

**GOVERNMENT OF GOA**  
**POWER DEPARTMENT**  
**NOTIFICATION**

No. ...., Date.....

Clause (p) of section 14 of the Energy Conservation Act, 2001 (Central Act 52 of 2001) empowers the State Government to prescribe Energy Conservation Building Code for efficient use of energy and its conservation in the building or building complexes, by notification, in consultation with the Bureau of Energy Efficiency. Government of India issued the Energy Conservation Building Code, 2017, under clause (p) of section 14 of Energy Conservation Act, 2001. Clause (a) of section 15 of the Energy Conservation Act, 2001 empowers the State Government to amend the Energy Conservation Building Code, in consultation with the Bureau of Energy Efficiency, to suit the regional and local climatic conditions and may, by rules made by it, specify and notify Energy Conservation Building Code with respect to use of energy in the buildings.

In exercise of the powers conferred the Central government by clause (l) of sub-section (2) of section 56 read with clause (d) of sub-section (2) of section 13 and clause (p) of section 14 of the Energy Conservation Act, 2001 (52 of 2001) or clause (a) of Section 15 of the Energy Conservation Act 2001 (52 of 2001), the Government of Goa hereby makes the following rules to notify the Energy Conservation Building Code applicable to the State of Goa, namely: –

**1. Short title and commencement**

- (1) These rules may be called the **“Goa Energy Conservation Building Code Rules, 2020”**.
- (2) They shall come into force on the date of their publication in the Official Gazette.

**2. Definitions**

- (1) In these rules, unless the context otherwise requires, –
  - (a) “Act” means the Energy Conservation Act, 2001 (52 of 2001);
  - (b) “best practices” means those measures that allow for optimisation of efficiencies in the identified components and systems to enhance the energy efficiency of the building; or
    - i) reduce the cost of construction having regard to the safety, stability of the building structure, health and environmental provisions of Central laws or Goa laws; and
    - ii) includes energy conservation measures approved by the Goa Energy Conservation Building Code Implementation Committee or Goa Energy Conservation Building Code

Compliant Technical Grievances Redressal Committee or National Energy Conservation Building Code Implementation Committee;

- (c) “building complex” means a building or group of buildings constructed in a contiguous area for business, commercial, institutional purposes or assembly of buildings under the single ownership of individuals or group of individuals or under the name of a co-operative group society or on lease and sold as shops or office space or space for other Non-residential purposes;
- (d) “built-up area” means the total covered areas on all floors of a building from the basement to all storeys covered by walls and parapet measured at the floor levels excluding parking;
- (e) “bye-laws” means the building bye-laws framed by the Goa Government or any authority under its control to regulate the building activities in its areas falling in the jurisdiction of –
- i. Town and country Planning Department
  - ii. All Panchayats and Municipalities;
  - iii. South Goa Planning Development Authority
  - iv. North Goa Planning Development Authority
  - v. Goa Industrial development corporation (GIDC)
  - vi. Any other authority notified by Goa Govt.

under various development plans notified by the Goa Government and enforced by such authority in its jurisdiction in which the Energy Conservation Building Code compliant building shall be located and includes any regulation or rule framed by the Goa Government or any other authority having jurisdiction established by the Goa Government;

- (f) “Certified Energy Auditor (Building)” means a person who fulfils the eligibility criteria specified in the Energy Conservation (Minimum qualification for Energy Auditors and Energy Managers) Rules, 2006 and has qualified National Examination for Energy Conservation Building Codes Compliance;
- (g) “Code” means the Goa Energy Conservation Building Code framed by the Bureau under the Act;
- (h) “compliance documents” mean the forms specified in Appendix D of the Code and includes certificates from Empanelled Energy Auditors (Building) to conform compliance with these rules,
- (i) “connected load” means the total of the rated wattage of all equipment, appliances and devices to be installed or installed in the building or part of the building or building complexes in terms of kilowatt (kW) that will be allocated to all applicants for electric power consumption in respect of the proposed building or building complex, as the case

may be, on their completion;

- (j) “construction documents” mean drawings or documents containing information pertaining to building construction processes and approvals, building materials and equipment specification, architectural details required by the authority having jurisdiction;
- (k) “contract demand” means the maximum demand in kilo Watt (kW) or Kilo-Volt Ampere (kVA) (within a consumer’s sanctioned load) agreed to be supplied by the electricity provider or utility in the agreement executed between the user and the utility or electricity provider;
- (l) “Empanelled Energy Auditors (Building)” means a firm consisting of the Certified Energy Auditor certified under Bureau of Energy Efficiency (Certification Procedures for Energy Auditors and Energy Managers) Regulations, 2010 and Certified Energy Auditor (Building), and empanelled with the Bureau;
- (m) “energy conservation measures” mean the measures incorporated in the building design for saving energy, or enhancing comfort in peak electrical or thermal demand, or reducing cooling or heating load covering any element of a component with any other element of the same or other component of the Code and includes any such measure incorporated in the said building design of the proposed or existing building;
- (n) “energy performance index” means annual energy consumption of a building in kilowatt-hours per square meter of the area of the building which shall be calculated as per the following formula:

$$\text{Energy Performance Index} = \frac{\text{Annual energy consumption in kWh}}{\text{Total built up area (excluding storage area and The parking in the basement) in m}^2}$$

