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Augmenting Nature by Green Affordable New-habitat

A Courtyard for Revolutionary Change in Building Energy Efficiency

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THIS PRESENTATION WAS SHARED BY

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FOR THE SESSION:

“ Policy Implementation and Enforcement “

DURING ANGAN 2019

Knowledge Partner



Event Partner

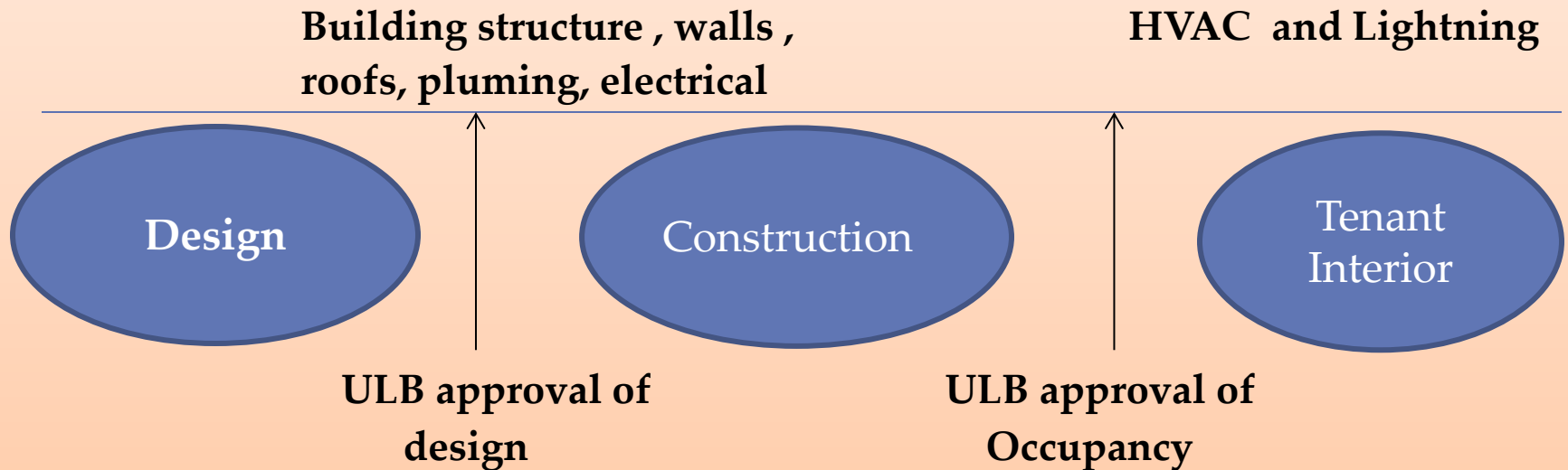


Implementation And Enforcement Of ECBC With Reference To U.P.

- ❖ As we enter the depth of 21st century , we all focus on mitigation of climate change. One of the proven methods to address climate change mitigation is to reduce Energy Consumption in Buildings.
- ❖ India lead to a surge of new construction, and we expect about 67% to total building stock is yet to built in next 15 years.
- ❖ Compliance of code is must if the country is to realize the gains from implementation of ECBC.

Compliance Procedure

Tiered approach for Building Energy Code Compliance



- ❖ In tiered approach to ECBC Compliance includes those requirements of ECBC that are easy for market adoption, have huge energy saving potential and are enforceable through current building permit process.

Compliance Procedure

- ❖ Tier 2 and 3 include additional measures, difficult to implement and enforce in current practices.
- ❖ Tier I can lock over 80% of the lifetime energy saving related to ECBC can be incorporated into the local building by laws more easily. They relate to Building Structure , Walls, Roof , Windows which are usually in purview of bye laws.
- ❖ Tier 2 and 3 need not enforced by ULB's for construction and occupancy certificate. BEE's labeling & Standard can be used by Tenants /Occupants.

