

OBEROI MALL- A PIONEER IN GREENING INDIAN RETAIL

By Godrej Green Building Consultancy Services



In the light of growing mall footprints in India, sustainable practices have the potential to drastically reduce environmental impacts of resource intensive buildings like Shopping Malls.

At such a time, Mumbai's **Oberoi Mall** in Goregaon has set a powerful example for the retail industry to follow. By demonstrating sustainable building performance, it has become the first mall in India to achieve **USGBC* LEED** Existing Building GOLD Rating**, scoring **60 points** under Operation & Maintenance Category.

Godrej Green Building Consultancy Services (GBCS) provided a comprehensive green solution which included Facilitation, Retro- Commissioning, Energy Audit and Waste Stream Audit. The mall's green initiative has been rewarded with a host of benefits.

Through the Existing Building (EB) rating, the Oberoi Mall demonstrated that water and energy consumption of malls too can be brought within internationally acceptable standards.

Score Summary		
Categories	Possible Points	Points Scored
Sustainable Sites	26	18
Water Efficiency	14	11
Energy and Atmosphere	35	12
Materials and Resources	10	3
Indoor Environmental Quality	15	7
Innovation in Operations	6	5
Regional Priority Credits	4	4
Total	110	60

LEED EB O&M Certification level	
Categories	Range
Certified	40 - 49
Silver	50 - 59
Gold	60 - 79
Platinum	80 - 110

A gist of the highlights is as follows:

•**Water Management:** Retro-fitting of plumbing fixtures with aerators enabled a 30-40% water use reduction. The complete landscaping water needs are now met by the STP.

•**Energy Management:**

With software tools like the Energy Star Portfolio Manager, a structured approach was developed to map the energy performance of the mall year-on-year. This also helped to map the current levels of CO2 emissions with respect to energy consumption. Some of the implemented measures include lux level sensors for lighting, occupancy sensors to control lighting and group control for elevators.

•**Retro-commissioning:** GBCS introduced the concept of the retro-commissioning to the mall operators for the first time. The goal was to evaluate the current performance of the building systems and identify measures to enhance the energy efficiency, such as:

- i. Chiller sequence control
- ii. Replacement of belts and filters
- iii. Water balancing
- iv. Modification of operation logic of chiller
- v. Adjusting chilled water set-point

• **O&M practices:** The mall already had regular & planned O&M practices. Additionally, GBCS documented a System Description and Building Operation Plan for the mall operators. A preliminary walkthrough audit was conducted to ensure that the mandatory requirements are met.

Regular O&M documents like the checklist, operational plan etc. were also aligned with international standards.

• **Housekeeping and Waste Management:** The EB rating is also focused on the other aspects of operation like housekeeping and waste management. Green Seal Housekeeping chemicals,

with minimal impact on human health, and sustainable cleaning equipment are now employed by the mall staff.

A Waste Stream Audit was conducted and a procedure was set up to track waste collection and disposal.

•**Policies:** Key policies that have been formulated to reinforce Good and Green practices include:

- - A Sustainable Purchasing Policy which provides guidelines for purchase of eco-friendly materials with recycled content, low mercury lamps, local materials from within 500 miles, FSC certified materials etc.
- - A Solid Waste Management policy which provides guidelines for disposal of waste.

GBCS has guided this pioneering project in identifying and achieving its efficiency goals, carrying forward its commitment of enabling a sustainable future in the building industry.

**USGBC: United States Green Building Council*

***LEED: Leadership in Energy and Environment Design*