



A POLICY STRATEGY FOR DECARBONIZING THE BUILDINGS SECTOR



CONTEXT

India's residential sector floor area is expected to rise to **21.9 billion m²** in next 10 years from 15.3 billion m² in 2017. However, there is a **housing shortage**, estimated at 18.78 million & 43.67 million units in urban and rural areas respectively for the period 2012-17. The **Pradhan Mantri Awas Yojana (Urban) (PMAY-U)**, launched to bridge this gap, had proposed the construction of **12 million units by 2022**. This provides an opportunity to evaluate, demonstrate and build housing that also focuses on providing **thermal comfort** hence, **minimizing energy** and **resource use**.

Housing that is built as part of PMAY will last 40-60 years and decisions taken today will have an impact on the level of comfort that these dwellings provide to its occupants and the energy use, costs and associated carbon emissions over the lifetime of the building. Presently, residential buildings accounts for **24%** of the total energy consumption, and it will increase rapidly if no intervention is done. Hence, there is a need of a robust **implementation framework** to holistically address the building sector and its growing resource needs.



PROJECT RELEVANCE TO NATIONAL PRIORITIES

The **Energy Conservation Building Code for Residential Sector (ECBC-R)** was launched in December 2018 by the Minister of Power. Part I, sets minimum building envelope performance standards to limit heat gains and heat losses, for adequate natural ventilation and daylight potential. Part II, focusing on EE in electro-mechanical equipment for building operation, RE generation, embodied energy of materials, is under development. Implementation of ECBC-R will have the potential for **energy savings of 125 billion units** of electricity per year by 2030, which is equivalent to about **100 million ton of CO₂** emission.

PMAY-U, Government of India's flagship program aiming to provide affordable housing to urban and rural poor. Launched in

2015, the PMAY-U is targeting to build approximately 12 million dwelling units by 2022, out of which only 2% is constructed, 6% is under construction and 32% is sanctioned. Recent studies show that, government is well on track to realize the goal of 10 million dwelling units by 2022 which leaves a very narrow timeframe to grab this opportunity for building energy efficient and thermally comfort houses.

The project will support Indian State governments to **adopt appropriate sustainable buildings policies** and **energy codes** that aid the India's Nationally Determined Contribution commitments to reduce the emissions intensity of its GDP by **33 to 35 percent** by 2030 from 2005 level and exceed India's commitments to **climate action**.



PROJECT GOALS AND OUTCOMES

This project aims to increase adoption of ECBC-R in India through a replicable implementation framework, with a focus on affordable housing sector. The project is divided in 2 phases.

Phase 1 will be focused on developing a policy implementation pipeline that leads regional jurisdictions through policy planning, adoption and implementation by 2020. The objective is to build administrative capacity through an action learning approach that provides the necessary MRV of energy and emissions baseline for affordable housing units.

Phase 2 will be focused on implementation of ECBC-R in an affordable housing project (in a state or city) as part of the code implementation process, simultaneously build process of compliance mechanism using code compliance tools and third-party assessment.



