

## NEERMAN Awards

*The NEERMAN Awards for Energy Efficient Building Design in India is constituted with the objective to acknowledge and encourage exemplary building designs complying with BEE's Energy Conservation Building Codes 2017 and Eco Niwas Samhita 2018.*

### CATEGORY OF THE AWARDS

The awards shall be given in the form of a plaque and certificate with appropriate citation for each of the categories –

#### For Commercial Buildings

**ECBC 2017 Award - 1 or more awards for each building category depending on number of applicants.**



ASSEMBLY



HEALTH CARE



HOSPITALITY



SHOPPING COMPLEX



BUSINESS



EDUCATIONAL



MIXED-USE



NATURALLY VENTILATED

#### ECBC 2017 Exemplary Performance Award – 1 Award for each section

- Building Envelope
- Lighting and Controls
- Comfort Systems and Controls / Natural Ventilation
- Electrical and Renewable Energy Systems

#### For Residential Buildings

**ENS 2018 Award - 1 or more awards for each building category depending on number of applicants.**



SUBSIDIZED / AFFORDABLE HOUSING



MARKET RATE HOUSING

**STATE AWARDS – 3 Awards for SDAs representing the states.**

**APPLICANT LIST**

The application can be submitted by any of the following

- Building Owner
- Developer
- Project Designer
- Facility Manager
- President of a cooperative housing society
- Architects and Consultants
- RWA Representatives

**ELIGIBILITY & EVALUATION**

**COMMERCIAL PROJECTS**

**Eligibility:**

1. It is applicable to buildings or building complexes that have a connected load of 100 kW or greater or a contract demand of 120 kVA or greater and are intended to be used for commercial purposes.
2. An individual building that has received Occupancy Certificate (OC) between 1 January 2017 and date of submission 31 August 2021.
3. The building project should have 100% of high side HVAC<sup>1</sup>, 50% of low side HVAC<sup>2</sup> and 50% of lighting equipment installed based on project area, on or before the submission date.

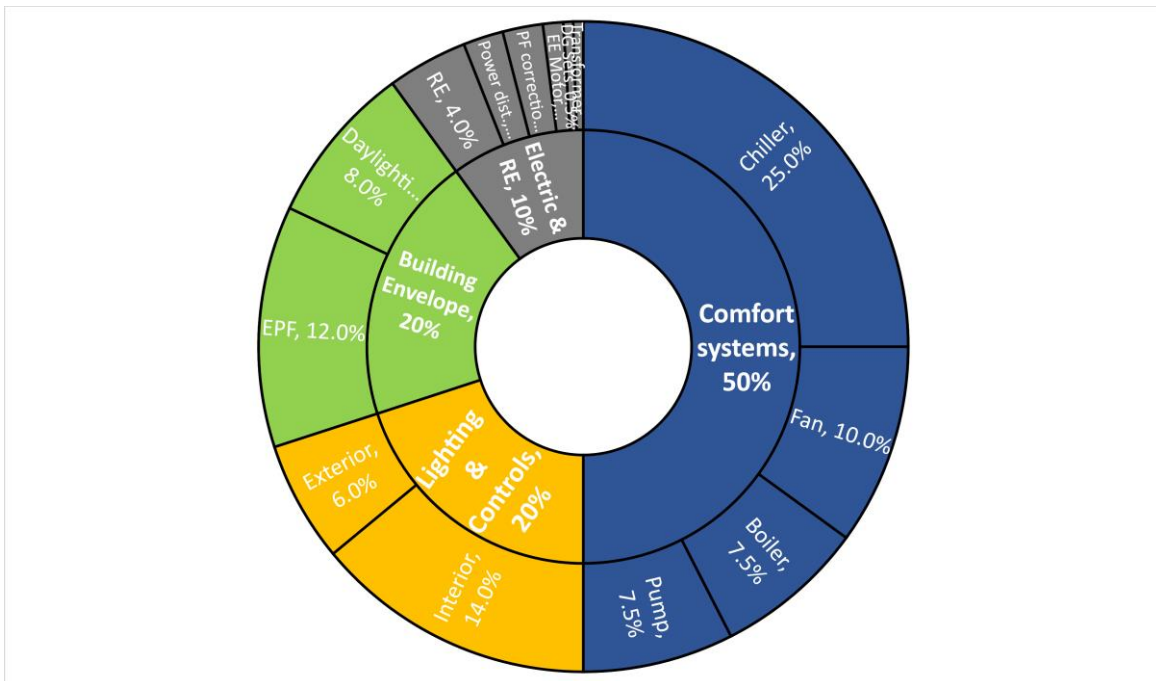
Confirming the above, the owner/developer shall submit a signed declaration (Annexure 1).

