TELANGANA STATE ENERGY CONSERVATION BUILDING CODE (ECBC) FOR COMMERCIAL BUILDINGS

In a nutshell: Effective implementation of the Energy Conservation Building Code (ECBC) of the Ministry of Power by the State government of Telangana

Nodal agency: Government of Telangana

The building sector represents about 33% of electricity consumption in India, with commercial sector and residential sector accounting for 8% and 25% respectively. Two thirds of India's total building stock that will exist by 2030 is yet to be built. In this context, the Energy Conservation Building Code (ECBC) provides minimum requirements for energy efficient design and construction of buildings and their systems. It is estimated that ECBC compliant buildings can use 40% to 60% less energy than conventional buildings. The ongoing successful implementation of ECBC in the State of Telangana is the focus of this article.

For effective implementation of the mandatory provisions of the ECBC, the Government of Telangana has constituted the ECBC technical committee consisting of representatives from the relevant government departments and the academia.

The technical committee has developed a third-party assessor model, under which the applicant can obtain ECBC compliance certificate from the empaneled third-party assessors (TPAs). In Telangana, around 38 ECBC TPAs have been empaneled. The ECBC implementation is made mandatory through the online development permission management system (DPMS). The mechanism was first started with Greater Hyderabad Municipal Corporation's DPMS and later it was extended to all the urban local bodies. Presently in Telangana, no commercial building shall be constructed without ECBC compliance.

In Telangana, the following steps are followed by real estate developer/owner/builder for ECBC compliance as per the compliance framework:

1. Real estate developer/ owner/ builder shall submit building design with the support of any Architect to licensed ECBC third party assessor.
2. The TPA will verify the submitted designs and recommend necessary measures for ECBC compliance and certify the design along with simulation report.
3. The real estate developer/owner/builder submits the modified designs along with certificate issued by TPA.
4. Urban local body gives the permission for construction.
5. During the construction phase of the building ULB may do random inspections.

6. Before occupancy Certificate, real estate developer/owner/builder submits the data (materials used, certificates etc.) to TPA for physical inspection. The TPA after inspection issues ECBC compliance verification certificate mentioning building construction is as per ECBC compliance.
7. Real estate developer/owner/builder will submit the same to ULB for occupancy certificate.
8. Urban local body issues occupancy certificate after inspecting the ECBC compliance certificate.

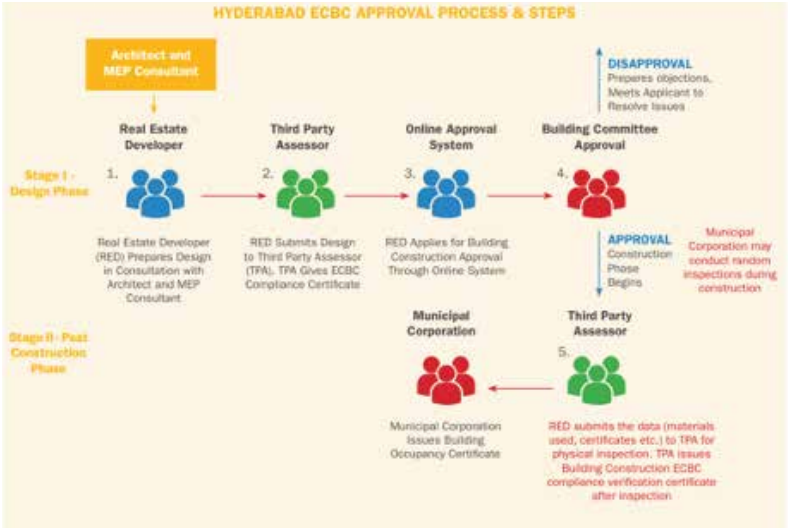
Telangana State Renewable Energy Development Corporation Limited (TSREDCO) is supporting ULBs through the ECBC cell in smooth implementation of ECBC in the entire State. Further, the mandatory provisions of ECBC are incorporated in the Telangana Municipalities Act, 2019. This makes Telangana the first State in India to do so.

Impact

Under the initiative, around 430 commercial buildings have been certified as ECBC compliant. They have a cumulative built-up area of 13.12 Lakh square meters, and it is estimated to have saved energy of 336 MkWh per annum. This initiative also received the National Energy Conservation Award, 2020 from Bureau of Energy Efficiency, Ministry of Power.

Way forward

The latest ECBC version for the commercial buildings shall be implemented. Along with it, adoption and implementation of Eco-Nivas Samhita Code (ECBC – R) for residential buildings across the State is being planned.



Flowchart showing the process of approval for ECDC[6]

[6]TSREDCO – Telangana State Renewable Energy Development Corporation Ltd.,