areas

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the measures proposed in the hotel for differently abled people and senior citizens
ii. 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.
iii. Conceptual drawings highlighting the measures proposed for differently abled people and senior citizens

Certification

i. Narrative describing the measures implemented in the hotel for differently abled people and senior citizens
ii. 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
iii. Drawings highlighting the measures implemented for differently abled people and senior citizens.
iv. Photographs showing all the measures implemented

Sustainable Landscape

New Hotel	Existing Hotel

SS Credit 1 **Credit Points: 2**

Intent:

Minimize site disturbances and restore green cover/vegetation to enhance habitat and biodiversity.

Compliance Options:

❖ **Option 1: Natural Topography or Vegetation** **Credit Points: 2**

Demonstrate that the hotel has retained or restored green cover or vegetation, for at least 15% of the site area.

Percentage of Site Area with Green Cover / Vegetation	Points
> 15%	1
> 20%	2

Notes:

- *Grass medians, grass pavers, jogging track, open-air theatre, parking areas, driveways, walkways, playground, swimming pool, etc., are considered as site disturbance.*
- *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.*
- *Only native / adaptive vegetation shall be considered for this credit calculation.*
- *Potted plants shall not be considered as vegetation.*

(OR)

❖ **Option 2: Plantation of Tree Saplings:** **Credit Points: 2**

Plant tree saplings that can mature into grown up trees within the next 5 years on the project site, as per the below criteria (including existing and transplanted trees in the project site).

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

Notes:

- *If the Ministry of Environment & Forest (MoEF) or local authorities prescribe stringent criteria, then the project shall comply with the respective criteria.*
- *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.*
- *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.*
- *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.*

(OR)

❖ **Option 3: Landscape Area Provision per Guest Room** **Credit Points: 2**

Demonstrate provision of sufficient landscape area per guest room, thereby improving outdoor environmental quality.

$$\text{Landscape area per guest room} = \frac{\text{Total landscape area (sq.m)}}{\text{Total No.of guest rooms}}$$

Star classification	Landscape Area / Guest Room	Points
3-Star & Below Hotels	≥ 5 m² per guest room	1
	≥ 7 m² per guest room	2
4-Star & 5-Star Hotels	≥ 10 m² per guest room	1
	≥ 12 m² per guest room	2

Notes:

- *Vegetation on the ground as well as vegetation over built structures such as roofs, basement, podiums, etc., can be considered.*
- *Only native / adaptive vegetation shall be considered for this credit calculation.*
- *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.*
- *Potted plants shall not be considered as vegetation.*
- *Artificial vegetation shall not be considered for this credit calculation.*

Exemplary Performance:

The project is eligible for exemplary performance under Innovation & Exemplary performance, if the green cover/vegetation exceeds 25% of the total site area (or) minimum of two tree saplings for every 80 m² of the site area (or) landscape area per guest room greater than 9 m² for 3-Star and below hotels, and greater than 14 m² for 4-Star and 5-Star hotels.

Documentation Required:

Precertification

Option 1: Natural Topography or Vegetation

i. Conceptual site drawing highlighting the area with green cover or vegetation
ii. Tentative calculations indicating the total area with green cover or vegetation on the ground to the total site area, in percentage
iii. Tentative list of turf, drought tolerant, native and adaptive species proposed in the project

Option 2: Plantation of Tree Saplings

i. Narrative describing the strategies proposed to plant new saplings and retention of existing trees, within the project site
ii. Conceptual landscape drawing highlighting the tree saplings and existing trees
iii. Tentative calculations indicating the total site area (in acres), tree saplings and existing trees
iv. Tentative list of the existing trees/ plant species and proposed species which can mature into fully grown trees for shading, within the next 5 years

Option 3: Landscape Area Provision per Guest Room

i. Conceptual site drawing highlighting the total landscaped area within the project boundary
ii. Tentative calculations indicating total landscape area to the total number of guest rooms, in percentage
iii. Tentative list of landscape species and proposed species in the project site

Certification

Option 1: Natural Topography or Vegetation

i. Site drawing highlighting the area with green cover or vegetation
ii. Calculations indicating the total area with green cover or vegetation on the ground to the total site area, in percentage

iii. List of turf, drought tolerant, native and adaptive species proposed in the project
iv. Photographs showing the site area with green cover or vegetation

Option 2: Plantation of Tree Saplings

i. Narrative describing the strategies implemented to plant new saplings and retention of existing trees, within the project site
ii. Landscape drawing highlighting the tree saplings and existing trees
iii. Calculations indicating the total site area (in acres), tree saplings and existing trees
iv. List of the existing trees/ plant species and new saplings which can mature into fully grown trees for shading, within the next 5 years
v. Photographs showing the tree saplings and existing trees

Option 3: Landscape Area Provision per Guest Room

i. Site drawing highlighting the total landscaped area within the project boundary
ii. Calculations indicating total landscape area to the total number of guest rooms, in percentage
iii. List of landscape species (existing trees/ plant species, turf, drought tolerant, native and adaptive species) used in the project
iv. Photographs showing the landscaped areas

Heat Island Reduction, Roof & Non-roof

New Hotel	Existing Hotel

SS Credit 2 **Credit Points: 2**

Intent:

Minimize heat island effect so as to reduce negative impact on micro-climate.

Compliance Options:

Credit Point: 1

❖ **Option 1: Non-roof Impervious Areas**

Implement green measures to minimize Urban Heat Island effect by covering at least 50% of non-roof impervious areas.

- Shade from existing tree cover that can mature into grown-up trees with medium to large canopy in the next 5 years
- Open grid or grass pavers
- Hardscape materials with SRI of at least 29 (and not higher than 64)
- Shade from permanent canopies (shall meet roof SRI requirements)

Notes:

- *Non-roof impervious areas include, but not limited to, footpaths, pathways, roads, driveways, bicycle lanes uncovered surface parking, and other impervious areas.*
- *Exposed non-roof area need not include utility areas such as areas covered with DG sets, transformer, STP etc.,*
- *Trees / Saplings shall be in place at the time of certification.*
- *Artificial vegetation shall not be considered.*
- *SRI values of reflectance materials shall be as per ASTM Standards.*
- *All areas, including podium, covered surface parking and utility blocks, which are exposed to the sky (at and above ground level) shall be considered for the credit calculation under roof area*

(AND/OR)

❖ **Option 2: Roof Areas** **Credit Point: 1**

Implement green measures to minimize Urban Heat Island (UHI) effect by covering at least 95% of the exposed roof area.

Solar Reflective Index (SRI) values for different roof types:-

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

Notes:

- *SRI values of high reflectance materials shall be as per ASTM Standards.*
- *All roof areas, including podium, Lift / staircase headroom, covered surface parking, utility blocks which are exposed to the sky shall be considered for this credit calculation.*
- *Exposed roof area does not include equipment platforms, areas with Solar Photovoltaic (SPV) & Solar Water Heaters (SWH), skylights, driveways, roads, play areas, etc.*
- *Exposed parking covered with either metal/permanent roof would be considered under roof area calculation.*

Applicable Only For Existing Hotels

❖ **Option 3: UHI Mapping** **Credit Point: 1**

Demonstrate that the project has conducted a heat mapping study to identify Urban Heat Island (UHI) hotspots.

(AND/OR)

❖ **Option 4: UHI Mitigation** **Credit Point: 1**

Demonstrate measures implemented to minimize Urban Heat Island (UHI) effect for both roof and non-roof impervious areas.

- Provide high SRI materials, reflective coatings, tiles, or vegetated roofs for the exposed roof area.
- Provide tree cover, grass pavers, open-grid pavements, or high SRI materials for the non-roof impervious areas.

Notes:

- *The hotel shall conduct a thermal imaging or heat mapping study to assess surface temperatures of both roof and non-roof areas using one or more of the following scientifically validated methods: Infrared (IR) camera–based survey, calibrated handheld infrared thermometer measurements, drone-based thermal imaging survey, satellite-based land surface temperature (LST) analysis, or simulation-based heat gain assessment. The selected methodology shall be carried out under representative peak daytime conditions and supported with documented temperature data, images/maps, and analysis identifying UHI hotspots.*
- *Based on the findings, the project shall implement mitigation measures such as high SRI coatings, vegetative roofs, or shaded pavements.*
- *The final report should include Interpretation report highlighting key heat gain zones, pre- and post-implementation images (where applicable) and summary of actions taken to address identified hotspots.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Non-roof Impervious Areas

i. Narrative describing the proposed strategies to reduce heat island effect from non-roof areas
ii. Conceptual site drawing highlighting the non-roof impervious (hardscape) areas and the areas covered with mitigation measures
iii. Tentative calculations indicating the non-roof area covered with mitigation measures to the total exposed non-roof impervious area, in percentage
iv. Tentative list of the existing trees/ plant species which can mature into fully grown trees for shading, within the next 5 years

Roof Areas

i. Narrative describing the proposed strategies to reduce heat island effect from roof areas
ii. Conceptual Roof drawing highlighting the area to be covered with high reflective roof materials/ vegetation
iii. Tentative calculations indicating the total effective roof area covered with high reflective roof materials/vegetation to the total exposed roof area (excluding service & utility areas), in percentage
iv. Manufacturer datasheets of the proposed high reflective roof materials indicating the Solar Reflective Index (SRI) value.

Certification

Non-roof Impervious Areas

i. Narrative describing the strategies to reduce heat island effect from non-roof areas
ii. Site drawing highlighting the non-roof impervious (hardscape) areas and the areas covered with mitigation measures
iii. Calculations indicating the non-roof area covered with mitigation measures to the total exposed non-roof impervious area, in percentage
iv. List of the existing trees/ plant species which can mature into fully grown up trees for shading, within the next 5 to 8 years
v. Purchase invoice/ Payment receipt of the reflective materials, if sourced
vi. Manufacturer letters/ brochures indicating the Solar Reflective Index (SRI) of the reflective materials
vii. Photographs showing the measures implemented to reduce heat island effect from non- roof areas

Roof Areas

i. Narrative describing the proposed strategies to reduce heat island effect from roof areas
ii. Roof drawing highlighting the area covered with high reflective roof materials/ vegetation
iii. Calculations indicating the total effective roof area covered with high reflective roof materials/vegetation to the total exposed roof area (excluding service & utility areas), in percentage
iv. Purchase invoice/ Payment receipt of the reflective materials, if sourced
v. Manufacturer letters/ brochures indicating the Solar Reflective Index (SRI) of the reflective materials
vi. Photographs showing the measures implemented to reduce heat island effect from roof areas

Existing Hotel

UHI Mapping

i. Narrative highlighting the methodology adopted for conducting the thermal imaging and heat mapping study
ii. Thermal imaging and heat mapping analysis report indicating the zones covered under the study and identified Urban Heat Island (UHI) hotspots for roof and non-roof areas.

UHI Mitigation

i. Narrative describing the strategies adopted to minimize the Urban Heat Island (UHI) effect.
ii. Layout highlighting roof and non-roof impervious areas covered with Urban Heat Island (UHI) reduction measures
iii. Calculations indicating the total effective roof area covered with Urban Heat Island (UHI) reduction measures to the total exposed roof area, in percentage
iv. Calculations indicating the total effective non-roof area covered with Urban Heat Island (UHI) reduction measures to the total exposed non-roof area, in percentage
v. Purchase invoice/ Payment receipt of the reflective materials, if sourced
vi. Manufacturer letters/ brochures indicating the Solar Reflective Index (SRI) of the reflective materials
vii. Photographs showing the measures implemented to reduce heat island effect from roof and non-roof areas

Nocturnal Environment Protection

New Hotel	Existing Hotel

SS Credit 3 **Credit Point: 1**

Intent:

Reduce light pollution to enhance night sky access thereby protecting the nocturnal environment.

Compliance Options:

❖ **Upward Lighting**

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 ±10°.
- 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)

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the design strategies proposed for outdoor light pollution reduction in the project along with the details of proposed shading devices such as blinds, curtains, or automated shades for exterior openings, where applicable.
ii. Conceptual site drawing highlighting the exterior lighting fixtures proposed in the project
iii. Manufacturer cutsheet of the exterior lighting fixtures indicating upward lighting percentage

Certification

i. Narrative describing the strategies implemented for outdoor light pollution reduction in the project along with the details installed shading devices, such as blinds, curtains, or automated shades for exterior openings, where

applicable.

ii. Site drawing highlighting the exterior lighting fixtures installed in the project

iii. Manufacturer cutsheet letter of the exterior lighting fixtures indicating upward lighting percentage

iv. Purchase invoice of the exterior lighting fixtures

v. Day and night time photographs showing the typical exterior lighting fixtures

vi. Photographs of installed shading devices, such as blinds, curtains, or automated shades, for exterior openings, where applicable.

New Hotel	Existing Hotel

Climate Resilience and Mitigation

SS Credit 4 **Credit Point: 2,1**

Intent:

Minimize the impact of climate-related hazards such as floods, cyclones, heatwaves, droughts, and landslides, so as to reduce vulnerability and ensure long-term operational resilience and sustainability.

Compliance Options:

❖ **Climate Risk Assessment and Mitigation**

- Identify the climate risks associated with the site using recognized tools or hazard-mapping studies.
- Integrate suitable design and operational measures to mitigate identified risks and enhance resiliency.

Notes:

- *Project team can analyze associated climate risks: https://ndma.gov.in/*

The project shall demonstrate adoption of mitigation measures as per the table below:

Hazard Category	Hazard Type	Mitigation Measures *(New Hotels)*	Mitigation Measures *(Existing Hotels)*
Water	Local / Urban Flood, River / Lake Flood, Flash Flood	• Maintain adequate site elevation (minimum 6 m above identified flood level) and ensure site grading directs at least 60% of the perimeter runoff away from building foundations. • Design on-site stormwater retention and detention systems to manage peak discharge. • Provide permeable paving for ≥80% of non-roof hardscape areas to enhance groundwater recharge. • Elevate critical utilities, electrical panels, and emergency systems above the highest recorded flood level. • Adopt flood-resistant construction materials for plinths, external walls, and service areas. • Provide watertight doors, windows, and service penetrations at ground level.	• Retrofit flood barriers or deployable flood protection systems at vulnerable openings. • Relocate or elevate critical utilities above flood-prone levels, wherever feasible. • Install sump pumps with emergency backup power. • Improve external grading and drainage pathways, where possible. • Develop and implement a Flood Emergency Response and Evacuation Plan.

		• Incorporate raised thresholds and flood barriers at entrances and service access points. • Integrate bioswales, rain gardens, and landscape depressions for on-site stormwater infiltration.	
	Coastal / Tidal Flood, Storm Surge, Tsunami	• Maintain prescribed setback from High Tide Line (HTL) and comply with applicable coastal regulations. • Provide natural buffers such as dunes, vegetated berms, or mangrove protection (as applicable). • Design ground floor levels on stilts or raised podiums to allow unobstructed water flow during surge events. • Use corrosion-resistant materials in marine exposure zones. • Seal underground utilities and provide emergency dewatering systems. • Design structural systems to resist lateral and uplift forces induced by storm surge. • Incorporate breakaway wall panels at lower levels, where appropriate, to reduce structural damage during surge events.	• Apply corrosion protection coatings and periodic anti-corrosion treatment for structural elements. • Provide temporary or permanent surge barriers, where feasible. • Waterproof basements and critical service areas. • Provide emergency pumps and drainage sumps. • Undertake periodic structural audits for marine corrosion and degradation. • Provide clearly marked tsunami evacuation routes and designated assembly areas.
Wind	Cyclone, Typhoon, Hurricane, Tornado, Downburst	• Design structural systems in accordance with IS 875 (Part 3) considering regional wind speeds. • Anchor roofs, façades, solar panels, and external fixtures to resist uplift and lateral loads. • Provide wind-rated glazing, storm shutters, and impact-resistant facade systems. • Incorporate vegetated windbreaks or shelterbelts along the site perimeter. • Secure signage, light poles, and outdoor equipment. • Provide wind-lock vestibules at primary entrances to minimize internal pressure variation.	• Retrofit roof anchoring and façade support systems, where required. • Replace vulnerable glazing with wind-rated systems, where feasible. • Secure rooftop equipment and external installations. • Install storm shutters for critical openings. • Undertake periodic pre-monsoon structural inspections of roof and façade systems. • Develop and implement a Cyclone Preparedness and Guest Communication Protocol.

		• Adopt aerodynamic building forms and roof profiles to reduce uplift forces. • Use laminated impact-resistant glazing in high wind zones.	
Fire	Local Fire, Wildfire	• Use fire-rated assemblies (doors, partitions, shafts) with minimum 60-minute fire resistance rating. • Maintain vegetation clearance (minimum 10 m) around building perimeter in wildfire-prone areas. • Install automatic detection, alarm, sprinkler, hydrant, and hose reel systems. • Use FRLS cables and provide ELCBs for electrical safety. • Provide spark arrestors and cavity barriers within wall assemblies. • Install tempered safety glazing conforming to IS 2553. • Provide a dedicated Fire Command Center with integrated monitoring systems.	• Upgrade fire alarm systems to addressable systems, where feasible. • Replace non-compliant fire doors with certified fire-rated doors. • Maintain hydrant, sprinkler, and detection systems through periodic testing. • Conduct vegetation management in wildfire-prone regions. • Conduct regular fire drills for staff and maintain training records. • Conduct periodic third-party fire safety audits.
Geoseismic	Earthquake, Landslide, Subsidence	• Design structures in accordance with IS 1893 and IS 13920 incorporating ductile detailing. • Conduct geotechnical investigations and slope stability assessments. • Provide retaining structures and erosion control measures where required. • Anchor non-structural components and equipment. • Provide flexible joints for pipelines and ensure proper surface drainage. • Provide seismic separation joints between adjacent building blocks.	• Conduct structural stability and seismic vulnerability assessment. • Retrofit structural elements using appropriate strengthening techniques (e.g., steel bracing, jacketing). • Anchor façade elements, parapets, and heavy equipment. • Stabilize slopes and improve drainage systems. • Develop and implement Earthquake Emergency Response and Evacuation Procedures.

Documentation Required:

Precertification

i. Detailed report identifying climate-related risks at the project site along with the tentative design measures proposed to mitigate identified risks and enhance resilience.
ii. Tentative drawings indicating design interventions for climate risk mitigation
iii. Photographs of interventions implemented to mitigate identified climate-related hazards, if available

Certification

i. Detailed report identifying climate-related risks at the project site along with the design measures proposed to mitigate identified risks and enhance resilience
ii. Drawings indicating design interventions for climate risk mitigation
iii. Photographs of interventions implemented to mitigate identified climate-related hazards

WATER CONSERVATION

Rainwater Harvesting

New Hotel	Existing Hotel

WC Mandatory Requirement 1

Intent:

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

Compliance Options:

❖ **Case A: Rainwater Harvesting**

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

** One-day rainfall can be derived from 'percentage of average peak month rainfall' given in Table - 2.*

To arrive at average peak month rainfall, consider an average of at least last 5 years peak month rainfall (of the respective year).

Criteria to arrive at 'One-day Rainfall'

Average Peak Month Rainfall (in mm)	One-day Rainfall (% of Average Peak Month Rainfall)
Upto 250	9%
251 – 350	7.5%
351 – 500	6%
501 – 700	4.5%
701 & above	3%

❖ **Case B: High Groundwater Table**

In areas where the Central / State Ground Water Board does not recommend artificial rain water 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:

- *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
- *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 coefficients for Typical Surface Types

Surface Type	Run-off Coefficient
Cemented / Tiled Roof	0.95
Roof Garden (<100 mm thickness)	0.5
Roof Garden (100 – 200 mm thickness)	0.3
Roof Garden (201 – 500 mm thickness)	0.2
Roof Garden (> 500 mm thickness)	0.1
Turf, Flat (0 - 1% slope)	0.25
Turf, Average (1 - 3% slope)	0.35
Turf, Hilly (3 - 10% slope)	0.4
Turf, Steep (> 10% slope)	0.45
Vegetation, Flat (0 - 1% slope)	0.1
Vegetation, Average (1 - 3% slope)	0.2
Vegetation, Hilly (1 - 3% slope)	0.25
Vegetation, Steep (> 10% slope)	0.3
Concrete Pavement	0.95
Gravel Pavement	0.75
Open-grid Concrete Pavement	0.75
Open-grid Grass Pavement	0.5
Water Bodies (lined) Ex: Swimming Pools	0.95
Water Bodies (un-lined) Ex: Water Pond	0

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

Source: Food and Agriculture Organisation

Documentation Required:

Precertification

Option 1: Rainwater Harvesting

i. Narrative describing the strategies proposed to capture/ harvest rain water from roof & non-roof areas
ii. Tentative calculations indicating the run-off volume captured/ harvested from roof and non-roof and the volume of rainwater harvesting pits/tanks.
iii. Conceptual external storm water drain layout highlighting the location of rain water harvesting - ponds, pits, storage tanks, etc., as applicable, including cross-sectional drawings
iv. Hydrogeological test report (approved by third-party) indicating the percolation capacity of the soil/ Project specific borewell test report indicating the percolation rate.

Option 2: High Groundwater Table

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

Certification

Option 1: Rainwater Harvesting

i. Narrative describing the strategies implemented to capture/ harvest rain water from roof & non-roof areas
ii. Calculations indicating the run-off volume captured/ harvested from roof and non-roof and the volume of rainwater harvesting pits/tanks.
iii. External storm water drain layout highlighting the location of rain water harvesting - ponds, pits, storage tanks, etc., as applicable, including cross-sectional drawings of rain water harvesting systems
iv. Hydrogeological test report (approved by third-party) indicating the percolation capacity of the soil/ Project specific borewell test report indicating the percolation rate
v. Photographs of rain water harvesting systems, taken during and after construction

Option 2: High Groundwater Table

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

New Hotel	Existing Hotel

Water Efficiency

WC Mandatory Requirement 2

Intent:

To optimize and benchmark water consumption per occupied room through efficient fixtures and effective water management practices.

