



Punjab National Bank Head Office

Location	: Plot No. 4, Sector-10, Dwarka, New Delhi
Site Area	: 19470 m ²
Built up Area	: 37874 m ²
Air-conditioned Area	: 26143 m ²
Non Air-conditioned Area	: 11731 m ²
Typology	: Commercial (Office Building)
Energy consumption reduction	: 58.2% reduction in energy consumption compared to GRIHA benchmark
Energy Performance Index (EPI)	: 43.5 kWh/m ² /year
Renewable Energy	: Rated capacity of solar PV installed is 202 kWp
GRIHA provisional rating	: 5 Stars
Year of Completion	: 2017

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

🌱 Sustainable Site Planning:

- Excavated fertile top soil was preserved, appropriately stabilized and mulched on site, and later re-applied for landscape.
- Barricading of site was done to prevent air pollution.

💧 Water Management:

- Reduction of more than 79% from the GRIHA base case has been demonstrated in landscape water demand through use of highly efficient drip irrigation and sprinkler system.
- Reduction of 81% from the GRIHA base case has been demonstrated in building water use by installing water efficient flush and flow fixtures.
- Construction water consumption was reduced by use of wet hessian cloths for curing of columns and ponding technique for curing of slabs.

⚡ Energy Optimization:

- 76.6% of the habitable spaces are day lit and meet the daylight factors prescribed by the National Building Code of India.
- High efficacy lamps are installed for exterior lighting which is operated by timer controller.
- EPI reduction of 58.2% from GRIHA benchmark has been demonstrated.

☀️ Renewable Energy Technology Integration:

- The project has installed solar PV panels of 202 kWp capacity.
- The capacity of installed solar panels is capable to handle 47.68% of internal lighting consumption.

🏠 Sustainable Building Materials:

- Pozzolana Portland Cement with 32% fly-ash content by weight has been used in plaster and masonry mortar.
- Use of low energy flooring, false ceiling and paneling has been demonstrated.
- Materials with recycled content such as fly ash bricks have been used for block work.
- All paints, adhesives and sealants used in the project have low VOC content.

👥 Integrated Design Team:

Client	: Punjab National Bank
Project Coordinator	: Central Public Works Department (CPWD), R. K. Puram, New Delhi
Principal Architect	: Rajinder Kumar Associates (RKA), Safdarjung Enclave, New Delhi
Landscape Architect	: Integral Designs, Anand Niketan, New Delhi
Project Management Consultant	: Central Public Works Department (CPWD), R. K. Puram, New Delhi
Electrical Consultant	: Ener Save Consultants Pvt. Ltd., Nehru Place, New Delhi
Green Building Design and Certification	: Environmental Design Solutions Pvt. Ltd., Vasant Vihar, New Delhi