TPA Model for ECBC Compliance and Enforcement

Operational Framework of TPA :

- ❖ The project team selects a TPA for its TPA is required to declare no conflict of interest.
- ❖ TPA reviews each building project in two stages to determine ECBC Compliance , i.e.

At design review

**At construction
Review**

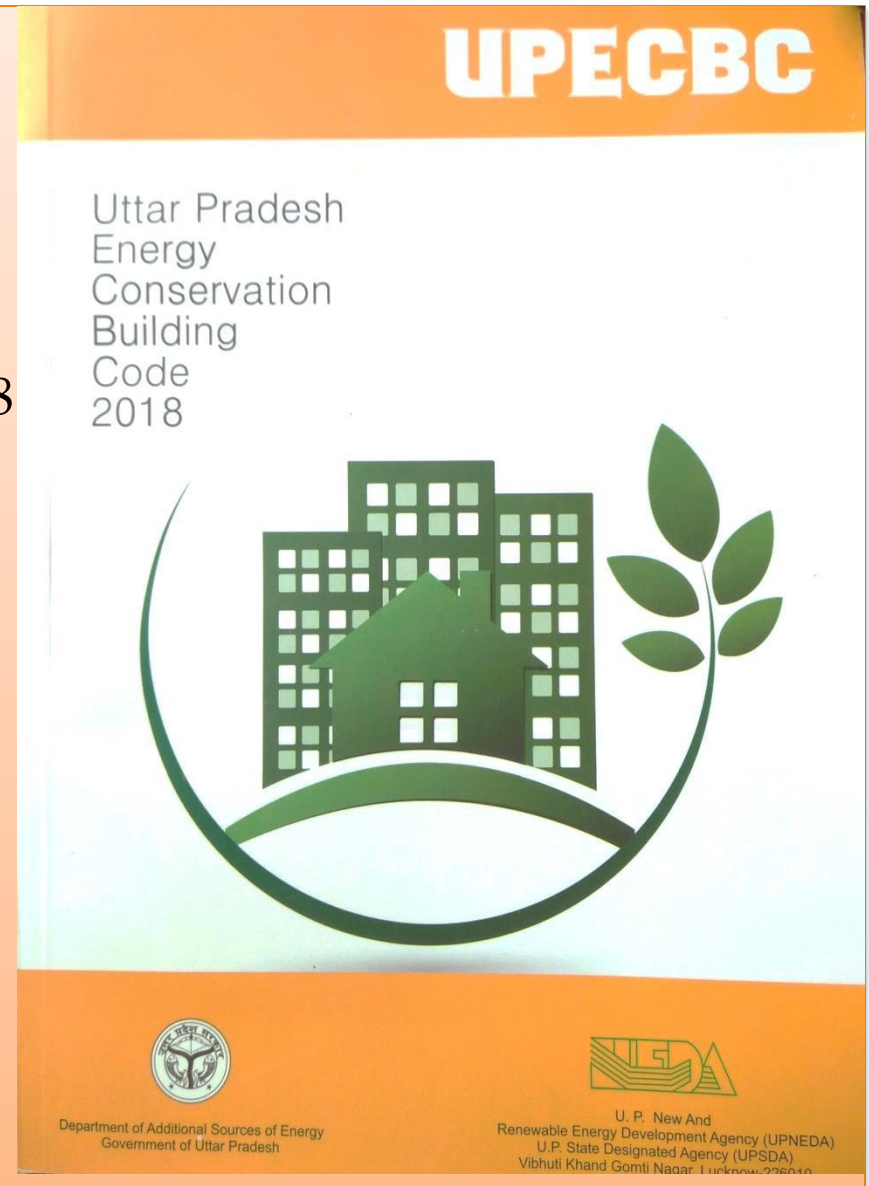
- ❖ During the design review stage , TPA reviews the drawing, specs and ECBC for compliance forms to ensure energy conservation measures are appropriately documented in design documents.

