

INDEX

- 1. Short title and commencement**
- 2. Definitions**
- 3. Applicability**
- 4. Exemption**
- 5. COMPLIANCE MECHANISM**
 - 5.1. Prescriptive method
 - 5.2. Whole building performance method
- 6. Procedure for construction of MP ECBC compliant building**
 - 6.1. DESIGN PHASE**
 - 6.1.1. Design team and Certified Energy Auditor (Building)
 - 6.1.2. Compliance scrutiny and verification of building design by Certified Energy Auditor (Building)
 - 6.1.3. Non-compliance observed during design stage by Certified Energy Auditor (Building)
 - 6.1.4. Building permit approval
 - 6.1.5. Grant of permit or refusal
 - 6.2. CONSTRUCTION PHASE**
 - 6.2.1. Owner's responsibility during the construction phase
 - 6.2.2. Verification and certification during construction by Certified Energy Auditor (Building)
 - 6.2.3. Violation observed during construction by Certified Energy Auditor (Building)
 - 6.3. COMPLETION OF CONSTRUCTION**
 - 6.3.1. Application for occupancy certificate by owner
 - 6.3.2. Completion stage verification by Certified Energy Auditor (Building)
 - 6.3.3. Verification of EPI by Certified Energy Auditor (Building)
 - 6.3.4. Violations found at completion stage
 - 6.3.5. Occupancy certificate
 - 6.4. OPERATIONAL STAGE MONITORING**
- 7. Right of review and appeal**
- 8. Establishment of MP energy conservation building code committee**
- 9. Roles and responsibility of MP energy conservation building code committee**
- 10. Qualification of Certified Energy Auditor (Building)**
- 11. Qualification of Accredited Energy Auditor (Building)**
- 12. Role of Accredited Energy Auditor (Building).**
- 13. Roles, responsibility and duties of the Certified Energy Auditor (Building)**
- 14. Responsibilities and duties of the owner**
- 15. Responsibility and duty of MPUVNL**
- 16. Responsibility and duty of the distribution licensee**
- 17. Penalties**
- 18. Power to relax**
- 19. FORMS (I- VIII)**
- 20. CHECKLISTS (1-3)**
- 21. APPENDIX 1- ECBC code**
- 22. APPENDIX 2- CLIMATE RECLASSIFICATION DOCUMENT**

[To be published in the Gazette of State of Madhya Pradesh, Extraordinary, Part IV-a]

Address of the department where this document is being submitted

NOTIFICATION

<Letter number – MPUVNL admin department will provide it>- In exercise of the powers conferred by section 15 of the Energy Conservation Act, 2001 (52 of 2001), the Government of Madhya Pradesh (MP) in consultation with the Madhya Pradesh Urja Vikas Nigam Limited (MPUVNL), established under clause (d) of section 15 of the said Act, hereby makes the following Rules, namely:-

1. SHORT TITLE AND COMMENCEMENT

These rules may be called MP State Energy Conservation Building Code (ECBC) Rules, 2017 or MP ECBC Rules, 2017.

They shall come into force on date 1st September 2018

2. DEFINITIONS

2.1. In these rules, unless the context otherwise requires,-

- (a) "Act" means the Energy Conservation Act, 2001 (52 of 2001)
- (b) "Accredited Energy Auditor (Building)" means an accredited energy auditor for ECBC eligible building given accreditation in accordance with the provisions of Section 11 of these rules.
- (c) "Bye-laws" means the building bye-laws notified by MP Government or any authority under its control to regulate the development and construction 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;
- (d) "best practices" means those measures which optimize efficiencies in the identified components and systems based on integrated design approach that enhances the building performances or reduces the cost of construction having regard to the safety, stability of the building structure, health and environmental provisions of Central or State laws and includes energy conservation measures approved by the State or National Energy Conservation Code Committee or ECBC Quality Review Board;
- (e) "Building complex or complexes" mean a building or group of buildings constructed in a contiguous area under the single ownership of individuals or group of individuals or under the name of a co-operative group society or on lease.

- (f) "Built up area" "Built up Area" means the area covered by a building on all floors including cantilevered portion, mezzanine floors if any but except the areas excluded specifically from Floor Space Index (FSI) under the Regulations of Authority having Jurisdiction.
- (g) "Bureau" means Bureau of energy Efficiency, India.
- (h) "Connected load" means aggregate of the manufacturer's rated capacities of all energy consuming devices or apparatus connected with the distribution licensee's service line on the consumer's premises which can be simultaneously used and shall be determined as per the procedure laid down in this Code;
- (i) "Contract Demand" means demand in kilovolt ampere (kVA) as mutually agreed between Distribution Licensee and the consumer and as entered into in the agreement for which Distribution Licensee makes specific commitment to supply from time to time in accordance with the governing terms and conditions contained therein; equal to the sanctioned load, where the contract demand has not been provided through /in the agreement;
- (j) "Commercial building" means a building or a part of building having occupancy / utility purpose other than 'residential' and 'industrial' but includes utilities such as educational, institutional, assembly, business, office, mercantile, wholesale, storage etc.;
- (k) "Construction documents" mean set of documents required for commencement and completion such as; key plan, site plan, building plan, specifications, and in addition for MP ECBC eligible building certificates of supervision covering different components and systems any other document required by authority having jurisdiction
- (l) "Compliance Documents" mean the Forms specified in these rules which ensure or demonstrate compliance with these rules through the ECBC and include EPI Ratio Compliance Report, Building Envelop Compliance Forms, and Mechanical Systems and equipment including Heating, Ventilation and Air-conditioning, Service Water Heating and Pumping Compliance Forms and Mechanical Permit Check-list, Interior and exterior Lighting System Compliance Form and Lighting Electric Power Compliance and Checklist Form annexed at appendix and include certificates from the Certified Energy Auditor(Building) recognized by MPUVNL.
- (m) "Energy Conservation Measures" means the measures incorporated in the building design based on the provisions included in these rules or based on the MP ECBC compliance mechanism chosen by the owner covering any element of a component with any other element of the same or other component of the ECBC and includes any measure incorporated in the said building design based on international and national best practices of the building having regard to the location and needs of the MP ECBC eligible building
- (n) "Certified Energy Auditor for Building" means a qualified professional in accordance with the provisions of Section 10 of these rules.
- (o) "Energy Performance Index" or "EPI" of a building means the annual energy consumption expressed in terms of electrical units, namely Kilo Watt Hours (kWh) per square meter of

the area wherein energy is used and includes the location of the building and shall be expressed by the following formula:

$$\text{E.P.I} = \frac{\text{Annual energy Consumption in terms of kWh}}{\text{Total built up area excluding parking Basement}}$$

E.P.I value shall be calculated based on hours of operation of a building so as to tweak the model for making it to come in the range of the actual EPI of the building

- (p) "E.P.I Ratio" of a building means the ratio of the Energy Performance Index of the proposed design of a building in relation Energy Performance Index of the Standard Design of a Building;
- (q) "Energy Conservation Building Codes (ECBC)" means the Energy Conservation Building Codes 2007 or its subsequent updated version approved by the Bureau and displayed by it on the website (www.beeindia.gov.in).
- (r) "Form" means the forms appended to these rules
- (s) "Proposed Design" of a building means a computer representation of a design consistent with the design of a building which complies with all the mandatory requirement of ECBC.
- (t) "Public-Semi-public Building" means a building constructed or used by Government, Semi Government Organization, Government Undertaking, Local Authorities, for conducting public semi-public use like municipal office, post office, telephone office, etc.
- (u) "Standard Design" of a building means a computer representation of a hypothetical design based on the actual design of the proposed building as per Whole Building Performance method.
- (v) "Owner" of a building means a person, group of persons, a company, a trust, institute, Registered Body, State or Central Government and its attached or Sub-ordinate Departments, Undertakings and like agencies or organization in whose name the property stands registered in the revenue records.

