



IIT Delhi Lecture Hall Complex

Location	: New Delhi
Site Area	: 19690 m ²
Built up Area	: 45760 m ²
Air-conditioned Area	: 14470 m ²
Non Air- conditioned Area	: 31290 m ²
Energy Consumption Reduction	: 47% reduction in energy consumption compared to GRIHA benchmark
EPI	: 59.06 KWh/m ² /year
Renewable Energy	: Rated capacity of solar PV installed on site is 1000 KW
GRIHA provisional rating	: 4 Stars
Year of completion	: 2015

The following strategies were adopted to reduce the building impact on the natural environment:

🌱 Sustainable Site Planning:

- Existing trees were preserved and transplanted
- Excavation and construction started after the monsoon season to prevent soil erosion and soil run off from the site
- Top soil was preserved and re-used to raise the ground level along the periphery
- Service corridors are planned to cause minimum damage to the site and natural topography

🌱 Reducing water consumption:

- Reduction in building water consumption by use of low-flow fixtures : 81.6%
- Rain water harvesting implemented

🌱 Reducing energy consumption (compared to GRIHA benchmarks) while maintaining occupant comfort:

- For achieving visual comfort:
 - » Energy efficient artificial lighting design is compliant with ECBC recommendations
 - » External shading and efficient glazing to reduce solar heat gain and have glare-free daylight have been installed.
- For achieving thermal comfort:
 - » Thick locally available stone cladding and AAC block walls to reduce solar heat gain
 - » Recessed windows to cut direct sun rays and glare inside the building
 - » Building envelope is ECBC compliant, which helps reduce cooling loads in AC spaces and meets thermal comfort levels in non AC spaces.

🌱 Renewable energy technologies installed on site:

- Rooftop Solar PV systems of 1000 KW installed for catering the entire academic campus

🌱 Use of low energy materials:

- Use of bamboo for flooring within all lecture theatres

Integrated Design Team:

Client	: IIT Delhi
Project Coordinator	: CPWD
Principal Architect	: Suresh Goel & Associates
Project Management Consultant	: BL Kashyap & Sons Ltd.
Green Building Design and Certification	: Green Tree Building Energy Pvt. Ltd.