Compliance Options:

❖ **Option 1: Water Efficient Plumbing Fixtures:**

Use Water efficient plumbing fixtures with flow rates to meet the baseline criteria individually or in aggregate. The total annual water consumption of the facility should not exceed the total base case water consumption.

The baseline criteria is as below:

Fixture type	Maximum Flow Rate/ Consumption	Duration	Estimated Daily Uses per Occupant
Water Closet (Full Flush)	6.0 lpf	1 flush	1
Water Closet (Half Flush)	3.0 lpf	1 flush	4
Urinal*	3.0 lpf	1 flush	2 for male
Health faucet*	6.0lpm	15 seconds	1
Faucet*	8.0lpm	15 seconds	8
Kitchen Sink*	8.0lpm	15 seconds	6
Shower Head / Handheld Shower*	10.0lpm	8 minutes	1

**Reporting pressure for these fixtures shall be at 4.1 bar*

Notes:

- *Water fixtures do not include irrigation systems.*
- *Faucets / Taps installed for hand wash in rest rooms and dining 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.*
- *The baseline flows can be demonstrated at a flowing water pressure of 4.1 bar. Flowing water pressure of 4.1bar 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.*
- *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: Q2 =Q1 [square root of P2/P1] Where, Q1 & P1 are the known flow rate(Q1) and known pressure (P1). The resulting flow rate (Q2) is calculated for the pressure applied (P2).

- *Default occupancy shall be considered as 50% for male and 50% female..*
- *In case the plumbing fixtures provided in the guest rooms is differing from the common areas, separate calculations shall be submitted to demonstrate compliance in common areas considering FTE occupancy including visitors.*
- *Full Time Equivalent (FTE) represents a regular building occupant who spends 8 hours per day in the building. Part-time or overtime occupants have FTE values based on their hours per day divided by 8.*
- *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.*

(OR)

❖ **Option 2: Water Use Intensity** *(Applicable only for Existing Hotels)*

Projects shall calculate and demonstrate the Water Use Intensity (WUI) on per guest night basis as follows:

$$\text{WUI (litres/guest night)} = \frac{\text{Annual Water Consumption (litres)}}{\text{Annual Guest Nights}}$$

$$\text{Annual Guest Nights} = \sum(\text{Number of Guests staying each night})$$

Demonstrate that the annual water consumption (WUI) per guest night falls within the benchmark range as per the following table:

Type of the hotel	WUI (Liters/Guest Night)
Luxury Hotels	< 600
Business Hotels	< 400

Notes:

- *MICE Hotels with Convention Center shall demonstrate compliance as per Option 1: Water Efficient Plumbing Fixtures.*
- *Total Annual Water Consumption includes water from all sources (potable, recycled, and alternate sources) used within the facility.*
- *The project team shall consider recent 12 months data to calculate the WUI*

Documentation Required:

Precertification

Option 1: Water Efficient Plumbing Fixtures:

i. List of plumbing fixtures (flow and flush) proposed in public spaces(Lobby, Restaurant and other facilities)private spaces(guest rooms), with respective make & model and flow rates.
ii. Tentative FTE occupancy calculations for the staff and guests.
iii. Manufacturer cut-sheets/ brochures/ letters indicating the flow rates of the plumbing fixtures (flow and flush) at 4.1 bar flowing water pressure.
iv. Tentative calculation indicating the water savings over baseline.

Certification

Option 1: Water Efficient Plumbing Fixtures:

i. List of plumbing fixtures (flow and flush) installed in public spaces(Lobby, Restaurant and other facilities)private spaces(guest rooms), with respective make & model and flow rates.
ii. FTE occupancy calculations for the staff and guests.
iii. Manufacturer cut-sheets/ brochures/ letters indicating the flow rates of the plumbing fixtures (flow and flush) at 4.1 bar flowing water pressure.
iv. Calculation indicating the water savings over baseline.
v. Purchase invoice of plumbing fixtures (flow and flush) with make & model.
vi. Photographs of plumbing fixtures installed in the private and public spaces of the hotel.

Option 2: Water Use Intensity

i. Narrative describing the annual water consumption of the hotel, including the sources of water used within the facility.

ii. Annual water consumption data.

iii. Annual guest-night occupancy data with number of guests staying each night for 12 months.

iv. Calculations indicating Water Use Intensity (WUI) in litres/guest night.

New Hotel	Existing Hotel

Enhanced Rainwater Harvesting

WC Credit 1 **Credit Points: 3**

Intent:

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

Compliance Options:

- **Case A: Rainwater Harvesting**

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

(OR)

- **Case B: High Groundwater Table**

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

Criteria to arrive at 'One-day Rainfall' for Case A & B

Average Peak Month Rainfall (mm)	One-day Rainfall (% of Average Peak Month Rainfall)		
	1 Credit Point	2 Credit Points	3 Credit Points
Upto 250	12%	15%	18%
251 – 350	10%	12.5%	15%
351 – 500	8%	10%	12%
501 – 700	6%	7.5%	9%
701 & above	4%	5%	6%

***Notes*:**

- *One-day rainfall can be derived from 'percentage of average peak month rainfall' given in table.*
- *To arrive at average peak month rainfall, consider an average of at least last 5 years peak month rainfall (of the respective year).*
- *For rainfall information, refer Indian Meteorological Department data 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

- *Runoff volume = Surface area x Runoff Coefficient x Rainfall.*
- *For run-off coefficients for typical surface types, refer Table 3 - Run-off coefficients for Typical Surface Types in.*
- *Consider Rainwater Harvesting Guidelines (as and when available) from the National Building Code (NBC) of India, 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.*
- *Filtering of suspended solids shall be ensured by providing suitable filtering media before letting the water into the collection tanks, water bodies and municipal storm water drains.*

Exemplary Performance:

The project is eligible for exemplary performance under INN - Innovation and Exemplary Performance, if rainwater runoff from Roof & Non roof areas under Case A and from Roof areas under Case B is harvested, as listed below:

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

Average Peak Month Rainfall (mm)	One-day Rainfall (% of Average Peak Month Rainfall)
Upto 250	21%
251 – 350	17.5%
351 – 500	14%
501 – 700	10.5%
700 & above	7%

Documentation Required:

Precertification

Option 1: Rainwater Harvesting

i. Narrative describing the strategies proposed to capture/ harvest rain water from roof & non-roof areas
ii. Tentative calculations indicating the run-off volume captured/ harvested from roof and non-roof and the volume of rainwater harvesting pits/tanks.
iii. Conceptual external storm water drain layout highlighting the location of rain water harvesting - ponds, pits, storage tanks, etc., as applicable, including cross-sectional drawings
iv. Hydrogeological test report (approved by third-party) indicating the percolation capacity of the soil/ Project specific borewell test report indicating the percolation rate.

Option 2: High Groundwater Table

i. Narrative describing the strategies proposed to capture/ harvest rain water from roof areas
ii. Tentative calculations indicating the run-off volume captured/ harvested from roof and the volume of rainwater harvesting pits/tanks.
iii. Conceptual external storm water drain layout highlighting the location of rain water ha5rvesting - ponds, pits, storage tanks, etc., as applicable, including cross-sectional drawings
iv. Hydrogeological test report (approved by third-party) indicating the percolation capacity of the soil/ Project specific borewell test report indicating the percolation rate.

Certification

Option 1: Rainwater Harvesting

i. Narrative describing the strategies implemented to capture/ harvest rain water from roof & non-roof areas
ii. Calculations indicating the run-off volume captured/ harvested from roof and non-roof and the volume of rainwater harvesting pits/tanks.
iii. External storm water drain layout highlighting the location of rain water harvesting - ponds, pits, storage tanks, etc., as applicable, including cross-sectional drawings of rain water harvesting systems
iv. Hydrogeological test report (approved by third-party) indicating the percolation capacity of the soil/ Project specific borewell test report indicating the percolation rate
v. Photographs of rain water harvesting systems, taken during and after construction

Option 2: High Groundwater Table

i. Narrative describing the strategies proposed to capture/ harvest rain water from roof areas
ii. Tentative calculations indicating the run-off volume captured/ harvested from roof and the volume of rainwater harvesting pits/tanks.
iii. Conceptual external storm water drain layout highlighting the location of rain water harvesting - ponds, pits, storage tanks, etc., as applicable, including cross-sectional drawings
iv. Hydrogeological test report (approved by third-party) indicating the percolation capacity of the soil/ Project specific borewell test report indicating the percolation rate.

Enhanced Water Efficiency

New Hotel	Existing Hotel

WC Credit 2 **Credit Points: 4**

Intent:

Enhance plumbing fixture efficiency and optimize water performance by reducing potable water use and benchmarking consumption per occupied room.

Compliance Option:

❖ **Option 1: Water Efficient Plumbing Fixtures** **Credit Points: 4**

Use water efficient plumbing fixtures with individual flow and flush rates as indicated in the table below and demonstrate 5% of potable water savings over baseline, individually or in aggregate.

The baseline criteria is as below:

Fixture type	Maximum Flow Rate/ Consumption	Duration	Estimated Daily Uses per Occupant
Water Closet (Full Flush)	6.0 lpf	1 flush	1
Water Closet (Half Flush)	3.0 lpf	1 flush	4
Urinal*	3.0 lpf	1 flush	2 for male
Health faucet*	6.0lpm	15 seconds	1
Faucet*	8.0lpm	15 seconds	8
Kitchen Sink*	8.0lpm	15 seconds	6
Shower Head / Handheld Shower*	10.0lpm	8 minutes	1

**Reporting pressure for these fixtures shall be at 4.1 bar*

Points are awarded as below:

% Potable Water Savings over baseline	Credit Points
>5%	1
>10%	2
>15%	3
>20%	4

Notes:

- *Water fixtures do not include irrigation systems.*
- *Faucets / Taps installed for hand wash in rest rooms and dining 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.*
- *The baseline flows can be demonstrated at a flowing water pressure of 4.1 bar. Flowing water pressure of 4.1bar 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.*
- *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: Q2 =Q1 [square root of P2/P1] Where, Q1 & P1 are the known flow rate(Q1) and known pressure (P1). The resulting flow rate (Q2) is calculated for the pressure applied (P2).*
- *Default occupancy shall be considered as 50% for male and 50% female..*
- *In case the plumbing fixtures provided in the guest rooms is differing from the common areas, separate calculations shall be submitted to demonstrate compliance in common areas considering FTE occupancy including visitors.*
- *Full Time Equivalent (FTE) represents a regular building occupant who spends 8 hours per day in the building. Part-time or overtime occupants have FTE values based on their hours per day divided by 8.*
- *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.*

(OR)

❖ **Option 1: Water Use Intensity:** **Credit Points: 4**

(Applicable only for Existing Hotels)

Projects shall calculate and demonstrate the Water Use Intensity (WUI) on a per guest night basis as follows:

$$\text{WUI (litres/ guest night)} = \frac{\text{Annual Water Consumption (litres)}}{\text{Annual Guest Nights}}$$

$$\text{Annual Guest Nights} = \sum(\text{Number of Guests staying each night})$$

Demonstrate that the annual water consumption per guest night meets as per the table below:

Type of Hotel	WUI (Liters/Guest Night)
Luxury Hotel	< 600
Business Hotel	< 400

Points are awarded as below:

Percentage savings over WUI (Litres/Guest Night)	Points
5%	1
10%	2
15 %	3
20 %	4

Notes:

- *MICE Hotels with Convention Center shall demonstrate compliance as per Option 1: Water Efficient Plumbing Fixtures.*
- *Total Annual Water Consumption includes water from all sources (potable, recycled, and alternate sources) used within the facility.*
- *The project team shall consider recent 12 months data to calculate the WUI*

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if 25% of savings are achieved from baseline or WUI.

Documentation Required:

Precertification

Option 1: Water Efficient Plumbing Fixtures:

i. List of plumbing fixtures (flow and flush) proposed in public spaces (Lobby, Restaurant and other facilities) private spaces (guest rooms), with respective make & model and flow rates.
ii. Tentative FTE occupancy calculations for the staff and guests.
iii. Manufacturer cut-sheets/ brochures/ letters indicating the flow rates of the plumbing fixtures (flow and flush) at 4.1 bar flowing water pressure.
iv. Tentative calculation indicating the water savings over baseline.

Certification

Option 1: Water Efficient Plumbing Fixtures:

i. List of plumbing fixtures (flow and flush) installed in each building in the campus, with respective make & model and flow rates.
ii. FTE occupancy calculations for the staff and guests.
iii. Manufacturer cut-sheets/ brochures/ letters indicating the flow rates of the plumbing fixtures (flow and flush) at 4.1 bar flowing water pressure.
iv. Calculation indicating the water savings over baseline.
v. Purchase invoice of plumbing fixtures (flow and flush) with make & model.
vi. Photographs of plumbing fixtures installed in the private and public spaces of the hotel.

Option 2: Water Use Intensity

i. Narrative describing the annual water consumption of the hotel, including the sources of water used within the facility.
ii. Water consumption data of at least 12 months.
iii. Annual guest-night occupancy data with number of guests staying each night for 12 months.
iv. Calculations indicating the percentage savings over the Water Use Intensity (WUI) baseline in litres/guest night.

Water Efficient Dishwashing Systems

New Hotel	Existing Hotel

WC Credit 3 **Credit Points: 2**

Intent:

To minimize potable water consumption in kitchen operations by using high-efficiency dishwashing systems and practices that achieve effective cleaning with reduced water use per cycle.

Compliance Options:

❖ **Option 1: Efficient Dishwasher** **Credit Point: 1**

Projects shall demonstrate the adoption of water-efficient dishwashing systems as per the table below:

Type of Dishwasher	Threshold value
Undercounter	≤ 3.2 L/rack
Hood type	≤ 3.3 L/rack
Conveyor	≤ 2.6 L/rack

(AND/OR)

❖ **Option 2: Efficient Pot and Pan washer** **Credit Point: 1**

Projects shall demonstrate the adoption of water-efficient pot and pan washer as per the table below:

Type of washer	Threshold value
Pot Washer	≤ 2.6 L/ rack area (sq ft)

Note:

- *Rack area*- For Pot and Pan Utensil Washer, the rack area is defined based on the height and width (diameter) of the washer.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the type of dishwashing systems proposed (undercounter, hood type, conveyor, pot washer), along with the list of the systems proposed in the hotel.
ii. Manufacturer cut-sheets / brochures / technical data sheets of the systems proposed in the hotel indicating the water consumption (L/rack or L/sq.ft of rack area), wash cycle details, and test conditions.

Certification

i. Narrative describing the type of dishwashing systems installed (undercounter, hood type, conveyor, pot washer), along with the list of the systems provided in the hotel.
ii. Manufacturer cut-sheets / brochures / technical data sheets indicating the water consumption (L/rack or L/sq.ft of rack area), wash cycle details, and test conditions.
iii. Photographs of dishwashers and pot/pan washers installed in the kitchen areas.
iv. Purchase invoices indicating make and model of the installed dishwashing systems, wherever applicable.

Water Efficient Laundry Systems

New Hotel	Existing Hotel

WC Credit 4 **Credit Points: 2**

Intent:

To promote the use of high efficiency washing systems thereby minimizing potable water consumption in laundry operations.

Compliance Options:

❖ **Option 1: Laundry Washer** **Credit Point:1**

Demonstrate that the water consumption of the installed laundry system is as below:

$$\frac{\text{Water Consumption Per Cycle (litres)}}{\text{Washer Capacity } (m^3)} \leq 534.6 \text{ L/cycle/m}^3$$

(OR)

❖ **Option 2: Laundry Water Performance** **Credit Point:1**

(Applicable only for Existing Hotels)

Demonstrate that the annual water consumption of the in-house laundry facility/outsourced laundry facility is ≤13.5 litres/kg of laundry processed.

$$\text{Laundry Water Performance} = \frac{\text{Annual water consumption from all the Laundry System (litres)}}{\text{Annual Laundry Load (kg)}}$$

Notes:

- *For the water consumption calculations, consider all the laundry systems such as Washer Extractor, Hydro Washer, Tumble Dryer, Flat Ironing/ Calender Machine, Steam Press/ Form Finisher, Water softener, Equipment for Dry Cleaning, Boiler/Hot water generator etc.,*

(AND/OR)

❖ **Option 3: Laundry Water Recycling** **Credit Point: 1**

Demonstrate that the laundry system reuses treated rinse water for pre-wash cycles, thereby reducing overall potable water demand.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Laundry Washer

i. Narrative describing the laundry facility operations, type and list of equipment proposed along with the list of laundry washer proposed in the hotel.
ii. Tentative calculations indicating the water consumption of the proposed laundry washer (Litre/cycle/m3).
iii. Manufacturer cut-sheets / brochures / technical data sheets indicating the water consumption details (L/cycle), wash cycle details, and capacity.

Option 3: Laundry Water Recycling

i. Narrative describing the laundry facility operations and the water recycling process.
ii. Single line drawing of the water recycling tank
iii. Manufacturer cut-sheets / brochures / technical data sheets indicating the data regarding water recycling for pre-wash cycles.

Certification

Option 1: Laundry Washer

i. Narrative describing the laundry facility operations, type and list of equipment proposed along with the list of laundry washer proposed in the hotel
ii. Calculations indicating the water consumption of the installed laundry washer.
iii. Purchase invoice showing make and model of installed laundry washer, wherever applicable.
iv. Photographs of laundry washer.

Option 2: Laundry Water Performance

i. Narrative describing the laundry facility operations, type and list of equipment proposed along with the list of laundry systems proposed in the hotel.
ii. Calculations indicating the annual water consumption of the installed laundry systems (litres/kg).
iii. Water consumption data of laundry for at least 12 months.
iv. Photographs of laundry equipment installed at site, covering washer extractors, hydro washers, ironing units, and water reuse systems.

Option 3: Laundry Water Recycling

i. Narrative describing the laundry facility operations and the water recycling process.
ii. Single line drawing of the water recycling tank
iii. Manufacturer cut-sheets / brochures / technical data sheets indicating the data regarding water recycling for pre-wash cycles.

Irrigation Management

New Hotel	Existing Hotel

WC Credit 5 **Credit Point: 1**

Intent:

Reduce water demand for irrigation through water efficient management systems and techniques.

Compliance Options:

❖ **Option 1: Landscape Design:** **Credit Point: 1**

Demonstrate at least 20% water savings as compared to base case 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:

$$\text{Water Consumption for irrigation} = \frac{(\text{Monthly Evapotranspiration Rate} \times \text{Landscape Area} \times \text{Plant Factor})}{\text{Irrigation System Efficiency}}$$

The design case water requirement shall be demonstrated through the consumption quantity of non-potable water for irrigation and by indicating the percentage savings achieved over the baseline potable water requirement.

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

Plant Species	Plant Factor
Lawns(On ground /podium)	0.85
Native/ Naturalized 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

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

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 millimeters per day (mm/day) or millimeters 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).*
- *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.*

(OR)

❖ **Option 2: Irrigation System Performance** **Credit Point: 1**

(Applicable only for Existing Hotels)

Provide or install highly efficient irrigation systems and demonstrate that the irrigation water consumption is less than 5 litres/sq.m/day

$$\text{Average Water Consumption for irrigation} = \frac{\text{Annual irrigation water consumption (litres)}}{365 \text{ days} \times \text{Landscape Area (sq.m)}} < 5 \text{ litres/sq.m/day}$$

Notes:

- *For irrigation water consumption calculations, atleast 12 months of data to be considered.*

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if the project team demonstrates potable water savings of more than 30% due to efficient landscape design (or) irrigation water consumption less than 4 litres/sq.m/day

Documentation Required:

Precertification

i. Narrative describing the water efficient irrigation systems and techniques proposed in the project.
ii. Tentative calculation indicating the baseline irrigation water consumption and the design case non-potable water requirement, along with the percentage savings achieved.
iii. Conceptual landscape plan layout indicating landscape areas, planting zones,

and location of irrigation systems (sprinklers, drip lines, soil moisture sensors, timers, etc.) (Optional)

iv. Manufacturer cut-sheets/ brochures of the proposed water efficient irrigation systems and techniques. (Optional)

Certification

Option 1: Landscape Design

i. Narrative describing the landscape design approach, type of planting zones, and irrigation strategy adopted for the project.
ii. Calculation indicating the baseline irrigation water consumption and the design case non-potable water requirement, along with the percentage savings achieved.
iii. Site plan / layout indicating landscape areas, planting zones, and location of irrigation systems (sprinklers, drip lines, soil moisture sensors, timers, etc.).
iv. Manufacturer cut-sheets / brochures of irrigation components (sprinklers, drip emitters, controllers, sensors), wherever applicable.
v. Photographs of installed irrigation systems and controls at site.

Option 2: Irrigation System Performance

i. Narrative describing the landscape design, type of planting zones, and efficient irrigation strategy installed for the project.
ii. Site plan / layout indicating landscape areas, planting zones, and location of irrigation systems (sprinklers, drip lines, soil moisture sensors, timers, etc.).
iii. Irrigation water consumption data (atleast 12 months)
iv. Calculation indicating the average water consumption for irrigation
v. Photographs of installed irrigation systems and controls at site.

Waste Water Treatment

New Hotel	Existing Hotel

WC Credit 6 **Credit Points: 1**

Intent:

Treat wastewater generated on-site, so as to avoid polluting the receiving streams by safe disposal. Use treated wastewater, thereby reducing dependency on potable water.

Compliance Options:

❖ **Waste Water Treatment:**

Have an on-site treatment system to handle 100% of waste water generated in the hotels to the quality standards suitable for reuse, as prescribed by Central (or) State Pollution Control Board, as applicable.

Notes:

- *Waste water here refers to grey and black water.*
- *The credit point(s) can be claimed only if the waste water is treated in-situ and reused in-situ. In case the local authorities insist the project to divert waste water to a centralized /common waste water treatment plant outside the hotel, then the project can show compliance under WC Cr 7 by reusing treated wastewater from the centralized / common / any other waste water 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.

