

We're painting the town green

CONTINUED FROM PAGE 21

Great Lakes Institute of Management, Chennai Rating: Platinum

Located in the Manamai village of Kanchipuram, the Great Lakes Institute of Management (GLIM) is a bona fide, certified green building. It is also said to be the country's first green college campus. The green certification was awarded to the building based on the maintenance and operation practices here, as well as other factors.

Purushotham T.V., general manager, projects, spoke to *Guardian 20* on the various aspects of this green campus. "It is the dream campus of our Dean and Chairman, Padmashri Bala V. Balachandran. He wanted to establish an Institute in Chennai and subsequently went on to achieve his goal by making GLIM-Chennai as the first green campus which is an LEED platinum-rated campus."

LEED expands to Leadership in Energy and Environmental Design, a green-building certification programme valid worldwide.



Various features were added to the GLIM campus, to make it, so to speak, green. Use of sustainable resources is emphasised for one thing. Purushotham says, "Setting up semi-open water bodies, consumption of minimum fresh water from the open well sources,

recirculation of 100% treated water from STPs for landscaping, herbal garden and watering the plants — these are few of the many features added to this Green Campus. This effective and sustainable use of resources helps in conservation of environment. We can effectively

maintain the campus with the help of these features."

Along with it, the campus is equipped with various energy efficient systems that help reduce the facility's carbon footprint. The energy efficient systems like solar water heating, rooftop solar power

generation to the tune of 347 kWh, heat resistance building materials like Aerocon bricks, thermal roof insulation to reduce power consumption and much more are accounted in making GLIM the Green Campus it is," explains Purushotham.

However, it is not easy to build "green" buildings as they come with a cost. These kind of buildings are expensive than regular buildings we see. "Generally green buildings are expensive than regular buildings by 15% to 18%," adds Purushotham. But the costs are recovered, of course, in the long run.

One can also convert a regular building to a green building. This can be done by adding a few crucial features to a regular building. "This can be done taking up retrofitting works like providing skylight and more daylight areas, fixing auto controls for water supply, developing outdoor and indoor landscaping areas," says Purushotham.

— Bhumika Popli



Infosys Software Development Block 5, Mysore
Rating: Platinum

This happens to be one of the 19 green buildings owned by Infosys across India. Their Mysore office is one of the most energy efficient buildings in the country, with 58% less water consumption compared to other buildings of the same size.

One of India's biggest I.T. companies in the world, Infosys is also a leader in the field of green architecture. The company was part of one of the largest retrofitting projects in the world whereby all their older buildings were fitted with new energy-efficient systems and waste-recycling facilities.

"First of all we don't call them green buildings, we call them Sensible Buildings. As these buildings are sensible not just in terms of construction but also maintenance, since the materials sourced for the construction are taken from areas in close proximity," says Guruprakash Sastry, regional manager, infrastructure, Infosys.

The building also houses a water recycling plant that processes used water and puts it to irrigational use. The complex also has insulated walls and roof, along with spectrally selective double-glazed windows. With the help of smart automation and highly effective systems, the building consumes 40% less electricity than normal buildings. 90% of the working space in Infosys' Mysore office receives natural light thanks to designs which allow sunlight to reach almost all the nooks and corners of the building. — Anirudh Vohra



I-Gate Knowledge Centre, Noida
Rating: Platinum

Constructed by The 3C Company, the I-Gate Knowledge Centre is another platinum-rated green building in the NCR. The unique aspect of this building is that it uses passive architectural and active mechanical and electrical methods to minimise the energy consumed.

"Green buildings are a need of the hour as the amount of energy an ordinary building consumes is huge. Add to that the waste that is generated, which is a complete no for countries like ours," says Ravi Bhargava, senior

manager, The 3C Company.

