Up-gradation of Jawaharlal Nehru Medical College Under PMSSY-II

Location	:	Aligarh Muslim University, Aligarh, Uttar Pradesh
Site Area	:	62,768m^2
Built up Area	:	20,712 m^2
Air-conditioned Area	:	7,844 m^2
Non Air- conditioned Area	:	13,428 m^2
Energy Consumption Reduction	:	28.01% reduction in energy consumption compared to GRIHA benchmark
EPI	:	164.88 kWh/m^2/year
Renewable Energy	:	Solar PV: 36 kWp and Solar Hot-water System: 2,000 Lt
GRIHA provisional rating	:	3 Stars
Year of completion	:	2016

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

Sustainable Site Planning:

- The natural site contour is mostly maintained and a naturally existing water body on the site has been preserved.
- Excavation and construction started after the monsoon to prevent soil erosion and soil run-off from the site.
- Top soil was preserved and was later re-applied for landscaping on the project.

Reducing water consumption:

- Reduction of 66% has been demonstrated in the building water consumption compared to GRIHA base case scenario by installing low flow fixtures.
- The building annual water consumption in design case is 12,517kl as compared to the water consumption in base case which is 37,460kl
- Project has achieved a 43.55% reduction in the landscape water requirement over GRIHA base case.

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

- The building envelope has been designed efficiently. Double glazed windows with an SHGC of 0.23 have been installed.
- Cut-outs have been provided in the buildings to maximize the penetration of daylight in the common areas.
- Efficient lighting and HVAC, compliant with ECBC requirements, has been implemented in the project.

Renewable energy technologies installed on site:

- 36 kWp solar panel has been installed to cater building energy requirement.
- Flat-plate collector based Solar Hot-water System of 2,000 Litre capacity has been installed.

Use of low energy materials:

- Fly-ash bricks and stone masonry have been used for construction.
- Gypsum and particle boards have been used for false ceiling.
- Low energy flooring materials like vitrified tiles, Kota stone, Granite and cement tiles have been used for flooring work.

Integrated Design Team:

Client	:	Ministry of Health & Family Welfare
Project Coordinator	:	Mr. A.K Goel, Chief Engineer (ID), HLL Lifecare Limited.
Principal Architect	:	Srikar and Associates (P) Ltd.
Project Management Consultant	:	HLL Lifecare Limited