2.2. Words and expressions used herein and not defined, but defined in the Act, or in the Energy Conservation Building Codes and National Building Code 2005 or its subsequent updated version shall have the meanings respectively assigned to them in the Act or the said Energy Conservation Building Codes and National Building Code.

3. APPLICABILITY

- (a) These rules shall apply to the design, construction and completion of any commercial and public/ semi- public building or establishment having a connected load of 100 kilowatt (kW) or greater or a contract demand of 120 kilovolt ampere (kVA) or greater used or intended to be used for commercial purposes and shall cover-
 - (i) building envelopes, excluding unconditioned storage spaces or warehouses;
 - (ii) mechanical systems and equipment, including heating, ventilation, and air-conditioning;
 - (iii) service hot water system;

- (iv) interior and exterior lighting; and
- (v) electrical power and motors

(b) Where the existing building undergoes additions or alteration resulting in aggregate connected load of 100 kilowatt (kW) or greater or a contract demand of 120 kilovolt ampere (kVA) or greater, such portion of additions or alteration shall comply with the provisions referred to in clauses (i) to (v) of sub rule (3 (a)).

4. EXEMPTION

(a) These rules shall not apply to-

- (i) buildings that do not use either electricity or fossil fuel; and
- (ii) equipment and portions of building systems that use energy primarily for manufacturing processes;
- (iii) building that uses 100% renewable energy

(b) Provided further that wherever these rules are in conflict with safety, health, or environmental provisions of Central or State laws or building bye-laws or building regulations such provisions shall prevail over these rules.

5. COMPLIANCE MECHANISM

The compliance of energy performance of a building as per these rules shall be ensured by the owner either by following the Prescriptive Method or by following the Whole Building Performance Method specified in the Energy Conservation Building Code. The classification of climate zone for given building location shall be as per APPENDIX 2 of these rules.

ADMINISTRATIVE DIVISION	CLIMATIC ZONE
Chambal Division	Composite
Gwalior Division	Composite
Bhopal Division	Composite
Ujjain Division	Composite and Hot & Dry
Indore Division	Composite and Hot & Dry
Narmadapuram Division	Composite
Jabalpur Division	Composite
Shahdol Division	Composite
Rewa Division	Composite
Sagar Division	Composite

*More detailed brief is shared in the Climatic Map attached in Annexure-II

5.1. PRESCRIPTIVE METHOD:

Comprises:

- (a) mandatory requirements specified in Sections 4.2, 5.2, 6.2, 7.2 and 8.2 of the Energy Conservation Building Code MP displayed on the website (www.beeindia.gov.in);
- (b) all the prescriptive requirement specified in the following sections of the aforesaid Code; 4.3.or 4.4; 5.3 and 7.3
- (c) The Energy Performance Index Ratio or EPI Ratio of the proposed building design that meet all prescriptive requirements shall be one and such building will be deemed as “MP certified”

5.2. WHOLE BUILDING PERFORMANCE METHOD

Comprises:

- (a) All mandatory measures described in Section 4.2, 5.2, 6.2, 7.2 and 8.2 of the Energy Conservation Building Code displayed on the website (www.beeindia.gov.in);
- (b) The requirements specified in section 10:-Appendix B-Whole Building Performance Method of the Energy Conservation Building Code displayed on the website (www.beeindia.gov.in);

Note: The EPI of the Proposed Design under this method, shall be the same or less than the EPI of the Standard Design, the EPI Ratio shall therefore be one or less than one.

- 5.2.1. To encourage compliance, MP Quality Review Board shall adopt the compliance rating methodology as described in the table below.
- 5.2.2. However, builder/owner/developer can adopt MP 1 star and above on voluntary basis. Later, based on the rating achieved equivalent incentive programs will be adopted.

Category	Compliance Requirement
Certified	Compliance by prescriptive method as per MP ECBC or compliance by WBP method with energy savings upto 5% above standard design
MP 1 Star	Compliance by whole building performance method with every savings of $\geq 6\%$ and 10% above standard design
MP 2 Star	Compliance by whole building performance method with every savings of $\geq 11\%$ and $\leq 15\%$ above standard design
MP 3 Star	Compliance by whole building performance method with every savings of $\geq 16\%$ and $\leq 20\%$ above standard design
MP 4 Star	Compliance by whole building performance method with every savings of $\geq 21\%$ and $\leq 30\%$ above standard design
MP 5 Star	Compliance by whole building performance method with every savings of $> 30\%$ above standard design

6. PROCEDURE FOR CONSTRUCTION OF MP ECBC COMPLIANT BUILDING

Every owner who intends to construct, re-construct or make alterations or addition in any building covered under Section 3 of these rules shall follow the procedure for construction to ensure compliance by giving intimation in **FORM I** supported with construction documents required as per the Development Control rules/ bye laws of concerned Authority having Jurisdiction (AHJ) and compliance document related to **MP ECBC mentioned in APPENDIX I.**

6.1. DESIGN PHASE

6.1.1. DESIGN TEAM AND CERTIFIED ENERGY AUDITOR (BUILDING)

- (a) The construction of MP ECBC eligible building requires an integrated design process for its successful implementation. The owner has to ensure that the design team appointed/hired is equipped with knowledge MP ECBC, building envelope, energy efficient HVAC, lighting, service hot water, pumping, electrical power etc. If the building is opting for whole building compliance approach an energy modelling expert needs to be included in the design team.
- (b) The owner during the design stage shall hire the services of the Certified Energy Auditor (Building) for verification and certification of MP ECBC compliances. The duties of the Certified Energy Auditor (Building) will be as per **section 13 of these rules.**
- (c) The appointment of the Certified Energy Auditor (Building) has to be reported by the owner to the Authority having Jurisdiction and MPUVNL during building permit application process.

Note: The Certified Energy Auditor (Building) shall ensure that neither him/her or professional /employee working under him/her is engaged in any work in connection with the design, erection or re-erection of the concerned building covered under these rules to ensure that there is no conflict of interest with his/her official duties.

6.1.2. COMPLIANCE SCRUTINY AND VERIFICATION OF BUILDING DESIGN BY CERTIFIED ENERGY AUDITOR (BUILDING)

Certified Energy Auditor (Building) before recommending approval to the building permit application and furnishing a certificate of compliance in **FORM II** with these rules, shall follow the following procedure of scrutiny and verification, namely; -

- (a) Scrutinize in the construction documents-
 - i. floor area;
 - ii. window area;
 - iii. wall area; and
 - iv. roof area calculations for the building;
- (b) scrutinize and verify the compliance documents and MP ECBC checklist –
 - i. Identify in the MP ECBC checklist, the Energy Conservation Measures (ECMs) that are applicable to the proposed building;
 - ii. Composition of wall highlighting the overall U value of the wall and quantity of different materials used in wall

- iii. Composition of roof highlighting the overall U value of the wall and quantity of different materials used in roof
- iv. Composition of glass highlighting Solar Heat Gain Co-efficient (SHGC), Visible Light Transmittance (VLT), and Thermal Transmittance (U-factor) for window assemblies;
- v. Heating Ventilation and Air-conditioning (HVAC) component tables for air-handling equipment, refrigeration equipment, condensing equipment, and air-flow summaries, piping and ductwork insulation;
- vi. HVAC equipment efficiencies and control equipment;
- vii. Service hot water system design
- viii. tables showing lighting equipment schedules;
- ix. lighting power density calculations in the Design Documents;
- x. proposed lighting controls;
- xi. motor efficiencies and controls;
- xii. transformer specification and losses
- xiii. Electricity distribution system component and losses
- xiv. Power factor correction calculation
- xv. Findings of the document review match with the energy model inputs for the proposed building through the use of simulation tool approved by the bureau.
- xvi. Scrutinize and certify EPI Ratio projected at the design stage;

6.1.3. NON-COMPLIANCE OBSERVED DURING DESIGN STAGE BY CERTIFIED ENERGY AUDITOR (BUILDING)

- (a) Certified Energy Auditor (Building) shall fill up the checklist, issue correction list in case the design documents of the proposed building provide inadequate information or do not meet the requirements of these rules and shall-
 - i. communicate its findings in Form IV to the owner of the building under intimation to MPUVNL for information.
 - ii. owner will take corrective measures as required and respond to Form IV along with updated set of documents, if necessary.
 - iii. the Certified Energy Auditor (Building) shall satisfy himself that the communication received from the owner meet his findings;
- (b) record his approval and complete the checklist indicating compliance with these rules and issue the certificate of approval in **FORM II** to the owner under intimation to the authority having jurisdiction and MPUVNL .