- (o) “energy performance index ratio” means the ratio of the energy performance index of the proposed building to the energy performance index of the standard baseline building;
- (p) “establishment” means a business or other organisation, or the place where an organisation operates and includes a Government establishment and private establishment;
- (q) “form” means the forms appended to these rules;
- (r) “owner” means a person, group of persons, a company, a trust, an institute, registered body, Goa Government or Central Government and its attached or sub-ordinate departments, undertakings and such other agencies or organisations in whose name the property stands registered in the revenue records for the construction of a building or building complex;

- (s) “proposed design” means the computerised design of a building consistent with the actual design of a building which complies with all the requirements of the Code either through prescriptive or whole building performance method;
  - (t) “standard baseline design” means the standard design that complies with all the mandatory and prescriptive requirements of the Code and has the same built-up area of the proposed building;
- (2) Words and expressions used herein and not defined, but defined in the Act, or in the Code, shall have the meanings respectively assigned to them in the Act or in the said Code.

### **3. Applicability**

These rules shall apply to every building which is used or intended to be used for **Non-Residential** purposes having, -

- (i) connected load of 50 kilo watt (kW) or above; or**
- (ii) contract demand of 60 kilo volt ampere (kVA); or**
- (iii) Building having total built up area of 1,000 Sq. mtrs or above.**

And such building shall cover the following components, namely: –

- (a) building envelope;
- (b) comfort systems and controls (heating, ventilation and air conditioning, service hot water system);
- (c) lighting and controls;
- (d) electrical and renewable energy systems;
- (e) any other system, as may be specified from time to time by the Bureau:

Provided that these rules shall not apply to equipment, appliances, devices and parts of building that use energy primarily for manufacturing processes.

Provided further that wherever these rules are in conflict with safety, security, health or environmental codes, or Bureau of Energy Efficiency’s Standard and Labelling for equipment or appliances, and Star Rating Program for buildings, and if they are more stringent than the requirement of these rules then they shall prevail over these rules.

Provided, also, that if any existing building after additions or alterations changes fall under the above said criteria shall comply with the provisions referred to in clauses (a) to (e) of this rule.

### **4. Compliance mechanism.**

- (1) The compliance of energy performance of a building shall be ensured by the owner by following either of the following methods, namely: –
- (a) Prescriptive Method – The building shall comply with the mandatory requirements and prescriptive requirements as specified in the Code for envelope components, comfort systems and controls, lighting and controls, electrical and renewable energy systems;

- (b) Whole Building Performance Method – The building shall comply with all mandatory measures and the requirements specified in the whole building performance method of the Code and the energy performance index of the proposed design under this method shall be the same or less than the energy performance index of the standard baseline design of building as follows:

$$\text{Energy Performance Index ratio} = \frac{\text{Energy Performance Index of proposed design}}{\text{Energy Performance Index of standard baseline design}} \leq 1$$

- (2) The summary covering building envelope, comfort systems and controls, lighting and controls, and electrical and renewable energy systems and their checklists under Prescriptive Method and Whole Building Performance Method shall be as specified in the Appendix D of the Code.

## 5. Procedure for erection of Code compliant building

- (1) Every owner who intends to erect or re-erect a building or make alterations or additions in any building under these rules shall submit to the concerned authority having jurisdiction, an under taking in **Form I** and a certificate in **Form II** by empanelled Energy Auditor after verification of following construction documents duly signed by the owner(s):
- (a) construction documents shall ensure –
- (i) compliance with the applicable building bye-laws in force;
  - (ii) building design incorporates energy conservation measures and best national and international practices having regard to the climatic conditions of the site and specific needs of the building so as to optimise the energy performance index ratio of the building;
  - (iii) that all the data, building features, identified energy conservation measures under various building components and systems are shown in detail and in the manner specified in the applicable bye-laws;
  - (iv) the drawing of plan, colour of plan, dimensions of plan, scale of plan as per requirements of the applicable bye-laws in force;
- (b) compliance documents covering the construction of components and systems of the Code, duly certified by Empanelled Energy Auditor(s) (Building) including the following, namely:
- (i) energy performance index ratio report in respect of the proposed building at the design stage;