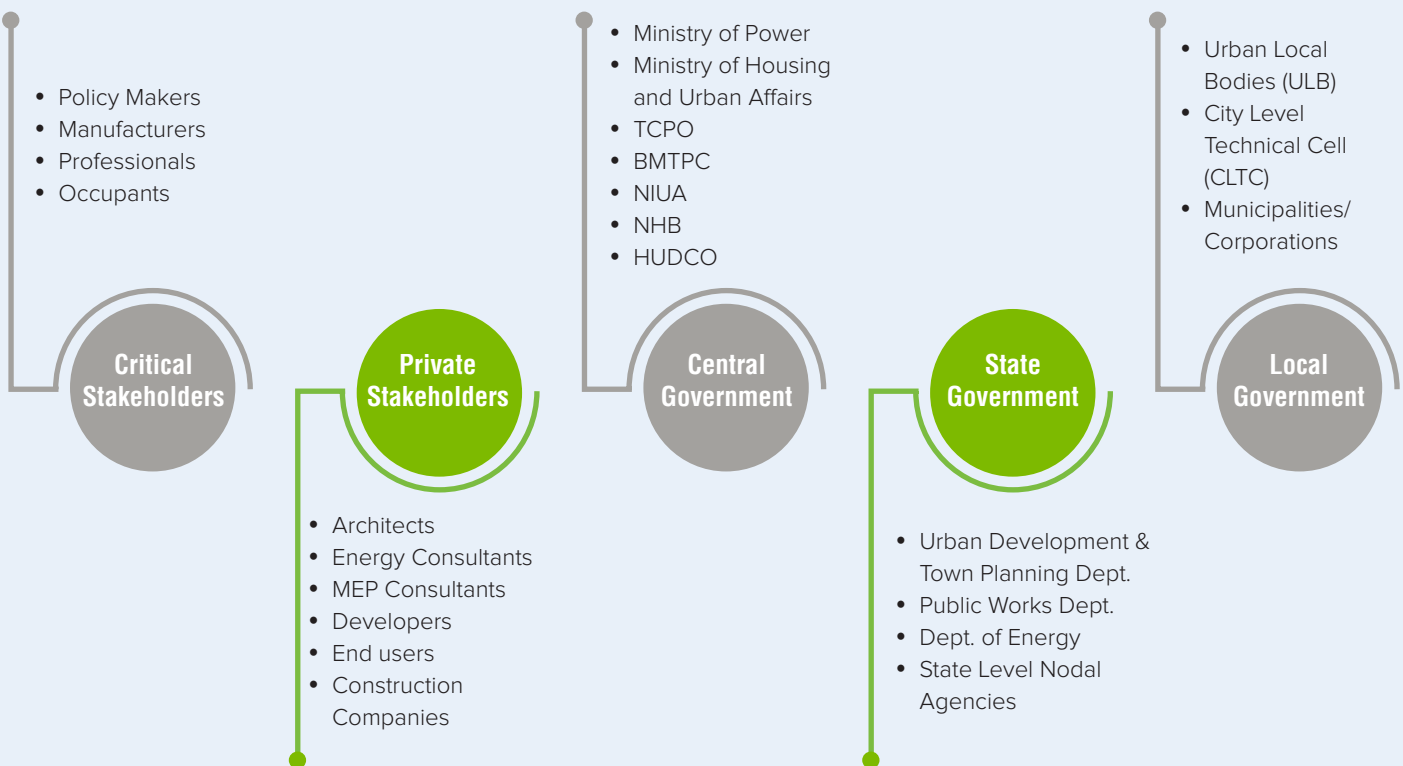


OUR METHODOLOGY

Phase 1 (Aug 2019 – Jan 2020)	Phase 2 (Mar 2020 – Dec 2020)
<ul style="list-style-type: none"> • Identification of state and city with consultation with relevant stakeholders • Identification of administrative procedures for inclusion of ECBC-R • Identification of feasible project under PMAY-U • Identification of building materials relevant under ECBC-R • Quantify benefits of ECBC-R at a city level 	<ul style="list-style-type: none"> • Technical assistance for the identified pilot project • Proposed amendments to state regulations and standards • Mainstream building materials as per ECBC-R requirements • Develop a framework for scaling up at ULBs in different states in India



KEY STAKEHOLDERS



ABOUT AEEE

AEEE is a policy advocacy and energy efficiency (EE) market enabler with a not-for-profit motive. It is the only organization in India that works on creating awareness about energy efficiency as a resource. It advocates for data-driven, evidence-based EE policies that will unleash innovation and entrepreneurship within

the country to create an energy-efficient economy. Through incisive activities, AEEE's mission is to be a partner in India's transformation into a global leader in the field of energy efficiency, and shape India as one of the most attractive markets for companies with the best available energy-efficient technologies.

Contact Us

Alliance for an Energy Efficient Economy

37 Link Road, Ground Floor, Lajpat Nagar III, New Delhi, 110 024

+91-11-41235600 | info@aeee.in

