



GAIL (India) Limited Office Building & Regional Gas Management Center

Location	: Navi Mumbai, Maharashtra
Site Area	: 3400 m ²
Built up Area	: 4816.6 m ²
Air-conditioned Area	: 3717.55 m ²
Non Air- conditioned Area	: 1442.44 m ²
Energy Consumption Reduction	: 44.8% reduction in energy consumption compared to GRIHA benchmark
EPI	: 104.3 KWh/m ² /year
Renewable Energy	: Solar Power system of 4 kWp is proposed to meet more than 10% of the lighting energy consumption.
GRIHA provisional rating	: 4 Stars
Year of completion	: 2016

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

📍 Sustainable Site Planning:

- Longer façade of the building face north and south and habitable spaces were planned in north while services in east and west direction. Shortest surfaces are exposed to west.
- Site services were planned according to natural contour of site and existing services around it, i.e. natural topography has been kept unchanged.
- To avoid soil erosion and soil run-off from site; sedimentation pit, temporary storm water channel was constructed during construction and excavations was carried out before monsoon.

📍 Reducing water consumption:

- Water efficient plumbing fixtures reduced the water usage up to 45% in comparison with baseline.
- 100% of the waste water generated on site is treated with on-site STP.
- Treated waste water from STP is used for irrigation and cooling tower application.

📍 Reducing energy consumption:

- For achieving visual comfort:
 - » Artificial lighting design as per NBC norms
 - » External shading with combination of fins and projections
- For achieving thermal comfort:
 - » AAC block work for external walls
 - » Double Glazing Unit with optimum shading to minimize the heat gain

📍 Renewable energy technologies installed on site:

- Solar PV panel of 4kWp capacity is installed.
- Installed PV panel contributes to 10% of the total lighting energy consumption

📍 Use of low energy materials:

- Low energy material like Vitrified tiles, Kota Stone, Gypsum board and Glass with recycled content are used for interior work.

Integrated Design Team: (Name, contact no, e-mail)

Client	: Mr. Udai Chand Singh; Gas Authority of India Ltd.
Project Coordinator	: Ms. Nitasha Gupta; Voyants Solutions Pvt. Ltd.
Principal Architect	: Ms. Swati Agarwal; Voyants Solutions Pvt. Ltd.
Landscape Architect	: Voyants Solutions Pvt. Ltd.
Project Management Consultant	: Mr. Sandesh Patil; Voyants Solutions Pvt. Ltd.
Structural Consultant	: Mr. Nikhil Shanghvi; Voyants Solutions Pvt. Ltd.
Electrical Consultant	: Mr. V. K. Dhawan; Voyants Solutions Pvt. Ltd.
Green Building Design and Certification	: Mr. Anurag Bajpai; GreenTree Building Energy Pvt. Ltd.