6.1.4. BUILDING PERMIT APPROVAL

Once the Certified Energy Auditor (Building) issues compliance certificate (**FORM II**) to the owner, he can apply for building permit to the Authority having Jurisdiction in Form I accompanied by-

- (a) **Construction documents** duly signed by the owner;
 - Construction documents shall ensure –
 - i. compliance with the applicable building bye-laws in force covering the site on which the building shall be constructed;

- ii. that all the pertinent 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;
 - iii. the drawing of plans, color of plans, dimensions of plans, scale of plans shall be as per requirements of the applicable bye-laws in force covering the site on which the building is proposed to be constructed;
- (b) **Compliance documents** covering the construction of components and systems of ECBC eligible buildings, duly certified by Certified Energy Auditor (Building) including the following namely-
- i. EPI ratio report in respect of the proposed building at the design stage.
 - ii. Certificate in **FORM II** by Certified Energy Auditor (Building) certifying under his seal and signature that the Compliance Documents have been scrutinized/verified by Certified Energy Auditor (Building) in respect of identified energy conservation measures, and these measures compliance with the provisions of these rules.
- (c) Declaration from the owner in **FORM III**.
- (d) Electrical load calculation of the proposed building to determine the connected load.

Submit all the documents along with the application for the Building Permit to concerned Authority having Jurisdiction before starting the construction work in respect of the proposed MP ECBC eligible building.

Note: The authority having jurisdiction may require submission of documents in electronic form in addition to hard copy in respect of buildings covered under these rules.

6.1.5. GRANT OF PERMIT OR REFUSAL

- (a) The authority having jurisdiction on receipt of application under sub-rule(6.1.4) of these rules for issue of permit for construction of MP ECBC eligible building shall sanction building plan only after it has received a certificate in **FORM II** from the Certified Energy Auditor (Building) that construction and compliance documents, design calculations including EPI ratio projected at the design stage, meet the requirements of these rules;
- (b) The authority having jurisdiction while communicating grant of permit to erect or re-erect or add to or make alterations in the building to carry out the construction works shall inter-alia add the following conditions in its sanction letter:
- i. it will be the duty of the owner to ensure that the construction works follow the sanctioned/approved plans and specifications that demonstrate the compliance with these Rules;
 - ii. the compliance with these rules is achieved during construction-in-progress;
 - iii. the building shall not be occupied before occupancy certificate is obtained by the owner;
 - iv. The authority having jurisdiction shall revoke any building permit issued under its bye-laws on receipt of non-compliance report from the Certified Energy Auditor (Building) wherever there has been any misrepresentation of material facts in respect of the provisions of these rules made in the application on which the

building permit was issued, after giving a reasonable opportunity of being heard to the owner.

6.2. CONSTRUCTION PHASE

6.2.1. OWNER'S RESPONSIBILITY DURING THE CONSTRUCTION PHASE

The building owner based on MP ECBC and having regard to the climatic conditions of the site and needs of the building, shall-

- (a) inform in writing within the validity of sanction to the Authority having Jurisdiction of his intention to start the construction works at the building site
- (b) undertake implementation of energy conservation measures incorporated in the construction documents in terms of sub-rule(6.1.4)(a)(ii);
- (c) have the flexibility in constructing the building components and systems covered in the construction documents referred to in Rule 6.1.4(a) to most effective use of energy by deploying best practices in such components and systems to optimize the EPI Ratio
- (d) take the approval of the Certified Energy Auditor (Building) before undertaking such construction referred to in clause (c).

6.2.2. VERIFICATION AND CERTIFICATION DURING CONSTRUCTION BY CERTIFIED ENERGY AUDITOR (BUILDING)

The Certified Energy Auditor (Building) shall before giving a certificate of compliance with these rules, follow the following procedure of verification regarding the on-going construction of the building, namely; -

- (a) Review and verify the specification of name plate values and compare the Compliance Forms with the Checklist filled out during the Design Stage;
- (b) Review and verify the specifications of each individual element of the building systems covered within the scope of ECBC as well as best practices deployed in terms of clause(c) as per the sanctioned plan which shall include-
 - i. review of construction documents for floor area, window area, wall area and roof area calculations;
 - ii. Determination of floor and roof areas using the documents submitted to the authority having jurisdiction by the building owner. The Certified Energy Auditor (Building) shall do at least random check to measure and determine the window and wall areas;
 - iii. Review of insulation quantities in walls and roof, and the construction assemblies and verify the documents /invoice in support of such insulation quantities used in walls, roof and the construction assemblies etc.
 - iv. Review of product label or manufacturers' cut sheets (test reports from labs should be must) for Solar Heat Gain Coefficient (SHGC), Visible Light Transmission (VLT), and Overall heat transfer factor (U-factor) verification for window/wall assemblies and verify the bills/invoices/documents in support of the products used in the construction of the building.
 - v. Review HVAC systems, electrical distribution systems and components and other building systems as per the compliance of the code.

- (c) the Certified Energy Auditor (Building) on satisfactory scrutiny of the building construction shall record his approval and complete the checklist indicating compliance with these rules and issue a certificate of approval in **Form V** to the owner under intimation to the Authority Having Jurisdiction;

6.2.3. VIOLATION OBSERVED DURING CONSTRUCTION BY CERTIFIED ENERGY AUDITOR (BUILDING)

- (a) Where it is determined at any stage that construction is not proceeding according to the sanctioned plan or is in violation of any of the provisions of these rules, Certified Energy Auditor (Building) shall notify the owner requesting additional information with respect to his findings. The short comings identified by the Certified Energy Auditor (Building) shall be conveyed to the owner in **Form VI**, intimating MPUVNL of the same.
- (b) In case the Certified Energy Auditor (Building) is satisfied with the additional information provided by the owner, he shall record the certificate of approval in **Form V** and communicate the same to the owner under intimation to the Authority Having Jurisdiction;
- (c) In case the Certified Energy Auditor (Building) is not satisfied with the additional information submitted by the owner he 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 approval has been issued by the Certified Energy Auditor (Building).

6.3. COMPLETION OF CONSTRUCTION

6.3.1. APPLICATION FOR OCCUPANCY CERTIFICATE BY OWNER

Every owner shall submit an application 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 plan.