Documentation Required:

Precertification:

i. Narrative describing the on-site waste water treatment system proposed in the project
ii. Tentative daily and annual water balance of the project
iii. Site plan highlighting the location of on-site waste water treatment system, proposed in the project.

Certification:

i. Narrative describing the installed on-site waste water treatment system, along with the capacity & efficiency of treatment plant
ii. Daily and annual water balance of the project
iii. Site plan highlighting the location of installed on-site waste water treatment system
iv. Technical specifications and details of the wastewater treatment systems.
v. Photographs showing the on-site waste water treatment system installed

Alternative Water Performance

New Hotel	Existing Hotel

WC Credit 7 **Credit Points: 3**

Intent:

Use alternate water, thereby reducing dependence on potable water.

Compliance Options:

Demonstrate alternate water use for at least 20% of the total water consumption in the project for various applications including domestic, irrigation, cooling tower & water cooled DG make-up water etc..

$$\% \text{ Use of Alternate Water (Water Performance Ratio)} = \frac{\text{Alternate Water Consumption}}{\text{Total Water Consumption}}$$

Percentage of Alternate water to the Total water consumption	Points
>20%	1
>35%	2
>50%	3

Notes:

- *Domestic water here includes water consumption for flushing, handwashing, cooking, drinking, cleaning, laundry, 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 5.*
- *Potted plants shall not be considered under vegetation.*

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if the water performance ratio for the project is $\geq$ 65%.

Documentation Required:

Precertification:

i. Narrative describing the sources of alternate water proposed in the project (treated wastewater, rainwater, AC condensate, RO reject recovery, STP reuse, etc.) and the end-use applications.
ii. Tentative calculation indicating the percentage of alternative water proposed to be used to the total water consumption of the project.
iii. Tentative site layout indicating the alternate water distribution system (piping layout, storage tanks, reuse points).

Certification:

i. Narrative describing the sources of alternate water used in the project (treated wastewater, rainwater, AC condensate, RO reject recovery, STP reuse, etc.) and the end-use applications.

ii. Calculation indicating the percentage of alternative water used to the total water consumption of the project in the preceding 1 year.

iii. Site layout showing the alternate water distribution system (piping layout, storage tanks, reuse points).

iv. Photographs showing infrastructure for alternate water collection, treatment and reuse (STP, rainwater harvesting units, condensate recovery systems, treated water tanks, etc.).

Water Metering and Management

New Hotel	Existing Hotel

WC Credit 8 **Credit Points: 2,3**

Intent:

Encourage sub-metering to improve water performance and thereby save potable water.

Compliance Options:

❖ **Option 1: Water Monitoring** **Credit Point: 1**

Implement meter at water source along with sub-metering for at least three of the following water use applications, as applicable:

- Flushing
- Kitchen
- Dishwashing
- Laundry
- Treated water from STP
- Hot water
- RO water
- Cooling Tower
- Swimming Pool
- Spa & Sauna
- Irrigation
- Any other major source of water consumption

(AND/OR)

❖ **Option 2: Water Dashboard** **Credit Points: 1,2**

Demonstrate integration of atleast 4 digital/ smart water meters with a centralized water management system for real time monitoring to analyze water consumption, enabling continuous tracking of water performance and effective water management across the facility.

Points are awarded as below:

Type of Monitoring	New Hotels	Existing Hotels
Water Metering	1	1
Water Dashboard	1	2

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Water Metering:

i. Narrative describing the list of water meters proposed in the project.
ii. Schematic diagram showing the location of water meters, proposed in the project.
iii. Manufacturer cut-sheets/ specifications of the water meters proposed in the project.

Option 2: Water Dashboard

i. Narrative describing the real time water monitoring system proposed in the project.
ii. Manufacturer cut-sheets/ specifications of the real time water monitoring system proposed in the project
iii. Declaration letter confirming the provision of water dashboard and water meters for monitoring

Certification:

Option 1: Water Metering:

i. Narrative describing the water meters, installed in the project.
ii. Schematic diagram showing the location of water meters, installed in the project.
iii. Manufacturer cut-sheets/ brochures of the installed water meters
iv. Photographs of the installed water meters
v. Purchase invoice of the installed water meters

Option 2: Water Dashboard

i. Narrative describing the real time water monitoring system installed in the project.
ii. Manufacturer cut-sheets/ brochures of the real time water monitoring dashboard.
iii. Photographs of the installed water monitoring dashboard
iv. Purchase invoice of the installed water monitoring dashboard
v. Project commitment to share performance data for next three years on half-yearly basis.

ENERGY EFFICIENCY

New Hotel	Existing Hotel

Eco-Friendly Refrigerant

EE Mandatory Requirement 1

Intent:

Encourage use of eco-friendly refrigerants and fire suppression systems thereby minimizing the impact of global warming potential.

Compliance Options:

- **Eco-friendly Refrigerants**

  Use low GWP/ eco-friendly refrigerants in all HVAC&R equipment and system by following MoEFCC guidelines and regulation (Phase out & Phase down program)

  (AND)

- **Fire Suppression Systems**

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

Notes:

- *All equipment or system which uses refrigerant shall be considered.*
- *In the existing hotels wherein ODP based refrigerant/gases are still used, the complete phase-out plan shall be submitted for the next 3 years.*
- *Retrofitting/ Renovation/ new structural extension projects shall only use eco- friendly refrigerant/gas as per MoEFCC guidelines.*

Documentation Required:

Precertification

i. Demonstrate that the hotel has ecofriendly refrigerants and provide a comprehensive list of HVAC&R equipment proposed for the project along with the details of refrigerant charged.
ii. Manufacturer cut sheets/ brochures to show the type of refrigerants proposed in the HVAC&R systems
iii. Manufacturer cut sheets/ brochures to show the type of gases proposed in the fire suppression systems.

Certification:

i. Demonstrate that the hotel has eco-friendly refrigerants and provide a comprehensive list of HVAC&R equipment installed in the project along with the details of refrigerant charged.
ii. Manufacturer cut sheets/ brochures to show the type of refrigerants installed in the HVAC&R systems

iii. Manufacturer cut sheets/ brochures to show the type of gases installed in the fire suppression systems.
iv. Submit photographs of nameplates indicating the type of refrigerants installed in the HVAC&R systems.
v. Purchase invoice of the HVAC&R systems installed.

Minimum Energy Performance

New Hotel	Existing Hotel

EE Mandatory Requirement 2

Intent:

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

Compliance Options:

New Hotels:

- **Whole Building Simulation Approach**

  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:

- *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 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 project team must model the proposed HVAC system in the design case during simulation.*
- *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.*

Existing Hotels

- **Option 1 : Energy Performance Index (EPI):**

  Demonstrate that the annual energy consumption in the building is within the EPI (Energy Performance Index) limits as mentioned in the table below:

Star classification of the Hotel	Climatic Zone	EPI (kWh/sq.m/year)
1-3 star Hotel	Warm Humid	215
	Composite	201
	Hot & Dry	167
	Moderate	107
4/5 star hotel	Warm Humid	333
	Composite	290
	Hot & Dry	250
	Moderate	313

Notes:

- *Energy Performance Index (EPI): Annual energy consumption (kWh) / built up area (sq.m)*
- *All sources of energy including electricity, High Speed Diesel (HSD), Liquefied Petroleum Gas (LPG), Light Diesel Oil (LDO), Furnace Oil (FO), Piped Natural Gas (PNG), Thermic Fluid, and Renewable Energy (RE) shall be considered to calculate EPI.*
- *Hotels which are not star classified shall demonstrate compliance as per the applicable star classification by the Ministry of Tourism.*

(OR)

❖ **Option 2 : Energy Use Intensity (EUI):**

Demonstrate the energy use intensity (EUI) on per guest night basis using the following equation:

$$\textit{Energy Use Intensity(EUI)} = \frac{\text{Annual Energy Consumption } (kWh)}{\text{Annual Room Nights}}$$

$$\textit{Annual Room Nights} = \sum \textit{Total rooms occupied each night}$$

Demonstrate that the annual energy consumption per room occupied is within the EUI (Energy Use Intensity) limits as mentioned in the table below:

Type of Hotel	EUI (kWh/room night)
Luxury Hotel	<120
Business Hotel	<80

Notes:

- *All sources of energy including electricity, High Speed Diesel (HSD), Liquefied Petroleum Gas (LPG), Light Diesel Oil (LDO), Furnace Oil (FO), Piped Natural Gas (PNG), Thermic Fluid, and Renewable Energy (RE) shall be considered to calculate EUI.*
- *MICE Hotels with Convention Center shall demonstrate compliance as per Option 1: Energy Performance Index.*

(OR)

❖ **Option 3 : Calibrated Simulation**

Demonstrate energy compliance for building/ space through calibrated simulation following M&V Protocols such as IPMVP/FEMP/ASHRAE 14. Simulation model shall be calibrated based on whole building energy consumption and any major energy end use (chiller/ cooling energy consumption/ lighting/ ventilation/ etc.).

Project to develop As Is case and define baseline specifications/ parameters following ASHRAE 90.1 - 2022/ ECSBC 2024 to compare energy performance.

Documentation Required:

Precertification

Performance Based Approach (Whole Building Simulation):

i. Building simulation analysis with the following information, as applicable:
Note: The baselines should be as per Energy Conservation Sustainability Building Code 2024 (Or) ASHRAE Standard 90.1-2022 (without amendments), Appendix-G

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

   b) Note: The list should include all ECMs that differ from the baseline building performance to proposed building performance.

   c) Window-to-wall ratio (WWR) calculations for each building.

   d) Comparison between the baseline building performance and the proposed building performance with percentage improvement.

   e) The schedules for lighting power, thermostat set-point, HVAC system, miscellaneous equipment power, etc., for proposed building, as determined by the designer.

   f) Input & output report(s) from the simulation program or compliance software including a breakdown of energy usage for the following components, but not limited to: interior lighting and exterior lighting, space cooling & heat rejection equipment, space heating equipment, fans, other HVAC equipment (such as pumps), internal and external equipment loads, etc., The output reports should also show the unmet hours by the HVAC system, for both the proposed design and baseline building design.

   g) An explanation of any error messages noted in the simulation program output.

ii. Details of the glazing proposed along with the list of identified manufacturers and respective specifications of glazing (SHGC value, U-value and VLT, as applicable).

iii. Construction details and sectional drawings of the wall assembly proposed (including wall insulation material, etc.,), along with the U-value of the overall wall assembly.

iv. Construction details and sectional drawings of the roof assembly proposed (including roof insulation material, etc.,), along with the U-value of the overall roof assembly.

v. Details of the lighting fixture and controls proposed.
   a) Conceptual interior and exterior lighting layout. (Optional)

   b) LPD calculations, as per 'Building Area Method' or 'Space-by-Space method / Space function method'

   c) Declaration letter signed by the project owner/ lighting consultant indicating the proposed LPD.

vi. Details of the air-conditioning system proposed indicating the COP/ EER values.

vii. Details of the space heating system proposed indicating the COP/ EER values.

viii. Details of solar water heating system such as calculations, plans showing location of solar water heating system.

ix. Manufacturer brochures/ cut-sheets/ letters indicating the efficiency parameters for glazing (SHGC value, U-value and VLT), wall and roof insulation materials, lighting fixtures & systems, air-conditioning system and space heating system, solar water heating system, as applicable.

Certification:

New Hotels

Performance Based Approach (Whole Building Simulation):

i. Building simulation analysis with the following information, as applicable:
The baselines should be as *Energy Conservation Sustainability Building Code 2024 (Or) ASHRAE Standard 90.1-2022 (without amendments), Appendix-G*

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

   b) Note: The list should include all ECMs that differ from the baseline building performance to proposed building performance.

   c) Window-to-wall ratio (WWR) calculations for each building.

   d) Comparison between the baseline building performance and the proposed building performance with percentage improvement.

   e) The schedules for lighting power, thermostat set-point, HVAC system, miscellaneous equipment power, etc., for the proposed building, as determined by the designer.

   f) Input and output report(s) from the simulation program or compliance software including a breakdown of energy usage for the following components, but not limited to: interior lighting and exterior lighting, space cooling & heat rejection equipment, space heating equipment, fans, other HVAC equipment (such as pumps), internal and external equipment loads, etc., The output reports should also show the unmet hours by the HVAC system, for both the proposed design and baseline building design.

   g) An explanation of any error messages noted in the simulation program output.

ii. Details of the glazing along with the specifications (SHGC value, U-value and VLT).

iii. Construction details and sectional drawings of the wall assembly (including wall insulation material, etc.,), along with the U-value of the overall wall assembly.

iv. Construction details and sectional drawings of the roof assembly (including roof insulation material, etc.,), along with the U-value of the overall roof assembly.

v. Details of the lighting systems and controls including the list of interior and exterior lighting fixtures, with make and model.
   a) LPD calculations, as per 'Building Area Method' or 'Space-by-Space method / Space function method'.

   b) Interior and exterior lighting layout.

vi. Details of the air-conditioning system indicating the COP/ EER values, along with make and model.

vii. Details of the space heating system indicating the COP/ EER values, along with make and model.

viii. Details of solar water heating system such as calculations, plans showing location of solar water heating system.

ix. Other Energy Conservation Measures (ECMs) details.

x. Manufacturer brochures/ cut-sheets/ letters indicating the efficiency parameters for glazing (SHGC value, U-value and VLT), wall and roof insulation materials, lighting fixtures & systems, air-conditioning system and space heating system, solar water heating system, as applicable.

xi. 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.

Existing Hotels

Option 1- EPI

i. Narrative describing the annual energy consumption of the hotel, including all energy sources used within the facility.

ii. Electricity bills of the preceding 1 year.

iii. Details of all utilities consumption over the last 12 months. (Electricity, HSD, LPG, LDO, FO, PNG, Thermic Fluid and RE)

iv. Calculations indicating the percentage savings of EPI over baseline.

Option 2 - EUI

i. Narrative describing the annual energy consumption of the hotel, including all energy sources used within the facility (electricity, diesel, solar, etc.).

ii. Annual guest-night occupancy details indicating total rooms occupied per month and number of guests.

iii. Electricity bills of the preceding 1 year.

iv. Details of all utilities consumption over the last 12 months. (Electricity, HSD, LPG, LDO, FO, PNG, Thermic Fluid and RE)

v. Calculations indicating the percentage savings of EUI over baseline.

Option 3 – Calibrated Simulation

i. Submit Energy Performance Index (EPI) calculation along with monthly energy consumption for last 3 years (whole building and major energy end use) in the prescribed format.

ii. Submit project area details clearly indicating total built up area, total conditioned area, unconditioned area, and basement area.

iii. Energy Simulation Report along with specifications of ‘as is’ case and baseline (building envelope, interior & exterior lighting, HVAC, equipment, actual schedules). Report shall include error limits such as MBE and CvRMSE and at least 5 recommendations proposed/ implemented for energy conservation on monthly basis.

iv. Calculations indicating the percentage savings of EPI over baseline.

Commissioning Plan for Building Equipment & Systems

New Hotel	Existing Hotel

EE Mandatory Requirement 3

Intent:

Verify and ensure that the buildings 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 the design. The commissioning authority is also required to have at least 3 years prior experience in equipment & systems.
- Document owners brief in terms of performance expectations from the building.
- Submit a 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 system
  - CO2 monitoring system
  - Energy & Water metering
  - Building management system
  - DG sets or Back-up systems
  - Sewage treatment plant
  - Any other equipment 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.

Documentation Required:

Precertification:

i. Copy of an agreement signed between the owner and the third party commissioning authority.

ii. Narrative describing the experience of the commissioning authority, on similar projects.

iii. Owners brief in terms of performance expectations from the building.

iv. Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.

v. Measurement & verification plan for yearly reporting.

vi. Post-occupancy survey to verify occupants comfort (lighting levels, temperature, relative humidity, noise levels, etc.,).

Certification:

i. Copy of an agreement signed between the owner and the third party commissioning authority.

ii. Narrative describing the experience of commissioning authority, on similar projects.

iii. Owners brief in terms of performance expectations from the building.

iv. Commissioning plan describing how the building would be audited for its green building performance after occupancy, with regard to the equipment and systems.

v. 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.

vi. Measurement & verification plan for yearly reporting.

vii. Post-occupancy survey to verify occupants comfort (lighting levels, temperature, relative humidity, noise levels, etc.,).

viii. Report on green building performance of the equipment & systems listed in commissioning plan.

Enhanced Eco-Friendly Refrigerant

New Hotel	Existing Hotel

EE Credit 1 **Credit Points: 1**

Intent:

Encourage use of refrigerant/substances which are eco-friendly and have significantly lower global warming impact.

Compliance Options:

- **Eco- friendly Refrigerants**

  Use eco-friendly refrigerants or refrigerants with less than 2100 GWP in all HVACR equipment and system by following MoEFCC guidelines and regulation (Phase out & Phase down program)

Notes:

- *All equipment or system which uses refrigerant shall be considered.*
- *In existing hotels wherein refrigerants with GWP greater than 2100 are still used, the complete phase-out plan shall be submitted for the next 3 years.*
- *Retrofitting/ Renovation/ new structural extension projects shall only use eco- friendly refrigerant/gas as per MoEFCC guidelines*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Demonstrate that the refrigerants with GWP less than 2100 and provide a comprehensive list of HVAC&R equipment proposed to be installed in the project along with the details of refrigerant charged.

ii. Manufacturer cut sheet indicating the type of refrigerants proposed in the HVAC&R systems and to show the type of gases proposed in the fire suppression systems.

Certification:

i. Demonstrate that the hotel has refrigerants with GWP less than 2100 and provide a comprehensive list of HVAC&R equipment installed in the project along with the details of refrigerant charged

ii. Manufacturer cut sheet indicating the type of refrigerants installed in the HVAC systems and to show the type of gases installed in the fire suppression systems.

iii. Nameplate Photographs of the equipment indicating the refrigerant type

iv. Purchase invoice of the HVAC&R system

Enhanced Energy Performance

New Hotel	Existing Hotel

EE Credit 2 **Credit Points: 8**

Intent:

To achieve enhanced energy performance through optimization of system efficiency and operational practices.

Compliance Options:

New Hotels:

❖ **Whole Building Simulation Approach:**

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.

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

Percentage savings over ASHRAE 90.1 2022 base case	Percentage savings over ECSBC 2024 base case	Credit Points
1%	6 %	1
2%	8%	2
3%	10%	3
4%	12%	4
5%	14%	5
6%	16%	6
7%	18%	7
8%	20%	8

Existing Hotels:

❖ **Option 1: Energy Performance Index (EPI):**

Demonstrate that the annual energy consumption in the building has achieved savings over the baseline.

Star classification of the Hotel	Climatic Zone	EPI
1-3 star Hotel	Warm Humid	215
	Composite	201
	Hot & Dry	167
	Moderate	107
4-5 star hotel	Warm Humid	333
	Composite	290
	Hot & Dry	250
	Moderate	313

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

Percentage savings over baseline EPI	Credit Points
6 %	1
8%	2
10%	3
12%	4
14%	5
16%	6
18%	7
20%	8

Notes:

- *Energy Performance Index (EPI): Annual energy consumption (kWh) / built up area (sq.m)*
- *All sources of energy including electricity, High Speed Diesel (HSD), Liquefied Petroleum Gas (LPG), Light Diesel Oil (LDO), Furnace Oil (FO), Piped Natural Gas (PNG), Thermic Fluid, and Renewable Energy (RE) shall be considered to calculate EPI.*
- *Hotels which are not star classified shall demonstrate compliance as per the applicable star classification by the Ministry of Tourism.*

(OR)

❖ **Option 2: Energy Use Intensity (EUI):**

Demonstrate that the Energy Use Intensity in the building has achieved savings over the baseline.

Type of Hotel	EUI (kWh/room night)
Luxury Hotel	<120
Business Hotel	<80

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

Percentage savings over baseline EUI	Credit Points
6%	1
8%	2
10%	3
12%	4
14%	5
16%	6
18%	7
20%	8

Note:

- *All sources of energy including electricity, High Speed Diesel (HSD), Liquefied Petroleum Gas (LPG), Light Diesel Oil (LDO), Furnace Oil (FO), Piped Natural Gas (PNG), Thermic Fluid, and Renewable Energy (RE) shall be considered to calculate EUI.*
- *MICE Hotels with Convention Center shall demonstrate compliance as per Option 1: Energy Performance Index.*

(OR)

❖ **Option 3: Calibrated Simulation**

Demonstrate energy compliance for building/ space through calibrated simulation following M&V Protocols such as IPMVP/FEMP/ASHRAE 14. Simulation model shall be calibrated based on whole building energy consumption and any major energy end use (chiller/ cooling energy consumption/ lighting/ ventilation/ etc.).

Project to develop As Is case and define baseline specifications/ parameters following ASHRAE 90.1 - 2022/ ECSBC 2024 to compare energy performance.

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

Percentage savings over baseline EUI	Credit Points
6 %	1
8%	2
10%	3
12%	4
14%	5
16%	6
18%	7
20%	8

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if 9% savings are achieved from ASHRAE 90.1-2022 base case or 22% savings are achieved from ECSBC 2024 base case or EPI/EUI baseline.

