

Green buildings, like the Lotus Boulevard in Noida, Sector 100, have energy-saving fittings, non-toxic paints and adhesives and orientation as per the sun path



HOUSING GOES GREEN

Real estate developers in India are waking up to low-carbon housing

Preeti Parashar

THE ISSUE of lowering carbon emissions may have rocked the United Nations Climate Change Conference in Copenhagen in December, but real estate developers in India are already waking up to the cause. Many of them are turning to low-carbon housing and projects in this segment have already been constructed.

UK-based Royal Institution of Chartered Surveyors (RICS) emphasises upon the need to create an integrated approach between the building control and planning systems to monitor and enforce carbon compliance and drive standards. The green wave in India has already delivered almost 50 green building and development over 100 million sq ft is on the way to be completed in the next three-four years.

Sachin Sandhir, Managing Director and Country Head, RICS India, feels that environmental sustainability is the biggest challenge that India faces in the path of its development. "Presently, households account for only 8% of total carbon emissions. With sustainable buildings said to reduce energy consumption by nearly 40%, green homes could further improve their energy efficiency, as this is a concept home owners can relate to, with everything translating into costs," says Sandhir. The international rating agency for green buildings, The Leadership in Energy and Environmental Design (LEED), has also established its presence in India through its counterpart, Indian Green Building Council (IGBC), which developers can approach for assistance and certification.

Sandhir said, "These factors have in some way also influenced architectural and real estate firms to foray into the green building segment, which has seen approximately 45%

growth per annum over the past five years. Hopefully, more developers will support sustainable development as the industry gets clued in to the long-term benefits of such structures and seeks recognition through LEEDs and Green Rating for Integrated Habitat Assessment (GRIHA) certifications."

Being environment-friendly

Developers are making conscious efforts to shift to greener technologies to create a product that has minimum carbon footprint and which directly or indirectly leads to lesser carbon emissions. Milind Korde, MD, Godrej Properties, shares, "Godrej Properties is a founding member of the IGBC, which is actively involved in promoting the green building concept in India and has a vision to serve as a single-point solutions provider and facilitator for green building activities in India. We also incorporate environment-friendly features in our projects, such as rainwater harvesting, sewage treatment plants and harvesting solar energy for common areas."

Moving a step forward, Supertech has launched India's first-ever eco-centric development project, Eco-Citi, in Sector 137, Noida, keeping in mind the consequences of a polluted environment. "This city is the first of its kind in India and will not just include eco-friendly material, but we have also taken an initiative to reduce carbon emissions," says Mohit Arora, Director, Supertech. The residential project is coming up over 12.6 acres, catalysing an investment of Rs 650 crore.

Raheja Developers is also undertaking many such projects in Gurgaon. Nayan Raheja, Director, Raheja Developers, says, "Most of our buildings have been awarded or are in the process of being awarded certification from organisations such as LEEDS and the environment ministry. CFL lighting, double glass windows, water recycling, water harvesting and solar water heating are being used in all



What does Green mean

- Insulated walls that enable up to 60% heat reduction
- Insulated roof that allows up to 60% heat reduction
- Electric charge points for Reva or any other alternate fuel vehicle
- Lobbies with sensor lights
- External lighting that is solar
- 80% open spaces
- Optimum space utilisation that allows 100% natural light to flow in
- Energy-efficient mechanical and electric equipment
- 0% discharge buildings
- Solid waste management
- Waste segregation system
- Native and low-water consuming plants
- Water conserving fixtures and fittings
- Naturally lit, cross-ventilated living spaces
- Toughened glass
- Rain water harvesting

our projects. Vaidh Bharadwaj, Director, The 3C Company, shares, "Currently, we are executing almost seven million sq ft of green residential project Lotus Boulevard and 4 million sq ft of an IT SEZ. Both projects are located in Noida. All of our green projects have features that make them truly environment-friendly and sustainable. From energy-saving fittings and fixtures to non-toxic paints and adhesives, from insulated walls to creation of zero-discharge building to orientation as per the sun path, at The 3C we identify and implement ideas for optimum use of energy."

Cost factor

Even though construction costs involved in such green projects is higher than the others, the extra costs can be recovered in two-three years through energy savings and low operational and maintenance costs. A green building saves almost 40%-50% of operating costs, while providing a healthier environment. As per RICS, while the cost of constructing low-carbon buildings is estimated to be 5%-7% higher than conventional buildings, energy savings can vary across buildings and sites. Sachin Sandhir adds, "With the potential of green buildings to save up to 40% in energy consumption, operational costs can be reduced by 25-30%."

Additionally, the RICS global property sustainability survey highlights that Indian occupiers and investors are willing to pay a 10% premium for green buildings, while government departments are willing to pay premiums of up to 12%." Seconding his view, Mohit Arora feels that in the initial stages of construction, such projects cost relatively more. "We will be planting solar panels, wind mills, biomass plants and irrigation systems, which take a huge investment. Though the cost is higher, it gives a better environment to the customer," reiterates Arora.

Raheja Developers also believes that these technologies are beneficial in the long run. For example, flush water that is recycled for gardening saves on the water bills over time. Double-glass windows can actually save up to 50% in maintenance cost of an air-conditioned commercial or retail development. Solar water heating saves valuable money which would have been spent in electric geysers in a hotel, solar panels usually recover their cost of high investments within eight-12 years.

Advantage for customers

There are several benefits of green buildings, both tangible and intangible, for customers as well as developers. The benefits of building green include cost savings from reduced energy, water and waste; lower operations and maintenance costs; and enhanced occupant productivity and health.

Bharadwaj feels green features increase the sustainability of the building as these require hassle-free maintenance. "However, there is a need to keep a tab and a check on the functionality of the materials and the appliances. The total savings range between 40% and 50%, which starts from three to four years. Most importantly, green housing can enhance occupants' health, happiness and well being."

He adds, "The increase in the development costs might be a point of debate for the customers. However, we neutralise this as we absorb all the extra costs. Thus, the end user gets the product with all the energy-saving features at the market price of an ordinary house, while enjoying the benefits of a green home for life." Protecting and conserving natural resources while reducing energy consumption and achieving green ratings is considered to be the new socially responsible approach.