



GBPN Case Study

Achieving scale in energy-efficient buildings in India: A view from the construction and real estate sectors

A report from the Economist Intelligence Unit (EIU), commissioned by the GBPN.

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India is home to 1.2bn people, approximately 31% of whom now live in urban areas, according to the World Bank. Indeed, this South Asian giant boasts three of the world's top 20 mega cities—Mumbai, 18.4m strong, followed by Delhi (16.3m) and Kolkata (14m). These and other urban areas are only expected to grow. India's government projects the urban percentage of its population to reach 38.8% by 2026. As a result, a staggering 465m urban dwellers will need housing of one form or another.

Years of economic growth—an average of 7.6% annually since 2000—have spurred demand for more modern commercial and residential buildings and have increased energy consumption. According to a 2010 McKinsey report, between 700m and 900m square metres of commercial and residential space will be built each year until 2030. Residential buildings, which until now have not been targeted for energy efficiency, make up 75% of India's market. The upside potential to expanding and adapting existing energy-efficiency policies to the residential segment is tremendous.

To date, efforts of India's policymakers have focused on reducing energy consumption in new commercial buildings. Achieving significant scale will depend on efficiency measures becoming standard practice in the commercial middle market, retrofit, and, particularly, the residential buildings segments.

India needs to build a better business case for energy-efficient construction. Roughly 75% of executives in India's building industry believe energy-efficient buildings cost at least 15% more than traditional buildings, according to the Economist Intelligence Unit (EIU) June 2012 survey. This limits their willingness to make additional upfront investments. Yet, 80% of them agree that energy-efficiency legislation benefits their sector. Indian businesses, therefore, would likely welcome more stringent government legislation and efforts to improve the awareness of cost savings—helping them to achieve scale and reduce carbon emissions.

Key findings from the report include:

- **The key energy efficiency regulation for large commercial buildings in India, the Energy Conservation Building Code (ECBC) adopted in June 2007, is having a positive effect.** Commercial buildings certified for energy efficiency now account for 1.2bn square feet (about 111m square metres) of space. Although experts say the true impact of the ECBC's implementation may be greater because some building owners are willing to simply secure energy savings rather than going through multiple procedures to become certified.

- **To date, policymakers have prioritised the large commercial sector over India's commercial mid-market and residential buildings segments.** Few formal energy-efficiency guidelines or laws exist today for new housing developments. However, the Bureau of Energy Efficiency is now helping to draft some, while the residential sector is starting to employ many best practices related to window design and building orientation.
- **Consensus is growing among private and public sector leaders that now is the time to make India's voluntary energy-efficiency code for commercial buildings mandatory.** In fact, the government has announced its intention to make the ECBC mandatory during India's current economic Five-Year Plan (2012-2017).
- **Market forces such as the falling cost of materials are helping home builders overcome the perception that energy-efficient buildings are costly.** Solar photovoltaic panel costs, for example, have fallen dramatically over the last four years. Promotion of energy-efficient technologies by government regulators would further drive near-term demand until these technologies are in widespread use and, consequently, become less costly.
- **Home builders are less attracted by potential energy savings—since these will mostly benefit homeowners, so they would like to see more incentives for construction.** Legislative proposals are on the table to give builders tax cuts and other concessions for constructing energy-efficient buildings. Such incentives should be accompanied by closer government monitoring to ensure implementation of energy-efficiency measures.