Third Regional Workshop on ECBC Implementation in States

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ENERGY CONSERVATION BUILDING CODE

The Energy Conservation Building Code (ECBC) was **launched by Ministry of Power**, Government of India in **May 2007**, as a **first step towards promoting energy efficiency in the building sector**

The **purpose of the code** is to provide **minimum requirements for energy-efficient design** and **construction** of building

Code **adoption is voluntary** in the country and **becomes mandatory in state after notification by respective state government**

India's Nationally Determined Contribution (NDC) lists **Enhancing EE through ECBC** as one of **most imp. mitigation strategy**

Source: BEE & UNDP_GEF

ABOUT ECBC

ECBC **developed under EC ACT 2001**, wherein **power to implement** is with both **center & state**

Sets minimum energy standards for new *commercial buildings* having a connected load of 100kW or contract demand of 120 KVA and above

So far, **10 states** have **notified ECBC** and establishment of **ECBC cells** in **5 states**

Trained 89 ECBC Master trainers and **3300 building sector stakeholders**

Identified **six institutes for supporting training and capacity building**

Source: BEE & UNDP_GEF

DEFINITION OF COMMECIAL BUILDING

Alliance for an Energy Efficient Economy

Any building that is used for neither residential, manufacturing, nor agricultural purposes, such as:

- Office buildings
- Hotels
- Restaurants
- Retail mall and shops
- Hospitals
- Educational Institutes

ECBC NOTIFICATION STATUS

Alliance for an Energy Efficient Economy

CATEGORY 1: ECBC NOTIFIED

10 States/UTs

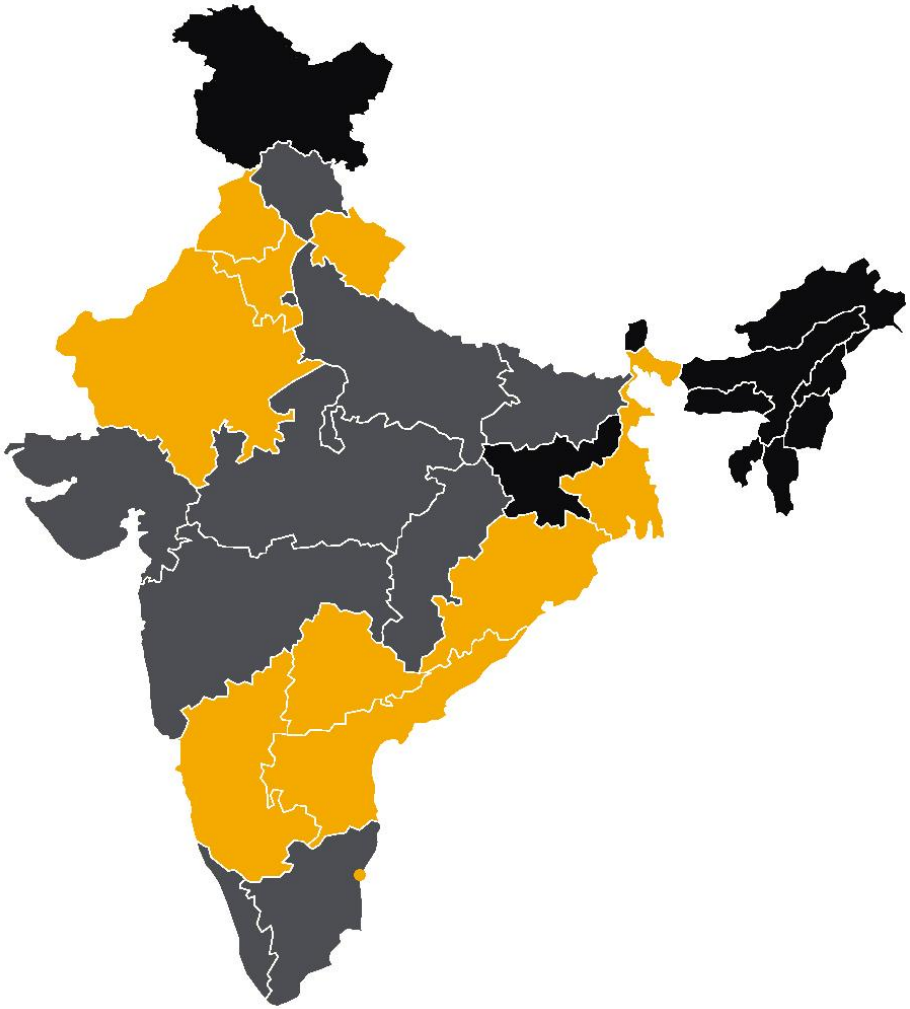
Rajasthan, Odisha, **Uttarakhand**, UT of Puducherry, **Andhra Pradesh**, **Punjab**, **Telangana**, Haryana, West Bengal, and Karnataka