- (ii) certificate in **Form II** by Empanelled Energy Auditor(s) (Building) certifying the compliance documents as specified in Appendix D of the Code;
  - (iii) have been scrutinised or verified in respect of the identified energy conservation measures; and
- (2) The Empanelled Energy Auditor(s) (Building), at the design stage, shall follow the following procedure of inspection, namely: –
- (a) scrutinise the construction documents with respect to–
    - (i) floor area;
    - (ii) window area;
    - (iii) wall area;
    - (iv) roof area of the building;
    - (v) built-up area of the proposed design of the building;
  - (b) scrutinise the Code compliance documents and the check list as specified in the Appendix D of the Code and identify –
    - (i) the energy conservation measures that are applicable to the proposed design of building;
    - (ii) insulation quantities in walls and roof, and the construction assemblies, solar heat gain co-efficient, visible light transmittance and thermal transmittance (U-factor) for window assemblies;
    - (iii) heating, ventilation and air-conditioning component tables for air-handling equipment, refrigeration equipment, condensing equipment and air-flow summaries;
    - (iv) heating, ventilation and air-conditioning equipment efficiencies and control equipment; tables showing lighting equipment schedules;
    - (v) lighting power density calculations in the design documents;
    - (vi) lighting controls;
    - (vii) motor efficiencies and controls;
    - (viii) findings of the document; review to match with the energy model inputs for the proposed building by using the simulation tool approved by the Bureau;
  - (c) scrutinise energy performance index ratio projected at the design stage;
  - (d) verify and certify the items from (i) to (viii) of (b) and (c);
  - (e) fill the check list as specified in the Appendix D of the Code and issue correction list in

case the design documents of the proposed design of building provide inadequate information or do not meet the requirements of these rules and shall –

- (i) communicate his/her/their findings in **Form IV** to the owner(s) of the building under intimation to the concerned authority having jurisdiction;
  - (ii) give specified time to the owner(s) to implement its findings;
  - (iii) satisfy himself/herself/themselves that the communication received from the owner(s) within the specified time, meet the findings and fulfil the shortcomings;
- (f) Record his/her/their approval and complete the checklist conforming compliance with the Code and these rules, and issue the certificate of approval in **Form II** to the owner(s) under intimation to the concerned authority having jurisdiction.
- (3) The authority having jurisdiction on receipt of application under sub-rule (1) for issue of permit for construction of proposed building shall –
- (1) approve the design and sanction building plan only after it has received a certificate in **Form II** from the Empanelled Energy Auditor(s) (Building);
  - (2) grant permit to erect or re-erect the building or add to or make alterations in the building to carry out the construction works subject to the following conditions in its sanction letter, namely: –
    - (i) the construction work shall be in accordance with the sanctioned plan and requirement under the Code and these rules;
    - (ii) the compliance with these rules shall be achieved during construction-in-progress;
    - (iii) the building shall not be occupied before issuance of occupancy certificate to the owner(s);
    - (iv) The authority having jurisdiction may, at any stage, revoke the permit on receipt of non-compliance report from the Empanelled Energy Auditor(s) (Building) or on the notice of any misrepresentation of material facts in the application in respect of the provisions of these rules or the Code after giving a reasonable opportunity of being heard to the owner(s).
- (4) After receiving the permit, the owner(s) shall-
- (a) give notice of his/her/their intention to start the construction work of the building.
  - (b) undertake construction of energy conservation measures incorporated in the construction documents in terms of sub-clause (ii) of clause (b) of sub-rule (1);
  - (c) have flexibility in constructing the building components and systems covered in the construction documents referred to in clause (a) of sub-rule (1) to most

effective use of energy by deploying best practices in such components and systems to optimise the energy performance index ratio;

(d) Take the approval of the Empanelled Energy Auditor(s) (Building) before undertaking such construction referred to in clause (c) if the components and systems proposed to be constructed are other than those incorporated in the construction and compliance document.

(5) The Empanelled Energy Auditor(s) (Building), at construction stage, shall review, verify the specifications of the parameters specified in sub-rule (3) and,

(a) fill out the checklist specified in the Appendix D of the Code, provide comments if the proposed design of building does not meet the construction requirements and specify the shortcomings in compliance to the Code, these rules and sanctioned plan, and shall-

(i) communicate its shortcomings and finding to the owner(s);

(ii) give specified time to the owner(s) to implement its findings;

(iii) satisfy himself/herself/themselves that the communication received thereafter from the owner(s) meets the specified findings and fulfils shortcomings;

(b) Record his/her/their approval and complete the checklist indicating compliance with the Code and these rules, and issue a certificate of compliance in **Form III** to the owner(s) under intimation to the authority having jurisdiction;

(c) where it is determined at any stage that construction is not proceeding in accordance with the sanctioned plan or is in violation of any of the provisions of the Code and these rules, Empanelled Energy Auditor(s) (Building) shall notify the owner(s), and request for additional information with respect to his/her/their findings or on the short comings identified by him/her/them as per **Form IV**;

(d) in case the Empanelled Energy Auditor(s) (Building) is/are satisfied with the additional information provided by the owner, he/she/they shall record the same in the certificate of compliance in **Form III** and communicate the same to the owner under intimation to the authority having jurisdiction;

(e) In case the Empanelled Energy Auditor(s) (Building) is not satisfied with the additional information submitted by the owner(s) he/she/they shall report the same to the authority having jurisdiction to ensure that all further construction is stayed until correction has been effectuated and a certificate of compliance has been issued by the Empanelled Energy Auditor(s) (Building).