This should be accompanied by-

- (a) Certificate of verification in **Form VII** completed by the Certified Energy Auditor (Building) under his seal and signature in support of the completion of the building.
- (b) Following documents should be attached in support:
 - i. a list of the energy related building features in the constructed design that is different from the sanctioned/standard design;
 - ii. all documents and Invoices in support of the construction undertaken with respect to all energy conservation measures including insulation, fenestration, HVAC, lighting and electrical systems, service water heating systems, etc.;

6.3.2. COMPLETION STAGE VERIFICATION BY CERTIFIED ENERGY AUDITOR (BUILDING)

The Certified Energy Auditor (Building) shall Check the compliance at the completion stage and fill out **Form VII** including **CHECKLIST-** of the compliance which shall include the following-

- (a) review of HVAC component tables for air-handling equipment, refrigeration equipment, condensing equipment, air-flow summaries, tables showing lighting equipment specifications, and tables showing motor specifications;
- (b) Verification of lighting equipment like lamps, ballasts, to confirm fixture wattage. Verification shall include at least random check across space types in the building to determine lighting power density;
- (c) 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;
- (d) review of co-efficient of Performance values of installed HVAC equipment and control equipment;
- (e) review of efficiencies of installed motor and controls;
- (f) transformer part and full load efficiency and its losses
- (g) review of power factor and power distribution losses
- (h) review the required check metering and monitoring system

If the EPI Ratio at the completion stage is less than or equal to one in the sanctioned Plan the building shall be deemed to have complied with these rules;

6.3.3. VERIFICATION OF EPI BY CERTIFIED ENERGY AUDITOR (BUILDING)

- (a) The Certified Energy Auditor (Building) shall verify and certify the EPI Ratio by following the procedure specified below, namely;—
 - i. ensure that the building design incorporates the identified energy conservation measure with relevant details so that compliance of the building could be verified;
 - ii. verify the standard design model ensuring that it shall comply with the minimum performance requirements of the various energy efficiency and conservation measures specified in the ECBC;
 - iii. verify the climate zone in which the proposed building is located
 - iv. verify the category of the building to identify as to whether the proposed building is a 24-hours activity building or a day time activity building;
 - v. determine the EPI Ratio as per provisions of Rule 5 if the EPI Ratio of the building design, is less than or equal to one, the building design shall be deemed to comply with these rules
 - vi. the Certified Energy Auditor (Building) shall proceed to verify the compliance documents submitted by the building owner;

- (b) The E.P.I. of the proposed design shall be compared with that of the standard design through simulation tool as approved by the Bureau to arrive at the following outputs:
- i. if the E.P.I. Ratio of the building design is greater than one, additional energy conservation measures shall be incorporated in the proposed design.
 - ii. the process shall be run repeatedly till E.P.I. Ratio of the proposed design is less than or equal to one.
 - iii. the Certified Energy Auditor (Building) shall fill the checklist of the various energy conservation measures at each stage namely design, construction and completion to achieve the compliance with these rules;
 - iv. the Owner/Certified Energy Auditor (Building) shall submit the compliance documents prepared in accordance with clause (c) to the Authority Having Jurisdiction to show that E.P.I. Ratio is less than or equal to one
- (c) The tool deployed vide (c) above shall be approved by the Bureau based on the standard method of test for the evaluation of building energy analysis computer program;

6.3.4. VIOLATIONS OBSERVED AT CONSTRUCTION COMPLETION STAGE

If there is deviation in the EPI Ratio of the sanctioned plan i.e. it is more than one. Certified Energy Auditor (Building) shall record his findings in **Form VIII** and communicate the same to the owner and seek compliance of these rules through incorporation of additional energy conservation measure.

If needed, Certified Energy Auditor (Building) will render technical assistance to ensure the building becomes MP ECBC compliant;

6.3.5. OCCUPANCY CERTIFICATE

The Authority Having Jurisdiction on receipt of compliance certificate by the Certified Energy Auditor (Building) (**FORM VII**) issue the occupancy certificate for the building.

6.4. OPERATIONAL STAGE MONITORING

- (a) After the building is operational, the building energy performance will be monitored by the distribution licensee and MPUVNL using the unique building ID (with a suffix "ECBC") given to the building by the Authority having Jurisdiction at the time of issuance of design approval.
- (b) AHJ will then update (digitally and manually) respective distribution licensee and MPUVNL about the new unique building ID for the upcoming ECBC compliant building.
- (c) In case of multiple tenants, all the sub electrical connections of the MP ECBC eligible building will have the same unique building ID to monitor the EPI of all the consumer connections building.
- (d) The EPI of the proposed design predicted at the completion stage along with the built up area of all consumer connections will be integrated in the utility database software.
- (e) All the consumer connections of the said building will be verified with energy consumption data.
- (f) This will reflect in the monthly utility bills and deviation from the foresaid EPI (proposed design of the building) will be flagged.

- (g) As the owner can only predict the building use type during the design phase, any major variation in the energy consumption should be reported to the distribution licensee; e.g. the building later housing a data center etc. Which will be incorporated into the system of the utility database.
- (h) The database and energy consumption of all the MP ECBC eligible buildings (as per section 3 of these rules) shall be shared with MPUVNL which will keep a constant check on the violations.
- (i) MPUVNL shall conduct random energy audits of buildings with the help of Accredited Energy Auditor (Building). Method for random check should be devised and made public.
- (j) If any misinformation or malpractice is found, the same shall be reported to the MPECBC committee who shall take any further action.
- (k) The due course of action on the owner and the Certified Energy Auditor (Building) shall be taken after the hearing which shall be abided by MPUVNL and utility.

7. RIGHT OF REVIEW AND APPEAL

- (a) In case of non-compliance of any of provisions of these rules or dispute in this regard, resulting into rejection of the application, for commencement / completion or occupancy certificate or cancellation of prior approval given for the building, the owner shall have the right to call for review. Such application shall be made to quality review board who shall review the application filed by the owner.
- (b) ECBC Quality Review Board.-MP ECBC Committee constituted shall appoint the ECBC Quality Review Board under sub-rule 8 (d) (i).
- (c) The quality review board shall be headed by a nominee of the urban department of state with members drawn from different disciplines, not exceeding three, who are qualified by experience and training to pass judgement on matters pertaining to the construction of the MP ECBC eligible building.
- (d) The quality review board after hearing shall pass an order in this regard with an intimation to SDA/ Authority having Jurisdiction.
- (e) The Quality Review Board shall hear review petition filed by the owner of a building within the specified period given by the Authority Having Jurisdiction against the cancellation of building permit or issue of completion or occupancy certificate of building for the following cases, namely,-
 - i. interpretation of the provisions of these rules in relation to any dispute;
 - ii. Non-issue of completion or occupancy certificate due to non-compliance with the EPI Ratio approved in the sanctioned plan; or
 - iii. any other matter covered under these rules for not achieving the EPI Ratio at the completion stage
 - iv. issues related to professional misconduct of the Certified Energy Auditor (Building).
 - v. The quality review board shall hear review petition filed by the owner of ECBC eligible building against the cancellation of building permit or non-issue of completion/occupancy certificate due to non-compliance with the EPI Ratio approved in the sanctioned plan, interpretation of any of the provisions of these rules.

- vi. If the owner of a building is not a Designated Consumer, the quality review board shall, after giving to the representative of Authority Having Jurisdiction concerned or MPUVNL , a reasonable opportunity being heard and pass an order in writing for implementation by the Authority Having Jurisdiction and MPUVNL .
- (f) Any person aggrieved, by an order passed by the Quality Review Board or any other authority under the State Government may prefer an appeal before the Appellate Tribunal for Energy Conservation under section 31 of the Act within a period of forty-five days from the date on which a copy of the order made by the Quality Review Board or any other authority under the State Government to the Appellate Tribunal for Energy Conservation established under section 30 of the Energy Conservation Act, 2001 (52 of 2001).
- (g) PROVIDED that where the owner of the building is a designated consumer declared under clause (e) of section 14 of Energy Conservation Act-2001 and has been charged for non-compliance with the any provision specified in the section 26 of the Energy Conservation Act-2001. The quality review board shall make its recommendations on technical matters for consideration by the State Commission under section 27 of the Energy Conservation Act-2001. The state commission (MERC) shall take into consideration the recommendations of the quality review board before conducting an inquiry under 27 of the Act.

