NOTIFICATION

In exercise of the powers conferred by clause (a) of sub-section (2) of section 57 read with clause (a) of section 15 of the Energy Conservation Act, 2001 (Central Act 52 of 2001), the Governor of Tamil Nadu, in consultation with the Bureau of Energy Efficiency, hereby makes the following rules, namely:-

1. **Short title and commencement.** – (1) These rules may be called the Tamil Nadu Energy Conservation Building Code Rules, 2022.

(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 (Central Act 52 of 2001);

(b) "best practices" means those measures that–
   (i) allow for optimisation of efficiencies in the identified components and systems to enhance the energy efficiency of the building; or
   (ii) reduce the cost of construction having regard to the safety, stability of the building structure, health and environmental provisions of Central laws or the State laws; and
   (iii) includes energy conservation measures approved by the Tamil Nadu Energy Conservation Building Code Implementation Committee or Tamil Nadu 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 development 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 State 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 State Government and enforced by such authority in its jurisdiction in which the Tamil Nadu Energy Conservation Building Code compliant building shall be located and includes any regulation or rule framed by the State Government or any other authority having jurisdiction established by the State Government;

(f) "Certified Energy Auditor (Building)" means a person who fulfills the eligibility criteria specified in the Energy Conservation (Minimum Qualification for

Energy Auditors, Energy Auditors (Building) and Energy Managers) Rules, 2020 and has qualifiedNational Examination for Energy Conservation Building Codes Compliance;

(g) "Code" means the Tamil Nadu Energy Conservation Building Code, 2022 annexed to these rules.

(h) "compliance documents" mean the Compliance 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 containinginformation 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 kiloWatt (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:

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

(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 organization, or the place where an organization operates and includes a Government establishment and private establishment;

(q) “form” means the TNECBC forms appended to these rules;

(r) “owner” means a person, group of persons, a company, a trust, an institute, registered body, State Government or Central Government and its attached or sub-ordinate departments, undertakings and such other agencies or organizations 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. Application. – These rules shall apply to every building, which is used or intended to be used for commercial purposes, having a connected load of 100 kiloWatt (kW) or above or a contract demand of 120 kilo-Volt Ampere (kVA) or above or a built-up area of 2000 square meter 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 its a connected load to 100 kilo-Watt (kW) or above or a contract demand of 120 kilo-Volt Ampere (kVA) or above or a built up area of 2000 square meter or above, 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:

$$\textit{energy performance index ratio} = \frac{\textit{energy performance index of proposed design}}{\textit{energy performance index of standard baseline design}} \leq 1$$

(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. <u>Procedure for erection of Code compliant building</u>. – (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 TNECBC Form I accompanied by-

(a) construction documents duly signed by the owner together with an undertaking in TNECBC 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 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 shownin 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;

(c) compliance documents covering the construction of components and systems of the Code, duly certified by Empanelled Energy Auditors (Building) including the following, namely:-

(i) energy performance index ratio report in respect of the proposed building at the design stage;

(ii) certificate in TNECBC Form III by Empanelled Energy Auditors (Building) certifying the compliance documents as specified in Appendix D of the Code;

(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 Tamil Nadu Energy Conservation Building Code compliant Building”, duly signed by the owner 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 Auditors (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;

(b) scrutinize 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;

(v) tables showing lighting equipment schedules;

(vi) lighting power density calculations in the design documents;

(vii) lighting controls;

(viii) motor efficiencies and controls;

(ix) 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) scrutinize energy performance index ratio projected at the design stage;

(d) verify and certify the items from (i) to (ix) 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 findings in TNECBC Form IV to the owner of the building under intimation to the concerned authority having jurisdiction;

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

(iii) satisfy himself that the communication received from the owner within the specified time, meet the findings and fulfill the shortcomings;

(f) record his approval and complete the checklist conforming compliance with the Code and these rules, and issue the certificate of approval in TNECBC Form V to the owner under intimation to the concerned authority having jurisdiction and the State designated agency.

(4) The authority having jurisdiction on receipt of application under sub-rule (1) for issue of permit for construction of proposed building shall-

(i) approve the design and sanction building plan only after it has received a certificate in TNECBC Form II or Form V from the Empanelled Energy Auditors (Building);

(ii) 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: -

(A) the construction work shall be in accordance with thesanctioned plan and requirement under the Code and these rules;

(B) the compliance with these rules shall be achieved during construction-in-progress;

(C) the building shall not be occupied before issuance of occupancy/completion certificate to the owner;

(D) the authority having jurisdiction may, at any stage, revoke the permit on receipt of non-compliance report from the Empanelled Energy Auditors (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.