Documentation Required:

Precertification

Performance Based Approach (Whole Building Simulation):

i. Building simulation analysis with the following information, as applicable:
Note: The baselines should be as per Energy Conservation Sustainability Building Code 2024 (Or) ASHRAE Standard 90.1-2022 (without amendments), Appendix-G

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

b) Note: The list should include all ECMs that differ from the baseline building performance to proposed building performance.

c)

d) Window-to-wall ratio (WWR) calculations for each building.
e) Comparison between the baseline building performance and the proposed building performance with percentage improvement.
f) The schedules for lighting power, thermostat set-point, HVAC system, miscellaneous equipment power, etc., for proposed building, as determined by the designer.
g) Input & output report(s) from the simulation program or compliance software including a breakdown of energy usage for the following components, but not limited to: interior lighting and exterior lighting, space cooling & heat rejection equipment, space heating equipment, fans, other HVAC equipment (such as pumps), internal and external equipment loads, etc., The output reports should also show the unmet hours by the HVAC system, for both the proposed design and baseline building design.
h) An explanation of any error messages noted in the simulation program output.

ii. Details of the glazing proposed along with the list of identified manufacturers and respective specifications of glazing (SHGC value, U-value and VLT, as applicable).

iii. Construction details and sectional drawings of the wall assembly proposed (including wall insulation material, etc.,), along with the U-value of the overall wall assembly.

iv. Construction details and sectional drawings of the roof assembly proposed (including roof insulation material, etc.,), along with the U-value of the overall roof assembly.

v. Details of the lighting fixture and controls proposed.
d) Conceptual interior and exterior lighting layout. (Optional)
e) LPD calculations, as per 'Building Area Method' or 'Space-by-Space method / Space function method'
f) Declaration letter signed by the project owner/ lighting consultant indicating the proposed LPD.

vi. Details of the air-conditioning system proposed indicating the COP/ EER values.

vii. Details of the space heating system proposed indicating the COP/ EER values.

viii. Details of solar water heating system such as calculations, plans showing location of solar water heating system.

ix. Manufacturer brochures/ cut-sheets/ letters indicating the efficiency parameters for glazing (SHGC value, U-value and VLT), wall and roof insulation materials, lighting fixtures & systems, air-conditioning system and space heating system, solar water heating system, as applicable.

Certification:

New Hotels

Performance Based Approach (Whole Building Simulation):

i. Building simulation analysis with the following information, as applicable:
The baselines should be as *Energy Conservation Sustainability Building Code 2024 (Or) ASHRAE Standard 90.1-2022 (without amendments), Appendix-G*

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

i) Note: The list should include all ECMs that differ from the baseline building performance to proposed building performance.

j) Window-to-wall ratio (WWR) calculations for each building.

k) Comparison between the baseline building performance and the proposed building performance with percentage improvement.

l) The schedules for lighting power, thermostat set-point, HVAC system, miscellaneous equipment power, etc., for the proposed building, as determined by the designer.

m) Input and output report(s) from the simulation program or compliance software including a breakdown of energy usage for the following components, but not limited to: interior lighting and exterior lighting, space cooling & heat rejection equipment, space heating equipment, fans, other HVAC equipment (such as pumps), internal and external equipment loads, etc., The output reports should also show the unmet hours by the HVAC system, for both the proposed design and baseline building design.

n) An explanation of any error messages noted in the simulation program output.

ii. Details of the glazing along with the specifications (SHGC value, U-value and VLT).

iii. Construction details and sectional drawings of the wall assembly (including wall insulation material, etc.,), along with the U-value of the overall wall assembly.

iv. Construction details and sectional drawings of the roof assembly (including roof insulation material, etc.,), along with the U-value of the overall roof assembly.

v. Details of the lighting systems and controls including the list of interior and exterior lighting fixtures, with make and model.

c) LPD calculations, as per ‘Building Area Method’ or ‘Space-by-Space method / Space function method’.

d) Interior and exterior lighting layout.

vi. Details of the air-conditioning system indicating the COP/ EER values, along with make and model.

vii. Details of the space heating system indicating the COP/ EER values, along with make and model.

viii. Details of solar water heating system such as calculations, plans showing location of solar water heating system.

ix. Other Energy Conservation Measures (ECMs) details.

x. Manufacturer brochures/ cut-sheets/ letters indicating the efficiency parameters for glazing (SHGC value, U-value and VLT), wall and roof insulation materials, lighting fixtures & systems, air-conditioning system and space heating system, solar water heating system, as applicable.

xi. 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.

Existing Hotels

Option 1- EPI

i. Narrative describing the annual energy consumption of the hotel, including all energy sources used within the facility (electricity, diesel, solar, etc.).

ii. Electricity bills of the preceding 1 year.

iii. Details of all utilities consumption over the last 12 months. (Electricity, HSD, LPG, LDO, FO, PNG, Thermic Fluid and RE)

iv. Calculations indicating the Energy Performance Index (EPI) in kWh/sq.m.

Option 2 - EUI

i. Narrative describing the annual energy consumption of the hotel, including all energy sources used within the facility (electricity, diesel, solar, etc.).

ii. Annual guest-night occupancy details indicating total rooms occupied per month and number of guests.

iii. Electricity bills of the preceding 1 year.

iv. Details of all utilities consumption over the last 12 months. (Electricity, HSD, LPG, LDO, FO, PNG, Thermic Fluid and RE)

v. Calculations indicating the Energy Use Intensity (EUI) in kWh/guest night.

Option 3 – Calibrated Simulation

i. Submit Energy Performance Index (EPI) calculation along with monthly energy consumption for last 3 years (whole building and major energy end use) in the prescribed format.

ii. Submit project area details clearly indicating total built up area, total conditioned area, unconditioned area, and basement area.

iii. Energy Simulation Report along with specifications of ‘as is’ case and baseline (building envelope, interior & exterior lighting, HVAC, equipment, actual schedules). Report shall include error limits such as MBE and CvRMSE and at least 5 recommendations proposed/ implemented for energy conservation on monthly basis.

Energy Efficient Kitchen System

New Hotel	Existing Hotel

EE Credit 3 **Credit Points: 3**

Intent:

To enhance kitchen energy efficiency through efficient equipment, partial electrification, and demand-controlled ventilation.

Compliance Options:

❖ **Option 1: Kitchen Electrification** **Credit Points: 2**

Demonstrate the percentage of commercial cooking equipment that are electric-powered to enhance operational energy efficiency, as shown in the following table.

$$\text{Electrification \%} = \frac{\text{Total Number of Electric Cooking Equipments}}{\text{Total Number of Cooking Equipments (All Utilities)}} \times 100$$

Type of the Facility	Kitchen Electrification Percentage
New Hotel	50%
Existing Hotel	30%

Notes:

- *Commercial cooking equipment such as cooktops, ovens, griddles, steam cookers, fryers, woks shall be considered.*
- *If Multi-Utility equipment is used, consider only the utility which is primarily used for cooking purposes for calculations.*

(AND/OR)

❖ **Option 2: Demand Control Kitchen Ventilation System** **Credit Point: 1**

Demonstrate that the project has a demand control kitchen ventilation system that is engineered to modulate the kitchen hood exhaust rate based on the cooking activity.

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if 70% of Kitchen is run by electrical appliances in New Hotels and 50% of Kitchen is run by electrical appliances in Existing Hotels, one point is awarded.

Documentation Required:

Precertification

Option 1: Kitchen Electrification

i. Narrative describing the type of kitchen equipment proposed (cooktops, ovens, griddles, steam cookers, fryers, woks), along with the list of proposed equipment with utility type.

ii. Tentative calculation indicating the kitchen electrification percentage.

iii. Manufacturer cut-sheets / data sheets of the proposed electrical kitchen equipment.

Option 2: Demand Control Ventilation

i. Narrative describing the demand-control kitchen ventilation design, including sensors, controls, and modulation strategy.

ii. Drawings of the proposed Demand Control Ventilation system.

Certification:

Option 1: Kitchen Electrification

i. Narrative describing the type of kitchen equipment installed (cooktops, ovens, griddles, steam cookers, fryers, woks), along with the list of proposed equipment with utility type.

ii. Calculation indicating the kitchen electrification percentage.

iii. Manufacturer cut-sheets / data sheets of the installed electrical kitchen equipment.

iv. Purchase invoices of the installed electrical kitchen equipment.

v. Photographs of the installed electrical kitchen equipment.

Option 2: Demand Control Ventilation

i. Narrative describing the demand-control kitchen ventilation design, including sensors, controls, and modulation strategy.

ii. Drawings of the installed Demand Control Ventilation system.

iii. Photographs of installed ventilation hoods, sensors, and controls.

iv. Purchase invoices of the installed Demand Control Ventilation.

Energy Efficient Cold Room

New Hotel	Existing Hotel

EE Credit 4 **Credit Point: 1**

Intent:

To enhance the energy efficiency of walk-in cold rooms and freezers by adopting thermally efficient insulation and high-performance refrigeration systems.

Compliance Options:

- **Option 1: Envelope Efficiency**

  Demonstrate that the U-value of walk-in cold room and walk- in freezer complies with the requirements specified in *IS 661:2000 – Table 1 / Annex B*.

Storage Temperature Range (°C)	Maximum U – Values W/m² K			
	Exposed Walls	Intermediate Walls/Ceilings	Roofs	Floors
-30 to -20	0.17	0.47	0.14	0.20
-20 to -15	0.21	0.47	0.17	0.23
-15 to -4	0.23	0.47	0.21	0.27
-4 to 2	0.27	0.58	0.24	0.29
2 to 10	0.35	0.93	0.29	0.47
10 to 16	0.47	0.93	0.29	0.64
16 and above	1.28	1.47	1.05	1.63

(AND)

- **Option 2: Cold Room Efficiency**

  Demonstrate the best practices followed for efficient energy use in the walk-in cold rooms and freezers provided in the facility.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Envelope Efficiency

i. Narrative describing the proposed walk-in cold room and freezer layout, storage temperature ranges, insulation strategy, and the overall approach adopted to enhance energy efficiency.

ii. List of all walk-in cold rooms and freezers proposed in the facility, indicating make, model, storage temperature range, refrigeration system type, and key control features

iii. U-value calculation demonstrating compliance with IS 661:2000 – Table 1 / Annex B for exposed walls, intermediate walls/ceilings, roofs, and floors.

iv. Insulation manufacturer data sheets showing thermal conductivity (k-value), thickness, and construction details.

Option 2: Cold Room efficiency

i. Narrative describing the energy-efficient measures proposed.

Certification

Option 1: Envelope Efficiency

i. Narrative describing the installed walk-in cold room and freezer layout, storage temperature ranges, insulation strategy, and the overall approach adopted to enhance energy efficiency.

ii. List of all walk-in cold rooms and freezers installed in the facility, indicating make, model, storage temperature range, refrigeration system type, and key control features

iii. U-value calculation demonstrating compliance with IS 661:2000 – Table 1 / Annex B for exposed walls, intermediate walls/ceilings, roofs, and floors.

iv. Insulation manufacturer data sheets showing thermal conductivity (k-value), thickness, and construction details.

v. Photographs of the walk-in cold rooms and freezers installed in the facility.

Option 2: Cold Room efficiency

i. Narrative describing the energy-efficient measures implemented.

ii. Photographs of the energy efficient measures implemented.

Domestic Hot Water System

New Hotel	Existing Hotel

EE Credit 5 **Credit Points: 2**

Intent:

To optimize energy use by adopting renewable or high-efficiency systems for meeting hot water demand.

Compliance Options:

❖ **Option 1: Solar Water Heating Systems:** **Credit Point: 1**

Install solar water heating system to meet at least 20% of the total hot water demand.

(AND/OR)

❖ **Option 2: Energy Efficient Hot Water Systems:** **Credit Point: 1**

- Provide high-efficiency heat pump systems to meet the hot water requirement with a minimum Coefficient of Performance (COP) as below:

Heat Pump	COP Range
Air Source Heat Pump	≥ 3.5
Water Source Heat Pump	≥ 4.5
Ground Source Heat Pump	≥ 3.0

(OR)

- Provide Boilers of at least 95% efficiency to meet the hotel hot water requirement.

(OR)

- Provide BEE 5 star Geysers catering to meet the hotel hot water requirement.

Note:

- *All types of boilers shall be considered to demonstrate compliance.*

Exemplary Performance:

The project is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Solar Water Heating system

i. Narrative describing the total hot water demand proposed for the facility.

ii. Tentative calculation demonstrating that the proposed solar water heating system meets at least 20% of the total hot water demand.

iii. Schematic layout/SLD indicating proposed solar water heating systems.

iv. Manufacturer cut sheets / data sheets of the proposed solar water heating system.

Option 2: Energy Efficient Hot water system

i. Narrative and list of the energy efficient hot water systems proposed in the facility (solar water heater, heat pumps, boilers, geysers), indicating make, model, capacity, and utility type.

ii. Schematic layout/SLD indicating proposed energy efficient hot water systems.

iii. Manufacturer cut-sheets / data sheets of the proposed energy efficient hot water systems indicating the efficiency values.

Certification:

Option 1: Solar Water Heating system

i. Narrative describing the total hot water demand installed in the facility.

ii. Calculations demonstrating that the installed solar water heating system meets at least 20% of the total hot water demand.

iii. Layout/SLD indicating installed solar water heating systems.

iv. Manufacturer cut sheets / data sheets of the installed solar water heating system.

v. Purchase invoice of the installed solar water heating system.

vi. Photographs of the installed solar water heating system.

Option 2: Energy Efficient Hot water system

i. Narrative and list of the energy efficient hot water systems installed in the facility (solar water heater, heat pumps, boilers, geysers), indicating make, model, capacity, and utility type.

ii. Layout/SLD indicating installed energy efficient hot water systems.

iii. Manufacturer cut-sheets / data sheets of the installed energy efficient hot water systems indicating the efficiency values.

iv. Purchase invoice of the installed energy efficient hot water systems

v. Photographs of the installed energy efficient hot water systems.

Energy Efficient Laundry System

New Hotel	Existing Hotel

EE Credit 6 **Credit Points: 1**

Intent:

To improve energy performance in laundry operations through efficient equipment and optimized operational practices.

Compliance Options:

❖ **Option 1: Laundry Washer** **Credit Point: 1**

Demonstrate that the in-house laundry system has washer efficiency ≥16.05 kWh/cycle/ m³

$$\text{Washer Efficiency} = \frac{\text{Total energy consumption per cycle (kWh)}}{\text{Capacity of the clothes container } (m^3)}$$

(OR)

❖ **Option 2: Laundry Dryer** **Credit Point: 1**

Demonstrate that the Combined Energy Factor (CEF) of the dryer installed in the hotel is as per the following table:

$$\text{Combined Energy Factor} = \frac{\text{Total energy consumption per cycle (kWh)}}{\text{Capacity of the clothes container (kg)}}$$

Type of the Dryer in the facility	CEF value
Vented Gas Dryer	≥ 0.63 kWh/kg
Ventless or Vented Electric *Model-Standard or 4.4cu.ft and above*	≥ 0.56 kWh/kg
Ventless or Vented Electric *Model- Compact, 120V*	≥ 0.58 kWh/kg
Vented or Ventless Electric *Model- Compact, 240V*	≥ 0.64 kWh/kg

(OR)

❖ **Option 3: Laundry Energy Performance** **Credit Point: 1**

(Applicable only for Existing Hotel)

Demonstrate that the annual energy consumption of the in-house laundry facility/ outsourced laundry facility is ≤1.45 kWh/kg of laundry processed.

$$\text{Laundry Energy Performance} = \frac{\text{Annual energy consumption from all the Laundry System (kWh)}}{\text{Annual Laundry Load (kg)}}$$

Note:

- *For the energy consumption calculations, consider all the laundry systems such as Washer Extractor, Hydro Washer, Tumble Dryer, Equipment for Dry Cleaning, Water softener, Boiler/Hot water generator etc.,*

(OR)

❖ **Option 4: Low Temperature Laundry** **Credit Point: 1**

(Applicable only for Existing Hotel)

Demonstrate that at least 80% of the annual laundry load is washed using low-temperature wash cycles (≤40°C).

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Laundry Washer

i. Narrative describing the proposed laundry washer- type and capacity.

ii. Tentative calculation indicating the laundry washer efficiency.

iii. Manufacturer cut-sheets / data sheets showing washer capacity (m^3) and total energy consumption per cycle (kWh).

Option 2: Laundry Dryer

i. Narrative describing the proposed laundry dryer- type and capacity.

ii. Tentative calculation indicating the laundry dryer combined energy factor (CEF).

iii. Manufacturer cut sheets / data sheets indicating dryer type (vented/ventless, gas/electric), capacity (kg), and total energy consumption per cycle (kWh).

Certification

Option 1: Laundry Washer

i. Narrative describing the laundry washer installed, along with list indicating type and capacity.

ii. Calculation indicating the laundry washer efficiency.

iii. Manufacturer cut sheets / data sheets showing washer capacity (m^3) and total energy consumption per cycle (kWh).

iv. Photographs of the Laundry washer installed.

v. Purchase invoice of the Laundry washer installed.

Option 2: Laundry Dryer

i. Narrative describing the laundry dryer installed, along with list indicating type and capacity.

ii. Calculation indicating the laundry dryer combined energy factor (CEF).

iii. Manufacturer cut sheets / data sheets indicating dryer type (vented/ventless, gas/electric), capacity (kg), and total energy consumption per cycle (kWh).

iv. Photographs of the Laundry dryer installed.

v. Purchase invoice of the Laundry dryer installed.

Option 3: Laundry performance

i. Narrative describing the list of laundry systems considered such as Washer Extractor, Hydro Washer, Tumble Dryer, Equipment for Dry Cleaning, Water softener, Boiler/Hot water generator etc., to calculate the laundry performance of the hotel.

ii. Log book or Excel based data indicating load, energy consumption and chemical consumption data.

iii. Photographs of all the laundry systems considered for the calculations.

Option 4: Low Temperature Laundry

i. Narrative describing the low temperature laundry process practiced.

ii. Laundry Standard Operating Procedure (SOP) indicating wash cycles operated at ≤ 40 °C.

iii. Laundry Equipment specifications or program settings showing availability of low-temperature wash cycles.

iv. Operational records / laundry logs demonstrating that ≥80% of annual laundry load is processed at ≤ 40 °C

Energy Efficient Dishwashing System

New Hotel	Existing Hotel

EE Credit 7 **Credit Point: 1**

Intent:

To enhance kitchen energy efficiency by using high-performance dishwashing system and pot washing equipment.

Compliance Options:

Install energy-efficient dishwashing system as per the below table:

Type of Dishwasher	Threshold for Energy consumption
Under Counter / Hood Type	≤ 0.35 kWh/rack
Conveyor type	≤ 0.36 kWh/rack
Pot and Pan Utensil Washer	≤ 0.55 + 0.05 × rack area* (sq.ft)

Note:

- *Rack area*- For Pot and Pan Utensil Washer, the rack area is defined based on the height and width (diameter) of the washer.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the type of dishwashing systems proposed (undercounter, hood type, conveyor, pot washer), along with the list of the systems proposed in the hotel.

ii. Manufacturer cut-sheets / brochures / technical data sheets of the systems proposed in the hotel indicating the energy consumption (kWh/rack area) and cycle details.

Certification

i. Narrative describing the type of dishwashing systems installed (undercounter, hood type, conveyor, pot washer), along with the list of the systems provided in the hotel.

ii. Manufacturer cut-sheets / brochures / technical data sheets of the systems proposed in the hotel indicating the energy consumption (kWh/rack area) and cycle details.

iii. Photographs of dishwashers and pot/pan washers installed in the kitchen areas.

iv. Purchase invoices indicating make and model of the installed dishwashing systems, wherever applicable.

Energy Recovery Systems

New Hotel	Existing Hotel

EE Credit 8 **Credit Point: 2**

Intent:

To improve overall energy efficiency by recovering and reusing thermal energy from building equipment in hotel operations.

Compliance Options:

Recover and reuse thermal energy from at least two of the following systems for use in hotel operations *(1 credit point for each measures, maximum 2 points)*

- HVAC system (e.g., condenser heat recovery, heat recovery wheel)
- Kitchen exhaust systems (e.g., exhaust air heat recovery)
- Laundry systems (e.g., wastewater or dryer exhaust heat recovery)
- Dishwasher systems (e.g., rinse-water heat recovery)
- Hot water systems (e.g., flue gas heat recovery)
- DG sets (e.g., generator exhaust heat recovery)

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance if heat recovery is implemented for more than 3 systems.

Documentation Required:

Precertification

i. Narrative describing the energy recovery strategy adopted by the hotel, including the list of the energy recovery systems (HVAC, kitchen, laundry, dishwasher, hot water, DG exhaust) proposed in the facility from which heat is recovered, the recovery mechanism, and the end-use applications.

ii. Manufacturer cut-sheets / data sheets of the proposed energy recovery system (heat exchangers, heat recovery wheels, condensers, exhaust recovery units, etc.)

iii. System schematic / flow diagram showing the source of waste heat, heat recovery device, and end-use application.

Certification

i. Narrative describing the energy recovery strategy adopted by the hotel, including the list of the energy recovery systems (HVAC, kitchen, laundry, dishwasher, hot water, DG exhaust) installed in the facility from which heat is recovered, the recovery mechanism, and the end-use applications.

ii. Manufacturer cut-sheets / data sheets of the proposed energy recovery system (heat exchangers, heat recovery wheels, condensers, exhaust recovery units, etc.)

iii. System schematic / flow diagram showing the source of waste heat, heat recovery device, and end-use application.

iv. Photographs of the energy recovery systems installed in the hotel.

v. Purchase invoice of the Energy recovery systems installed.

Periodic Energy Assessment

New Hotel	Existing Hotel

EE Credit 9 **Credit Points: 2**

Intent:

Ensure continuous energy performance in the hotel project, so as to achieve benefits during the lifetime of the facility.

Compliance Options:

- **Option 1: Energy Assessment** **Credit Point: 1**

  Demonstrate that the project has carried out a detailed Energy Assessment once in 2 years following guidelines by Bureau of Energy Efficiency

  (AND/OR)

- **Option 2: Energy Efficiency Measures** **Credit Point: 1**

  Demonstrate the energy efficiency measures implemented/ proposed to be implemented.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Certification:

i. Energy assessment reports following guidelines by Bureau of Energy Efficiency indicating opportunities/ measures for energy conservation in the hotel.

ii. Action plan initiated after the audit to reduce energy consumption or list of proposed Energy efficiency measures.

iii. Documentary proof to validate the implemented energy efficiency measures for the hotel.