8. ESTABLISHMENT OF MP ENERGY CONSERVATION BUILDING CODE COMMITTEE

- (a) To promote energy efficient design in the buildings through optimization of energy efficiency in the various components and systems of the building to enhance the building performance and assist the National Energy Conservation Building Code Committee to develop and revise Energy Consumption Standards for Building in terms of EPI in relation to the buildings constructed in the Hot and Dry, Warm and Humid, Composite, Temperate and Cold Climate Zones of India;
- (b) the MP Energy Conservation Building Code Committee shall function in the State under the Chairmanship of an officer nominated by the State Government in consultation with MPUVNL and shall inter alia have the following members, namely:-
 - i. a nominee of the Energy Department
 - ii. a nominee of the Urban Development Department of a State
 - iii. a nominee of a Chief Town Planner of each State;
 - iv. a nominee of the State Commission (MERC);
 - v. a nominee of the DISCOM;
 - vi. a nominee of the PWD Department of the State;
 - vii. chief architect, PWD Department of the State;
 - viii. chief electrical engineer, PWD
- (c) MPUVNL shall provide the secretariat to MPECBC Committee.
- (d) MPECBC Committee through MPUVNL shall:

- i. constitute a Quality Review Board headed by a nominee of the Urban Development with other members not exceeding two who are experienced in this field to pass judgment upon matters pertaining to construction of MP ECBC eligible building in the State;
 - ii. nominate a representative of MPUVNL to act as the Secretary to the Quality Review Board.
 - iii. prepare and adopt the rules of procedures in the 1st committee meeting of the Review Board for discharge of its functions including providing assistance to the State electricity regulatory Commission (MP-ERC) in the conduct of enquiry in the matters before the commission.
- (e) On receipt of a review petition, MPUVNL shall arrange a meeting of the Quality Review Board and seek recommendations of the Quality Review Board for implementation by the Authority Having Jurisdiction in case of building owner who is not a designated consumer and for Designated Consumer, the MPUVNL shall seek the technical recommendations for adjudication of the matter pending before it, as the case may be. The quality review board may call a person and record statement in regard with any clarification needed in respect with the dispute.
- (f) The Quality Review Board as well as the MP-Electricity Regulatory Commission (MP-ERC) shall ensure implementation of its decisions through MPUVNL and Authority Having Jurisdiction.
- (g) The State Commission (MP-Electricity Regulatory Commission) shall be competent to seek the opinion of the experts of the Quality Review Board on its own on any matter pertaining to MP ECBC eligible building pending before it.

9. ROLES AND RESPONSIBILITY OF MP ENERGY CONSERVATION BUILDING CODE COMMITTEE

MP Energy Conservation Building Code Committees shall be responsible for –

- (a) Deciding the procedures and methodologies to function of the quality review board and the MPECBC committee
- (b) Deciding the fee structure of the certified and Accredited Energy Auditor (Building) and periodically revising the same.
- (c) creating awareness about ECBC compliant Building and procedure for erection of such building, capacity building of building professionals, developers, contractors to promote energy efficient designs of buildings in the State in close co-ordination with Urban/Rural Local Bodies and Municipal Corporations;
- (d) constructions of energy efficient buildings ensuring quality and consistency in their constructions having regard to the climatic conditions and needs of the building projects;
- (e) undertaking performance review of annual work of all Certified Energy Auditor (Building) and all Accredited Energy Auditor (Building) in the state;
- (f) checking credentials of Certified Energy Auditor (Building) and Accredited Energy Auditor (Building);
- (g) preparing a summary of violations which shall be provided by MPUVNL to the Bureau; and they shall review such violations for the purpose of evaluating his professional skills.

- (h) preparing a yearly report which shall be sent by the MPUVNL to BEE indicating inter alia the progress made in compliance with MP ECBC rules in the state and the steps taken by MPUVNL to improve the rate of compliance of ECBC in the State;
- (i) creation of data base through compilation of data of EPI achieved by each building constructed after the coming into force of these rules;
- (j) assist the Bureau in developing the Energy Consumption Standards in terms of EPI in respect of various categories of buildings based on statistical data of building constructed under the different climatic zones covered under these rules;

10. QUALIFICATION OF CERTIFIED ENERGY AUDITOR (BUILDING)

10.1. Qualification of Certified Energy Auditor (Building)- A person shall be qualified to become a Certified Energy Auditor (Building), if he/she –

- (a) has passed the National or state Examination for Certified Energy Auditor (Building) under the Bureau of Energy Efficiency (Certification procedure for Energy Auditor and Energy Manager, 2010) as amended from time to time ; and
- (b) Has been issued a certificate by the Bureau or MPUVNL to that effect.

10.2. No candidate shall be eligible for appearing in the said National / State Examination unless s/he is –

- (a) an architect registered with the Council of Architecture as per Architects Act, 1972 with three years of experience in the field of building design, its construction, structural engineering, and other related building activities after registration with the Council; or
- (b) a civil or structural engineer having corporate membership of the Institution of Engineer; or
- (c) engineer having other degree in Engineering from a University incorporated by an Act of the Central or State Legislature in India; or other educational institutions established by an Act of Parliament or State Legislature in India or declared to be deemed as Universities under section 3 of the University Grants Commission Act, 1956 or any degree recognized by All India Council for Technical Education as equivalent; or
- (d) a graduate degree in Engineering from such foreign University or College or Institution recognized by the Central Government under such conditions as may be laid down for the purpose, from time to time with three years' experience in building design, construction, structural engineering, and other related building activities or involving use of energy in operation, maintenance and planning etc.; or
- (e) a post-graduate degree in engineering, or architecture, Business management, or Energy and Environment with two years' experience in building design, construction, structural engineering, and other related building activities or involving use of energy in operation, maintenance and planning etc. after the award of post-graduate degree; or
- (f) a candidate having diploma in engineering or architecture with six years' experience in building design, construction, structural engineering, and other related building activities or involving use of energy in operation, maintenance and planning etc; or

- (g) a Certified Energy Manager or Certified Energy Auditor under clause (r) of sub-section (2) of section 13 of the Act.

11. QUALIFICATION OF ACCREDITED ENERGY AUDITOR (BUILDING)

A person shall be qualified to become an Accredited Energy Auditor (Building) if:

- (a) He/she is an accredited energy auditor and his/her name is included in the list of Accredited Energy Auditors (Building) maintained by the Bureau or MPUVNL.
- (b) has passed the National or state Examination for Certified Energy Auditor (Building) under the aegis of the Bureau or MPUVNL ; and
- (c) has been issued a certificate to that effect
- (d) meets the criteria prescribed by MPUVNL in consultation with MPECBC committee
- (e) has been granted a Certification of Accreditation by the Bureau or MPUVNL .

12. ROLE OF ACCREDITED ENERGY AUDITOR (BUILDING).

Any person who has been given accreditation as ECBC Accredited Energy Auditor (Building) as per rule 11 of these rules –

- (a) undertake energy performance evaluation of the building under the guidance MPECBC committee, whenever required.
- (b) Evaluate the performance of the Certified Energy Auditor (Building) as and when decided by the MPECBC committee.
- (c) assist MPUVNL in the development of norms and standard in respect of various categories of building in the different climatic zones in terms of Energy Performance Index;

13. ROLES, RESPONSIBILITY AND DUTIES OF THE CERTIFIED ENERGY AUDITOR (BUILDING)

- (a) Certified Energy Auditor (Building), whose services are hired by the owner shall verify and certify the following, namely-
 - i. design of the building keeping in view the design criteria, energy goals of the project, integrated energy design approach, energy systems performance verification plan, and the modeling approach;
 - ii. Energy conservation measures (ECMs) based on the design approach for the project under consideration.
 - iii. construction documents, compliance documents and checklists specified to ensure that the building complies with these rules.
 - iv. specification sheets, work orders and purchase orders of different building
 - v. EPI Ratio of the proposed building design.

- vi. report on such unusual technical issues that may arise due to issue of building permit or construction of building or during occupancy stage subject to approval of the competent authority under the building bye-laws.
 - vii. provide inputs to MP and National Energy Conservation Building Code Committees to facilitate the implementation of MP ECBC rules and to promote norms and standards for various categories of buildings under various climatic zones of the country;
- (b) furnish a certificate under his seal and signature to certify that drawings, specifications, Construction Documents, Compliance documents prepared covering Building envelope, Heating, Ventilation, and Air-Conditioning, Service hot water system, Lighting and Electrical Power systems, where ever applicable, and all other ECBC related documentation prepared for submission to the Authority Having Jurisdiction, ensure compliance with the provision of these rules.
 - (c) Certified Energy Auditor (Building) shall exercise the powers of verification of the building works from the design stage to commissioning of buildings including their uses under these rules
 - (d) it shall be ensured that no professional or employee working under him/her is engaged in any work in connection with the erection or re-erection of the concerned building covered under these rules to ensure that there is no conflict of interest with his/her official duties with the interests of the Authority Having Jurisdiction.

