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GOVERNMENT OF ARUNACHAL PRADESH
DEPARTMENT OF POWER
ITANAGAR

NOTIFICATION

The 28th March, 2022

No. PWRS/E-61/2022/APEDA.—The Governor of Arunachal Pradesh is pleased to notify the "Arunachal Pradesh Energy Conservation Building Code-2022 and APECBC Rule-2022" in the state for the implementation of APECBC code and rules for commercial buildings having a connected load of more than 100 KW or contract demand of above 120 KVA to be adopted in building bye-laws by the Town Planning and ULB's Department.

This code and rules are being adopted for standardizing the minimum energy consumption and its conservation in the commercial buildings as well as to provide minimum requirement for Energy Efficient Design in Buildings and their system.

The provisions of this code applies to :

- (a) Building envelope,
- (b) Mechanical systems and equipment, including heating, ventilating, and air conditioning, service hot water heating,
- (c) Interior and exterior lighting, and
- (d) Electrical power and motors, and renewable energy systems.

This notification issues with the approval of the competent authority vide file No. APEDA/W(E)-433/ECBC/2021-2022, Pg.9/N, Dated 7th March, 2021.

Kaling Tayeng, IAS
Commissioner (Power),
Government of Arunachal Pradesh,
Itanagar.

**ARUNACHAL PRADESH
ENERGY CONSERVATION BUILDING CODE RULES, 2022**

Whereas, Clause (p) of section 14 of the Energy Conservation Act, 2001 (Central Act 52 of 2001) empowers the Central 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 and accordingly Government of India has issued the Energy Conservation Building Code, 2017, under clause (p) of section 14 of Energy Conservation Act, 2001.

Whereas, 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.

Now therefore, in exercise of the powers conferred under section 57 of the Energy Conservation Act, (2001) read with clause (a) of Section 15 of the Energy Conservation Act 2001, the Government of Arunachal Pradesh in consultation with Bureau of Energy Efficiency hereby makes the following rules to notify the Energy Conservation Building Code applicable to the state of Arunachal Pradesh, namely: -

1. Short title and commencement :

- (1) These rules may be called the 'Arunachal Pradesh Energy Conservation Building Code Rules, 2022 (APECBC Rules)',
- (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 optimization 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 Arunachal Pradesh laws; and
 - (ii) includes energy conservation measures approved by the Arunachal Pradesh Energy Conservation Building Code Implementation Committee or Arunachal Pradesh 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 commercial 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 Arunachal Pradesh Government or any authority under its control to regulate the building activities in its areas falling in the jurisdiction of-
 - (i) all Municipal authorities or Committees or Councils;
 - (ii) all Metropolitan areas or Nagar Panchayats;
 - (iii) all areas covered under the Development or Planning authorities;

under various development plans notified by the Arunachal Pradesh 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 Arunachal Pradesh Government or any other authority having jurisdiction established by the Arunachal Pradesh 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 Arunachal Pradesh Energy Conservation Building Code, 2022 or the latest framed by the state 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 equipments, appliances and devices to be installed or installed in the building or part of the building or building complexes in terms of kilo Watt (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 kilo Watt-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 base line 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, Arunachal Pradesh 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 computerized 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 commercial purposes, having a connected load of above 100 kilowatt(kW) or a contract demand of above 120 kilo-Volt Ampere(kVA) 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 Labeling 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 its connected load to above 100 kilo-Watt (kW) or above contract demand of 120 kilo-Volt Ampere(kVA) shall comply with the provisions referred to above clause at 3 [(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 base line 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 check lists under Prescriptive Method and Whole Building Performance Method shall be as specified in the Appendix D of the APECBC Code-2022.

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 application in Form-I accompanied by-
- (a) Construction documents duly signed by the owner(s) together with an under taking in Form-II;
 - (b) 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 optimize 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, color of plan, dimensions of plan, scale of plan as per requirements of the applicable bye- laws in force;
 - (c) 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-III by Empanelled Energy Auditor(s) (Building) certifying the compliance documents as specified in Appendix D of the APECBC Code - 2022;
 - (iii) Have been scrutinized or verified in respect of the identified energy conservation measures; and
 - (iv) An application with heading super scribed "Application for permission to erect/re-erect an Energy Conservation Building Code Compliant Building", duly signed by the owner(s) seeking building permit from the concerned authority having jurisdiction before starting construction work in respect of the proposed building.
- (2) The authority having jurisdiction may require submission of documents in electronic form or hard copy of the documents, referred to in sub-rule(1).
- (3) The Empanelled Energy Auditor(s) (Building), at the design stage, shall follow the following procedure of inspection, namely:-
- (a) Scrutinize 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;