(6) Every owner shall submit a notice of completion of the building to the authority having jurisdiction on the completion of work including the works related to energy conservation measures specified in the sanctioned permit along with the certificate in **Form V** issued by the Empanelled Energy Auditor(s) (Building) certifying the completion of the building by the verification of –

(a) the duly completed compliance forms together with check list of various



components covered under rule (3) at the completion stage which shall include the following –

- (i) review of heating, ventilation and air-conditioning component tables for air-handling equipment, refrigeration equipment, condensing equipment, air-flow summaries, tables showing lighting equipment specifications, and tables showing motor specifications;
  - (ii) inspection of lighting equipment like lamps, ballasts, to confirm fixture wattage and inspection shall include at least random check across according to the type of usage in the building to determine lighting power density;
  - (iii) review the required lighting controls such as manual switching off perimeter, day lighting circuits, automated occupancy-based control, photo sensor controls, and automated timer based controls;
  - (iv) review of coefficient of performance values of installed heating, ventilation and air-conditioning equipment and control equipment;
  - (v) review of efficiencies of installed motor and controls;
  - (vi) review of power factor and power distribution losses;
  - (vii) Review the required check metering and monitoring system.
- (b) a list of the energy related building features in the proposed design, if any, which are different from the sanctioned or standard baseline design;
  - (c) all documents and invoices in support of the construction undertaken with respect to all energy conservation measures including insulation, fenestration, heating, ventilation and air-conditioning, lighting and electrical systems, water heating systems of the building.
- (7) If the energy performance index ratio at the completion stage is less than or equal to one as compared to the sanctioned plan of the building, it shall be deemed to have complied with the Code and these rules.
- (8) If there is deviation in the energy performance index ratio of the sanctioned plan, that is, it is more than one as compared to the sanctioned plan of the building, Empanelled Energy Auditor(s) (Building) shall record its findings in **Form IV** and communicate the same to the owner(s) and seek compliance of the same through incorporation of additional energy conservation measures. The Empanelled Energy Auditor(s) (Building) shall render technical assistance to the owner(s) to ensure that the proposed design of building becomes compliant with these rules.
- (9) The owner(s) shall neither occupy nor allow any other person to occupy the building or part of the building covered under these rules for any purpose until such building or such part thereof has been granted occupancy certificate under the byelaws of the authority having jurisdiction.
- (10) The owner(s) shall give notice of completion of the building and seek permission for occupancy.

- (11) The authority having jurisdiction on receipt of such notice by the owner accompanied by a certificate by the Empanelled Energy Auditor(s) (Building), issue the occupancy certificate incorporating *inter alia* the following conditions, namely: –
- (i) that the energy performance of the building shall be monitored and verified by the Goa Energy Conservation Building Code Implementation Committee;
  - (ii) that the owner(s) through the Empanelled Energy Auditor(s) (Building) shall submit to the Electricity Department, an energy performance index report as per **Form VI** under intimation to Bureau for two consecutive years after the building has been fully operational;
  - (iii) in case the energy performance index ratio of the building is more than one, the authority having jurisdiction may issue a provisional occupancy certificate subject to the condition that the owner shall undertake energy audit of the building to identify additional energy conservation measures to achieve the energy performance index ratio of the building approved in the sanctioned plan or permit within a period of three years;
  - (iv) if the owner(s) fail(s) to achieve the energy performance index ratio as specified in clause (iii) within a period of three years from the date of occupancy of the building, the authority having jurisdiction shall place the matter before the Goa Energy Conservation Building Code Technical Grievances Redressal Committee, which shall hear the owner(s) and the Empanelled Energy Auditor(s) (Building) and make recommendations in the matter accordingly and the authority having jurisdiction shall comply with such recommendations.
- (12) The process shall be continued repeatedly till energy performance index ratio of the building comes to less than one or equal to one and Empanelled Energy Auditor(s) (Building) shall fill and submit the compliance documents, as specified in Appendix D of the Code, of various energy conservation measures at each stage namely, design, construction and completion, to achieve conformity with the Code and these rules.
- (13) The simulation tool referred in sub-rule (3) shall be based on the standard method of test for the evaluation of building energy analysis computer program.
- (14) The owner(s) may approach the Goa Energy Conservation Building Code Compliant Technical Grievances Redressal Committee for redressal of any grievance under the provisions of these rules.

## 6. Committees

(1) The SDA, i.e. the Electricity Department, shall constitute –

(a) Goa Energy Conservation Building Code Implementation Committee headed by Chief Secretary of Goa or, his/her nominee and comprising of all stakeholders including a nominee from Bureau, to–