CATEGORY 2: ECBC AMENDED

10 States/UTs

Uttar Pradesh, Kerala, Chhattisgarh, Gujarat, Tamil Nadu, Maharashtra, Bihar, Himachal Pradesh, Madhya Pradesh, and Delhi

CATEGORY 3: NO ACTION



Source: UNDP-GEF

ENERGY CONSERVATION BUILDING CODE

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The ECBC provides design norms for:

Building envelope (thermal performance requirements for walls, roofs & windows)

HVAC system (energy performance of chillers and air distribution systems)

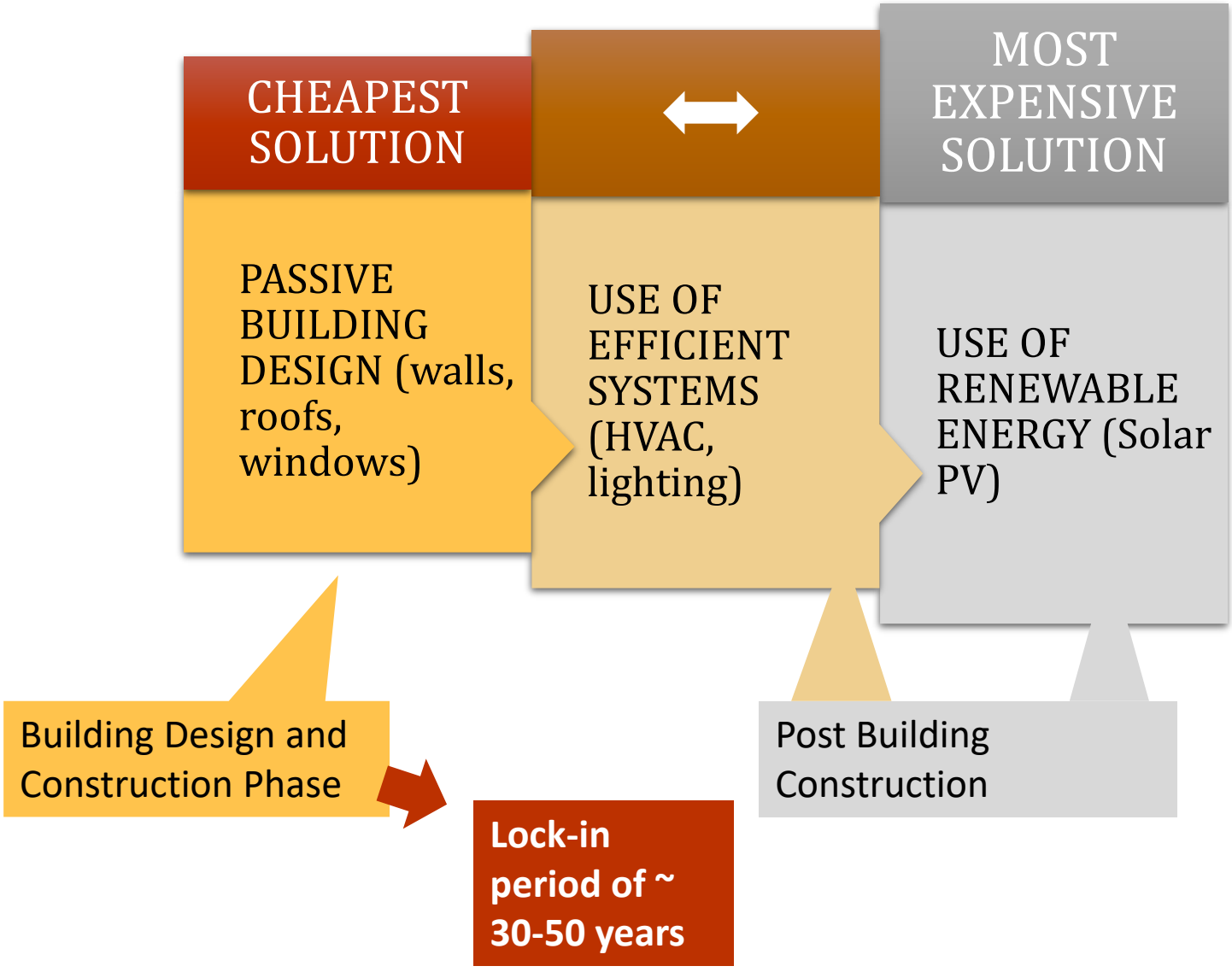
Lighting system (lamps performance requirements, automatic controls)

Electrical system

Water heating and pumping systems

Source: BEE

ENERGY EFFICIENCY MEASURES



BENEFITS

BAU commercial buildings have energy performance index (**EPI) of 200-400 kWh/sqm/year**

Energy efficient buildings have shown EPI between **80-100 kWh/sqm/year**, in some cases as less as **13 kWH/sqm/year**