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*\* A project not meeting any of the mandatory criteria will not be considered for the award*

**Evaluation:**

**Evaluation Criterion:**



\*\*Weighted area scoring for a mechanically ventilated project.

Shall change based on building type and climate

<sup>1</sup> Chilled water production and supply to the spaces, which includes chillers, cooling tower, VRV system, VAM system, pumping arrangement etc. as applicable

<sup>2</sup> Cooling distribution side, which includes AHUs, fans, refrigerant and chilled water piping, ducting, VFD, Split unit, individual system, FCU, BMS etc. as applicable

The project entry would be judged through the pro forma (forms and checklists formats) which would be evaluated by the Committee and if needed through a visit/interview by the Award Judging Committee.

A 2-stage evaluation method will be followed for evaluation of entries:

**Stage 1:** Projects shall submit completed excel based Forms, Checklist (both shared via email) and Stage 1 documents.

1. ENVELOPE			
1.1 ENVELOPE DETAILS			
% Window to Wall Ratio (WWR) i.e. 100 x Total Vertical Fenestration Area /Gross Exterior Wall Area			
% Skylight to roof ratio (SRR) i.e. 100 x Total Skylight Area x Gross Exterior Roof Area			
Envelope Sealing (Select from the dropdown)			
1.2 DAYLIGHTING SUMMARY			
% above-grade floor area meeting the UDI requirement for 90% of the potential daylight time in a year			
1.3 OPAQUE ASSEMBLY			
Wall U-factor (W/m2.K)		Roof U-factor (W/m2.K)	
1.3.1 WALL ASSEMBLY			
Material	Assembly U Factor (W/m2.K)	Area (m2)	Direction
200 mm hollow concrete block + 50mm XPS insulation + External Cladding			North
200 mm hollow concrete block + 50mm XPS insulation + External Cladding			South
200 mm hollow concrete block + 50mm XPS insulation + External Cladding	0.34	5405.75	East
200 mm hollow concrete block + 50mm XPS insulation + External Cladding	0.34	5406.74	West

Applicability (select from dropdown)	Component	Information required
	Occupancy Certificate	Confirmation that the project has received Occupancy Certificate between 1 January 2017 and date of submission
	Submission Drawings	Floor plans Elevations
	Project Photographs	High resolution photographs of the project (5-10 in numbers) showing key project features
	Additional submission drawings for Mixed mode & naturally ventilated buildings	Door-Window Schedule
	Additional Photographs for Mixed mode & naturally ventilated buildings	Project photographs of implemented ventilation strategies

Objective forms and project drawings shall be evaluated, leading to short-listing of projects for the next stage of awards.

Projects shall fill the excel based form according to their ventilation type as mentioned below-  
Mechanically ventilation: Fill sheet 3a. Comfort systems and controls' form

Mixed Mode ventilation: Fill both sheet 3a. Comfort systems and controls' and sheet 3b. Natural Ventilation forms and respective document checklist

Natural ventilation: Fill sheet 3b. Natural Ventilation form and respective document checklist

3a. COMFORT SYSTEMS AND CONTROLS								
3.1 DESCRIPTION OF COMFORT SYSTEMS TYPE AND FEATURES								
Natural ventilation, mechanical Ventilation, Low energy comfort system, heating and cooling mechanical equipment. Percentage area distribution for the installed system, and related information.		The project has a provision of centralised Air Conditioners for Office spaces with 4 water cooled chillers (including one standby). All the motors, including that of cooling towers, have a motor efficiency of IE2. The project has also provided provision of time clock control and VAV fan controls. The project is provisioned with Treated Fresh Air systems with heat recovery.						
COMPLIANCE OPTION (Select		Performance Method						
3.2 EQUIPMENT SCHEDULE (The following information is required to be incorporated with the mechanical equipment schedules on the plans. For projects without plans, fill in the required information below.)								
3.2.1 COOLING AND HEATING EQUIPMENT SCHEDULE								
Equipment	Type (Select from the dropdown)	Capacity (kW)	Quantity	Performance				Area served by the equipment (m <sup>2</sup> )
				COPI/EER/SCOP/Efficiency		IPLV/Part load efficiency/SEER/MEE		
				Value	Units	Value	Units	
Chiller	Water Cooled	1050	3(+1 standb	6.09		0.577	kW/Ton	36040
Unitary, Split, Packaged Air-Conditioners	NA							
Variable Refrigerant Flow Air Conditioning	NA							

