



## Media: Construction Week

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### How green buildings are a saving grace

Green buildings are the way to go if you want to live a healthier life and also save the environment

By [SARAH HARRIS](#) | June 2, 2024 | [SHARE](#) [f](#) [t](#) [e](#) [in](#)



The construction industry faces a significant environmental challenge in achieving the dual objectives of providing high living standards and maintaining ecological sustainability. Buildings should not only serve as shelters but also offer essential physiological comforts. These include visual comfort, smoking cessation, better sleep, green roofs and high-performance windows that significantly reduce the burden on electricity. Along with this, we install water-efficient fixtures, high-performance insulation materials, such as recycled denim, cellulose, or spray foam, help maintain comfortable indoor temperatures with reducing heating and cooling energy consumption. Regulated roofs and walls provide insulation, reduce absorption, runoff, erosion or sealing and create habitat for wildlife, contributing to a healthier urban environment.

David Ajemba, director, Ajemba Realty, says, "As developers, we are driven to promote a green and eco-friendly living. To keep our buildings green, we choose the eco-labeled products and components that help to conserve natural resources, for example, energy-efficient appliances, LED lighting systems, recycled materials, solar panels, green roofs and high-performance windows that significantly reduce the burden on electricity. Along with this, we install water-efficient fixtures, high-performance insulation materials, such as recycled denim, cellulose, or spray foam, help maintain comfortable indoor temperatures with reducing heating and cooling energy consumption. Regulated roofs and walls provide insulation, reduce absorption, runoff, erosion or sealing and create habitat for wildlife, contributing to a healthier urban environment."

As green buildings have gained prominence over the years, both developers and consumers are focusing on sustainable green practices. To further those goals on this, India Council for Green Building (ICGB) annual list of top 20 countries and regions in the world for LEED certification (2023) in the region. VI planning and procurement, Sathya Group, says, "We adopt fly ash bricks as an alternative to conventional clay bricks, contribute to the reduction of environmental pollution and increase the need for bright adoption of this industrial waste. We use effective non-halocarbonated (NHC) roofing of asbestos for better shading, which reduces the temperature by 4 to 5°C."

John Ashwin, chief design and sustainability officer, Coohas Properties, says, "The foundation of a green building marks the commencement of a shared responsibility between developers and buyers to promote its environmental integrity. Developers need to communicate and educate buyers on green building maintenance. Buyers play a pivotal role in upholding sustainability by adhering to green maintenance practices. At Coohas Properties, we provide a detailed green building section in the handbook manual to educate buyers about features and maintenance. The timely, regular maintenance of energy-efficient systems, proper waste management, and ensuring an eco-conscious lifestyle. Furthermore, fostering community engagement encourages collective efforts towards sustainably promoting a harmonious living with the environment."

**What to look for**  
The present context represents an unprecedented opportunity for green building initiatives across residential, commercial, industrial, and manufacturing sectors. Both developers and consumers are increasingly committed to creating and embracing sustainable work and living environments. This trend is only expected to grow, primarily driven by green greater dedication to sustainability in construction and lifestyle choices. Harshita Chohan, an IIT Madras project management, Tata Realty and Infrastructure, says, "Energy-efficient features and renewable energy integration translate to lower energy bills over the building's lifespan. Additionally, high-performance materials and systems often require less frequent maintenance compared to conventional building components, further reducing long-term operational costs. The value proposition of green buildings extends beyond just cost savings. These buildings are increasingly sought after for tenants and buyers, which can potentially command higher rental rates and priority sales."

Green building technology might be applied in the planning, procurement, design, construction and operation stages, which shape the construction industry in many countries. Anuragman Jain, director, Sathya Group, believes, "The optimal design of green buildings needs to be considered in all aspects, otherwise any deviation in design can lead to higher total energy consumption and result in a burden on the environment. The main economic challenges of planning green buildings include the high initial costs and high capital investments and the high investment required for research and development to benchmark innovative practices."

In addition, the use of green buildings requires collective efforts from all participants and stakeholders to thoroughly understand the technical guidelines and regulations of green buildings and to promote green building implementation. Furthermore, green building evolution policies need to be further improved according to regional economic development differences in the construction of green buildings. The transfer of new and emerging technologies can lead to information loss among all parties involved in the construction process and research on key technologies for energy efficiency needs to be further developed.

**Making it easy**  
LEED certification is a globally recognized symbol of sustainable development that encourages the promotion of green buildings. Deyash Datta, director, Kiral Group, says, "Even though the Green Building and Platinum LEED certification come with some challenges, such as higher initial investment in green building materials, advanced systems, and expert consultants, which can increase upfront costs, integrating various green features requires careful planning and expertise, which can cause delays where residents must adapt to practices such as using energy-efficient appliances and proper waste management to maintain efficiency."