- (i) promote energy efficiency standards through optimisation of parameters in the various components and systems of the building in line with the provisions of these rules to enhance the building performance and provide every support to it to make it an effective instrument of promoting energy conservation and energy efficiency in the Non-residential buildings or establishment;
- (ii) forward its recommendations to the Bureau to assist the National Energy Conservation Building Code Implementation Committee to develop and revise energy consumption standards for buildings, in terms of energy performance index in warm & humid climate zone,
- (iii) create awareness about Goa Energy Conservation Building Code and procedure for erection of Code compliant building;
- (iv) promote construction of energy efficient buildings ensuring quality and consistency in their constructions having regard to the climatic conditions and needs of the building projects;
- (v) promote capacity building of building professionals, developers and contractors to promote energy efficient designs of buildings in close co-ordination with authorities having jurisdiction;
- (vi) undertake performance review of annual work of all Empanelled Energy Auditors (Building) to check their credentials;
- (vii) prepare a summary of violations which shall be provided by the Electricity Department to the Bureau and review such violations for the purpose of evaluating his/her professional skills;
- (viii) prepare a yearly report and furnish the same to the Bureau indicating *inter alia* the progress made in compliance of these rules in Goa and the steps taken by the Electricity Department, to improve the rate of compliance of Code in Goa;
- (ix) create data base through compilation of data of energy performance index and its ratio achieved by each building constructed after coming into force of these rules;

- (b) Goa Energy Conservation Building Code Compliant Technical Grievances Redressal Committee headed by an officer of the Urban Development Department of the Goa, with other members, not exceeding four, nominated by the Goa Energy Conservation Building Code Implementation Committee who are qualified by experience and training to pass judgment upon matters pertaining to construction of Code compliant building in Goa, to–
- (i) hear grievance filed by the owner(s) of a Code complaint building within the specified time period given by the authority having jurisdiction relating to the building permit, completion certificate, occupancy certificate of building including determination of the energy performance index ratio at the completion stage and interpretation of these rules or any other grievance arising out of the implementation of the Code and these rules;
  - (ii) Make recommendations to the authority having jurisdiction to reconsider such issue, or for implementation by the authority having jurisdiction, as the case may be.
- (c) Recommendation of the bureau through national energy conservation building code implementation committee approved by central government may be used for updating the code and rule

## **7. Responsibilities and duties of the owner(s)**

- (1) The owner(s) of the Code compliant building shall carry out the work of the said building in accordance with the requirements of the Code and these rules.
- (2) Every owner shall–
  - (a) engage Empanelled Energy Auditor(s) (Building) in development of building design, installation of energy conservation measures and equipment to meet with the requirements of these rules and ensure following, namely: –
    - (i) finalise the compliance approach relevant for his/her/their building project based on the complexity of the building, budget and time constraints;
    - (ii) finalise the energy conservation measures as per the Code as amended from time to time having regard to the location of the proposed building;
    - (iii) to integrate the energy conservation measures in the building design in accordance with the provisions of these rules;
    - (iv) that drawings, specifications and compliance forms are prepared and energy conservation measures are reflected in the building design documents and submitted to the authority having jurisdiction in compliance with the requirements of the rules accompanied by a certificate specifying the energy performance index ratio of the building by the Empanelled Energy Auditor(s) (Building) that the documents are as per the requirement of these rules;

- (v) notice is given within the validity of sanction to the authority having jurisdiction of his/her/their intention to start the construction work at the building site;
  - (vi) commence the work within the period specified by the authority having jurisdiction from the date of such notice or seek extension of time for starting the construction work, wherever necessary;
  - (vii) ensure that the designed energy conservation measures are deployed in the construction of the building and installation of its components and systems.
- (b) permit the Empanelled Energy Auditor(s) (Building) to enter the building or premises at any reasonable time for the purpose of inspection to ensure compliance of building works with rules and regulations under the Act;
- (c) give written notice to the authority having jurisdiction intimating the completion of the construction work along with a certificate from the Empanelled Energy Auditor(s) (Building) to the effect that—
- (i) the construction of the building has been done in accordance with the sanction of the building permit;
  - (ii) all the energy conservation measures have been installed and inspected, and they meet the requirements of the Code and these rules;
  - (iii) the building design meets with the provisions of the Code and these rules;
- (d) give written notice to the authority having jurisdiction as well as to the Electricity Department, in case of termination of the services of Empanelled Energy Auditor(s) (Building) and appointment of other Empanelled Energy Auditor(s) (Building) in its place;
- (e) obtain an occupancy permit from the authority having jurisdiction prior to any occupancy of the building or part thereof after completion of the building;
- (f) report the practical difficulties to the Empanelled Energy Auditor(s) (Building), if any, in carrying out the provisions of these rules, who shall take necessary action in consultation with the Electricity Department, and Goa Energy Conservation Building Code Implementation Committee;
- (g) on the receipt of the notice, if any, from the authority having jurisdiction, he/she/they shall discontinue such usage within reasonable time as specified in such notice and in no case he/she/they shall disregard the provisions of these rules;
- (h) where he/she/they propose(s) to alter the installation of any system or material or equipment on account of improving the energy efficiency of the building contrary to the system, material or equipment as indicated in the sanction plan he/she/they shall use or install such system or material or equipment after obtaining the necessary approval of the Empanelled Energy Auditors (Building):

Provided that it does not violate the spirit and intent of the provisions of these rules:

Provided further that such change shall not compromise with the building requirements namely, structural stability, safety, health or environmental provisions of Central laws and Goa laws applicable to the buildings covered under these rules.