New Hotel	Existing Hotel

Energy Performance

EE Credit 10 **Credit Points: 2,3**

Intent:

Encourage metering and monitoring of equipment on continuous basis to ensure benchmarks are met or exceeded.

Compliance Options:

❖ **Option 1: Energy Metering** **Credit Points: 1**

Demonstrate submetering for at least three of the following energy use applications, as applicable:

- Interior & Common area lighting
- Exterior area lighting
- Municipal water pumping
- Ground water pumping
- Treated waste water pumping
- Renewable energy generation
- Power backup systems (Generators sets, Gas turbines, etc.,)
- Elevators, Escalators, Travelators, etc.,
- BTU meter for chilled water consumption
- Any other energy consuming equipment and systems

(AND/OR)

❖ **Option 2: Building Management Systems** **Credit Points: 1,2**

Demonstrate that the building management system is in place to monitor and control atleast three of the following systems, as applicable *(1 credit point for New Hotels, 2 credit points for Existing Hotels):*

- Air-conditioning management system
- Lighting management system
- Renewable energy management system
- Elevator management system
- Fresh air monitoring system
- CO2 control and monitoring system

The project team shall 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.

Points are awarded as below:

Type of Monitoring	New Hotels	Existing Hotels
Energy Metering	1	1
Building Management System	1	2

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification:

Option 1: Energy Metering

i. Narrative describing the energy meters proposed in the project.

ii. Single line drawing showing the proposed energy meters.

Option 2: Building Management System

i. Narrative describing the building management system proposed in the project, to control and monitor equipment and systems.

ii. Technical datasheet of the building management system proposed in the project.

iii. Declaration letter from the project owner/ developer stating that the project will provide the annual total building energy consumption data to IGBC.

Certification

Option 1 : Energy Metering

i. Narrative describing the energy meters installed in the project.

ii. Single line drawing showing the energy meters.

iii. Photographs of the energy meters installed in the project.

Option 2: Building Management System

i. Narrative describing the building management system installed in the project, to control and monitor equipment and systems.

ii. I/O summary of the BMS system installed.

iii. Photographs showing the systems monitored through the building management system.

iv. Project commitment to share performance data for next three years on half yearly basis.

MATERIAL STEWARDSHIP

Waste Segregation & Circularity

New Hotel	Existing Hotel

MS Mandatory Requirement 1

Intent:

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

Compliance Options:

- **Dry and Wet Waste**

  Provide separate bins to collect dry waste (paper, plastic, metals, glass, sanitary Waste etc.,) and wet waste (Food), at all the guest rooms and common areas of the hotel, as applicable. Divert the collected waste to a centralized facility, which is easily accessible for hauling.

(AND)

- **Hazardous Waste**

  In addition to dry and wet waste bins, provide separate bins for safe disposal of the following hazardous waste, at the centralized facility:

  - Batteries
  - e-waste
  - Lamps
  - Used cooking oil (if collected for recycling into biofuel)
  - Medical waste, if any

(AND)

- **Responsible Handling**

  Demonstrate contracts with recyclers for responsible handling of waste generated in the facility

Note:

- *The project shall follow the Hazardous Waste Management Guidelines as prescribed by the Ministry of Environment & Forest (MoEF), Government of India.*
- *Common areas include lobbies, restaurants, banquet halls, pools, corridors, etc.*

Documentation Required:

Precertification

i. Narrative describing the strategies proposed to:
   a. Segregate and divert dry waste (paper, plastic, metals, glass, etc.,) and wet waste from the building(s) to the easily accessible common facility
   b. Divert dry & wet waste and other waste such as batteries, e-waste, lamps, and medical waste (if any), from the common facility
ii. Conceptual floor plans showing the location of waste bins at floor level and common areas, as applicable
iii. Conceptual Site/ floor plan showing the location of the centralized facility for segregation of waste
iv. Identify list of potential recycler/vendors for responsible handling of waste generated in the hotel

Certification

i. Narrative describing the strategies proposed to:
   a. Segregate and divert dry waste (paper, plastic, metals, glass, etc.,) and wet waste from the building(s) to the easily accessible common facility
   b. Divert dry & wet waste and other waste such as batteries, e-waste, lamps, and medical waste (if any), from the common facility
ii. Floor plans showing the location of waste bins at floor level and common areas, as applicable
iii. Site/ floor plan showing the location of the centralized facility for segregation of waste
iv. Contract agreement with recyclers for responsible handling of waste generated in the hotel
v. Photographs showing the waste bins provided at floor level and centralized facility.

Sustainable Procurement

New Hotel	Existing Hotel

MS Credit 1 **Credit Points: 2**

Intent:

Demonstrate the commitment to purchase products or services with lowest environmental impact in hotel operations

Compliance Options:

❖ **Option 1: Sustainable Procurement** **Credit Point: 1**

Demonstrate that the hotel has adopted green purchasing for the following: *(1 credit point for two measures)*

- ➢ Use recycled or FSC-certified paper for menu cards, guest bills, brochures, and visiting cards.
- ➢ Use non-bleached/chlorine-free toilet paper.
- ➢ Use recycled and/or non-bleached tissue paper (facial tissues, napkins, paper towels).
- ➢ Procure bed, bath, and table linen made from sustainable textiles such as organic cotton, Better Cotton, bamboo-based fabrics, or other certified sustainable materials.

(AND/OR)

❖ **Option 2: Plastic Free Hospitality** **Credit Point: 1**

Replace at least 75% of single-use plastics with Reusable/Eco-friendly alternatives in the following areas:

- ➢ Cutleries & utensils in restaurants
- ➢ F&B service (straw, stirrers, takeaway packaging)
- ➢ Conference & banquet service
- ➢ Guest amenities
- ➢ Water bottles
- ➢ Laundry bags
- ➢ Garbage bags/liners

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Sustainable Procurement

i. Narrative describing the hotel's approach towards sustainable procurement along with the list of identified products proposed for implementation in the project

ii. Manufacturer brochure/ Technical datasheets of identified products proposed for implementation in the project
iii. Sample photographs of identified products proposed for implementation in the project
iv. Declaration/ Policy statement indicating the hotel's commitment to adopt sustainable procurement practices for identified materials.

Option 2: Plastic Free Hospitality

i. Narrative describing the hotel's approach towards achieving a plastic-free environment along with the list of single-use plastic items proposed to be replaced and identified eco-friendly alternatives.
ii. Manufacturer brochure / technical datasheets of proposed eco-friendly alternatives.
iii. Sample photographs of identified eco-friendly alternatives
iv. Declaration / policy statement from hotel management committing to eliminate single-use plastics in hotel operations.

Certification

Option 1: Sustainable Procurement

i. Narrative describing the sustainable procurement practices adopted in the project along with the list of sustainable products procured and implemented in the project.
ii. Purchase invoices indicating procurement of recycled, FSC-certified, or non-bleached materials.
iii. Product specification sheets confirming recycled content, FSC certification, or chlorine-free properties.
iv. Photographs of implemented products within the hotel premises

Option 2: Plastic Free Hospitality

i. Narrative describing the measures implemented to achieve a plastic-free environment along with the list of eco-friendly alternatives implemented in place of single-use plastics.
ii. Purchase invoices for reusable or biodegradable products adopted in the project
iii. Manufacturer brochure / technical datasheets of the eco-friendly alternatives adopted in the project.
iv. Photographs of eco-friendly alternatives adopted in the project

Waste Footprint Reduction

New Hotel	Existing Hotel

MS Credit 2 **Credit Points: 2**

Intent:

To reduce single-use products and promote adoption of reusable products to minimize the overall negative environmental impact

Compliance Options:

❖ **Option 1: Waste Reduction Measures** **Credit Points: 2**

❖ **Digital and Paperless Operations** *(Any one measure)* **Credit Point: 1**

- Implement paperless operations such as digital check-in/check-out and e-billing.
- Provide digital menus accessible through QR codes in restaurants, guest rooms, and banquets.

(AND/OR)

➢ **Green Guest Service** (Any two measures) **Credit Point: 1**

- Use reusable and non-plastic water containers for drinking water in guest rooms, restaurants, and banquets.
- Replace paper tissue napkins in dining areas with reusable cloth napkins.
- Limit to use of five individually packaged single-serving food and beverage items (e.g., milk/cream, coffee, tea, sugar, butter, honey, jam, yoghurt, cheese, condiments, etc.). *Note: Additional items may be provided on guest request to reduce packaging waste.*
- Provide guest toiletries through refillable dispensers instead of single-use plastic containers.

(OR)

❖ **Option 2: Waste Intensity Index** **Credit Points: 2**

(Applicable only for Existing Hotels)

Projects shall calculate and demonstrate the Waste Intensity on a per room night basis as follows:

$$\text{Waste Intensity (kg/guest night)} = \frac{\text{Annual Dry Waste/Food Waste Generation (kg)}}{\text{Annual Guest Nights}}$$

$$\text{Annual Guest Nights} = \sum(\text{Number of Guests staying each night})$$

Thresholds for Waste Intensity Index

Waste Intensity	Luxury Hotel	Business Hotel	Credit Points
Dry Waste (kg/guest night)	≤ 0.4	≤ 0.3	1
Food Waste (kg/guest night)	≤ 0.8	≤ 0.5	1

Note:

- *Dry Waste: Dry waste shall include non-biodegradable waste generated from hotel operations such as paper, cardboard, plastics, glass, metals, tetra packs, packaging materials, and other recyclable or non-organic waste from guest rooms and common areas.*
- *Food Waste: Food waste shall include biodegradable waste generated from food service operations such as kitchen preparation waste, spoiled or expired food, buffet leftovers, and plate waste from restaurants and banquets.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Waste Reduction Measures

i. Narrative describing the hotel's approach towards waste reduction and identified waste reduction measures proposed for implementation in the hotel
ii. Sample photographs of proposed measures proposed for implementation in the hotel
iii. Declaration / policy statement from hotel management committing to implement waste reduction initiatives

Certification

Option 1: Waste Reduction Measures

i. Narrative describing the waste reduction measures implemented in the project.
ii. Purchase invoices for products adopted in the project
iii. Photographs of waste reduction measures implemented in the project.

Option 2: Waste Intensity Index

i. Narrative describing the waste management practices implemented and achieved waste intensity levels.
ii. Calculations indicating the waste intensity (kg per room night) for dry waste and food waste.
iii. Log records/books indicating the dry waste & food waste generated for 12 months.
iv. Annual guest-night occupancy data with number of guests staying each night for 12 months.

Green Products

New Hotel	Existing Hotel

MS Credit 3 **Credit Points: 2**

Intent:

To use eco-labelled building material, product, equipment, and technology to reduce the negative environmental impacts.

Compliance Options:

❖ **Option 1: Eco-labelled Products** **Credit Points: 2**

(Applicable only for New Hotels)

Ensure that at least 20% of the total building materials and products (by cost) used in the hotel are GreenPro or Type 1 eco-labelled products.

% of Eco labelled Products Procured	Credit Points
≥ 20%	1
≥ 30%	2

(OR)

❖ **Option 2: Green Operation & Maintenance** **Credit Points: 2**

(Applicable only for Existing Hotels)

Ensure that the project uses at least two passive or active green building materials, products, and equipment that are certified by GreenPro or Type 1 eco-labelled.

Number of Certified Green Products Used	Credit Points
2	1
4	2

Notes:

- *Passive Products & Materials include glazing, insulation, paints & coatings, adhesives & sealants, fly ash blocks, cement, concrete, composite wood, certified new wood, housekeeping chemicals, false ceiling materials, flooring materials, furniture, gypsum based products, high reflective materials & coatings, etc.*
- *Active Products include Electrical systems (Lighting Systems & Controls, Pumps & Motors, etc.,), Mechanical systems (unitary air conditioners, etc.,), Plumbing Fixtures (faucets, showers, etc.,)*
- *Material/ products procured should be quantifiable with respect to the cost of operation & maintenance.*

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if at least 40% of the total building materials and products (by cost) used in the hotel are GreenPro or Type 1 eco-labelled products or at least 6 passive or active green building materials, products, and equipment that are certified by GreenPro or Type 1 eco-labelled.

Documentation Required:

Precertification

Option 1: Eco-labelled Products

i. Narrative describing the hotel's approach towards adoption of eco-labelled products and strategies proposed in the hotel
ii. Tentative calculations indicating the cost of GreenPro certified products and the total cost of materials/products purchased, in percentage.
iii. GreenPro / Type 1 eco-label certificates or equivalent third-party certifications for green building materials, products, and equipment proposed in the hotel.

Certification

Option 1: Eco-labelled Products

i. Narrative describing the hotel's approach towards adoption of eco-labelled products and strategies implemented in the hotel
ii. Calculations indicating the cost of GreenPro certified products and the total cost of materials/products purchased, in percentage.
iii. GreenPro / Type 1 eco-label certificates or equivalent third-party certifications for green building materials, products, and equipment procured in the hotel
i. Photographs of certified materials, equipment, and products procured in the hotel.

Option 2: Green Operation & Maintenance

ii. Narrative describing the strategies to source passive or active green building materials, products, and equipment, that are certified by IGBC under Green Product Certification Programme or by a third-party agency approved by IGBC. *Note: The narrative should also include the list of passive or active green building materials, products, and equipment, with certification details.*
iii. Purchase Invoices and Test certificates/ reports of the passive or active green building materials, products, and equipment.
iv. GreenPro / Type 1 eco-label certificates or equivalent third-party certifications for passive or active green building materials, products, and equipment procured in the hotel.
v. Photographs of certified materials, equipment, and products procured in the hotel.

Organic Waste Management

New Hotel	Existing Hotel

MS Credit 4 **Credit Points: 2**

Intent:

Ensure effective waste management, so as to avoid organic waste being sent to landfills and to improve sanitation & health.

Compliance Options:

- **Option 1: Aerobic Digestion** **Credit Points: 2**
  - **Treatment** **Credit Point:1**

    Install an aerobic digestion system (eg: organic waste converter) for handling 100% of the organic waste generated in the hotel and utilize the manure generated within the hotel.
  - **System Efficiency** **Credit Point:1**

    Demonstrate that the aerobic digestion system meets the equipment efficiency defined below.

$$\text{Equipment Efficiency} = \frac{\text{Rated Power (kW)}}{\text{Rated Capacity (kg)}} < 0.06 \text{ kW/kg}$$

Notes:

- *If the project is having an organic waste convertor in an enclosed room, then design such area with exhaust system, self-closing door, deck-to-deck partition/ hard ceiling*
- *For existing hotels, the average food waste and landscape waste generation shall be determined based on actual waste generation records for the previous 12 months, and expressed as average waste generated per day (kg/day).*
- *For new hotels, food waste can be considered as 0.2 kg per person or as prescribed by the local byelaw, for all occupants.*
- *For new hotels, landscape waste can be considered as 0.2 kg per sq.m per day (i.e. 0.2 kg/ sq.m/ day).*

(OR)

- **Option 2: Anaerobic Digestion (Waste to Energy)** **Credit Points: 2**

  Install on-site biogas treatment (WTE) system for handling more than 90% of the organic waste generated in the hotel.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Aerobic Digestion

i. Narrative describing the quantities and strategies proposed to handle food waste and garden waste generated in the hotel and the on-site organic waste treatment system
ii. Conceptual site plan/floor plan highlighting the location of on-site organic waste treatment system in the project
iii. Manufacturer brochure/ cut-sheet of the organic waste treatment system highlighting make, model, capacity (kg/day), and rated power (kW/kg) proposed in the project
iv. Tentative calculations indicating the organic waste treatment system efficiency (kW/kg)
v. Tentative calculations indicating the percentage (%) of organic waste treated by the proposed on-site organic waste treatment system.

Option 2: Anaerobic Digestion

i. Narrative describing the waste to energy treatment system and details of how the biogas produced is utilized
ii. Conceptual site plan/ floor plan highlighting the location of waste to energy treatment system proposed in the project
iii. Tentative calculations indicating the quantity of organic waste (Food and Garden) treated to the total quantity of organic waste generated, in percentage
iv. Manufacturer brochure/ cut-sheet of the organic waste treatment system proposed in the project

Certification

Option 1: Aerobic Digestion

i. Narrative describing the strategies to handle Food waste and Garden waste generated in the hotel, and the on-site organic waste treatment system
ii. Site plan/Floor plan highlighting the location of on-site organic waste treatment system installed in the project
iii. Calculations indicating the organic waste treatment system efficiency (kW/kg)
iv. Calculations indicating the percentage (%) of organic waste treated by the installed on-site organic waste treatment system.
v. Manufacturer brochure/ cut-sheet of the installed organic waste treatment system highlighting make, model, capacity (kg/day), and rated power (kW/kg).
vi. Purchase invoice/ payment receipts of the installed organic waste treatment system.
vii. Photographs showing the installed organic waste treatment system

Option 2: Anaerobic Digestion

i. Narrative describing the waste to energy system and details of how the biogas produced is utilized

ii. Site plan/ Floor plan highlighting the location of waste to energy treatment system proposed in the project
iii. Calculations indicating the quantity of organic waste (Food and Garden) treated to the total quantity of organic waste generated, in percentage
iv. Logs indicating the quantity of biogas produced from the plant
v. Manufacturer cutsheet of the organic waste treatment system proposed in the project
vi. Purchase invoice/ payment receipts of the installed waste to energy.
vii. Photographs showing the installed waste to energy system.

CARBON NEUTRALITY

Embodied Carbon Optimization

New Hotel	Existing Hotel

CN Credit 1 **Credit Points: 4**

Intent:

Encourage the use of low carbon building materials, thereby, minimizing the associated environmental impacts

Compliance Options:

❖ **Option 1: Low Carbon Building Materials** **Credit Point: 2**

Demonstrate the use of low carbon building materials through one of the following measures:

➢ **Local Materials** **Credit Point: 1**

Ensure at least 30% of the total building materials (by cost) used in the hotel are manufactured locally within a distance of 400 km.

Notes:

- *Local Materials are those which are manufactured within a distance of 400 km. Assembly of building materials shall not be considered.*
- *Extraction and processing of raw materials need not be considered as part of this credit calculation.*

(AND/OR)

➢ **Materials with Recycled Content** **Credit Point: 1**

Use materials with recycled content such that the total recycled content constitutes at least 20% of the total cost of building materials used in the hotel.

Notes:

- *Recycled Content is the content in a material or product derived from recycled materials versus virgin materials. Recycled content can be materials from recycling programs (post-consumer) or waste materials from the production process or an industrial/agricultural source (pre-consumer or post-industrial).*

(OR)

❖ **Option 2: Whole Building Life Cycle Analysis** **Credit Points: 4**

Perform whole building Life Cycle Analysis (LCA) to estimate carbon emissions as per ISO standard 14040, and report the following for the overall built-up area of the project:

- Embodied carbon in kg CO_2e per square meter

- Operational carbon in kg CO2e per year considering a minimum building lifespan of 50 years.

Analyze the Embodied Carbon emissions of the proposed design and identify the major contributors – stagewise, building elements, materials etc.

LCA System Boundary	Credit Points
Building Envelope & Structure	2
Whole Building (Envelope, Structure, Interiors, MEP)	4

Notes:

- *Embodied carbon is the result of supply chain (transport), extraction, processing, and manufacturing of building materials, prior to construction and during construction or renovation activities.*
- *Operational carbon is from the use of energy, materials and generation of waste during building operations and renovations.*
- *The project team shall use Life Cycle Analysis (LCA) tools to calculate the embodied carbon of each material considering embodied carbon of the respective materials and embodied carbon resulting from transportation from the manufacturing plant to the project site.*
- *The LCA shall be carried out using a standard recognized software tool.*
- *The proposed case embodied carbon (in kg of CO2e per square meter) shall be calculated considering all the proposed civil materials as per the Bill of Quantities (BOQ).*
- *The embodied carbon of respective materials can be sourced from Environmental Protection Declarations (EPDs) or Eco-labelling programmes such as GreenPro or equivalent. 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.*
- *Carbon owing to material transportation from manufacturing plant to project site shall also be considered while calculating the embodied carbon for the respective material.*

Exemplary Performance:

The credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Local Materials:

i. Narrative describing the strategies proposed to source local materials. The narrative shall also include a tentative list of local materials with manufacturer's name, specifying approximate distance from the project site to the place of manufacturing unit.

ii. Tentative calculations indicating the local materials sourced (in terms of cost) to the total materials cost of the project, in percentage.

Materials with Recycled Content:

i. Narrative describing the strategies proposed to source materials with recycled content. Along with a tentative list of materials specifying recycled content, with the manufacturer's name.

ii. Tentative calculations indicating the materials with recycled content (in terms of cost) to the total materials cost of the project, in percentage.

iii. Manufacturer letters/ cut-sheets/ brochures indicating the recycled content in the materials. (Optional)

Whole Building Life Cycle Analysis:

i. Drawings of the proposed design

ii. Bill of Quantities of proposed design (architecture and civil).

iii. Detailed input materials report and detailed LCA output report of proposed design.

iv. Supporting documentation indicating the embodied carbon of the materials used in the proposed design (e.g. EPD).

v. Transport details (like distance, mode of transport and fuel type) with supporting documents.

vi. Manufacturer brochure/ Technical datasheets of proposed materials (indicating recycled content etc).

Certification

Local Materials:

i. Narrative describing the strategies implemented to source local materials. The narrative should also include the list of local materials with manufacturer's name, specifying approximate distance from the project site to the place of manufacturing unit.

ii. Calculations indicating the local materials sourced (in terms of cost) to the total materials cost of the project, in percentage.

iii. Manufacturer letters indicating the distance from the project site to the place of manufacturing unit.

Materials with Recycled Content:

i. Narrative describing the strategies implemented to source materials with recycled content. The narrative should also include the list of materials specifying recycled content, with manufacturer name.

ii. Calculations indicating the materials with recycled content (in terms of cost) to the total materials cost of the project, in percentage.

iii. Project specific Manufacturer letters/ cut-sheets/ brochures indicating the recycled content in the materials sourced.