The building, other than being enveloped in insulating material, which reduces the energy consumed for cooling, has also been designed in a manner that it manages to capture and use daylight for almost 75% of its working space. The beautiful landscaping around the campus can be seen from most parts of the building. Due to its in-house wastewater recycling system, the building manages to use almost all the sewage water for the purpose of watering the landscape greens, comprising 50% of the total land that building was constructed on. The

building thus discharges zero water into the drains.

"The cost of making these buildings is a bit higher as they require the use of materials and systems that are costlier than the ones that companies generally use, but they completely forget that these buildings use automation and all the systems in them are highly energy effective thus making the maintenance cost really low, which in turn reduces its carbon footprint," Bhargava explained.

Overall, the building's carbon footprint is between 60-70% less than any other building of a similar size.

— Anirudh Vohra

Owners: Suzlon City: Pune Rating: Platinum

Suzlon's One Earth campus is the company's global corporate headquarter, spread over 10 acres of land in Hadapsar, Pune. Conceived as a "global village", the campus pays homage to tradition even while making the best and most effective use of technology to create a workspace that goes beyond the obvious. What a visitor will see on entering the campus are innovative green areas that blend fluidly into the built spaces, unusual landscaping elements that complement water bodies, and sweeping architectural lines that offset the deceptive simplicity of the building design.

The campus is aptly named One Earth as Suzlon's business believes in caring for the earth; it further highlights the earth's unique existence as an ecosystem, signifies a unified view of the planet and reinforces the company's belief that co-existence and responsible usage of natural resources are the only way to achieve sustainability. The name of each building, inspired by nature, had the potential to be a story in itself. Hence, the buildings were named after five energy elements of the universe in sync with the values of sustainability of Suzlon and matching its core business of providing renewable energy solutions. The buildings have thus, been appropriate



privately named Sun Lounge, Aqua Lounge, Tree Lounge, SEA Lounge and Sky lounge.

Suzlon One Earth, too, is platinum rating LEED certified building. It also has a five-star rated GRIHA certification, making it a one of the very few corporate campuses in India today with such high sustainability standards. This has been made possible by the early incorporation of green principles in the planning and design of the building, strategic investments in high-tech energy efficient technologies and overall optimisation of materials and resources.

The clear purpose of building this complex was to have a space that was not restricted to being corporate. It would operate under the same sustainable environment that is its mission and which encourages the world to adopt the same. During the entire construction phase the project has consciously and responsibly adhered to norms of renewable energy usage, manpower health and safety, sanitation and hygiene, socio environmental responsibility and very stringent norms related to green building recognition and much beyond.

One Earth is the first campus in India where L.E.D. lights are used extensively for external general illumination to achieve desired levels of energy conservation. Since the external light design is on the basis of zero light pollution at night, a total load of external lighting is only 50kW for the entire campus. All buildings are designed to harvest maximum daylight through glass and louvers with almost 90% of the users not requiring switching on lights during the daytime.

Suzlon One Earth is 100% powered by a combination of on-site and off-site renewable energy

sources. On an average 5% of the total energy consumption comes from 14 on site wind turbines and solar solutions which includes rooftop panels and Building Integrated Photo voltaic Panels.

The campus has achieved 30-40% reduction in operating costs due to energy savings of some 40% as compared to any other conventional equivalent-sized corporate building. Large parking spaces, common meeting rooms and individual cabins are provided with occupancy sensors while parking areas and open work stations are equipped with day light sensors to control lighting load.

Installation of water cooled V.R.V. (Variable Refrigerant Volume) system resulted in savings of around 40% energy as compared to conventional air conditioning systems. Integrated Building Management System is used to closely monitor power consumption and rectify accordingly in order to maintain specified load levels.

There is no challenge in maintaining a green building but the challenge is in making one. Green building projects cost more than regular projects. It is just necessary to engage with a qualified operations and maintenance partner. The infrastructure and management team remained conscious always to address the core company mission of Powering a Greener Tomorrow, today, giving shape to their vision and make it a reality. — Preeti Singh