

Concept Note: Kick off Webinar for the BEE-IEA India roadmap for mainstreaming energy efficiency in residential buildings

September 2020

Background:

India is one of the fastest urbanizing countries and is witnessing some of the fastest construction growth worldwide. This construction growth is not unforeseen especially considering the perpetual housing shortage. The thriving residential & commercial building sector in India accounted for 34 % of the total electricity consumption, 1066 TWh, in 2016–17¹ with the residential sector alone consuming one-fourth of the total national demand. With the growing housing demand and continuously increasing appliance penetration, the residential sector electricity consumption is expected to further double² in the coming decade posing huge stress on the already burdened electricity grids.

Under national missions like Housing for All, Smart Cities & Solar Cities, India is witnessing a significant increase in commercial and residential building stock with a lock-in period ranging from 30–50 years. The national missions and codes aligned to building energy efficiently and sustainably such as National Mission on Sustainable Habitat (NMSH), National Mission on Enhanced Energy Efficiency (NMEEE) now renamed ROSHANE, Energy Conservation Building Code (ECBC – both for commercial and residential) focus on building design and construction practices, but face implementation challenges to fully realize their potential.

The demand for new buildings presents a unique opportunity to leapfrog into a low carbon and resource-efficient future by building it responsibly. By incorporating energy efficient design and construction strategies, buildings could inherently have a reduced energy consumption footprint over its operating lifetime. Existing examples of high-performance buildings in India show that on average the annual energy consumption of such buildings could reduce by 30–40%. Further deployment of energy efficient appliances can significantly transform the energy consumption trajectory.

This being said, it is also important to realize the role different stakeholders such as architects, developers, engineers, and policymakers play throughout the design, construction and operation stages of a building's lifetime. Therefore, it is important to understand from different stakeholders their perspective on mainstreaming energy efficiency throughout the process and shape a common vision to address the challenges faced. Developed in consultation with several hundred stakeholders, the [GlobalABC Regional Roadmap for Buildings and Construction in Asia](#) attempts to address some of the major policy and technology challenges witnessed throughout the sub-continent across eight different themes (link to the roadmap).

¹ http://mospi.nic.in/sites/default/files/publication_reports/Energy_Statistics_2018.pdf

² http://cea.nic.in/reports/others/planning/pslf/Long_Term_Electricity_Demand_Forecasting_Report.pdf

The India Roadmap for Mainstreaming EE in Residential Buildings

In this context, the International Energy Agency (IEA) along with Bureau of Energy Efficiency (BEE) are working together on “Developing a roadmap for mainstreaming energy efficiency in the Indian residential building sector”. The overall aim of the project is to:

1. Mainstream energy efficiency in high-rise and affordable housing building sector in India
2. Facilitate the adoption of the residential building code (ECBC-R) and the adoption of other voluntary green building standards and star rating systems for residential buildings;
3. Promote the use of low-carbon materials, more integrated urban planning, and clean energy integration in new building design; and
4. Develop a strategy to reach nearly zero energy residential buildings in India.

The Residential Building Roadmap will build upon the GlobalABC roadmap for Asia, and focus on the **implementation** of the suggested actions that have been identified as being necessary to reach zero-emission, efficient and resilient buildings. Specifically, the roadmap will focus on **new building design and construction**, how new buildings affect **urban planning issues**, how to decrease the embodied carbon of building **materials**, and how to ensure buildings are **integrated with an increasingly clean energy system**.

For each of these topics, the roadmap will identify the **key issues**, highlight **existing policies and programmes**, and suggest the **key actions** that different stakeholder groups can take to contribute towards energy efficient residential buildings, along with a methodology for **tracking progress and setting targets**. One of the pillars of the roadmap process will also be to identify the different benefits that energy efficient buildings bring to different stakeholder groups, in order to increase buy-in and collaboration. Such benefits include increased affordability of energy services, increased thermal comfort, reduced air pollution, job creation, as well as other priorities of the Government of India and the UN Sustainable Development Goals.

Key to this process is understanding the motivations and perspectives of different stakeholders acting in the long value-chain of buildings and construction. In order to kick-off a series of consultations, the IEA and BEE are hosting a launch presentation, followed by a panel discussion with several policy-level actors.

A draft agenda is shown below:

Date: **Friday 18th September 2020, 15:30-17:00 IST**

Mode: Zoom Webinar with use of live polling

| Time (IST) | Session |
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| 15:30 – 15:45 | Inaugural session (15 minutes) <ul style="list-style-type: none"> • Welcome remarks: <i>Ms. Melanie Slade, Senior Programme manager, IEA</i> • Opening remarks: <i>Mr. Abhay Bakre, Director General, BEE</i> • Opening remarks: <i>Ms. Natalie Toms, Economic Counsellor, British High Commission</i> |
| 15:45 – 16:00 | Introduction to the project (15 minutes) <ul style="list-style-type: none"> • Introduction to the India Residential Buildings Roadmap, introduction to polls: <i>Ms. Maxine Jordan, Policy Analyst, IEA</i> • Introduction to buildings energy efficiency in India: <i>Mr. Saurabh Diddi, Director, BEE</i> |

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| <p>16:00 – 17:00</p> | <p>Panel discussion <i>Moderators: Ms. Maxine Jordan, IEA and Mr. Saurabh Diddi, BEE</i></p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Mr. Ajay Jain, <i>Principal Secretary to the Government, Housing Department, Andhra Pradesh</i> 2. Mr. Vipin Sharma, <i>Commissioner, Thane Municipal Corporation</i> 3. Mr. Sunit Mathur, <i>General Manager, Rajasthan Renewable Energy Corporation Limited</i> 4. Mr. Hanumanthrayappa. V, <i>Assistant General Manager, Karnataka Renewable Energy Department</i> 5. Mr. Rajkiran V Bilolikar, <i>Associate Professor, Energy Area of Administrative Staff College of India</i> 6. Dr. Anand Shukla, <i>Senior Thematic Advisor, Swiss Agency for Development and Cooperation</i> 7. Mr. Vikash Ranjan, <i>Programme Manager for Buildings, GiZ</i> <p>Poll results</p> <p>Audience Q&A</p> |
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