Whole Building Life Cycle Analysis:

i. Drawings of the proposed design

ii. Bill of Quantities of proposed design (architecture and civil).

iii. Detailed input materials report and detailed LCA output report of proposed design.

iv. Supporting documentation indicating the embodied carbon of the materials used in the proposed design (e.g. EPD).

v. Transport details (like distance, mode of transport and fuel type) with supporting documents.

vi. Manufacturer brochure/ Technical datasheets of proposed materials (indicating recycled content etc).

vii. Purchase invoice of the building materials used in the project.

viii. Photographs of the building materials used in the project.

Green Power

New Hotel	Existing Hotel

CN Credit 2 **Credit Points: 5**

Intent:

Encourage the use of renewable energy to reduce use of fossil fuel energy.

Compliance Options:

❖ **Option 1: On-site Renewable Energy** **Credit Point: 1**

Install on-site renewable energy system to off-set fossil-fuel based energy consumption. Credit points are awarded based on the percentage of maximum admissible onsite Renewable Energy (RE) system installation.

The maximum admissible onsite RE installation shall be equal to the capacity limit imposed by the State Government/ local Authority or at least 100 Wp/sq.m. for exposed roof area, whichever is less.

Points are awarded as below:

% of maximum admissible onsite RE installation	Credit Points
100 %	1

(OR)

❖ **Option 2: Combination of On-site & Off-site Renewable Energy** **Credit Points: 5**

Demonstrate that on-site RE generation and (or) wheeling of off-site renewable energy replace grid energy use by at least 20% of total annual energy consumption of the project.

Points are awarded as below:

Renewable energy as a percentage of total annual energy consumption	Credit Points
20 %	1
40 %	2
60 %	3
80 %	4
90 %	5

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.*
- *The purchased Renewable Energy Certificates (RECs) will not be acceptable to show compliance.*
- *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.*
- *Off-site renewable energy so generated shall be counted only once.*
- *Hydro power projects with 25 MW or lesser size shall only be considered under this credit.*

Exemplary Performance

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: On-Site Renewable Energy

i. Narrative describing the on-site renewable energy systems proposed in the project
ii. Conceptual drawing showing the location of the renewable energy systems
iii. Feasibility study report with technical details of the renewable energy systems
iv. Tentative calculations indicating the percentage of annual energy consumption met by proposed onsite renewable energy generation

Option 2: Combination of On-site & Off-site Renewable Energy

i. Narrative describing the on-site renewable energy systems / off-site renewable energy systems proposed in the project
ii. Conceptual drawing showing the location of the renewable energy systems
iii. Power Purchase Agreement signed between the project owner/ developer and the green power developer (Or) Extract copy from Organization policy/ annual report, signed by the top management, highlighting the organization's policy on off-site renewable energy
iv. 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 hotel
v. Feasibility study report with technical details of the on-site & off-site renewable energy systems

Certification

Option 1: On-Site Renewable Energy

i. Narrative describing the installed renewable energy systems, along with the technical details

ii. Drawing showing the location of installed renewable energy systems

iii. Calculations indicating the percentage of annual energy consumption met by onsite renewable energy generation

iv. Purchase invoice of the on-site renewable energy system installed

v. Photographs showing the renewable energy systems

Option 2: Combination of On-site & Off-site Renewable Energy

i. Narrative describing the on-site renewable energy systems / off-site renewable energy systems proposed in the project

ii. Drawing showing the location of the renewable energy systems

iii. Power Purchase Agreement signed between the project owner/ developer and the green power developer

iv. 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 hotel

v. Purchase invoice of the on-site renewable energy system installed

vi. Photographs showing the renewable energy systems

Promotion of Local Economy

New Hotel	Existing Hotel

CN Credit 3 **Credit Points : 1, 2**

Intent:

Encourage local procurement of goods and services thereby strengthening the local economy.

Compliance Options:

❖ **Option 1: Local Employment** **Credit Point: 1**

Demonstrate that the hotel employs at least 50% of its workforce from the local area, as detailed in the table below.

Location	Distance Criterion
Hotels in hilly areas, arid and semi-arid areas	150 km radius
All other Hotels	100 km radius

(AND/OR)

❖ **Option 2: Local Procurement** **Credit Point: 1**

(Applicable only for Existing Hotels)

Demonstrate that the hotel purchases 50% of food products (by weight/cost) locally, as detailed in the table below.

Location	Distance Criterion
Hotels in hilly areas, arid and semi-arid areas	200 km radius
All other Hotels	50 km radius

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if at least 75% of employees working in the hotel are locals or 60% of food products are purchased locally.

Documentation Required:

Precertification

Option 1: Local Employment

i. Narrative describing the measures adopted by the hotel to promote the local economy through employment.
ii. Tentative calculations indicating the proposed percentage of hotel employees to be recruited locally.
iii. Declaration letter from the project owner/ HR stating the percentage of employees to be recruited locally.

Option 2: Local Procurement

i. Narrative describing the measures adopted by the hotel to promote the local economy through procurement.
ii. Tentative calculations indicating the proposed percentage of food products (by cost/weight) to be purchased locally.
iii. Declaration letter from the project owner stating the percentage of food products (by cost/weight) to be purchased locally.

Certification

Option 1: Local Employment

i. Narrative describing the measures adopted by the hotel to promote the local economy through employment.
ii. Calculations indicating the proposed percentage of hotel employees recruited locally.
iii. Summary of employee records with permanent residence details.

Option 2: Local Procurement

i. Narrative describing the measures adopted by the hotel to promote the local economy through procurement.
ii. Calculations indicating the proposed percentage of food products (by cost/weight) purchased locally.
iii. Aerial maps indicating the distance of sourcing for food products.
iv. Purchase invoice of the food products purchased.

Sustainable Transportation

New Hotel	Existing Hotel

CN Credit 4 **Credit Points: 2**

Intent:

Encourage use of eco friendly transport, to reduce associated carbon emissions.

Compliance Options:

Demonstrate the following measures: (1 Credit Point for each measure, maximum 2 Credit Points)

❖ **Option 1: Public Transport** **Credit Point: 1**

Provide access to a public transportation facility (bus-stop/ intra-city railway station), within 800 meters walking distance from the hotel and display information regarding the same at the hotel lobby.

(AND/OR)

❖ **Option 2: Low Emitting Vehicles** **Credit Point: 1**

Operate or have a contract in place for low-emitting vehicles, such as electric or CNG-powered vehicles, for hotel operations which include:

- Guest transportation services catering to at least 5% of guests. (e.g., airport pickup/drop, sightseeing, or in-city travel)

  (OR)

- Hotel logistics and service vehicles (e.g., housekeeping, laundry, and goods movement)

  (OR)

- Shuttle services catering to at least 20% of the staff

(AND/OR)

❖ **Option 3: Electric Vehicle Charging Infrastructure** **Credit Point: 1**

Provide Electric Vehicle Charging Infrastructure (EVCI) within the site, catering to at least 5% of the total parking capacity (excluding visitor parking).

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Public Transport

i. Site vicinity map (with scale) highlighting the location of intra-city railway station (or) a bus-stop, within 800 meters from the campus entrance(s). Also, show pedestrian access from the entrance(s) to the public transport facility

ii. Photographs showing the intra-city railway station (or) a bus-stop. (Optional)

Option 2: Low Emitting Vehicles

i. Narrative describing the strategy adopted by the hotel for operating low emitting vehicles for guest transportation.

ii. Details of logistics and service vehicles to be operated for the hotel.

iii. Draft copy of contract agreement that will be signed between the project owner and the transportation service provider. (as applicable)

iv. Tentative calculations indicating the percentage of guests/staff catered through low emitting vehicles.

v. Declaration from owner stating the percentage of guests/staff catered through low emitting vehicles.

vi. Declaration from owner confirming that low emitting vehicles will be operated for hotel logistics and service vehicles

Option 3: Charging Infrastructure for Electric Vehicles

i. Conceptual parking layouts highlighting the location of preferred parking spaces with electric charging facilities, for electric vehicles.

ii. Tentative calculations indicating the percentage of parking capacity proposed to be provided with electric charging Infrastructure

iii. Manufacturer cut sheet of the proposed electric charging infrastructure

Certification

Option 1: Public Transport

i. Site vicinity map (with scale) highlighting the location of intra-city railway station (or) a bus-stop, within 800 meters from the campus entrance(s). Also, show pedestrian access from the entrance(s) to the public transport facility

ii. Photographs showing the intra-city railway station (or) a bus-stop

Option 2: Low Emitting Vehicles

i. Narrative describing the strategy adopted by the hotel for operating low emitting vehicles for guest transportation.

ii. Copy of contract agreement signed between the project owner and the transportation service provider (as applicable)

iii. Details of logistics and service vehicles being operated for the hotel.

iv. Calculations indicating the percentage of guests/staff catered through low emitting vehicles

v. Purchase invoice of the low emitting vehicles used by the hotel.

vi. Photographs of the low emitting vehicles used by the hotel.

Option 3: Charging Infrastructure for Electric Vehicles

i. Parking layouts highlighting the location of preferred parking spaces with electric charging facilities, for electric vehicles.

ii. Calculations indicating the percentage of parking capacity provided with electric charging points to demonstrate credit compliance.

iii. Manufacturer cut sheet of the installed electric charging facility

iv. Purchase invoice of the electric charging facility installed in the project, indicating the type and number of charging points provided.

v. Photographs showing electric charging facilities with signages, provided in the project.

GHG Inventorisation and Roadmap

New Hotel	Existing Hotel

CN Credit 5 **Credit 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 Net Zero goals, establish a science-based decarbonization roadmap, and publicly disclose progress to enhance accountability and transparency.

Compliance Options:

❖ **Option 1: Decarbonization at Project Level** **Credit Points: 2**

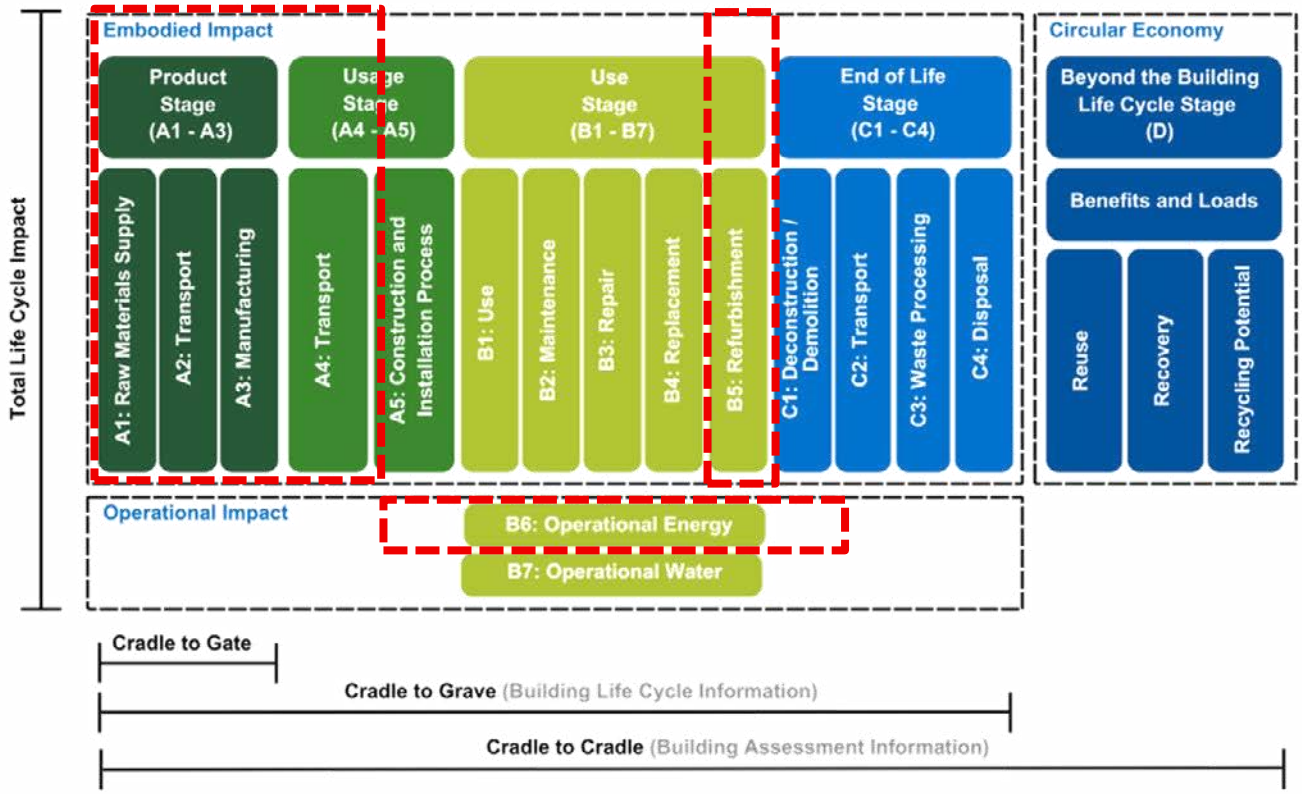
(Applicable for New Hotels)

Perform whole building Life Cycle Analysis (LCA) to estimate carbon emissions 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 CO_2e/m^2 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
- *Life Cycle Embodied carbon/GHG emissions can be considered from CN NR 1.*
- *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 CN CR 1.*



Methodology for Roadmap:

1. Goal and Scope
   - Define what the decarbonization plan intends to achieve and its boundaries.
   - Set climate goals (e.g., Net Zero by 2040)
2. Decarbonization Strategy & Action Plan
   Based on the LCA, develop targeted carbon reduction interventions. The strategies can include:
   - Renewable energy integration
   - Low-carbon materials for renovation/ operation or circular economy approaches
   - Operational efficiency, green transport, etc.

(OR)

❖ **Option 2: Decarbonization at Organisation Level** **Credit Points: 2**

(Applicable only for Existing Hotels)

Account GHG emissions pertaining to Direct (Scope-1) and Indirect (Scope-2 & Scope-3) emissions in consistence with ISO 14064-1: 2018

- Provide a detailed report indicating the baseline carbon emissions and the strategies taken to reduce the carbon footprint from Scope-1, Scope-2 & Scope-3 emissions year-on-year.

- Provide a detailed action plan with strategies to reduce the carbon footprint from Scope-1, Scope-2 & Scope-3 emissions year-on-year to achieve the target.

.

Notes:

- *The mitigation measures shall include, but not limited to operational improvement, resource efficiency, mode of transport, switch to cleaner fuel, on-site renewable energy, fleet optimization, technology upgradation, carbon offsets etc as applicable*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Decarbonization at Project Level

i. Narrative describing the approach adopted for Whole Building Life Cycle Analysis (LCA) and key assumptions considered.
ii. LCA methodology report in accordance with ISO 14040, defining study scope, boundaries, and life cycle stages (Modules A1–A3, A4, B4, B6).
iii. Bill of Quantities (BOQ) indicating all major building materials used in the project.
iv. Summary table showing embodied and operational carbon emissions (kg CO_2e/m² BUA).
v. Details of software tool used for LCA with reference to data sources
vi. Decarbonisation roadmap outlining targets, key strategies, and intended interventions (renewable energy, efficiency, materials, etc.).

Certification

Option 1: Decarbonisation at Project Level

i. Final LCA report demonstrating embodied and operational carbon emissions in accordance with ISO 14040 standards.
ii. Supporting BOQ and material data used for LCA inputs.
iii. Calculation sheet showing total GHG emissions (kg CO_2e/m²) and annual operational GHG (kg CO_2e/year).
iv. Details of software tool used for LCA with reference to data sources
v. Copy of decarbonisation roadmap highlighting targeted reduction measures, timelines, and implementation plan.

Option 2: Decarbonisation at Organization Level

i. GHG Accounting report verified by third-party with the following information - boundary assumptions, type of control, type of GHGs, GHG emission statement (including Scope 1, 2 & 3),
ii. Summary of year-on-year emission reduction (absolute and intensity metrics) along with details of strategies taken to reduce the carbon footprint
iii. Decarbonisation roadmap with clear strategies, action plan, and monitoring framework.

ENHANCED GUEST EXPERIENCE

ENVIRONMENT FOR GUEST WELLBEING

HEALTHY FOOD AND BEVERAGES

GREEN HOUSEKEEPING

INNOVATION AND EXEMPLARY PERFORMANCE

ENVIRONMENT FOR GUEST WELLBEING

Minimum Fresh Air Ventilation

New Hotel	Existing Hotel

EGW Mandatory Requirement 1

Intent:

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

Compliance Options:

❖ **Case A: Mechanically Ventilated Spaces**

Demonstrate that the fresh air ventilation in all regularly occupied areas to meet 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.*
- *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.*

(AND/OR)

❖ **Case B: Non Air-conditioned Spaces**

Provide 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:

Design Criteria for Openable Windows and / or Doors to the Exteriors

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

Notes:

- *For sliding windows/ doors, only openable 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.*

General Notes:

- *Regularly occupied areas are those where guests, staff, or visitors spend significant time as part of their stay or work, regardless of the number of days occupied in a year. These areas shall include only enclosed spaces.*
- *Regularly occupied areas include guest rooms, lobbies, restaurants, meeting and banquet halls, reception areas, lounges, spas, gyms, and staff workstations.*
- *Non-regularly occupied areas include toilets, store rooms etc.,*

Documentation Required:

Precertification

Case A: Mechanically Ventilated Spaces

i. Narrative describing the proposed ventilation design and strategy.
ii. Tentative calculations of the fresh air intake volumes in all regularly occupied spaces, for each zone, as per Ventilation Rate Procedure prescribed in ASHRAE Standard 62.1 - 2022
iii. Conceptual HVAC layout indicating fresh air supplied to each regular occupied areas highlighting the location of AHU's, TFA's and fresh air intake louvers.
iv. Specification sheets of the proposed fresh air ventilation system.

Case B: Non Air-conditioned Spaces

i. Narrative describing the proposed ventilation design and strategy
ii. Tentative floor plans with window and door schedule.
iii. Building elevations showing operable windows and doors.
iv. Tentative calculations indicating the openable area of windows and doors to the carpet area, for each of the regularly occupied spaces in percentage.

Certification

Case A: Mechanically Ventilated Spaces

i. Narrative describing the ventilation design and strategy adopted.
ii. Calculations of the fresh air intake volumes in all regularly occupied spaces, for each zone, as per Ventilation Rate Procedure prescribed in ASHRAE Standard 62.1 – 2022
iii. HVAC layout indicating fresh air supplied to each regular occupied areas highlighting the location of AHU's, TFA's and fresh air intake louvers.
iv. Specification sheets of the fresh air ventilation system installed.
v. Purchase invoice of the fresh air ventilation system installed.

vi. Photographs of the fresh air ventilation system and fresh air intakes provided.

Case B: Non Air-conditioned Spaces

i. Narrative describing the natural ventilation strategy adopted.
ii. Floor plans with window and door schedule.
iii. Building elevations showing operable windows and doors.
iv. Calculations indicating the openable area of windows and doors to the carpet area, for each of the regularly occupied spaces in percentage.
v. Photographs showing the operable windows and doors to the exteriors, in all the regularly occupied areas.

Tobacco Smoke Control

New Hotel	Existing Hotel

EGW 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:

- Demonstrate that dedicated smoking rooms are designed with an effective tobacco smoke capture and removal system and complies with the following:
  - The ventilation requirements for smoking room shall be followed as per ASHRAE 62.1 2022.
  - Direct exhaust to the outdoors, without recirculation to other spaces.
  - Enclosed smoking room with impermeable deck-to-deck partitions on all sides.
  - Maintain negative pressure of at least 5 Pascals (Pa), measured as an average pressure differential with respect to adjacent spaces.
- Provide no smoking signages in other common areas

Notes:

- *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 ey or fresh air intakes.*

Documentation Required:

Precertification

i. Narrative describing the design parameters considered for the smoking room.
ii. Ventilation calculations for smoking room as per ASHRAE 62.1 2022
iii. Provide drawings of ventilation system indicating separate exhaust duct for the dedicated smoking rooms.
iv. Details of how pressurization are maintained in smoking rooms.
v. Declaration indicating the strategies proposed (eg. signages, posters, brochures, hotel guidelines, etc,) to communicate no smoking in common areas to all the hotel occupants

Certification

i. Narrative describing the design parameters considered for the smoking room.
ii. Ventilation calculations for smoking room as per ASHRAE 62.1 2022
iii. Provide drawings of ventilation system indicating separate exhaust duct for the dedicated smoking rooms.
iv. Details of how pressurization are maintained in smoking rooms.
v. Photographs of the smoking rooms.
vi. Photographs of no smoking signages in common areas.

Daylighting

New Hotel	Existing Hotel

EGW Credit 1 **Credit Points: 1**

Intent:

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

Compliance Options:

The project can choose any one of the following options to show compliance:

❖ **Option 1: Simulation Approach** **Credit Point: 1**

Using daylight simulation based on the Useful Daylight Illuminance (UDI) approach, demonstrate that at least 50% of the guest areas maintain illuminance values within the range of 100 lux to 2,000 lux for at least 90% of the potential daylight hours.

Notes:

- *Measure illuminance at a work plane height of 0.8 m above the finished floor.*
- *Potential daylight hours refer to the daylight simulation hours within the defined analysis period (minimum 8 continuous daytime hours per day) considered for the annual analysis.*
- *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%)*

(OR)

❖ **Option 2: Measurement Approach** **Credit Point: 1**

Demonstrate through daylight illuminance measurement that 50% of the guest areas in the building achieve daylight illuminance levels for a minimum of 100 Lux. Areas with 2,000 Lux or more daylight illumination levels shall be not considered.

Measurements shall be taken after installation of furniture, equipment & systems at work plane height at 9 am, 12 pm, and 3 pm, on a 10 foot square grid. To show compliance, consider the average of the measurements taken at 9 am, 12 pm, and 3 pm.