14. RESPONSIBILITIES AND DUTIES OF THE OWNER

14.1. The owner of MP ECBC eligible building shall have full obligation and responsibility of carrying out the work on the commissioning of the said building in accordance with the requirements of these rules. Every owner shall-

- (a) Select the design team and ECBC Certified Building Auditor for building registered with the Bureau or MPUVNL to help him to develop the building design, installation of material and equipment to meet with the requirements of these rules;
With the help of Design team:
 - i. Prepare detailed electrical load calculation for the proposed building design and submit it along with the declaration while submitting building permit application.
 - ii. finalize the compliance approach relevant for his building project based on the complexity of the building, budget and time constraints;
 - iii. finalize the Energy Conservation Measures (ECMs) as per ECBC having regard to the location of the proposed building;
 - iv. seek to integrate the ECMs in the building and system design so as to achieve the optimized solution;
 - v. ensure that drawings, specifications and compliance forms are prepared and ECMs are reflected in the building design documents and submitted to the Authority Having Jurisdiction in compliance with the requirements of their rules accompanied by a certificate specifying inter-alia the E.P.I. ratio of the Building, by the ECBE certified Building Energy Auditor that the documents meet the requirement of these rules;

- (b) inform within the validity of sanction to the Authority Having Jurisdiction of his intention to start the construction work at the building site
- (c) ensure that the design ECMs are reflected in the construction of the building and installation of its systems.
- (d) respond to the additional information requested, rectifications in construction or any other suggestions recommended by the Certified Energy Auditor (Building) to ensure compliance with the rules.
- (e) permit the Certified Energy Auditor (Building) to enter the building or premises at any reasonable time for the purpose of verification to ensure compliance of building works with ECBC.
- (f) inform the Authority Having Jurisdiction in writing intimating the completion of the construction work accompanied by a certificate from the Certified Energy Auditor (Building) to the effect that-
 - i. the construction of the building has been done in accordance with the sanction of the building permit for erection of the building; in compliance with the design and specifications of the building;
 - ii. all the energy conservation measures have been installed and inspected by him and they meet the requirements of these rules;
 - iii. the building design meet with the provisions of these rules;.
- (g) inform in writing to Authority Having Jurisdiction as well as to the MPUVNL in case of termination of the services of Certified Energy Auditor (Building) and appointment of other such professional;
- (h) obtain an occupancy permit from the Authority Having Jurisdiction prior to any occupancy of the building or part thereof after completion of the building ;

14.2. Wherever practical difficulties in carrying out the provisions of these rules are encountered, s/he shall report the matter to the Certified Energy Auditor (Building), and shall modify such provisions only upon seeking approval of the ECBC certified Building Energy Auditor and shall observe the spirit and intent of these rules;

14.3. Wherever any building after the receipt of the occupancy certificate is used contrary to the provisions of these rules the owner shall discontinue the use within reasonable time after receipt of the notice. In no case the owner shall disregard the provisions of these rules.

14.4. Before completion of the building, where the owner proposes to alter the installation of any system or material or instrument will affect the energy efficiency of the building compared to the system, material or instrument as indicated in the sanction plan he shall use or install such system, material or instrument after obtaining the necessary approval of the Certified Energy Auditor (Building) provided it does not violate the intent of the provisions of these rules.

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

15. RESPONSIBILITY AND DUTY OF MPUVNL

15.1. MPUVNL shall co-ordinate with various stakeholders and regulate and enforce the various provisions of these rules in its state and it shall ensure that;-

- (a) every building falling under the applicability of these section 3 of these rules is erected in compliance with these rules;
- (b) Conduct state level examination certification of Certified Energy Auditor (Building) and define criteria for accreditation of Accredited Energy Auditor (Building) and maintain a list of such certified ECBC Building Energy Auditor and Accredited Energy Auditor (Building).
- (c) framework for evaluating the performance of the Certified & Accredited Energy Auditor (Building) to improve the quality, consistency and rate of compliance of these rules is in place;
- (d) a data bank is created in the state to measure the compliance rates of the buildings covered under these rules and accurately account for the energy savings resulting from the compliance of these rules;
- (e) databank on energy use per square meter of area of the building under different zones namely, hot and dry, warm and humid, temperate, composite and cold, separately for each category of building types, is created in the State;
- (f) necessary steps are taken to make EPI 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 standard in respect of various categories of buildings constructed zone wise in the State;
- (g) it identifies the MP ECBC eligible building projects in consultation with the Bureau for detailed energy audit and a minimum of one project certified by ECBC Certified Building energy auditor is included in the program for detailed energy audit under its supervision in one evaluation cycle.
- (h) the functioning of MP ECBC Committee and budget, planning, expenditure and accounting for working of state ECBC committee and quality review board
- (i) the performance of Accredited Energy Auditor (Building) / Certified Energy Auditor (Building) in the state is monitored with a view to making the cadre of Certified Building Energy Auditor and Accredited Energy Auditor (Building) as effective instruments of promotion of energy efficiency in the building sector.
- (j) it also conducts site visits and/or energy audits, if considered necessary, to gauge the accuracy of reporting by the ECBC Accredited Energy Auditor (Building) and Certified Energy Auditor (Building) in the state;

- (k) it prepares a report on performance of each Accredited Energy Auditor (Building) listing out the projects audited by it, projects in violation of its compliance with these rules and the level of violation.
- (l) it shall provide summary of violations for each year to the Bureau.
- (m) it coordinates with the Authority Having Jurisdictions to amend their building bye-laws incorporating the provisions of these rules for the purpose of erection of buildings in compliance with these rules.
- (n) it shall provide the necessary support to the Authority Having Jurisdiction to conform to the provisions of these rules with regard to matters concerning material, design, construction, method for improving the energy performance of MP ECBC eligible buildings and effectiveness in compliance of these rules.
- (o) Prepare detail rules and framework for functioning of MP ECBC committee in regard to implementation of these rules.

15.2. MPUVNL shall inter-act with State Government to ensure that-

- (a) these Rules are made part of buildings Bye-laws of the State Municipal Authorities or Development Agencies or other Urban/Rural local bodies concerned with building related activities the State;
- (b) reasonable level of penalties is imposed in case of violations or non-compliance with the provisions of these rules for failure to meet the obligations imposed on the owner for enforcement of these rules.

16. RESPONSIBILITY AND DUTY OF THE DISTRIBUTION LICENSEE:

The distribution licensee responsible for granting connection to MP ECBC eligible building shall ensure that:

- (a) a unique building identification (UBID) provided to applicable buildings under these rules. This ID is provided by AHJ at the time of approval of building permit designs. As a distribution licensee, all the new electrical connection to any portion of the said building should have the same ID. This will help the in monitoring the building performance as per the methodology, format decided by MPUVNL.
- (a) Necessary changes are made in the software, rules, regulations and tariff to accommodate the implementation of these rules.
- (b) take necessary actions as suggested by MPUVNL in regard to these rules. Suggest the procedures and formats in regard to the rules.
- (c) Share the consumption data of the consumers of the building regularly as prescribed by MPUVNL .

17. PENALTIES

- (a) MPUVNL in consultation with Quality review Board shall be competent to propose penalty in case of violations of the provisions of these rules for non-compliance of the requirements or obligations imposed on the owner or any person other than designated consumers declared under the Act.
- (b) MPUVNL in case of violations shall give notice in writing to the owner/developer/consumer for non-compliance and 3 months period shall be given to respond.
- (c) MPUVNL in case of violations may levy penalty in the form of increased utility tariff at the rate of 10 paisa per unit through distribution licensee with the approval of MP ERC.
- (d) The money collected from penalty shall be deposited to MPUVNL in the State Energy Conservation Fund.