(3) The owner may approach the Goa Energy Conservation Building Code Compliant Technical Grievances Redressal Committee for Redressal of any grievance under the provisions of these rules.

#### **8. Role, responsibilities and duties of the Empanelled Energy Auditor(s) (Building)**

The Empanelled Energy Auditor(s) (Building), whose services are engaged by the owner(s), shall—

- (a) verify and certify—
  - (i) the design of the building keeping in view the design criteria, energy goals of the project, energy systems performance verification plan, and the modelling approach;
  - (ii) the energy conservation measures based on the design approach for the project under consideration;
  - (iii) construction documents and compliance documents, compliance forms and checklists specified to ensure that the building complies with the Code and these rules;
  - (iv) energy performance index ratio of the proposed building;
- (b) furnish a certificate under its seal and authorised signature to the effect that drawings, specifications, construction documents, compliance documents and forms prepared covering building envelope, comfort system and controls, lighting and electrical power systems, wherever applicable, and all other Code related documentation prepared for submission to the authority having jurisdiction ensuring compliance with these rules;
- (c) inspect the building works from the design stage to its commissioning stage of buildings including their uses under these rules and based on his/her/their certification, the authority having jurisdiction shall issue building permit, approve construction of building, issue completion and occupancy certificates;
- (d) the Empanelled Energy Auditor(s) (Building) shall ensure that none of the professionals or employees working under him/her/them is engaged in any work in connection with the construction or alteration of the concerned building covered under these rules to ensure that there is no conflict of interest of his/her/their official duties with the interests of the authority having jurisdiction;
- (e) report to the SDA on such unusual technical issues that may arise due to issue of building permit or construction of building or during occupancy stage;

- (f) provide inputs to the National and Goa Energy Conservation Building Code Implementation Committees to facilitate for better implementation of the Code and these rules;
- (g) promote norms and standards specified in the Code.

## **9. Responsibilities and duties of the State Designated Agency – Electricity Department**

The SDA, i.e. Electricity Department, established by Goa Government under clause (d) of section 15 of the Act, in consultation with Bureau, shall–

- (a) coordinate, regulate and enforce provisions of the Code and these rules for efficient use of energy and its conservation under the Act in Goa;
- (b) ensure every Non-residential building or establishment having 1) connected load of 50 kW or contract demand of 60 kVA or greater or Built-up Area of proposed building greater than or equal to 1000 Square Metre to be constructed in compliance with these rules;
- (c) monitor the performance of the Empanelled Energy Auditors (Building) to improve the quality, consistency and rate of compliance of these rules with a view to make the cadre of Empanelled Energy Auditors (Building) as effective instruments for promotion of energy efficiency in the building sector in Goa;
- (d) create a data bank in Goa to measure the compliance rates of the Code compliant buildings and accurately account for the energy savings resulting from the compliance of these rules;
- (e) also create a data bank on energy use per square meter of area of the building under different zones namely, warm & humid, separately for each category in Goa;
- (f) take necessary steps to make energy performance index as a measure to comply with these rules in the various categories of buildings and send its recommendations to the Bureau for the formulation of energy consumption norms and standards in respect of various categories of buildings constructed zone-wise in Goa;
- (g) arrange conduct site visits, if considered necessary, to determine the accuracy of reporting by the Empanelled Energy Auditors (Building) in Goa;
- (h) prepare a report on performance of the Empanelled Energy Auditors (Building) listing out the projects complying with these rules, projects in violation of compliance with these rules and the level of violation, and provide summary of such violations for each year to the Bureau of Energy Efficiency;

- (i) coordinate with the authority having jurisdiction to amend their building bye-laws incorporating the provisions of these rules for the purpose of construction of buildings in compliance with the Code and these rules;
- (ii) provide necessary support to the authority having jurisdiction to conform to the provisions of these rules with regard to matters concerning design construction including energy conservation measures and occupancy for improving the energy performance of Code compliant buildings and effectiveness in compliance of these rules.

## **10. Miscellaneous**

- (1) The use of any energy conservation measures or method or design or construction not specifically specified under these rules shall not be prevented by the authority having jurisdiction if such energy conservation measures or method or design or construction is found to be satisfactory by the Goa Energy Conservation Building Code Compliant Technical Grievance Redressal Committee and such energy conservation measures or method or design or construction assist the owner(s) in optimising the energy performance index ratio in the use of energy on its occupancy.
- (2) The Code shall be reviewed periodically, at least once in five years, to determine the need for revision or withdrawal of standards specified in the Code, and such standards which in the opinion of the Bureau need no revision or amendment shall be reaffirmed.



**Form I**  
**[See rule 5(1)]**

**UNDERTAKING BY OWNER**  
**(To be submitted to Authority Having Jurisdiction)**

To,

Competent Authority (Address)

Goa.