Notes:

- *Guest areas include guest rooms, lobbies, restaurants, reception areas, lounges, gym etc*
- *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, store rooms, etc.,*

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if at least 60% of the guest areas in the building maintain the required daylight illuminance levels.

Documentation Required:

Precertification

Option 1: Simulation Approach

i. Draft 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.
ii. Site/ master plan showing the building.
iii. Conceptual floor/ roof plans with window and skylight schedule.
iv. Manufacturer brochure/ cut-sheet/ letter of the glass proposed in the project showing the Visual Light Transmittance (VLT)

Certification

Option 1: Simulation Approach

i. Daylight simulation report with sky conditions (such as date & month; time; ambient Lux levels) and wall, floor & roof reflectance properties, for all the regularly spaces in the building. During simulation, consider shading devices and 'shadow effect' of adjacent buildings.
ii. Site/ master plan showing the building.
iii. Floor/ roof plans with window and skylight schedule.
iv. Manufacturer brochure/ cut-sheet/ letter of the glass installed showing the Visual Light Transmittance (VLT).
v. Purchase invoice of the glass used in the project.
vi. Photographs showing the building elevations (all sides) and interiors spaces at different floors.

Option 2: Measurement Approach

i. Daylight analysis report indicating daylight illuminance levels measured at work plane height, for all the regularly occupied spaces in the building.
ii. Site/ master plan showing the building.
iii. Floor/ roof plans with window and skylight schedule.
iv. Manufacturer brochure/ cut-sheet/ letter of the glass installed showing the Visual Light Transmittance (VLT).
v. Photographs showing the building elevations (all sides) and interiors spaces at different floors.

Connectivity with Nature

New Hotel	Existing Hotel

EGW Credit 2 **Credit Points:1**

Intent:

Ensure connectivity between the indoor and the outdoor 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 occupants in at least 90% of guest rooms and 50% of other regularly occupied spaces. Also, the project shall comply with the following criteria:

- The 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:

- *Regularly occupied areas include guest rooms, lobbies, restaurants, meeting and banquet halls, reception areas, lounges, spas, gyms, and staff workstations.*
- *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, store rooms, etc.,*

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if more than 95% of the regularly occupied spaces achieve direct line of sight to vision glazing.

Documentation Required:

Precertification

i. Site/ master plan showing the building(s).
ii. Tentative furniture layouts of all floors.
iii. Tentative sectional drawings indicating the direct line of sight to vision glazing, for each typical floor.
iv. Tentative calculations (floor-wise) indicating the regularly occupied spaces having access to outdoor views to the total regularly occupied spaces.

Certification

i. Site/ master plan showing the building.
ii. Furniture layouts of all floors.
iii. Sectional drawings indicating the direct line of sight to vision glazing, for each typical floor.

iv. Calculations (floor-wise) indicating the regularly occupied spaces having access to outdoor views to the total regularly occupied spaces.
v. Photographs showing the outdoor views, for all the floors.

Low Emitting Materials

New Hotel	Existing Hotel

EGW Credit 3 **Credit Point: 1**

Intent:

Encourage use of materials with low VOC emissions, to reduce adverse health impacts on occupants.

Compliance Options:

- **Option 1: Paints & Coatings**

  Use paints and coatings (including primers) with low or no VOC content (as specified in 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

(OR)

- **Option 2: Adhesives & Sealants**

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

Notes:

- *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 vaporize at normal room temperatures.*
- *Paints & coatings and Adhesives & sealants 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.*
- *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

Documentation Required:

Precertification

Paints & Coatings

i. Declaration letter from the project owner/ developer stating that the project will use low or no VOC content paints & coatings.
ii. 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).
iii. Manufacturer cut-sheets/ brochures/ Materials Safety Data Sheet (MSDS) indicating the VOC content (in g/l, less water) of the paints & coatings proposed to be sourced.

Adhesives & Sealants

i. Declaration letter from the project owner/ developer stating that the project will use low or no VOC content adhesives.
ii. 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).
iii. Manufacturer cut-sheets/ brochures/ Materials Safety Data Sheet (MSDS) indicating the VOC content (in g/L, less water) of the adhesives proposed to be sourced.

Carpets

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

Certification

Paints & Coatings

i. 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).
ii. Test certificate (or) Manufacturer cut-sheets/ brochures/ Materials Safety Data Sheet (MSDS), indicating the VOC content (in g/L, less water) of the paints & coatings sourced.
iii. Purchase invoice of the paints and coatings used in the project

Adhesives & Sealants

i. 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).
ii. Test certificate (or) Manufacturer cut-sheets/ brochures/ Materials Safety Data Sheet (MSDS), indicating the VOC content (in g/L, less water) of the adhesives sourced.
iii. Purchase invoice of the adhesives and sealants used in the project

Carpets:

i. Floor plans highlighting the location of the carpet in the project.
ii. Calculations indicating the area of the carpet proposed in the project to the total carpet area, in percentage.
iii. Certificate stating that the carpet is compliant with CRI Green Label Programme/GreenPro.
iv. Photographs showing the carpet installed in the project.
v. Purchase invoice of the carpet installed in the project

Wellbeing Facilities

New Hotel	Existing Hotel

EGW Credit 4 **Credit Points: 3**

Intent:

To promote holistic guest and staff wellness through design and facilities that support physical, mental, and spiritual well-being within the hotel environment.

Compliance Options:

❖ **Option 1: Wellness Suite** **Credit Point: 1**

Design 5% of rooms as dedicated Wellness-Focused Rooms with soundproofing, circadian lighting, ergonomic bedding, air purification, temperature control and aromatherapy.

(AND/OR)

❖ **Option 2: Physical Wellbeing Facilities** **Credit Point: 1**

Provide facilities to promote physical fitness of the occupants (one point for two facilities):

- Bicycle facilities with cycling tracks
- Walking trails through landscaped gardens
- Gym
- Indoor games
- Swimming pool

(AND/OR)

❖ **Option 3: Spiritual Wellbeing Facilities** **Credit Point: 1**

Provide designated spaces for relaxation to promote spiritual well-being of guests (one point for two facilities).

- Yoga/Meditation zones
- Zen Garden
- Water features
- Sensory Gardens
- Healing therapies
- Reading Spaces

Exemplary Performance:

The project is eligible for exemplary performance under INN Credit 1 - Innovation and Exemplary Performance, if at least 10% of rooms are provided as wellness suites (or) if at least four physical well-being facilities are provided (or) if at least four spiritual well-being facilities are provided.

Documentation Required:

Precertification

Option 1: Wellness Suite

i. Narrative describing the proposed design strategy for wellness focused suite, highlighting features that promote occupant comfort and well-being.
ii. Tentative calculations indicating the total number of wellness focused suite to the total number of rooms
iii. Tentative layout plans showing designated wellness-focused rooms and proposed features.
iv. Technical specifications of proposed wellness-related features.
v. Declaration confirming commitment to implement and maintain wellness features in suites.

Option 2: Physical Wellbeing Facilities

i. Narrative describing the physical wellbeing facilities proposed within the hotel premises.
ii. Tentative layout highlighting the location of proposed for physical wellbeing.
iii. Declaration confirming commitment to provide and maintain physical wellbeing amenities.

Option 3: Spiritual Wellbeing Facilities

i. Narrative describing the spiritual wellness facilities proposed within the hotel premises.
ii. Tentative layout highlighting the proposed spaces for spiritual wellbeing.
iii. Declaration confirming commitment to establish and maintain spiritual wellness facilities.

Certification

Option 1: Wellness Suite

i. Narrative describing the proposed design strategy for wellness focused suite, highlighting features that promote occupant comfort and well-being.
ii. Calculations indicating the total number of wellness focused suite to the total number of rooms
iii. Layout plans showing designated wellness-focused rooms and incorporated features.
iv. Technical specifications of installed wellness-related features.
v. Photographs of wellness elements integrated in suites.

Option 2: Physical Wellbeing Facilities

i. Narrative describing the physical well-being facilities provided within the hotel premises.
ii. Layout highlighting the location of physical wellness amenities.
iii. Photographs of facilities provided for physical wellbeing.

Option 3: Spiritual Wellbeing Facilities

i. Narrative describing the spiritual wellness facilities incorporated in the hotel
ii. Layout plan highlighting the dedicated spaces for spiritual wellbeing.
iii. Photographs of dedicated spaces for spiritual wellbeing.

Vernacular Art and Culture

New Hotel	Existing Hotel

EGW Credit 5 **Credit Point: 1**

Intent:

To promote the use of local art, craft, and design elements that reflect the region's cultural heritage, thereby enhancing guest connection with the destination.

Compliance Options:

❖ **Option 1: Indigenous Art, Craft & Architecture** **Credit Point: 1**

- Incorporate locally crafted furniture, décor elements, artworks, or sculptures that authentically represent the region's cultural heritage.
- Incorporate locally produced textiles such as handwoven rugs, upholstery, curtains, or bed linens featuring traditional patterns or weaving techniques.
- Apply vernacular materials or traditional construction techniques (e.g., bamboo, cane, terracotta, local stone) in interior or architectural features.

(OR)

❖ **Option 2: Local Culture & Experience** **Credit Point: 1**

- Design guest rooms and common areas using themes, motifs, or narratives inspired by local culture, history, or heritage to strengthen guest connection with the destination
- Embed elements of local music, folklore, performing arts, or storytelling traditions within guest experiences or interior ambience to enhance cultural engagement.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the measures proposed at the hotel
ii. List of vernacular art and culture elements proposed for implementation in guest rooms and common areas.
iii. Declaration confirming commitment to promote and incorporate vernacular art and culture as part of the hotel's design and development process.

Certification

i. Narrative describing the measures implemented at the hotel
ii. List of vernacular art and culture elements implemented in guest rooms and common areas.
iii. Photographs and videos of the measures promoted by the hotel

Inclusive Guest Experience

New Hotel	Existing Hotel

EGW Credit 6 **Credit Point:1**

Intent:

To promote inclusivity by providing facilities that cater to the needs of all guests, including the differently abled and senior citizens, thereby enhancing guest wellbeing.

Compliance Options:

Provide at least one accessible guest room or 2% of total rooms (whichever is higher) with the following features:

- Barrier-free access from lobby to guest room.
- Door width: Minimum 900 mm; corridor width: Minimum 1200 mm.
- Turning radius: Minimum 1500 mm in room and bathroom.
- Accessible bathroom fittings: Grab bars, roll-in shower, lever handles, and accessible mirror and wash basin.
- Switches, sockets, and controls positioned 900–1200 mm above floor.
- Visual/auditory alarms for safety where applicable.
- Signage with tactile/Braille information.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the measures proposed in the hotel for differently abled people and senior citizens
ii. Tentative calculations indicating the total number of preferred rooms (for differently abled people and senior citizens) to the total number of rooms
iii. Conceptual drawings highlighting the measures proposed for differently abled people and senior citizens

Certification

i. Narrative describing the measures implemented in the hotel for differently abled people and senior citizens
ii. Calculations indicating the total number of preferred rooms (for differently abled people and senior citizens) to the total number of rooms
iii. Drawings highlighting the measures implemented for differently abled people and senior citizens.
iv. Photographs showing all the measures implemented

IEQ Monitoring and Management

New Hotel	Existing Hotel

EGW Credit 7 **Credit Points: 3**

Intent

Encourage monitoring of indoor environmental quality, to ensure occupants' health and well-being

Compliance Options:

❖ **Option 1: IEQ Monitoring Systems** **Credit Point: 1**

Provide a continuous IAQ monitoring system in densely occupied areas (meeting/conference/seminar halls) to measure and display real-time values for at least four (4) of the parameters and maintain within the threshold values as per Indoor Environment Quality Standard, ISHRAE Standard -10001:2019

(AND/OR)

❖ **Option 2: Kitchen IAQ Monitoring** **Credit Point: 1**

Provide a continuous IAQ monitoring system in kitchen to measure and display at least four (4) of the following parameters and maintain within the threshold values as per Indoor Environment Quality Standard, ISHRAE Standard -10001:2019.

Parameters	Threshold values
CO2	Ambient + 500 ppm
PM 2.5	< 25 µg/m³
PM 10	< 100 µg/m³
TVOC	< 400 µg/m³
CO	< 9 ppm
NO_2	< 80 µg/m³
SO_2	< 80 µg/m³

(AND/OR)

❖ **Option 3: Acoustic Comfort** **Credit Points: 1**

New Hotels:

Demonstrate that reverberation time (RT) in regularly occupied spaces meets the values specified in the table through acoustic calculations, in accordance with National Building Code of India 2016 Part 8, Section 4 – Acoustics (Clause 1.4: Room Acoustics).

The reverberation time (RT) shall be calculated based on Sabine's Formula of RT 60

RT= 0.161 X (V / A)

V = room volume in m3

A = α • S

α = absorption coefficient

S = surface area

Existing Hotels:
Demonstrate that indoor ambient noise levels (dB(A)) in regularly occupied spaces comply with the limits specified in the table through on-site measurements, as per National Building Code of India 2016 Part 8, Section 4 – Acoustics.

Space	Recommended Reverberation Time (RT)	Recommended Noise Level dB(A)
Guest rooms / suites	0.4 – 0.6 s	30 – 35 dB(A)
Corridors	0.6 – 0.8 s	35 – 45 dB(A)
Lobby / reception	0.8 – 1.2 s	40 – 45 dB(A)
Restaurants / dining areas	0.8 – 1.0 s	40 – 50 dB(A)
Conference / meeting rooms	0.6 – 0.8 s	35 – 40 dB(A)
Banquet halls	1.0 – 1.5 s	40 – 45 dB(A)
Business centre / offices	0.6 – 0.8 s	35 – 45 dB(A)
Spa / relaxation areas	0.4 – 0.6 s	30 – 35 dB(A)

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Continuous Monitoring Systems

i. Narrative describing the proposed IAQ monitoring system
ii. Schematic layout highlighting tentative sensor locations in regularly occupied common areas
iii. Manufacturer cutsheet of air quality monitoring systems proposed in the project.
iv. Declaration confirming commitment to install, continuously monitor, and periodically calibrate IAQ sensors.

Option 2: Kitchen IAQ Monitoring

i. Narrative describing the proposed IAQ monitoring system
ii. Schematic layout highlighting tentative sensor locations in kitchens
iii. Manufacturer cutsheet of air quality monitoring systems proposed in the project.
iv. Declaration confirming commitment to install, continuously monitor, and

Option 3: Acoustic Comfort

i. Narrative describing approach to acoustic design proposed in the project.
ii. Calculations indicating reverberation time for the various spaces in the hotel.
iii. Manufacturer cut- sheets indicating the absorption co-efficient of the proposed materials.
iv. Declaration confirming acoustic measures proposed in the project.

Certification

Option 1: Continuous Monitoring Systems

i. Narrative describing the details of the IAQ monitoring system
ii. Layout plan highlighting sensor installation locations in regularly occupied common areas
iii. Air quality monitoring report highlighting air quality: PM 2.5, PM 10, CO_2 etc
iv. Manufacturer cutsheet of air quality monitoring systems used in the project.
v. Photographs of the display boards for creating awareness amongst guests & visitors about the air quality.
vi. Purchase invoice and photographs of the locations and air quality monitoring systems used in the project.

Option 2: Kitchen IAQ Monitoring

i. Narrative describing the details of the IAQ monitoring system
ii. Layout plan highlighting sensor installation locations in kitchens
iii. Air quality monitoring report highlighting air quality parameters
iv. Manufacturer cutsheet of air quality monitoring systems used in the project.
v. Photographs of the air quality monitoring system
vi. Purchase invoice of the air quality monitoring systems used in the project.

Option 2: Acoustic Comfort

New Hotels

i. Narrative describing approach to acoustic design in the project.
ii. Calculations indicating reverberation time for the various spaces in the hotel.
iii. Manufacturer cut- sheets indicating the absorption co-efficient of the materials installed.
iv. Photographs showing acoustic materials installed.
v. Purchase invoice of the acoustic materials used in the hotel.

Existing Hotels

i. Narrative describing approach to acoustic design adopted in the project.
ii. Acoustic analysis report or noise level test report indicating measured dB(A) values in representative spaces
iii. Photographs showing acoustic materials installed.

Guest Comfort Feedback

New Hotel	Existing Hotel

EGW Credit 8 **Credit Points: 1**

Intent:

To evaluate guest comfort through structured feedback and use insights to enhance indoor environmental quality and guest experience.

Compliance Options:

Conduct a guest comfort survey for comfort parameters (visual comfort, thermal comfort, acoustics comfort, olfactory comfort, and ergonomics) and demonstrate that at least 80% of guests are satisfied with the comfort parameters provided.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Sample Survey Questions:

1. Please rate your satisfaction with the thermal comfort in your room during your stay.

Unsatisfactory	1	2	3	4	5	Satisfactory

2. Please rate your satisfaction with the air quality and freshness in your room during your stay.

Unsatisfactory	1	2	3	4	5	Satisfactory

3. Please rate your satisfaction with the noise levels and acoustic comfort in your room during stay

Unsatisfactory	1	2	3	4	5	Satisfactory

4. Please rate your satisfaction with lighting quality and visual comfort in your room during stay

Unsatisfactory	1	2	3	4	5	Satisfactory

5. Please rate your satisfaction with comfort and ergonomics of furniture and room layout.

Unsatisfactory	1	2	3	4	5	Satisfactory

Documentation Required:

Precertification

i. Narrative describing the methodology for conducting the survey and assessing guest satisfaction levels.

ii. Draft copy of the guest comfort survey questionnaire covering visual, thermal, acoustic, olfactory, and ergonomic comfort parameters.
iii. Declaration confirming the commitment to conduct periodic guest comfort surveys and use feedback for continual improvement.

Certification

i. Narrative describing the methodology for conducting the survey and assessing guest satisfaction levels.
ii. Copy of the guest comfort survey questionnaire covering visual, thermal, acoustic, olfactory, and ergonomic comfort parameters.
iii. Survey responses or summary of results indicating the percentage of guest satisfaction for each parameter
iv. Calculation indicating the total number of responses and the percentage of satisfied guests

Green Education

New Hotel	Existing Hotel

EGW Credit 9 **Credit Points: 2**

Intent

To promote green education and participation in sustainability initiatives among hotel staff and guests, thereby fostering a culture of environmental responsibility and continuous improvement in green operations.

Compliance Options:

❖ **Option 1: Staff Education & Capacity Building:** **Credit Point: 1**

- Demonstrate that the hotel creates opportunities to impart green education equivalent to at least 1% of man-days per employee per year. (equivalent to 32 hours including in-house and external training programs)

(AND/OR)

❖ **Option 2: Guest Education & Engagement:** **Credit Point: 1**

- Display educational material and signage to raise awareness among guests about the hotel's green initiatives and sustainable lifestyle choices.

  (OR)

- Introduce a reward or recognition mechanism for guests who actively participate in resource conservation efforts.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Staff Awareness & Capacity Building

i. Narrative describing the hotel's approach towards enhancing staff capacity and promoting sustainability awareness.
ii. Proposed training plan or calendar highlighting topics, frequency, and target audience for sustainability-related sessions.
iii. Sample training materials or presentation content to be used during awareness programmes.
iv. Copy of draft Green O&M Guidelines proposed to be adopted by the hotel

Option 2: Guest Awareness & Engagement

i. Narrative describing the hotel's proposed guest awareness and engagement strategies.

ii. Conceptual layouts of proposed educational signages, digital displays, or awareness collaterals to be displayed in guest areas.
iii. Details of planned guest participation initiatives such as linen reuse, waste segregation, or green mobility programmes.

Certification

Option 1: Staff Awareness & Capacity Building

i. Narrative describing the hotel's approach towards building staff capacity and promoting sustainability awareness.
ii. Training calendar and attendance records indicating frequency and topics covered under sustainability training sessions.
iii. Training materials or presentation content used during awareness programmes.
iv. Copy of Green O&M Guidelines or Sustainability Handbook adopted by the hotel.
v. Photographs of awareness programmes

Option 2: Guest Awareness & Engagement

i. Narrative describing approach to acoustic design adopted in the project.
ii. Details of guest participation programmes such as linen reuse, waste segregation, or green mobility.
iii. Photographs or screenshots of educational signages, digital displays, or awareness materials displayed in guest areas.
iv. Rewards instituted to acknowledge the efforts for guests who actively participate in resource conservation efforts.

HEALTHY FOOD AND BEVERAGES

Drinking Water Quality

New Hotel	Existing Hotel

HFB Credit 1 **Credit Point:1**

Intent:

To ensure safe drinking water for guests and staff by maintaining quality within acceptable physical, chemical, and toxic limits.

Compliance Options:

Demonstrate that the drinking water is treated to meet the following drinking water specifications as per IS 10500- 2012 'Drinking Water- Specification Standard':

Characteristic	Requirement (Acceptable Limit)
Physical Parameters	
Colour	5 Hazen Units
Odour	Nil
Ph	6.5 – 8.5
Turbidity	1 NTU
TDS	500 mg/l
E.coli	Shall not be detectable in any 100ml sample
General Parameters	
Total Hardness CaCo3	200 mg/l
Chloride	250 mg/l
Iron	0.3 mg/l
Toxic Parameters	
Lead	0.01
Mercury	0.001
Total Arsenic	0.01

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification:

i. Narrative describing the proposed drinking water system.
ii. Technical sheet of the proposed drinking water system.
iii. Declaration letter from the project team confirming the drinking water quality parameters would be met as per IS 10500- 2012 ‘Drinking Water- Specification Standard’

Certification:

i. Narrative describing the installed drinking water system.
ii. Technical sheet of the installed drinking water system.
iii. Quarterly drinking water test reports
iv. Photographs of the drinking water system installed.

Responsible Sourcing for Food & Beverage

New Hotel	Existing Hotel

HFB Credit 2 **Credit Points: 2**

Intent:

Promote responsible food sourcing by procuring organic, locally grown, and fair-trade certified products.