ECBC COMPLAINCE REQUIREMENTS

Approaches	Mandatory Requirements	Flexibility	Expert Knowledge	Use of Energy Simulation
Prescriptive	Required	Low	Low	No
Performance based – Whole Building Approach	Required	High	High	Yes

ROLE OF STAKEHOLDERS: ACHIEVING TECHNICAL COMPLPIANCE

Alliance for an Energy Efficient Economy

Building envelope (thermal performance requirements for walls, roofs & windows)

HVAC system (energy performance of chillers and air distribution systems)

Lighting system (daylighting, and lamps a& luminaire performance requirements)

Electrical system

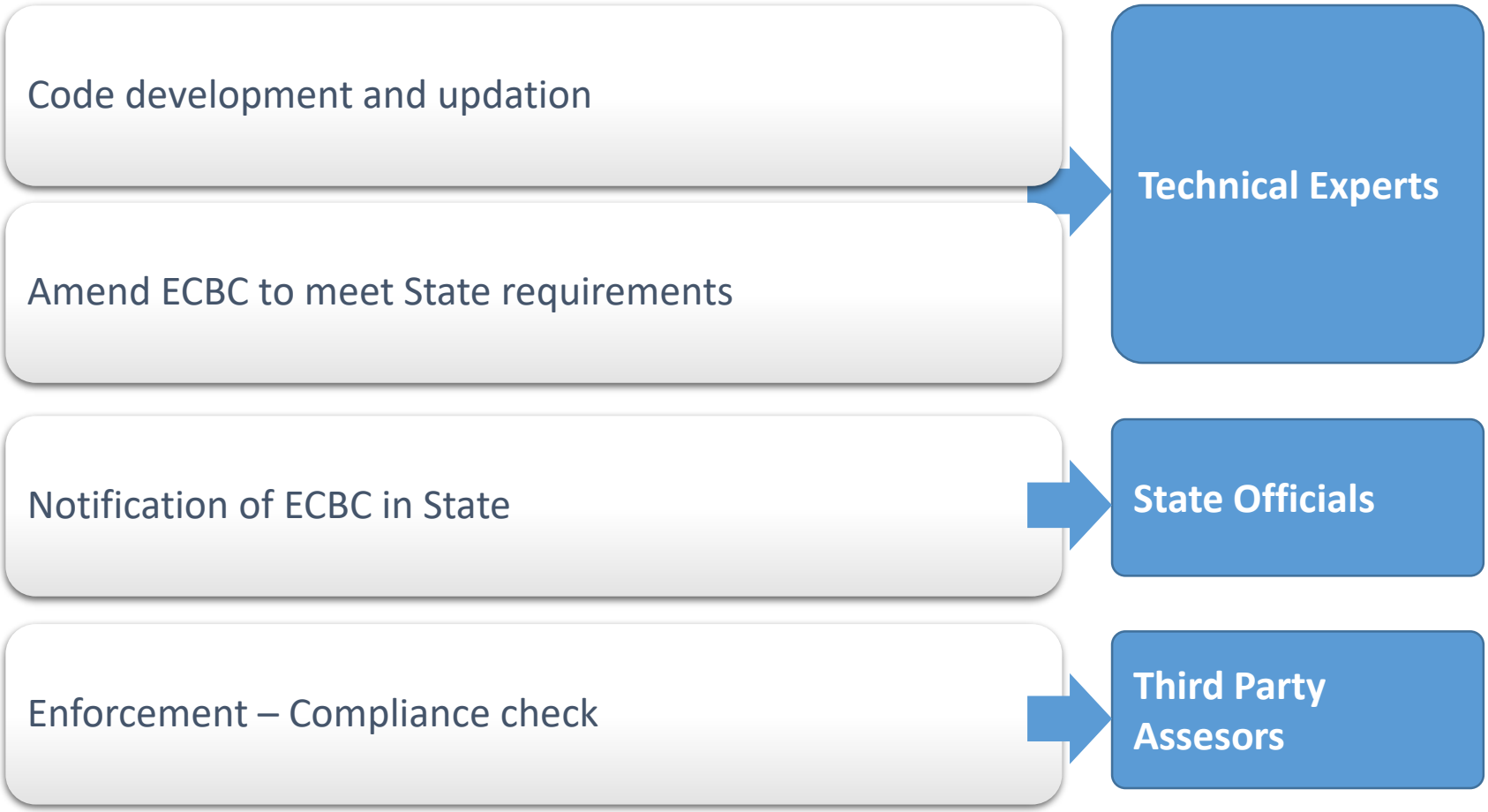
Water heating and pumping systems

During Construction

- ARCHITECTS
- MEP CONSULTANTS
- GREEN BUILDING/ ECBC CONSULTANTS

ROLE OF GOVERNTMENT BODIES

ECBC Administrative Requirements



THANK YOU

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