

The ITC Green Centre – Inspired by Nature

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Introduction

“The road we have been taking is deceptively easy, a smooth super highway on which we progress with great speed, but at its end lies disaster. The other fork of the road – the one ‘less traveled by’ – offers our last our only chance to reach a destination that assures the preservation of our earth.”

An excerpt from “The Road,” by Rachael Carlson

ITC Hotels commenced their journey on the less traveled road some 22 years ago. In the bargain, discovering unknown opportunities leading to new ways of doing old things, learning the art of eco-designing, which is nothing but the art of seeing opportunities where none exist.

Conceptualization, modeling and scaling up have been the forte of the hotel chain. The ecological challenges thrown up by modern industrial lifestyles have brought in its wake innumerable challenges that need to be addressed creatively and innovatively by process, policy and design innovation that will hopefully result in reducing our collective environmental footprint.

The Company, as an ecological pioneer, has throughout the years integrated environmental imperatives in its entire management system right from roots to shoots. In a very short span of time, the Company has established more than 3,000 check dams in rural parts of India to enhance water security for the marginalized farmers and helped more than four million farmers to enhance their earning capacity through knowledge-empowerment techniques. Its paper division has reduced water consumption from 250 tons of water to 55 tons of water per ton of paper produced.

ITC Hotels and Green Centre

Business Standard has identified the ITC Hotels chain as the greenest chain in India. With the already established “green lining” that exists in the Company, it was easy for the management to plunge into the green-building concept that emerged in India in 2002.

The work on our new ITC office project had already commenced and management had to make some course corrections to adopt the criteria laid by USGBC. This bold green initiative was taken and implemented despite time and cost overruns.

Construction of the ITC Green Centre commenced in October 2002. We were in the basement in 2003 when we heard about the green-building concept from the Confederation of Indian Industry. The most important learning that we derived from the green building was as follows:

We did an **energy-sensitivity exercise** for building (which we had never done before), even before the building was up, which gave us a deep insight of what will be heat loaded at different times of the day and what measures to take in order to decrease the heat load in the height of summer. This led to the use of energy-efficient glass and other green material that helped us to enhance our energy efficiency.

The second most important learning was about **project design** in oriental countries. Drawings are not frozen from the start, leading to inefficiencies by design intent during the operational phase, due to drawings from different consultants trickling in as the project work progresses. LEED (Leadership in Energy, Environment Design) criteria states that all drawings must be frozen on paper, and all corrections must be carried out at the drawing board.

The areas that we have addressed to make the green building are as follows:

Energy Efficiency and Atmosphere: In order to reduce energy consumption by design intent over existing ASHRAE standards, we introduced the concept of day lighting in the building in conjunction with the use of high-performance glass that keeps the heat out and brings in light. In the process, we consume approximately 135,000 units of energy per annum, as opposed to 635,000 units of energy, if the building was made with a standard business approach.

The collateral benefit of using the daylight is not only to reduce the operating cost, but also to help the occupants to enhance productivity. Studies in the USA indicate that people who work with daylight are healthier vis-à-vis people who work during the day with artificial lights.

Energy-efficient bulbs installed in the building are T-5 and CFL, with motion-sensor lighting.

Lampposts in the landscape area are capped on top so that the light falls on the ground and does not pollute the atmosphere. This is to ensure that birds get darkness to sleep in the night; sensitivity to nature has to become a hallmark of sustainable development.

Reflective paint, also called, high albedo paint, has been applied on the rooftop, which reduces heat gain by 47%, thereby reducing the size of the air-conditioning plant.

High performance chillers with a COP of 6.1 have been installed in the building that again addresses lower lifecycle cost of operation.

Green Materials: The paints, adhesives and solvents used in the building are low in volatile-organic compounds, which help avoid “sick-building” syndrome. Conventional paints, adhesives and solvents are embedded with harmful chemicals that exude gases throughout their lifetime.

The building has used forest-stewardship council-certified wood, which implies the use of wood from forests that are harvested in a sustainable manner as opposed to clear felling, and has extensively redeployed old furniture from its old building thereby reducing the pressure on forest.

Water: ITC Green Centre by design intent has reduced water consumption by 40%. It is a zero-discharge building and rainwater goes into the aquifer. The water used in the building is treated through the Sewage Treatment Plant and re-used for horticulture, AC cooling tower and for flushing.

We have installed waterless urinals that help us to save 300 kiloliters of water per annum. To further work toward water frugality by design intent we have reduced the flow rate in the taps from 6 liters per minute to 2 liters per minute.

We have plants that consume less water. The parking areas have interlocking tiles so that grass grows in between and gives the opportunity for rainwater to seep in.

In a manner of speaking, we have introduced the concept of conspicuous conservation of water!

Education: Since the green-building movement was a new concept in 2003, the architects and consultants were not familiar with the concepts as per the criteria of LEED. We trained more than 3,000 people to understand the finer nuances of green building so that the concept takes roots in the country and gets scaled up rapidly so that climate change and other ecological challenges are addressed collectively by all stakeholders.

Innovation: Small innovative ideas were implemented at the project stage, keeping in mind our triple bottom line – economic, environment and social. We demonstrated to the project workers the use of a solar-concentrator drip-irrigation device and sprinkler system not requiring energy. The intention behind this demonstration was that in India, the construction laborers are also farm laborers and if they take this idea back home it will help them to enhance their productivity and reduce the chores for women who normally walk four kilometers to collect wood for cooking.

Once the building was ready, we installed touch-screen computers in the lobby so that any person visiting the building can learn about the green building by touching the screen and getting answers in English and Hindi.

We were aware many of the green-building concepts are expensive and therefore we have loaded the cost-effective ideas on the touch screen computer for the average homeowner. The contents of the green-building concepts are also available on our website **www.itshotels.in**. It is also the first and largest platinum-rated building.

Visitors from far and wide have come to see our building, including U.S. Secretary of State Hillary Clinton who called the building a “monument for tomorrow.”

With exploding populations, increased earning capacity and higher aspirations, the pressure on natural resources will go up exponentially. As rightly pointed out by many enlightened people, such growth is not sustainable. Therefore, creative measures for regulating the use of finite natural resources are required.

In a country where the construction industry is growing at the rate of about 10% per annum, a few green buildings will not suffice. Keeping the above perspective in place, ITC Green Centre has been instrumental in engaging all stakeholders in green-building practices and introducing green-building concepts to lawmakers so that changed policies and economic instruments of GOI results in green building becoming part of building bylaws, as opposed to simply a few organizations taking up the green path in construction.

During the construction stage, 3,000 stakeholders of ITC Green Centre were sensitized to principles of eco-design. In addition, ITC Hotels conducts regular eco-design programs for schools, colleges, SME's (Small and Medium Enterprises) and chambers of commerce as part of its eco-responsible best practices, so that a cascading effect takes place in the shortest span of time.

"During the next quarter century, the most significant net contribution to a greener world will be made by industry. Not every company is there yet, but most are trying. Those that aren't trying won't be a problem simply because they won't be around long term."

Ed Woolard, former Chairman of DuPont