



New Government Medical College

Location	:	Baripada, Odisha
Site Area	:	84,984.06 m ²
Built-up Area	:	58,824.00 m ²
Typology	:	Institutional
Energy Consumption Reduction	:	69.9% reduction in the energy consumption compared to GRIHA benchmark
Energy Performance Index (EPI)	:	34.9 kWh/m ² /year
GRIHA Provisional Rating	:	4 Star Rating (Version 3)
Year of Completion	:	2018

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

📍 Sustainable Site Planning:

- Excavated fertile top soil was appropriately stored, stabilized and mulched on site.
- Barricading of site was done to prevent air pollution.
- Out of the 95 existing trees, 42 trees were cut and 415 native trees were planted.

📍 Water Management:

- Reduction of more than 56.61% from the GRIHA base case has been demonstrated in landscape water demand through use of highly efficient drip irrigation and sprinkler system.
- Reduction of 53.80% from the GRIHA base case has been demonstrated in building water use by installing water efficient low flow fixtures.
- Construction water consumption was reduced by use of admixtures with concrete, curing techniques such as gunny bags and ponding.

📍 Energy Optimization:

- » 52.9% 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 69.9% from GRIHA benchmark has been demonstrated.
- » Double glazing unit of SHGC- 0.23 was installed in conditioned area and single glazing unit of SHGC- 0.47 was installed for residential building.

📍 Renewable Energy Technology installed on site:

- Solar Photovoltaic system of capacity 16.75 kWp is installed on-site in the project for complying with the mandatory clause.
- The capacity of installed solar panels is capable to handle 7.39% of internal lighting consumption.

📍 Use of Low Energy Materials:

- Pozzolana Portland cement indicating use of 34.4% 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.
- All paints, adhesives & sealants used in the project have low VOC content.

Integrated Design Team:

Client	:	R&B Division, Puri
Principal Architect	:	L&T construction
Landscape Architect	:	L&T construction
Structural Consultant	:	L&T construction
Green Building Design and Certification	:	L&T construction