

BUILD AHEAD || EMBODIED CARBON BASELINING STUDY

CONTEXT

The built environment contributes approximately 39% of global carbon emissions, of which ~11% is attributed to embodied carbon, i.e., the emissions that arise from producing, procuring, and installing the materials and components that make up buildings. Currently, **embodied carbon forms almost 30% of the carbon footprint of the built environment**. This share is expected to increase to **more than 50% by 2050** as operational carbon, i.e., the emissions related to the use phase of the building, is increasingly addressed by renewable energy and energy efficiency measures. With an estimated 60% of building stock expected in India by 2050 yet to be built, embodied carbon **must** to be addressed up front, or it risks being locked in for decades.

BASELINING STUDY

To effectively reduce embodied emissions at scale, the sector must develop a shared understanding of embodied carbon and establish an embodied emissions baseline for the construction industry in different building types in India. To this end, Build Ahead is launching a baselining study and requests your invaluable participation to ensure its success.

Outline

The study will focus on baselining embodied carbon in various categories of residential and commercial buildings in India. The key objectives of the study are:

1. To establish a baseline and benchmarks for embodied carbon from the construction industry in India in different building types
2. To develop targets to reduce emissions in phased manner
3. To raise awareness among key stakeholders about embodied carbon and the need to tackle them in a phased and collaborative manner

Approach

To develop a reasonable baseline of embodied carbon in buildings, the study will focus on collecting data from existing building projects as opposed to planned projects. To facilitate data collection, an Embodied Carbon tool (EC tool) with a simplified template has been developed for study participants. Once study participants have submitted data for different building types, the data will be collated and analysed to develop the baselines and benchmarks.

Scope

The embodied carbon data will be collected using the principles of Life Cycle Assessment as laid out in ISO guidelines such as ISO 14040 and ISO 14044. The Product stage (A1 to A3), which relates to upfront embodied carbon in buildings, will be covered in the study.

Overall flow

Phase 1	Phase 2	Phase 3	Phase 4
Study launch and outreach to study participants	Data collection via EC tool	Collation and analysis of data	Baseline and benchmarking publication

Process for participants

Step 1: Attend introductory call and walkthrough for use of EC tool

Step 2: Receive login credentials for EC tool

Step 3: Create a new project and add unique identification information such as built-up area, demography, category/sub-category/type/sub-type (choose from categories)

Step 4: Add information regarding the material quantities used for each project,

What you will get

1. **Embodied Carbon Snapshot Report:** project-specific insights immediately after uploading data to the tool
2. **Embodied Carbon Primer:** an general overview of embodied carbon and interventions to address embodied carbon in construction
3. **Embodied Carbon Benchmarking Report:** comparative standing and benchmarks of the respective projects in their asset classes after data analysis
4. **Embodied Carbon Baseline Report:** detailed report on comparative standing and benchmarks of the asset classes after completion of the study

Why should you participate?

1. This study is the **first of its kind in India** and will initiate the process of **measuring and baselining embodied carbon** in India's built environment, without which we cannot holistically decarbonise.
2. Participants receive **insights on the embodied carbon footprint of their projects** and how they compare with peers, along with **initial interventions** to reduce their future embodied carbon footprint. Participants will also be invited to share their perspectives and join the launch of the Embodied Carbon Baseline Report.
3. With upcoming carbon markets and green credits that are poised to impact building emissions, revision of government policies and building codes, and increasing focus on green financing for construction, **embodied carbon is increasingly coming into the fore. Additionally, future incentive programs are expected** to support in driving reductions.

ABOUT BUILD AHEAD

Founded by Xynteo, [Build Ahead](#) is an industry-first coalition consisting of forward-leaning businesses, including construction material producers, construction players, financiers and technology enablers, that have come together to accelerate decarbonisation efforts across the Indian construction value chain. Launched in August 2022, our coalition members include Jones Lang Lasalle (JLL), Godrej Construction, Lodha, JSW Cement, SED Fund, Ultratech, Saint-Gobain, and Shell India. Through collective action and collaboration, the Build Ahead Coalition aims to support India's pledge to achieve net zero emissions by increasing the adoption of low carbon building materials in the design, construction, use and end of life phases of real estate, construction, and infrastructure projects.

ABOUT XYNTEO

[Xynteo](#) is a global advisory firm working with some of the world's largest businesses to advance a new model of growth – growth that works with and not against nature; delivers value in the long term and generates equitable value for all. Xynteo helps leaders and organisations shape cultures and businesses that think and act differently. In addition to Build Ahead, Xynteo also facilitates [Vikaasa](#), a coalition focused on creating new growth model for India in line with sustainable development goals and [Energy Leap](#), which is India's first clean hydrogen accelerator.