I/We am/are the owner(s) of the proposed Energy Conservation Building Code Compliant Building in the premises of Plot bearing Survey. No./Chalta.No./P.T.S No. \_\_\_\_\_ of Village /Town\_\_\_\_\_ Taluka \_\_\_\_\_, Goa wherein I/We intend to construct a building .The proposed building on completion of construction shall have a connected load/contract demand of 50 kW/60 kVA or greater OR a 1000m<sup>2</sup> built up area or greater and is proposed to be constructed and to be used for non-residential purposes. The proposed building accordingly attracts the provisions of Goa Energy Conservation Building Code Rules 2020. The building is presently at Design stage.

I/we undertake that the aforesaid building shall be constructed in accordance with the provisions of the Goa Energy Conservation Building Code Rules, 2020, In case any deviation is noticed during the construction of the Building, I/we shall indemnify the loss to the authority having jurisdiction.

I/we further undertake that the information supplied in the enclosed drawings, construction and compliance documents and the application is accurate to the best of my/our knowledge and if any of the information supplied is found to be incorrect and such information result in loss to the Central or the State Government or any other authority under them. I/ we undertake to indemnify such loss. In case of any deviation in the proposed design, the same will be conveyed and approved by the Empaneled Energy Auditors and submitted to Authority Having Jurisdiction.

Yours faithfully,

(Name of the owner(s))

Address

Tel. No. /Mobile No.

Date: - \_\_/\_\_/\_\_\_\_

i) Certificate in Form II attached.

**Form II**  
**[See rule 5(1),5(2)(f),5(3)1]**

**ECBC COMPLIANCE CERTIFICATE- DESIGN**

I/We am/are Empaneled Energy Auditors having registration No: \_\_\_\_\_  
under the Energy Conservation Act 2001 (52 of 2001) and am authorized to scrutinize and verify the  
design of Energy Conservation Building Code compliant building. I/We certify that –

- (a) I/We have scrutinized the construction documents, undertaking submitted by the owner duly  
signed by the owner/design professional showing all the pertinent data and features of the building,  
equipment and systems in sufficient details covering building envelop, heating, ventilation and air-  
conditioning, service hot water, lighting and electrical power in accordance with the Goa Energy  
Conservation Building Code rules,2020 in respect of building proposed to be constructed on Survey.  
No/Chalta.No./P.T. S No. \_\_\_\_\_ of Village /Town\_\_\_\_\_ Taluka \_\_\_\_\_, Goa
- (b) I/We have scrutinized the compliance forms with the check- lists to ensure compliance with the  
byelaws and the Goa Energy Conservation Building Code rules,2020
- (c) The compliance documents have been duly inspected by the undersigned.
- (d) The energy performance index ratio of the building design as per compliance documents, at the  
design stage is equal to or less than one and is therefore in compliance with Goa Energy  
Conservation Building Code rules,2020
- (e) It is certified that all required scrutiny and verification of the documents submitted have been  
carried out diligently, truthfully and all reasonable professional skill, care and diligence have been  
taken in scrutinizing and verifying the drawings of the buildings and compliance forms together with  
check–lists covering the various components of the Goa Energy Conservation Building Code  
rules,2020
- (f) The contents of all the documents submitted along with the application are a true representation  
of the facts and nothing has been concealed.

There is no objection for issue of building permit in respect of the aforesaid proposed building in so  
far as requirements of Goa Energy Conservation Building Code rules,2020 are concerned.

Authorized signature

Name of the Empanelled Energy Auditor (Building)

**Registration No./Seal**

Date: - \_\_/\_\_/\_\_\_\_

To,

- 1) Owner
- 2) Authority having jurisdiction

**Form III**  
[See rule 5(5) (b), (d)]

**ECBC COMPLIANCE CERTIFICATE- DURING CONSTRUCTION**

I/We am/are \_\_\_\_\_ being an authorized **Empaneled Energy Auditors (Building)** with registration no : \_\_\_\_\_ here by state I/we have reviewed the undertaking given by the owner, **energy conservation measures installed during the construction works** and have reviewed the construction documents, compliance forms, check-lists, submitted and inspected progress in construction works in respect of the various elements of the components referred to in sub-rule (6) of Rule 5 of the proposed Energy Conservation Building Code compliant building Survey. No./Chalta.No./P.T.S No. \_\_\_\_\_ of Village /Town \_\_\_\_\_ Taluka \_\_\_\_\_, Goa and certify that the energy performance index ratio calculation meets the requirement of ECBC compliant/ ECBC plus/ Super ECBC building.

I/We further certify that all reasonable professional skill, care, and diligence have been taken in verifying the construction document and compliance forms in respect of the various elements of the components covered in Goa Energy Conservation Building Code rules,2020 and contents thereof are a true representation of the facts and meet the requirements of Goa Energy Conservation Building Code rules,2020

Duly filled checklist and detail compliance report of the project is attached with the certificate.