18. POWER TO RELAX:

Where the State Government's Energy Department is of the opinion that it is necessary or expedient to relax, by order, for reasons to be recorded in writing, any of the provisions of these rules with respect of any class or category of persons on recommendation of MPECBC Committee or MPUVNL.

FORM I

**Application for Building Permit in respect of MP ECBC eligible Building for
Construction /Re-Construction/Addition or Alteration in existing building**

To

(Name of the competent authority)

Authority Having Jurisdiction,

Address

Date:

___/___/_____

Subject: Application for construction of MP ECBC eligible Building in premises of Plot no.

_____ Block No. _____ Scheme _____ Street _____ Name of the town/city

Sir,

I/we the undersigned hereby submit proposal to construct/ re-construct

/alter MP ECBC eligible Building under the MP ECBC Rules, 2017 in the premises of plot No. _____ Block No. _____ Scheme _____ and request for issue of building permit for the construction of the MP ECBC eligible building. The following documents are enclosed

- (i) Construction Documents and Compliance Forms together with check- lists incorporating the installation of Energy Conservations Measures specified in the aforesaid rules.
- (ii) The Construction Documents and Compliance Forms together with check-lists have been verified by Shri. _____ Regd. Number. _____ Certified Energy Auditor (Building).
- (iii) A certificate in FORM II duly signed by him under his seal in this regard is enclosed.

Yours Faithfully,

(Name of the owner)

Address _____

Tel. No./Mobile no. _____

FORM II

Certificate from Certified Energy Auditor (Building) for Building Permit of MP ECBC eligible building

Certificate of Compliance

I am Certified Energy Auditor for Building having registration No _____ under the Energy Conservation Act 2001 (52 of 2001) and am/are authorized to scrutinize and verify the design of MP ECBC eligible Building and certify that –

- (a) I have scrutinized the construction documents as per the following details showing all the pertinent data and features of the building, equipment and systems in sufficient details covering Building Envelop, HVAC, Service hot water, and Lighting and Electrical power in accordance with the ECBC rules.

Name of Owner/ Developer: _____

Address: _____

Site Address: _____

- (b) I have scrutinized the compliance forms together with the check- lists to ensure compliance with MP ECBC Rules 2017.
- (c) The construction documents have been duly verified
- (d) The Energy Performance Index Ratio of the building design as per construction documents at the design stage is in compliance with the MP ECBC Rules.
- (e) It is certified that all the required scrutiny and verification of the documents submitted have been carried out diligently and truthfully.

I have no objection for issuance of Building Permit for commencement in respect of the aforesaid proposed building as far as requirements of MP ECBC Rules are concerned.

Signature

Name of the Certified Energy Auditor (Building)

Registration No /SEAL.

Date

Copy to : Chief Executive, MPUVNL & Authority
having Jurisdiction

FORM III

Undertaking by owner for construction of MP ECBC eligible building

I/We am the owner/ Developer of the aforesaid Plot No. _____ Block No. _____ and the building proposed to be constructed /re-constructed/altered after completion of construction it shall have a connected load/contract demand of 100kW/120 kVA or greater and is proposed to be constructed as MP ECBC eligible building and shall be used or intended to be used as a commercial or public building.

The proposed building accordingly attract the provisions of Energy Conservation Code Rules, 2017.

I/we undertake that the aforesaid building shall be constructed in accordance the provisions of MP ECBC Rules, 2017. In case any deviation is observed 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 and application is accurate. if any of the information supplied is found to be incorrect I / we will be liable for legal action.

Yours Faithfully,

(Name of the owner)

Address _____

Tel. No./Mobile no. _____

FORM IV

Compliance Certificate of Certified Energy Auditor (Building) in respect of Building Permit Application in for MP ECBC eligible building- r e g a r d i n g Communication of non-compliance

To

(Name of the Owner/ Developer),
Address _____

Subject: Non-compliance with the MP ECBC Rules, 2017 at design stage verification

Reference: 1) Your order No. _____ Dated: _____

Non- Compliance with MP ECBC rules at design stage verification

Sir,

In reference with above scrutiny of the documents has been carried out. Report is given below:

1. Document name: _____ submitted/not submitted

Non-compliance observed:

Rule No.	Details	Recommendations
----------	---------	-----------------

a) _____

b) _____

2. Document name: _____ submitted/not submitted

Non-compliance observed:

Rule No.	Details	Recommendations
----------	---------	-----------------

a) _____

b) _____

.It is requested that the energy conservation measure are recommended be carried out in order to bring them into compliance with the M P ECBC rules, 2017. You are accordingly requested to take corrective action. Further action on your application for issue of Building Permit shall be taken after satisfactory compliance of the aforesaid recommendations.

Seal

Signature

ECBC Building Energy Auditor.

Registration number

Copy to: Director General, MPUVNL

FORM V

Certificate of compliance from Certified Energy Auditor (Building) for on review of construction works enclosing construction documents and compliance forms in respect of MP ECBC eligible building Certificate of Compliance

I am Certified Energy Auditor for Building having registration No

_____ Under the Energy Conservation Act 2001 (52 of 2001) and am/are authorized to scrutinize and verify the design of MP ECBC eligible Building and I certify that –

- (a) I have scrutinized the construction documents as per the following details showing all the pertinent data and features of the building, equipment and systems in sufficient details covering Building Envelop, HVAC, Service hot water, and Lighting and Electrical power in accordance with the MPECBC rules, 2017.

Name of Owner/ Developer

Address:

Site Address:

- (b) I have scrutinized the compliance forms together with the check- lists to ensure compliance with MP ECBC Rules, 2017.
- (c) The construction documents have been duly verified
- (d) The Energy Performance Index Ratio of the building design as per construction documents at the design stage is in compliance with the MP ECBC Rules, 2017.
- (e) It is certified that all the required scrutiny and verification of the documents submitted have been carried out diligently and truthfully.

I have no objection for issuance of Building Permit for commencement in respect of the aforesaid proposed building as far as requirements of MP ECBC Rules, 2017 are concerned.

Signature

Name of the Certified Energy Auditor (Building)

Registration No /SEAL.

Date

Copy to: Director General, MPUVNL

FORM VI

Non-Compliance Certificate by Certified Energy Auditor (Building) on review of construction works enclosing construction documents and compliance forms in respect of MP ECBC eligible building-

Issue of certificate of non-compliance

To,
(Name of owner/ Developer)
Address _____
Date: __/ __/ __

Sub: Non-compliance with the MP ECBC Rules, 2017 construction stage verification
Reference: 1) Your order No. ____ Dated: _____

Sir,

In reference with above scrutiny of the construction site has been carried out. Report for the same is given below:

1.Document name: _____ submitted/not submitted

Non-compliance observed:

Rule No.	Details	Recommendations
a)....		
b)....		

2.Document name: _____ submitted/not submitted

Non-compliance observed:

Rule No.	Details	Recommendations
a)....		
b)....		

.
. .
. .

None of the above deviations are covered in the best practices approved by MP Energy Conservation Building Code Committee.

or

The following deviations are covered in the best practices by MP Energy Conservation Building Code Committee

The building owner is requested to rectify the above deviations or take the approval of the Municipal Authority/ECBC Quality Review Board

The building owner after obtaining the approval provided in para 3 above or rectifying the deviations notified in para 1 above may inform the undersigned of the action taken in the matter within one month from the date of approval obtained or rectification completed along with the updated checklist to enable me to inspect the works in connection with the issue of certificate of approval provided in Rule 5(6)(d) of the MP ECBC Rules, 2017.

Yours faithfully,

Signature

Name of Authorized/

Certified Energy Auditor (Building)
number/Mobile number.