### **Submission Requirement at stage 1**

Following documents are required to be submitted by applicants at stage 1

- Application forms
- Detail Drawings
  - (1) Floor Plans
  - (2) Elevation
- Copy of occupancy certificate
- High resolution photographs of project
- Self-Declaration Form declaring the validity, authenticity, and applicability of the documents submitted by the applicants (Annexure 1)

Additional documents required for mixed mode and naturally ventilated building

- Door-window Schedule
- Project photographs of implemented ventilation facilities (for mixed mode and naturally ventilated building)

**Stage 2:** The shortlisted applicants are required to submit detail specifications & documents authenticating the ECBC compliant systems implemented in the project. Supporting documents of the short-listed projects shall be evaluated and the technical committee shall finalize decisions on the awards.

### **Submission Requirement at stage 2**

Following documents are required to be submitted by applicants at stage 2

- HVAC Drawings
- Lighting Drawings
- Technical Specification details of Mechanical & Electrical Equipments as per ECBC compliance
- Purchase order for all equipments

The Committee would take a final decision depending upon the number of entries received and other considerations. The Committee has the right for not declaring any award in any category if suitable applicants are not identified to qualify.

The Committee's decision would be final and no appeal for reconsideration shall be entertained.

**Exemplary Performance Awards**

Commercial projects which demonstrate outstanding achievements and contribution in the field of energy conservation and management for each of the ECBC 2017 sections-

- Building Envelope,
- Lighting and controls,
- Electrical and Renewable Energy Systems,
- Comfort Systems and Controls

Projects with Natural Ventilation shall also be recognized with Exemplary Performance Awards.

The recipient of the awards shall be selected on the basis of not only quantitative achievements but also considering the various other factors such as innovative techniques and technologies adopted.

**RESIDENTIAL PROJECTS**

**Eligibility:**

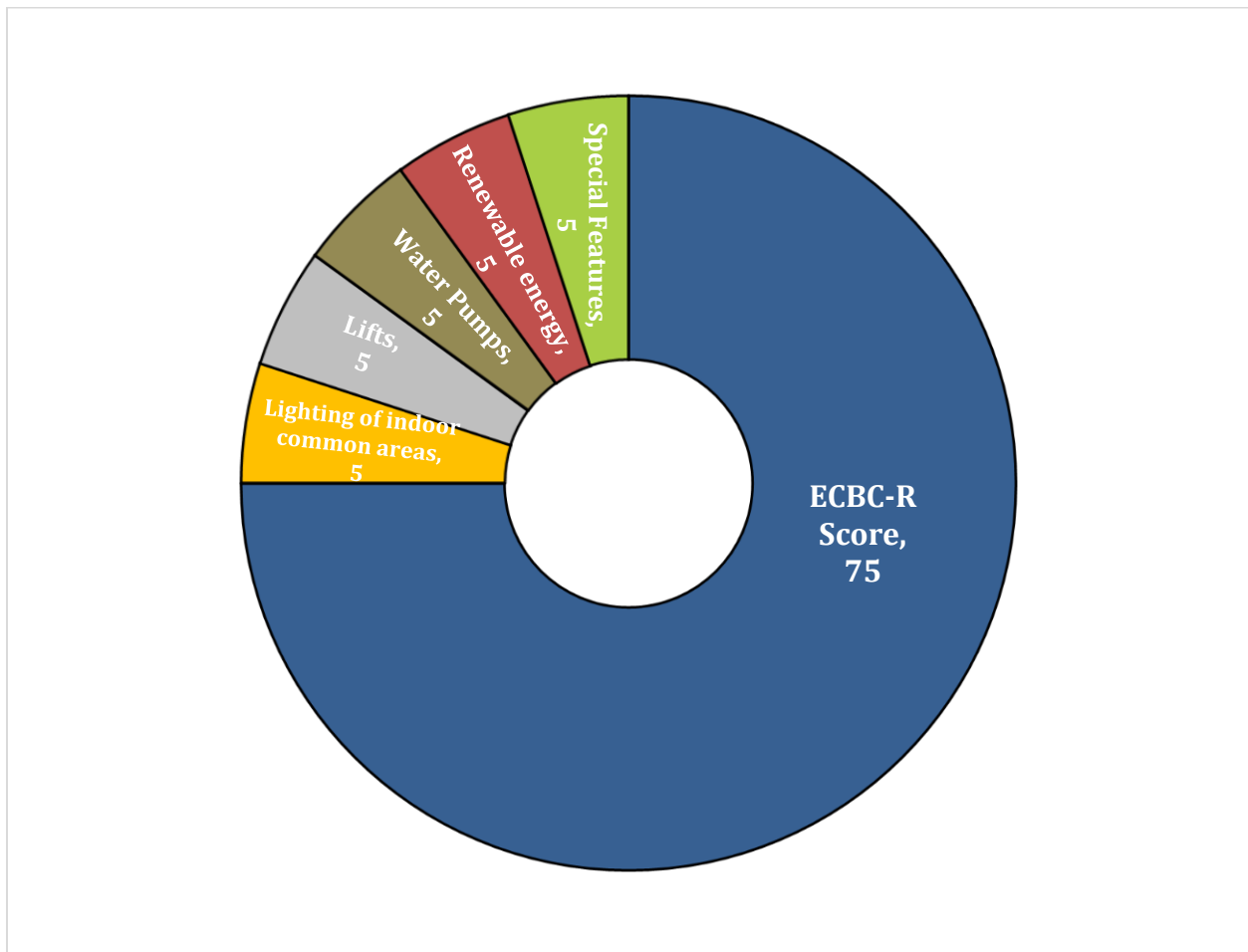
- I. 'Residential buildings' built on a plot area  $\geq 500 \text{ m}^2$  and Residential part of 'Mixed land-use building projects', built on a plot area of  $\geq 500 \text{ m}^2$ .
- ii. The award is for buildings in which construction has been completed and the building have been issued Occupancy Certificate. To be eligible, projects that received Occupancy Certificate (OC) between 1 January 2017 and date of submission 31 August 2021 shall be eligible to apply.