TPA Model for ECBC Compliance and Enforcement

- ❖ During the construction review stage , TPA reviews the ECBC Compliance forms and inspect the building to ensure that every conservation measures are incorporated in the construction of building and installation of systems.
- ❖ If the proposed building complies with the ECBC , the TPA sends a letter of recommendation along with the checklist to ULB and SDA.
- ❖ Based on the TPA's report Completion/Occupation Certificate shall be provided to developer.

Code Implementation and Enforcement in Uttar Pradesh

- ❖ Energy Conservation Building Code notified in UP on 26 July 2018 called UPECBC 2018.
- ❖ After the notification of UPECBC 2018 the code has been incorporated in the building by-laws of concern development authorities/up housing board.



Code Implementation and Enforcement in Uttar Pradesh

- ❖ The scope of this notification states that all such government and commercial building which are covered under the purview of UPECBC 2018 shall be constructed as per UPECBC 2018, the scope of UPECBC States that:
 - ❖ the building having connected load of 100 KW and above, or
 - ❖ the buildings having contract demand of 120 KVA or above, or
 - ❖ the buildings having the plot area of 1000 m² with minimum built up area of 2000 m² (excluding basement)

Code Implementation and Enforcement in Uttar Pradesh

The government agencies involved in the implementation and enforcement of UPECBC in the state are :-

Housing and Urban Planning Department of concern development authorities/infrastructure industrial development department or concerned industrial authorities in their respective jurisdiction would be as a enforcing authority for the implementation of UPECBC.

- ❖ Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA/UPSDA) will be the nodal agency to monitor and implementation of the code at the state level and to create the awareness of UPECBC.
- ❖ Other agencies like Awaas Bandhu, Chief Town and country Planning directorate , UP Housing Board and UPRERA are involved.

Execution Mechanism

- ❖ At the time of Plan Approval, the owner/builder/developer shall submit the UPECBC compliance , duly signed by Self and Architect against the mandatory requirement of compliance of UPECBC to concerned Development Authorities.
- ❖ During the construction of proposed Building work shall be monitored at different level by authorities having jurisdiction.
- ❖ After the completion of Building construction, the owner/Builder/Developer shall submit the UPECBC Compliance document signed by Self and BEE empanelled ECBC expert.
- ❖ Once the self declaration duly verified be BEE empanelled ECBC expert is submitted along with other necessary approvals under the rules of ULBs, ECBC compliance will be treated as completed.

State Level ECBC implementation-Challenges and Issues

- ❖ There are number of agencies involved that plays important role for implementation of ECBC in the state are :
 - ❖ Housing and Urban Planning Department , SDA under the EC Act, Renewable Energy Department/Agency, Development Authority, ULBs, PWD, Building Developers operating in the state , Engineers , Architects , Sustainability organisation.
- ❖ The ECBC has been notified under the EC Act for which BEE & SDAs are the key regulatory agencies , However since all the building activities comes under the purview of the housing and urban development departments and ULBs responsible for compliance in their respective areas.

State Level ECBC implementation - Challenges and Issues

- ❖ The process of compliance including documentation for compliance – all need to be included in the notification.
Need to take all stake holders on board for the implementation of ECBC.
- ❖ Stake holders need to be completely familiar with the code and compliance process.

Recommendations

- ❖ States are required to enforce ECBC through ULBs but Government and public sector agencies currently do not have the manpower or expertise to enforce ECBC. It is therefore crucial to build capacity and create a cadre of professional outside the public sector.
- ❖ BEE needs to appoint an examination agency that can develop and administer TPA examination and conduct awareness state wise/region wise empanelment is required.
- ❖ BEE needs to develop a curriculum guide and a corresponding examination material for TPA training & Exam.

Recommendations

- ❖ Template document and checklist to be used by TPA's , based on tiered approach.

The proposed TPA framework can resolve the issue of capacity and expertise to enforce ECBC at the local cost level. However coordinating with different government agencies and the other stake holders to incorporate the TPA Framework would be a challenging and time consuming initiative. State level initiatives demonstrating effectiveness of TPSs framework may help overcome some of the barriers.

Thank You