Seal:

Copy to: Director General, MPUVNL

FORM VII

Certificate of Completion by Certified Energy Auditor (Building) in respect of MP ECBC eligible building

To,

Name..... Owner the Building,

Address

Subject: Completion of Construction Works in respect of MP ECBC eligible Building

Certificate of compliance on Completion

I,....._hereby state that I have inspected the construction documents, compliance forms, check-lists, submitted on completion of building of the proposed MP ECBC eligible Building in the premises of plot No._____Block No._____Scheme_____Town/City_____State of_____and certify that the:

- (i) The EPI ratio of the building is ----- which is below / equal to the
- (ii) A list of the energy conservation measures deployed in the construction of aforesaid building enclosed. Necessary approvals required have been taken by the owner.
- (vi) The building in my view is MP ECBC compliant building and is intended to be used for
- (vii) The building in so far as MP ECBC rules, 2017 are concerned is fit for occupation for which it has been erected .i.e. office use/multi-purpose use/24 hrs use/day use /Hospital/Hotel.
- (viii) 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 MP ECBC Rules, 2017 and contents thereof are a true representation of the facts and meet the requirements of MP ECBC Rules, 2017.
- (ix) The check-list duly completed, signed sealed by the undersigned is enclosed

ECBC Certified Energy Auditor (Building)

Seal

Name

Regd. Number

Copy to: Director General, MPUVNL

FORM VIII

**Certificate of Verification by Certified Energy Auditor (Building) on review of completion of construction works -
Communication of omissions and non-compliance to owner**

To

(Name of owner/ Developer)

Address: _____

Subject: Non-compliance with the MPECBC Rules, 2017 at completion stage verification

Reference: 1) Your order No. _____ Dated: _____

Sir,

In reference with above scrutiny of the documents has been carried out. Report is given below:

1.Document name: _____ submitted/not submitted

Non-compliance observed:

Rule No.	Details	Recommendations
----------	---------	-----------------

a)....

b)....

2.Document name: _____ submitted/not submitted

Non-compliance observed:

Rule No.	Details	Recommendations
----------	---------	-----------------

a)....

b)....

You are accordingly requested to take corrective action. Further action on your application for issue of Completion Certificate shall be taken after satisfactory compliance of the aforesaid omission/non-compliance.

Signature, ECBC Building Energy Auditor

Registration number

Mobile number.

Copy to: Director General, MPUVNL

CHEKLIST 1
Prescriptive Method
Envelop Summary Checklist

Envelop Summary					
Project Info	Project Address			Date	
	Applicant Name				
Project Description	Applicant Address			For Building Department Use	
	Applicant Phone				
	New Building				
	Addition				
Compliance option	Alteration				
	Change of Use				
	Whole Building				
Vertical Fenestration Area	Envelope Trade off	Divide	Gross	Times 100	%vertical
	Prescriptive Total				
Calculations	Vertical Fenestration Area	rough opening)	exterior wall area	equals	fenestrati
Note: Vertical fenestration area can not exceed 40% of the gross wall area for prescriptive option					
Skylight Area Calculation Note:	Total	÷ Divide	Gross	×100 Times 100	%vertical
Skylight area cannot exceed 5% of the gross roof area for prescriptive compliance	Skylight Area rough opening)	d by	exterior wall area	equals	fenestrati
Check here if using this option and if project meets all requirements for the Concrete/Masonry Optio					
Hospital, hotel, call center (24 hour OPAQUE ASSEMBLY			Other building type (daytime OPAQUE ASSEMBLY		
Roof Minimum Insulation R-value			Roof Minimum Insulation R-value		
Wall Minimum Insulation R-value			Wall Minimum Insulation R-value		
FENESTRATION			FENESTRATION		
Vertical Maximum U-factor			Vertical Maximum U-factor		

**Maximum SHGC (or SC
Overhang (yes or no)
If yes, enter Projection Factor**

**Side fins (yes or no)
If yes, enter Projection Factor**

**Maximum SHGC (or SC
Overhang (yes or no)
If yes, enter Projection Factor**

**Side fins (yes or no)
If yes, enter Projection Factor**

Skylight		Skylight	
Maximum U-factor		Maximum U-factor	
Maximum SHGC (or SC)		Maximum SHGC (or SC)	

Envelop Permit Checklist							
Project Address					Date		
Applicability		Component		Information required		Location on Plans	Building Departments Notes
Mandatory Provisions							
Yes	NO	Na	Fenestration rating				
			U-factor				
			SHGC				
			Air Leakage	Specify leakage rates			
			Opaque U-factors	Specify whether per default in Appendix C or ASHRAE			
			Bldg. env. sealing	Indicate sealing, caulking, gasketing, and weather stripping			
PRESCRIPTIVE COMPLIANCE OPTION							
			Roofs	Indicate R-values on roof sections			
			Cool roof	Indicate minimum reflectance and emittance on plans			
			Roof	Indicate R-values on wall sections (1) Indicate U-factors on fenestration schedule. Indicate if values are rated or default. If values are default, then specify frame type, glazing layers, gap-width, low-e (2) Indicate SHGC or SC on fenestration schedule. Indicate if values are rated or default (3) Indicate if overhangs or side fins are used for compliance purposes. If so, provide projection factor calculation.			
			Vertical fenestration	(1) Indicate U-factors on fenestration schedule. Indicate if			

				values are rated or default. If values are default, then specify frame type,glazinglayers,gap-width,low-e 2) Indicate SHGC or SC on fenestration schedule. Indicate if values are rated or default		
BUILDING ENVELOPE TRADE-OFF OPTION						

Signatures

Owner/s:

Certified Energy Auditor (Building):

Checklist2
Prescriptive Method
Mechanical equipment Summary Form

Mechanical Summary		
Project Info	Project Address	Date
	Applicant Name	
	Applicant Address	For Building Department Use
Applicant Phone		
	New Building	

Project Description	Addition							
	Alteration							
	Change of Use							
Compliance option	Simple system							
	Complex system							
	System analysis							
Equipment Schedules	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							
Cooling Equipment Schedule								
Equip ID	Brand Name	Model No	Capacity kW	Total L/s	OSA CFM or Econo	SEER or EER	IPLV	Location
Heating Equipment Schedule								
Equip ID	Brand Name	Model No	Capacity kW	Total L/s	OSA CFM or Econo	SEER or EER	IPLV	Location
Fan Equipment Schedule								
Equip ID	Brand Name	Model No	Capacity kW	Total L/s	OSA CFM or Econo	SEER or EER	IPLV	Location

Signatures

Owner/s:

Certified Energy Auditor (Building):

Checklist 3
Prescriptive Method Mechanical Permit

Mechanical Permit Checklist						
Project Address					Date	
Applicability		Component		Information required		Location on Plans
Building Departments Notes						
Mandatory Provisions						
Yes	NO	Na	Equipment efficiency	Provide equipment schedule with type, capacity, efficiency		
			Controls			
			Timeclocks	Indicate thermostat with night setback, 3 different day types and 2-hour manual override		
			Temp. & deadband	Indicate temperature control with 3 degree C deadband minimum		
			Clg. tower, fluid cooler	Indicate two-speed motor, pony motor, or variable speed drive to control the fans		
			Piping & ductwork	Indicate sealing, caulking, gasketing, and weather stripping		
			Piping insulation	Indicate R-value of insulation		
			Ductwork insulation	Indicate R-value of insulation		
			Ductwork sealing	Specify sealing types and locations		
			System balancing	Specify system balancing		
PRESCRIPTIVE COMPLIANCE OPTION						
				Indicate whether project is complying with ECBC Prescriptive Option OR with ASHRAE Standard 90.1-2004		
			Economizer			
			Air economizer	Indicate 100% capability on schedule		
			Integrated operation	Indicate capability for partial cooling		
			Field testing	Specify tests		
			Variable flow hydronic			