Compliance Options:

The project shall demonstrate compliance through any one or a combination of the following measures *(Maximum 2 points)*

- **Option 1: Organic F&B Sourcing** **Credit Point : 1**

  Provide organic meal options for guests by sourcing atleast 10% (by cost or weight) of the total fruits, vegetables, and grains consumed in the facility from organically produced sources certified under recognized standards such as National Program for Organic Production (NPOP), Agriculture and Processed Food Products Export Development Authority (APEDA), PGS-India, or equivalent.

  (AND/OR)

- **Option 2: Responsibly Sourced Animal Products** **Credit Point : 1**

  Procure a minimum of 10% (by cost or weight) of the total animal products (dairy, meat & poultry) used in the hotel from responsible farms recognized by animal welfare Standards such as Certified Humane (India supply chains), Animal Welfare Board of India (AWBI) Good Husbandry Practices, Global Animal Partnership (GAP) for imported products.

Notes:

- *Organic F&B- Refers to fruits, vegetables, and grains grown without synthetic fertilizers, pesticides, or GMOs, following certified organic farming practices that sustain soil health and ecology.*
- *Responsibly Sourced Animal Products- Refers to meat, poultry, and dairy sourced from farms following ethical or responsible farming practices that ensure animal welfare and sustainability.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification:

Option 1: Organic F&B Sourcing

i. Narrative and the proposed list of organic produce that shall be used in the hotel.
ii. Declaration from project owner confirming that at least 10% (by cost or weight) of the vegetables, grains and fruits used in the hotel shall be organically produced.
iii. Declaration letter confirming offering of organic meals to guests.

Option 2: Responsible sourcing of animal products

i. Narrative and the proposed list of responsibly sourced animal products that shall be used in the hotel.
ii. Declaration from project owner confirming that at least 10% (by cost or weight) of the total animal products (dairy, meat & poultry) used in the hotel shall be responsibly sourced.

Certification:

Option 1: Organic F&B Consumption

i. Narrative and the list of the organic food, being sourced
ii. Calculations indicating that organic produce is being sourced for at least 10% of total annual fruits, vegetables, and grains consumption (by weight or cost) along with the corresponding quantity.
iii. Valid certification documents from National Program for Organic Produce(NPOP), Agricultural and Processed Food Products Export Development Authority (APEDA), PGS-India (Participatory Guarantee Scheme) or equivalent.
iv. Internal log records of Organic Produce sourced from F&B department.
v. Purchase invoice of the organic produce sourced.
vi. Menu samples indicating organic meal offerings to guests.

Option 2: Responsible sourcing of animal products

i. Narrative and the list of the animal products, being sourced under the responsible sourcing of animal products indicating that at least 10% of the total annual consumption (by weight or cost) along with the corresponding quantity.
ii. Valid certification documents from Certified Humane (India supply chains), AWBI Good Husbandry Practices, GAP (for imported animal products).
iii. Internal log records for responsible sourcing of animal products from F&B department
iv. Purchase invoice of the responsible sourced food.

Wellness Menu

New Hotel	Existing Hotel

HFB Credit 3 **Credit Points: 3**

Intent:
Enhance guest well-being by offering nutritious, inclusive, and regionally inspired food options that support balanced and healthy diets.

Compliance Options:

The project shall demonstrate compliance through any one or a combination of the following measures *(1 credit point for each measure, maximum 3 points)*

- **Option 1: Healthy Food Menu**

  Offer dedicated Healthy menu options prepared from whole, unprocessed ingredients, free from artificial flavors, colors, and preservatives.

  (AND/OR)

- **Option 2: Local & Regional Cuisine**

  Serve regional or traditional local dishes as part of menu options, prepared using locally sourced or seasonal ingredients to celebrate regional diversity and reduce food miles.

  (AND/OR)

- **Option 3: Special Dietary Options**

  Provide special dietary meal options such as vegan, gluten-free, lactose-free, or low-calorie options, are included as part of regular offerings.

  (AND/OR)

- **Option 4: Nutrition Label**

  Display information for all food and beverage items served within the facility. Hotels may provide details on Glycemic Index (GI), carbohydrates, fats, and proteins to enhance guest awareness.

  (AND/OR)

- **Option 5: Allergen Disclosure**

  Disclose the presence of common allergens (such as milk, eggs, gluten, nuts, soy, and shellfish) on menus, buffet counters, or display boards.

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Healthy Food Menu

i. Narrative describing the hotel's approach for the consideration of Healthy Food menu
ii. Declaration from Kitchen or Chef confirming preparation of items without artificial additives or processed ingredients.

Option 2: Local & Regional Cuisine

i. Narrative describing the hotel's approach for having Local & Regional Cuisine in the hotel.
ii. Declaration from project owner confirming that Local & Regional Cuisine shall be provided in the regular menu of the hotel.

Option 3: Special Dietary Options

i. Narrative describing the hotel's approach for having special dietary options in the hotel.
ii. Declaration from project owner confirming that Special dietary options catering to vegan, gluten-free, lactose-free, or low-calorie options shall be implemented in the Hotel

Option 4: Nutrition Label

i. Narrative describing the hotel's approach for having Nutrition label for the food served in the hotel.
ii. Declaration from project owner confirming that nutrition labelling shall be done for the food served in the hotel.
iii. Nutritional information sheet (calorie count and breakdown) for representative menu items.

Option 5: Allergen Declaration

i. Narrative describing the hotel's approach for serving food in the hotel with Allergen Declaration.
ii. Declaration from project owner confirming that allergen declaration shall be done for the food served in the hotel.

Certification

Option 1: Healthy Food Menu

i. Narrative describing the various Healthy Food options in the menu which are prepared from whole, unprocessed ingredients etc.
ii. Copy of menu and list of ingredients which were used as alternatives for items without artificial additives or processed ingredients.
iii. Purchase invoice or sourcing records showing use of local, seasonal, or organic ingredients where applicable.

Option 2: Local & Regional Cuisine

i. Narrative describing the hotel's approach for having Local & Regional Cuisine in the hotel.
ii. Copy of menu with Local and regional cuisine options
iii. Photographs of the dishes being served under Local & Regional Cuisine.
iv. Purchase invoice or sourcing records showing use of local and seasonal food as per the requirement of the dish.

Option 3: Special Dietary Options

i. Narrative describing the hotel's approach for having special dietary options in the hotel.
ii. Copy of menu indicating the special dietary options available in the hotel.
iii. Photographs of special dietary options displayed in the buffet area.

Option 4: Nutrition Label

i. Narrative describing the hotel's approach for having Nutrition label for the food served in the hotel.
ii. Nutritional information sheet (calorie count and breakdown) for representative menu items.
iii. Photographs of nutrition label displayed for the cooked dishes in the buffet area

Option 5: Allergen Declaration

i. Narrative describing the hotel's approach for serving food in the hotel with Allergen Declaration.
ii. Copy of menu indicating the allergen foods available in the hotel.
iii. Photographs of allergen declaration cards displayed in the buffet area.

GREEN HOUSEKEEPING

Chemical Footprint Reduction

New Hotel	Existing Hotel

GH Credit 1 **Credit points:1,2**

Intent:
To promote eco-friendly & safe housekeeping chemicals thereby reducing total chemical carbon footprint and enhancing health & wellbeing of occupants.

Compliance Options:

❖ **Option 1: Eco- Friendly Housekeeping Chemicals** **Credit Point: 1**

Use of eco-friendly (biodegradable and non-toxic) cleaning agents or GreenPro or Type 1 Eco Labelled products for the following applications within the hotel premises: (1 credit point for 3 chemicals)

- Carpet cleaning
- Floor cleaning, Glass cleaning
- General-purpose cleaning
- Restroom cleaning
- Laundry detergent
- Dishwashing detergent

(**AND/OR)**

❖ **Option 2: Chemical Use Intensity (CUI)** **Credit Point: 1**
(Applicable only for Existing Hotel)

Demonstrate that the annual chemical consumption per guest night is within 1 litre/room night

$$\text{Chemical Use Intensity (CUI)} = \frac{\text{Annual Chemical Use (litre/year)}}{\text{Annual room nights}}$$

Annual room nights = Total occupied rooms in a year

Note:

- *Total chemical use shall include all chemicals used for housekeeping, water treatment (pool, STP, WTP, Drinking water), Kitchen, Laundry, Pest control and HVAC maintenance.*

Points are awarded as below:

Compliance Option	New Hotel	Existing Hotel
Eco friendly house keeping chemical	1	1
Chemical Use Intensity	NA	1

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Eco- Friendly Housekeeping Chemicals

i. Narrative describing the list of proposed chemicals and approach adopted for selecting eco-friendly / biodegradable / non-toxic chemicals (GreenPro or Type-1 Eco-Label equivalent).
ii. Technical data sheets for the proposed eco-friendly / biodegradable / non-toxic chemicals (GreenPro or Type-1 Eco-Label equivalent).
iii. Declaration stating that eco-friendly chemicals shall be used for the housekeeping, laundry, and kitchen applications.

Certification

Option 1: Eco- Friendly Housekeeping Chemicals

i. Narrative describing the list of applications and approach adopted for selecting eco-friendly / biodegradable / non-toxic chemicals (GreenPro or Type-1 Eco-Label equivalent).
ii. Purchase invoices for the eco-friendly or equivalent chemicals of the last 3 months.
iii. Technical data sheets for the selected eco-friendly / biodegradable / non-toxic chemicals (GreenPro or Type-1 Eco-Label equivalent).
iv. Photographs of the chemicals highlighting the ingredients.

Option 2: Chemical Use Intensity (CUI)

i. Narrative describing the methodology adopted to track and monitor annual chemical consumption, including details of all functional areas covered (housekeeping, laundry, kitchen, pool, STP/WTP, drinking water, pest control, HVAC maintenance).
ii. Excel based calculations indicating the Chemical use Intensity (litres/room night) for the hotel.
iii. Log record indicating the chemical consumption for 12 months along with number of room nights.

Sustainable Linen Policy

New Hotel	Existing Hotel

GH Credit 2: **Credit point: 1**

Intent:

To reduce resource consumption such as energy, water and chemicals in hotel industry, thereby reducing their negative environmental impact on the ecology.

Compliance Options:

Implement a hotel-wide linen reuse policy across all guest rooms to reduce the frequency of washing bed linens and towels along with housekeeping procedures to ensure consistent implementation across all guest rooms.

Note:

- *Highlight the guest communication materials (signage, in-room information, or digital prompts) encouraging guests to participate.*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the proposed linen reuse policy to be implemented across the hotel.
ii. Draft Policy document indicating adoption of a linen reuse across all guest rooms in the hotel.

Certification

i. Narrative describing the linen reuse policy adopted by the project.
ii. Copy of the approved linen reuse policy implemented in the facility.
iii. Photographs of the installed guest communication materials displayed in guest rooms.
iv. Housekeeping standard operating procedures (SOPs) demonstrating implementation of the reuse policy in the project.
v. Records/logs or housekeeping checklists confirming adoption of reduced linen and towel washing frequency.

Wellness Toiletries

New Hotel	Existing Hotel

GH Credit 3 **Credit Points: 2**

Intent:

To promote guest well-being through organic, non-toxic toiletries and environmentally responsible packaging.

Compliance Options:

Demonstrate that the hotel procures guest toiletries that are made from natural ingredients or are free from harmful chemicals *(1 credit point for 2 products).*

Toiletry Product	Product Composition
Toothpaste	Organic/Natural or free from SLS, Triclosan & Paraben
Shampoo & Conditioner	Organic/Natural or free from SLS, Triclosan, Phthalate & Paraben
Moisturizer	Organic/Natural or free from Silicones, Phthalate & Paraben
Shower Gel	Organic/Natural or free from SLS, Triclosan & Paraben

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the proposed list and strategy for providing natural or chemical free toiletries for guest use.
ii. Product specification sheets of proposed toiletries indicating natural or chemical free toiletries for guest use.
iii. Declaration confirming that natural or chemical free toiletries will be provided during project operation.

Certification

i. Narrative describing the list and strategy for providing natural or chemical free toiletries for guest use.
ii. Product specification sheets of the toiletries provided in the project.
iii. Purchase invoices of the last three months for the toiletries used in the project.
iv. Photographs of the toiletries provided in the project.

Swimming Pool for Guest Wellness

New Hotel	Existing Hotel

GH Credit 4 **Credit point: 1**

Intent:

To ensure pool water quality through eco-friendly disinfection methods.

Compliance Options:

❖ **Option 1: Pool Water Quality Monitoring System**

Demonstrate that a continuous monitoring system is installed to maintain total free residual chlorine between 0.2 and 0.5 ppm, as per *IS:3328:1993 - Code of Practice for Chlorination of Water (for Swimming Pools)*, in the pool area through a public display system.

(OR)

❖ **Option 2: Alternative Pool Water Treatment Systems**

Treat swimming pool water using chemical-free or low-chemical alternatives, such as:

- Ozone treatment systems
- Ultraviolet (UV) disinfection
- Combination systems (e.g., UV + low chlorine)
- Any other system

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

Option 1: Pool Water Quality Monitoring System

i. Narrative describing the continuous residual chlorine monitoring strategy proposed in the project
ii. Technical details of the proposed monitoring system, including sensors, display units and control mechanism.
iii. Schematic drawings highlighting the proposed monitoring system integration with the pool water system.
iv. Site plan indicating the proposed location of the swimming pool and monitoring equipment.

v. Purchase invoice of monitoring system, including sensors, display units installed in the project, if available
vi. Declaration confirming that continuous monitoring will be implemented to maintain residual chlorine levels as per IS:3328:1993.

Option 2: Alternative Pool Water Treatment Systems

i. Narrative describing the alternative disinfection method proposed in the project
ii. Technical details of the proposed system including technology type, capacity and performance details.
iii. Site plan indicating the location of the swimming pool and associated treatment equipment proposed in the project.
iv. Declaration confirming that the selected alternative system will be implemented

Certification

Option 1: Pool Water Quality Monitoring System

i. Narrative describing the chlorine monitoring strategy adopted by the project.
ii. Technical details of the installed monitoring system, including calibration settings and operating ranges.
iii. Site plan indicating the actual location of the swimming pool and monitoring equipment.
iv. Purchase invoice of monitoring system, including sensors, display units installed in the project
v. Photographs of the installed monitoring system, including sensors, display units installed in the project

Option 2: Alternative Pool Water Treatment Systems

vi. Narrative describing the alternative treatment strategy adopted by the project.
vii. Technical details of the installed system including capacity, operational parameters and performance achieved in the project.
viii. Site plan indicating the location of the swimming pool and treatment system.
ix. Water quality test reports/log books of the past three months demonstrating the performance of the installed system.
x. Photographs/Videos of the swimming pool and treatment system.

Organic Fertilizers

New Hotel	Existing Hotel

GH Credit 5 **Credit point: 1**

Intent:

Encourage use of organic fertilisers to minimize negative impact on soil, flora & fauna.

Compliance Options:

Use organic fertilisers & pesticides for 100% of requirement for landscape area.

Notes:

Organic Fertilisers include:

1. *Vermicompost*
2. *Leaf mould*
3. *Bone meal*
4. *Farmyard manure*
5. *Deoiled cakes like neem cake, pongamia cake, Castor cake*

Organic Pesticides include:

1. *Neem seed kernel extract*
2. *Chilli and garlic paste*
3. *Sitaphal seed powder*
4. *Chrysanthemum extracts*
5. *Panchagavya*
6. *Panchmrutham*

Exemplary Performance:

This credit is not eligible for exemplary performance.

Documentation Required:

Precertification

i. Narrative describing the organic fertiliser and pesticide strategy proposed by the project along with the list of proposed organic fertilisers and organic pesticides.

ii. Detailed plan and sectional drawings of the proposed organic fertiliser preparation/storage system
iii. Site plan highlighting the proposed location of the organic fertiliser/pesticide preparation or storage area.
iv. Details of the selected method, including system type, capacity, suitability for landscape requirements, and process flow.
v. Declaration confirming that 100% of the landscape requirement will be met using organic fertilisers and organic pesticides.

Certification

i. Narrative describing the organic fertiliser and pesticide strategy adopted by the project along with the list of organic fertilisers and organic pesticides.
ii. Details of the method implemented, including system type, capacity, suitability for landscape requirements, and process flow.
iii. Site plan highlighting the actual location of the system
iv. Sectional drawings of the implemented organic fertiliser/pesticide preparation or storage system.
v. Past three months' tax invoices and product/specification sheets of organic fertilisers and organic pesticides used.
vi. Photographs of the organic fertilisers and organic pesticides used.

INNOVATION AND EXEMPLARY PERFORMANCE

Innovation and Exemplary Performance

New Hotel	Existing Hotel

INN Credit 1 **Credit Points: 4**

Intent:

Provide projects an opportunity to be awarded points for innovative performance in Green Hotel categories not specifically addressed by the Green Hotel Certification rating system and/or exemplary performance above the requirements set by the Green Hotel Certification rating system.

Compliance Options:

❖ **INN Credit 1.1: Innovation and Exemplary performance**

➢ **Option 1: Innovation**

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

***Notes*:**

The project shall also meet the following criteria for achieving an Innovation point:

- *Quantitative performance improvements (comparing a baseline and design case).*
- *Strategy must be significantly better than standard sustainable design & construction practices.*
- *Measures must be voluntary. Measures that are mandated by the local byelaws and not addressed in the rating system are not eligible for Innovation.*

(OR)

➢ **Option 2: 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 Hotel rating system.

***Notes*:**

- *As a general rule, points for exemplary performance are awarded for doubling the credit requirements and / or achieving the next incremental percentage threshold.*
- *Eligibility criteria for various credits in the IGBC Green Hotel rating system are defined in respective credits and Exhibit - A.*

❖ **INN Credit 1.2: Innovation and Exemplary performance**

Same as credit 1.1

❖ **INN Credit 1.3: Innovation and Exemplary performance**

Same as credit 1.1

❖ **INN Credit 1.4: Innovation and Exemplary performance**

Same as credit 1.1

Exhibit A - List of Base Credits eligible for Exemplary Performance

Sustainable Sites	
SS Credit 1	Sustainable Landscape ➢ Green cover/vegetation exceeds 25% of the total site area (or) ➢ Minimum of two tree saplings for every 80 m² of the site area (or) ➢ Landscape area per guest room greater than 9 m² for 3-Star and below hotels, and greater than 14 m² for 4-Star and 5-Star hotels.
Energy Efficiency	
EE Credit 3	Energy Efficiency ➢ Kitchen Electrification %-70%- For New Hotels ➢ Kitchen Electrification %-50%- For Existing Hotels
EE Credit 2	Enhanced Energy Performance ➢ 9% savings are achieved from ASHRAE 90.1-2022 base case (or) ➢ 22% savings are achieved from ECSBC 2024 base case (or) ➢ 22% of savings are achieved from EPI/EUI baseline
EE Credit 8	Heat Resources & Recovery ➢ Heat recovery is implemented for 3 or more systems
Water Conservation	
WC Credit 1	Enhanced Rainwater Harvesting ➢ As defined in credit
WC Credit 2	Enhanced Water Efficiency ➢ ≥25% of potable water savings from efficient plumbing fixtures ➢ ≥25% water reduction from baseline WUI
WC Credit 5	Landscape Design ➢ >25% of potable water savings Irrigation System Performance ➢ Irrigation water consumption less than 4 litres/sq.m/day
WC Credit 6	Waste Water Treatment ➢ Black water and grey water are treated separately in the on-site wastewater treatment system.
WC Credit 7	Alternative Water performance ➢ Water performance ratio is ≥ 65%.
Carbon Neutrality	
CN Credit 3	Promotion of Local Economy ➢ ≥60% of employees are local (or) ≥60% of food products

Material Stewardship	
MS Credit 3	Green Products ➢ ≥ 40% of the total building materials and products (by cost) used in the hotel are GreenPro or Type 1 eco-labelled products ➢ ≥ 6 passive or active green building materials, products, and equipment that are certified by GreenPro or Type 1 eco-labelled.
Environment for Guest Wellbeing	
EGW Credit 1	Daylighting ➢ ≥60% of regularly occupied areas meet the daylighting requirement as defined in the credit
EGW Credit 2	Connectivity with Nature ➢ >95% of regularly occupied areas achieve direct line of sight to vision glazing requirement as defined in the credit.
EGW Credit 4	Wellbeing Facilities ➢ ≥10% of rooms are provided as wellness suites (or) ➢ ≥ 4 physical well-being facilities are provided (or) ➢ ≥ 4 spiritual well-being facilities are provided.

Documentation Required:

Precertification

Innovation:

i. 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

ii. Table indicating tentative quantitative performance improvements, comparing baseline and design case

iii. Other supporting documents such as drawings, illustrations, cut-sheets, test reports, etc., as applicable

Exemplary Performance:

i. 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

Innovation:

i. Narrative describing intent, requirements, strategies and technologies implemented to achieve the innovation credit. Strategies adopted must be significantly better than standard sustainable design practices

ii. Table indicating quantitative performance improvements, comparing baseline and design case

iii. Other supporting documents such as drawings, illustrations, cut-sheets, test reports, etc., as applicable

Exemplary Performance:

i. Narrative describing the strategies implemented to achieve exemplary performance in the respective base credit

Note: Provide supporting documents in the respective base credit folder

IGBC Accredited Professional

New Hotel	Existing Hotel

INN Credit 2 **Credit Point:2**

Intent:

Support and encourage involvement of IGBC Accredited Professional in green hotel certification projects, so as to integrate appropriate design measures and streamline the certification process.

Compliance Options:

New Hotels:

- Demonstrate that at least two members including the Project team and Architect/Designer or MEP Consultant are IGBC Accredited Professionals. *(1 credit point for each Accredited Professional)*

Existing Hotels:

- Demonstrate that atleast two members from the Facility team are IGBC Accredited Professionals. (1 credit point for each Accredited Professional).

Documentation Required:

Precertification and Certification

i. IGBC Accredited Professional certificate of participants involved in the project.

For more details, please contact :

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