Confirming the above, the owner/developer shall submit signed declaration (Annexure 1).

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*\* A project not meeting any of the mandatory criteria will not be considered for the award*

**Evaluation Criterion:**



**Evaluation:**

Two categories of residential buildings as defined below shall be evaluated-

- Subsidized / Affordable Housing: Affordable housing, which is a focus area for the Government is kept as a separate category. Affordable housing is defined as houses that have carpet area of up to 60 m<sup>2</sup>.
- Market Rate Housing: All other kinds of housing

A 2-stage evaluation method will be followed separately for each category as explained below. The performance would be judged through the pro forma (forms and checklists formats) which would be evaluated by the Committee and if needed through a visit/interview by the Award Judging Committee.

**Stage 1:** Projects shall submit completed excel based Forms, Checklist (both shared via email) and Stage 1 documents.

ENS BUILDING SUMMARY			
<b>1. ENVELOPE DETAILS</b>			
Enter RETV Value (W/m2) :		If Cold Climate i.e. RETV not applicable, Enter U- Value envelope	
<b>2. ROOF DETAILS</b>			
U – Value Roof (W/m2.K) :		Percentage Roof area utilized for Solar Hot Water or Solar Photo Voltaic :	
<b>3. ELEVATORS (Select applicability from dropdown)</b>			
If applicable, check energy conserving features			
1. Gearless traction lift		4. Regenerative Breaking	
2. VFD's on Electric motors		5. Automatic control for lights and fans	
3. LED Lights inside Elevator			
<b>4. BEE STAR RATING OF WATER PUMPS</b> (Select from the dropdown)		<b>5. BEE STAR RATING OF INDOOR LIGHTING</b> At least 90% of lighting fixtures installed in common areas such as corridors, basement parking, lobby are (Select one):	
<b>6. SPECIAL FEATURES AND</b> Callouts for the energy efficiency features incorporated in Block B.			

ENS DOCUMENT CHECKLIST		
STAGE I		
Applicability (select from dropdown)	Component	Information required
	Occupancy Certificate	Confirmation that the project has received Occupancy Certificate between 1 January 2017 and date of submission
	Submission Drawings	Floor plans Elevations
	Project Photographs	High resolution photographs of the project (5-10 in numbers) showing key project features
	ECO-NIWAS SAMHITA Report	<a href="#">CBC-R Compliance Tool Link</a>

Evaluation shall be based on objective evaluation of forms and project drawings made leading to short-listing of projects for award.