Post-handover, buyers play a crucial role in maintaining the green building. "They need to engage in environmental education and awareness, being willing to bear the costs of maintenance, actively participating in community engagement activities, and ensuring the upkeep of the indoor environment to sustain the building's eco-friendly features. While green buildings may have higher initial costs, they prove to be cost-effective in the long run due to benefits such as energy savings, improved health outcomes, and reduced environmental impact. Conducting a comprehensive cost analysis considering these factors reveals the true cost-effectiveness of green buildings over time," says Ravi Sound, founding director, Emporium.

Yash Rajgopal, director, Gulshan Group, agrees with this and says post-handover, buyers are responsible for maintaining existing green building technologies, replacing fixtures with compliant ones, understanding certification requirements and technologies used, and ensuring timely removal of green building certificates.

Neelam Kishor of Harsha Developers agrees with this when he says, "Buyers must ensure that they implement a proactive maintenance schedule to ensure that green building features, such as energy-efficient HVAC systems and water-saving fixtures, are functioning optimally. Encourage energy-saving practices among occupants, such as turning off lights when not in use, adjusting thermostats for energy efficiency, and using appliances mindfully. Importantly, they need to choose eco-friendly products and materials for any renovations or upgrades within the building to maintain its green status. Also, provide education and training to occupants on sustainable living practices and the importance of maintaining a green building."

Sourcing sustainable materials and technologies can be challenging, particularly in regions where they may not be readily available or where there is limited market demand. This can lead to delays and increased costs. C.J Singh, COO, Wave City, says, "Many stakeholders, including architects, engineers, contractors, and clients, often lack knowledge about green building practices and the benefits they offer. Educating and raising awareness among the stakeholders involved is essential for successful implementation and adequate time and effort is required for the same."

**Long term plans**  
Maintaining the performance and longevity of green building systems and materials requires proper maintenance and updates. Ensuring that building owners and facility managers are prepared to handle these responsibilities is crucial for long-term success. Each region has unique climatic and geographic conditions that can influence the choice of green technologies and materials. Designing and implementing solutions that are tailored to local conditions can be a challenge.

Rishi Jain, MD, Jain Group, says, "Implementing cutting-edge green technologies or pushing the boundaries of sustainable design may encounter technical challenges or limitations. Innovations in renewable energy, water conservation, and materials science are continually evolving, requiring buyers, developers and developers to stay informed and adaptable to integrate the latest advancements into their projects."

Furthermore, the 2023 estimated during construction of a building one litigator and reduce the construction liability to go on into into... what creating to eliminate pollution by vehicles leaving a construction site, proper design and disposal of the hazardous waste of the OS, site material management... waste material aggregation and disposal proper storage of aggregates, etc. Anshu Sharma, AEP, operations, Biofarms Group, says, "The concept of green buildings is generally for reduction in the (Life cycle total impact effect) and therefore energy saving, optimization of energy and water usage and use of sustainable materials thereby meeting the needs of the present without compromising the availability of future."

Rishi Tharwa, chief area director, Sun Earth Developers, says, "During construction, our utmost priority is to reduce wastage, use leftover site materials and recycle waste for future use. We provide DWG (organic waste containers) that decomposes organic waste material into compost, which can then be used as fertilizer on soil conditions, along with SW (waste treatment plant) that removes pollutants from the sewage, making it safe to reuse for irrigation and other purposes. We have a robust system for segregating dry and wet waste, ensuring safe and sustainable waste disposal."

**Saving space**  
Green buildings may require higher upfront costs due to eco-friendly features and certifications, but they offer long-term savings through reduced energy consumption and operational expenses. Features such as energy-efficient designs, sustainable materials, and green technologies contribute to the initial expenses. However, lower utility bills, tax incentives, and increased property value over time offset these costs. Moreover, these buildings provide a conducive indoor environment leading to improved occupant well-being and productivity. David, investing in green buildings proves to be cost-effective in the long run, offering both environmental benefits and financial returns.

Jayesh Kumbhar, director, The Questions Real Estate Advisory, says, "Building Gold and Platinum-certified buildings undoubtedly paves the path for sustainable growth, but they are not without obstacles for starters. There is a major economic barrier. Construction of a green building often requires a larger initial investment than conventional construction. This is mostly due to the specialized materials and technology needed to achieve higher certification levels. Second, technological competence is quite important. Designing and creating green buildings need a certain skill set and knowledge foundation."

According to various studies, green construction methods tend to be difficult, especially in areas where such knowledge is limited. Furthermore, regulatory challenges might slow growth in certain places, green building standards may not be completely recognized or integrated into local building codes. This disparity might result in extra regulatory challenges and project delays. Addressing these obstacles would need collaborative efforts from stakeholders across sectors to foster innovation, education, and policy alignment towards sustainable construction techniques.

Despite these challenges, the demand for green buildings is growing as awareness of their environmental and economic benefits increases. Overcoming these hurdles often requires collaboration among stakeholders, innovative approaches to design and construction, and supportive government policies and incentives.

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