Authorized signature

Name of the Empanelled Energy Auditor (Building)

**Registration No./Seal**

Date: -\_\_/\_\_/\_\_\_\_

To,

- 1) Owner
- 2) Authority having jurisdiction

**Form IV**  
**[See rule 5(2) e(i), 5(5) c,5(8)]**  
**NON-COMPLIANCE NOTICE**

I/We am/are \_\_\_\_\_being an authorized **Empaneled** Energy Auditors(Building) with registration No: \_\_\_\_\_ hereby state that I/we have verified the undertaking given by the owner, and have inspected the construction documents, compliance forms, check-lists, submitted on for the proposed Energy Conservation Building Code compliant building at Survey. No./Chalta.No./P.T.S No. \_\_\_\_\_ of Village /Town\_\_\_\_\_ Taluka \_\_\_\_\_, Goa and submit to inform that the proposed building is not compliant with respect to the various components as specified in sub-rule (3) of rule 5. The following non-compliance has been observed my/our verification process during the Design/ construction /Completion stage of the building:

- 1.
- 2.
- 3.
- 4.
- 5.

This non-compliance certificate is issued after giving reasonable time to you for rectification and compliance (**communication with owner attached**). You are accordingly requested to take corrective action within a period of one month from the date of issue of this letter.

Authorized signature

Name of the Empanelled Energy Auditor (Building)

**Registration No./Seal**

Date: - \_\_/\_\_/\_\_\_\_

To,

- 1) Owner

**Form V**  
**[See rule 5(6)]**

**ECBC COMPLIANCE CERTIFICATE- COMPLETION**

I/We am/are \_\_\_\_\_ being an authorized **Empaneled Energy Auditors(Building)** with registration No: \_\_\_\_\_ hereby state that I/we have verified the undertaking given by the owner, and have inspected the construction documents, compliance forms, check-lists, submitted on completion of building \_\_\_\_\_ of the proposed Energy Conservation Building Code compliant building in Survey. No. \_\_\_\_\_ Approved vide technical order/Development permission order No. \_\_\_\_\_ dated \_\_\_\_\_ and licenced by village panchayat/municipality/ corporation vide No \_\_\_\_\_ Dated \_\_\_\_\_, Goa and certify that the: -

(i) The works covered under the Goa Energy Conservation Building Code Rules, 2020 have been completed to the best of my satisfaction. The details of the various components/system completed as per Goa Energy Conservation Building Code rules,2020 are given below.

Name of Component

- 1.
- 2.
- 3.
- 4.

(ii) The energy performance index ratio of the above said building match with the data given in the aforesaid compliance documents specified in para 1 above

(iii) A list of the energy conservation measures deployed in the construction of aforesaid building enclosed. Necessary approvals required have been taken by the owner.

(iv) The building in my/our view meets the requirements of Goa Energy Conservation Building Code rules,2020 Compliant.

(v) I further certify that all reasonable professional skill, care, and diligence have been taken in verifying the construction document and compliance forms in respect of the various elements of the components covered in the Goa Energy Conservation Building Code rules,2020 and contents thereof are a true representation of the facts and meet the requirements of the Goa Energy Conservation Building Code rules,2020.

(vi) Duly filled checklist and detail compliance report of the project signed and sealed by the undersigned is attached with the certificate.

Authorized signature

Name of the Empaneled Energy Auditor (Building)

**Registration No./Seal**

Date: - \_\_/\_\_/\_\_\_\_

To,

- 1) Owner
- 2) Authority having jurisdiction

**Form VI**

[See rule 5(11) (ii)]

**[Energy Performance Index Report Submission by Empanelled Energy Auditor(s) (Building) to the Chief Electrical Inspectorate, After the Building Has Become Fully Operational]**

To

The Chief Electrical Engineer / Nodal Officer SDA,

Electricity Department

Government of Goa

**Subject:** Energy Performance Index Report for Goa Energy Conservation Building Code compliant building constructed on Survey. No/Chalta.No./ P.T.S No. \_\_\_\_\_ of Village /Town\_\_\_\_\_ Taluka \_\_\_\_\_, Goa Communication by the Empanelled Energy Auditor(s) (Building)

Sir/Madam,

I/We, (Name), being the authorised/Empanelled Energy Auditor(s) (Building) vide order no. \_\_\_\_\_ hereby state that I/we have reviewed the undertaking given by the owner(s), energy consumption for year \_\_\_\_\_ of the proposed building of type \_\_\_\_\_ in the premises Survey. No/Chalta.No./P.T.S No. \_\_\_\_\_ of Village /Town\_\_\_\_\_ Taluka \_\_\_\_\_, Goa and having Plot area \_\_\_\_\_ Built-up area \_\_\_\_\_ connected load /sanctioned load \_\_\_\_\_kW/kVA certify that the energy performance index ratio is \_\_\_\_\_ which is less than or equal to one. The EPI report is enclosed.

I/we further certify that all reasonable professional skill, care, and diligence have been taken to verify the energy consumption of the aforesaid building.

Copies of the electricity bills have been enclosed for your reference.

Yours faithfully

Signature

Name of Authorised/Empanelled Energy Auditor(s) (Building)

**Registration No. /Mobile No.**

Seal

Enclosure: Energy performance index ratio report as specified in the Appendix D of the Code.

Copy to: Director, Buildings Programme, Bureau of Energy Efficiency, 4th Floor, Sewa Bhavan,

R K Puram, New Delhi – 110 066