**Submission Requirement at stage 1**

Following documents are required to be submitted by applicants at stage 1

- Application forms
- Detail Drawings
  - (1) Floor Plans
  - (2) Elevation
- High resolution photographs of project
- Eco Niwas Samitha Compliance Report generated from [ENS web link](#)
- Copy of occupancy certificate
- Self-Declaration Form declaring the validity, authenticity, and applicability of the documents submitted by the applicants (Annexure 1)



**Stage 2:** The shortlisted applicants are required to submit details, certifications, testimonials authenticating the energy conservation measures implemented in the project. The supporting documents of the short-listed projects shall be evaluated, and the technical committee shall take final decision on the awards.

### **Submission Requirement at stage 2**

Following documents are required to be submitted by applicants at stage 2

- Lighting Drawings for Common areas with Fixture specification
- Specification of Energy efficient Lifts
- Drawing & specification for Renewable systems
- Specification for Energy Efficient Water pumps

The Committee would take a final decision depending upon the number of entries received and other considerations. The Committee has the right for not declaring any award in any category If suitable applicants are not identified to qualify.

The Committee's decision would be final and no appeal for reconsideration shall be entertained.

**SUBMITTAL DIRECTIONS**

- Submittal shall be named as - (Project Registration id).

Documents for each section shall be compiled in a folder and named as (Project Registration id@Folder code)

**Folder codes**

<b>Stages</b>	<b>Building Category</b>	<b>Document types</b>	<b>Folder code</b>
Stage 1	Residential	All Document	@A
Stage 1	Commercial	All Document	@A
Stage 2	Residential	All Document	@B
Stage 2	Commercial	Building envelope documents	@1
		Lighting and controls documents	@2
		Comfort systems and controls documents	@3a
		Natural ventilation documents	@3b
		Electrical & renewable energy systems documents	@4

**Example**

Stage 1 document folder for residential building with project registration id RAH005 shall be named as [RAH005@A](#)

Stage 1 document folder for commercial building with project registration id CHC001 shall be named as [CHC001@A](#)

Stage 2 document folder for residential building with project registration id RAH005 shall be named as [RAH005@B](#)

Stage 2 lighting and controls document folder for commercial building with project registration id CHC001 shall be named as [CHC001@2](#)

Stage 2 natural ventilation documents folder for commercial building with project registration id CHC001 shall be named as [CHC001@3b](#)

Stage 2 electrical & renewable energy system documents folder for commercial building with project registration id CHC001 shall be named as [CHC001@4](#)

- Submittals for each stage shall be done through email (Link) or WeTransfer.
- Size of submittal shall be less than 1GB

The members of the Award Committee or their nominees may visit shortlisted projects for verification of data supplied, if felt necessary. It will be obligatory on the part of the participating teams to provide necessary assistance and co-operation for such visits. If the project is found non-compliant, the award shall be returned to BEE.

Please reach out to get help answer queries and address any issues faced by you -

Help desk email address: [info@bee-neerman.com](mailto:info@bee-neerman.com)

ANNEXURE 1

Declaration by Applicant:-

**DECLARATION** on applicant organization's letterhead

I/We\* \_\_\_\_\_ hereby, declare that the documents, information & commitments submitted for the project/building \_\_\_\_\_ for National Energy Efficiency Roadmap for Movement towards Affordable and Natural habitat Awards evaluation process are true, complete, and correct.

I/We am/are aware that Bureau shall not evaluate the authenticity of the documents submitted by the me/us for Award and grant of Award shall in no case be considered as expressly or impliedly certifying compliance of applicable laws by me/us. The Award so granted shall be limited only to the energy efficiency of the aforementioned project/building. I/We hereby acknowledge and understand that post Award, it is found that the information provided by the applicant is not correct, Bureau reserves the right to cancel the Award.

[\*Further, I/we declare that [*insert the name of specific license/approval*] to be submitted for the award, is not applicable on the building/project as per the law in force because [*insert the reason*] and accordingly the said license/approval was not obtained for the building/project.]

I acknowledge that the information submitted for the award is public, and I hereby grant the award organizers permission to use the information.

Signed

Organization:-

Role in project :-

Place:

Date:

Tel no :