



ENERGY MANAGEMENT CENTRE -KERALA

Department of Power, Government of Kerala

Thiruvananthapuram, Kerala – 695 017;

www.keralaenergy.gov.in

EXPRESSION OF INTEREST(EOI)

**Invitation for Demonstration Projects for checking Eco Niwas
Samhita Compliance**

Ref. No.: EMC/143/2022-ETB-6/EoI-1

Date of Publishing	:	06/04/2022
Starting date for submission of online application	:	07/04/2022

1. ABOUT ENERGY MANAGEMENT CENTRE- KERALA

Energy Management Centre - Kerala, Department of Power, Government of Kerala is the State Designated Agency (SDA) of Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India to coordinate, enforce and implement Energy Conservation Act-2001 (Central Act 52 of 2002) in Kerala.

Kerala Government is the first State Government in India to establish an Energy Management Centre (EMC) at the State level, aiming primarily to remold and instrumentalise the energy sector as a catalyst in promoting a development process that is economically-ecologically sustainable.

2. Eco Niwas Samhita- Energy Conservation Building Code for Residential Buildings

As India is poised to become the fifth-largest economy in the world, building stock is being added at a healthy rate of 8% per year, and building energy use is increasing exponentially. Although the buildings sector provides a challenge due to the extraordinary amount and pace of building construction, it also represents the most promising opportunities for fast and deep greenhouse gas emission mitigation. Improving energy efficiency in buildings is a priority of Government and has to be implemented by joint efforts of both central and state governments. Kerala as a State is committed to achieve coherence between the strategies and implementations being done at national and international levels. Residential sector is the biggest consumer of commercial energy and it consumes about 50% of the overall consumption in the state. This situation calls for an immediate energy conservation action plan.

Considering the current and anticipated rapid growth in the residential building stock across India and the importance of energy conservation in residential buildings, the Government of India has recently published the Energy Conservation Building Code for Residential Buildings named Eco Niwas Samhita (ENS) in two volumes: Eco Niwas Samhita 2018 (Part-I: Building Envelope) was launched to set minimum building envelope performance requirements to limit heat gains (for cooling dominated climates) and to limit heat loss (for heating-dominated climates), as well as for ensuring adequate natural ventilation and daylighting potential. The Eco Niwas Samhita 2021 (Code Compliance and Part II: Electro-Mechanical and Renewable Energy Systems) specifies code compliance approaches and minimum energy performance requirements for building services, indoor electrical end-use, and renewable energy systems. The ENS applies to-

1. Residential building built on a plot area of $\geq 500\text{m}^2$
2. Residential part of Mixed land-use building projects, built on a plot area of $\geq 500\text{m}^2$

An early introduction of ENS would improve the design and construction of new residential building stock being built currently and in the near future, thus significantly curtailing the anticipated energy demand for comfort cooling in times to come. This critical investment in envelope design and construction made today will reap the benefits of reduced GHG emissions for the lifetime of the buildings.

3. EMC INITIATIVES

Bureau of Energy Efficiency has announced the Residential Building Energy compliance demonstration and verification program. ENS code for new buildings are an important regulatory measure for ushering energy efficiency in the residential building sector. EMC is in the progress of creating awareness on Eco Niwas Samhita in the state to showcase the benefits and importance of ENS compliance for a project.

Energy Management Centre-Kerala is celebrating its 25th Anniversary, as a part of the Silver Jubilee Celebration, EMC has decided to select 25 residential projects as Demonstration projects for checking Eco Niwas Samhita Compliance for cost free. Energy Management Centre, Kerala invites details/information from Architects/ Developers for getting their projects for ENS Compliance.

4. TECHNICAL SUPPORT FOR ENS IMPLEMENTATION

Energy Efficient Building Cell in EMC Kerala will be giving technical assistance for the identified projects. EEB Cell carries out the verification of the submitted documents and details through ENS Online Compliance Tool. The client/ building owner is responsible for providing all necessary documents required for compliance checking. The owner/developer has to register through the online application form <https://forms.gle/Kh8cz2KREY5nmzRs5> and submit the details as provided in the project details attached as annexure. The following details are required for the ENS compliance checking and the building owner/developer has to submit the details accordingly.

- Building Typology
- Site & Floor Plans in Autocad
- Elevation & Section in Autocad
- Door Window Schedules
- Wall-roof & glazing Construction details and Material Specification
- 3d views
- Details of building services including lighting, HVAC, elevators and pumps
- Renewable energy systems

A detailed project report shall be submitted to Project Owner. Based on the report, the owner would be able to incorporate energy conservation measures in his/her residential building based on Eco Niwas Samhita.

5. EXPECTED OUTCOME

Provide technical support to building owners/developers for their upcoming residential buildings in Kerala in terms of energy efficiency and compliance check as per the Eco Niwas Samhita Code, so that building owners/developers could take effective conservative measures based on Code and rectify them beforehand. Thereafter help to reduce the overall energy consumption in the buildings after construction which in turn reduce the huge electricity bills, also help in conserving our energy resources and their usage in a sustainable way.

Annexure 1

PROJECT DETAILS

S. No.	Description	Project Details
1	Name of Building	
2	Location with Address	
3	Building Type (Single Dwelling/Multi-Dwelling /Apartment /Row Housing)	
4	Plot Area (sq. mt.) –	
5	Built-up Area (sq. mt.) –	
6	Number of towers/ Blocks	
7	Number of units	
8	Type of Unit (In terms of BHK)	
9	No. of Floors in Building	
10	Developer's Details	Name of Client –
		Client's Address –
11	Owner's details	Owner's Name –
		Owner's Contact No -
12	Architect Details	Name of Architect –
		Architect Address –
		Architect Contact Number -
		Architect Email Id:
13	Project Comes Under (Corporation/Council/Committee/ Authority/Nagar Panchayat) with Address	Name –
		Address -

Annexure 2

Undertaking letter format

Date:

To

The Director
Energy Management Centre - Kerala
Sreekrishna Nagar, Sreekaryam PO
Thiruvananthapuram – 695 017
Kerala

Sub: Undertaking letter to incorporate Energy Conservative Measures (ECM's) during building construction

Project Details:

Project Name:

Category: Residential (Housing Project/ Multiple Dwelling / Single Dwelling)

Location:

Dear Sir/Madam,

This is in with reference to the above cited subject, we would like to inform you that we will incorporate the energy conservation measures (ECMs) suggested by “Energy Efficiency Building (EEB) Cell” in the techno-commercial feasibility report based on Eco-Niwas Samhita (ENS) in the project mentioned above.

Thank you.

Authorised Signatory with Seal
(Owner)

Name:

Designation:

Address:

Email:

Contact No.: