



CHITKARA
UNIVERSITY



ROCKEFELLER BLOCK
A PLATINUM STANDARD IN GREEN BUILDINGS



Green Building - Indian Green Building Council

At Chitkara University, sustainability is a guiding principle in everything we do. The Rockefeller Block, recently awarded Platinum Pre-Certification by the Indian Green Building Council (IGBC), embodies our dedication to eco-friendly architecture. This innovative building incorporates numerous sustainable features, setting a benchmark for green infrastructure on campus.

Recycled Content Materials

The Rockefeller Block incorporates FSC-certified wood (Forest Stewardship Council) to promote sustainable forestry practices, ensuring that all wood used in construction is responsibly sourced. Additionally, the building makes extensive use of materials with recycled content, reducing demand for virgin resources and minimizing environmental impact. By incorporating repurposed materials, the building significantly reduces waste while contributing to circular economy practices.

- 100 % area covered with Heat reflective tiles with Solar Reflective Index, SRI >78



Green Building – Industry Partners

20% - Total Energy saving ASHRAE standards 90.1-2010 Base case

RENEWABLE ENERGY

- 30% of total energy is generated using solar energy



WATER CONSERVATION

- 18% of average peak month rainfall of upto 250 mm
- Water closets with 2 LPF
- Urinals with 0.5 LPF
- Faucets with 4 LPM
- 32% drought tolerant/native/adaptive species.
- 100 % treated water – recycled for landscaping and flushing purpose

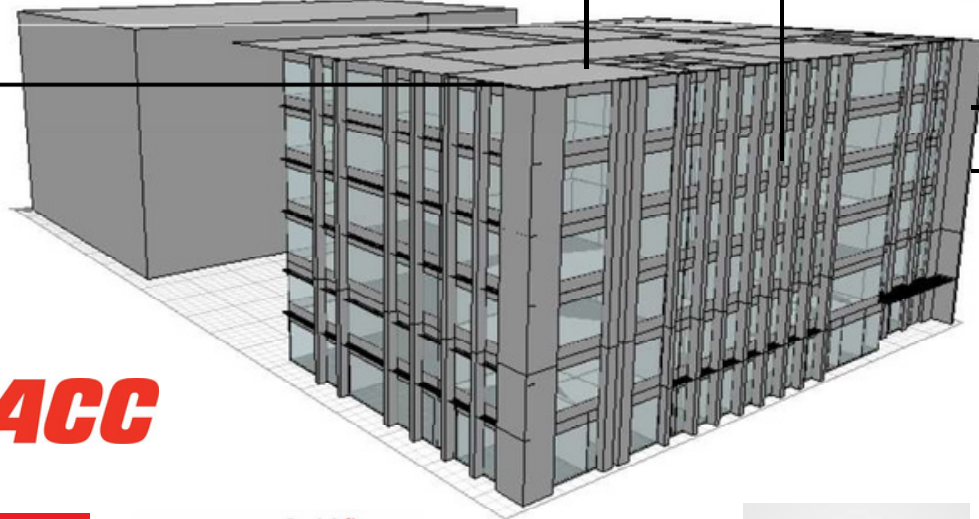


- 100 % area covered with Heat reflective tiles with SRI >78

U value of glass = 1.6 W/M2k
VLT = 31%
SHGC = 0.25



Simulation



HVAC



65% energy saving

- 24% energy reduction over ASHRAE standards 90.1-2010 Base case
- Variable Refrigerant flow (VRF) COP –4.1
- CFC –free refrigerants
- BLDC fans

LIGHTNING



- Equipment power density
- Office area –1 W/ft2
- Classroom –2 W/ft2
- Pantry –1.5 W/ft2
- Seminar hall -2.5 W/ft2
- 35% reduction in building interior, exterior and parking area lightning.
- 65% -floor area with daylight level between 110 to 2200 lux





Energy Efficiency

To reduce energy consumption, the Rockefeller Block is equipped with cutting-edge Variable Refrigerant Volume (VRV) technology, which offers precise climate control while minimizing power usage. The building also features energy-efficient LED lighting and BLDC fans (Brushless Direct Current) and Exhaust fans, which consume significantly less energy than traditional alternatives. Passive Infrared Sensors and motion sensors are also installed to optimize energy consumption. In addition, energy meters on every floor allow real-time tracking of power usage, helping optimize energy efficiency across the building.

On grid solar Power Plant

We also installed the solar power plant under Renewable Energy and Environment benefits to reduce the green house gas emissions like CO2.

BBT Bus Trunking System

We installed the BBT system with KWH metering to reduce the energy loss, over heating for better resistance and safety.



Water Conservation Systems

The Rockefeller Block prioritizes water conservation with several innovative systems in place. Low-flow faucets have been installed to reduce water consumption without sacrificing functionality. Additionally, the building houses an on-site Sewage Treatment Plant (STP), which treats wastewater and recycles it for use in non-potable applications like flushing and landscaping. A rainwater harvesting system and water-efficient plumbing fixtures further contribute to the building's water conservation goals.

Sustainable Waste Management

In line with Chitkara University's commitment to waste reduction, the Rockefeller Block includes an organic waste composter that converts organic waste, such as kitchen scraps, into compost. This system not only reduces waste sent to landfills but also supports the building's landscaping needs. During construction, waste was carefully managed, with a focus on recycling and minimizing landfill contributions.





Indoor Environmental Quality

To ensure a healthy indoor environment, the Rockefeller Block uses low-emission materials, paints, and coatings that help reduce the presence of harmful volatile organic compounds (VOCs). To improve indoor air quality by introducing filtered and conditioned outdoor air, we installed the Treated Fresh Air System. This commitment to maintaining excellent indoor air quality ensures a safe, comfortable, and productive environment for students, faculty, and staff.



ROCKEFELLER block



A Model for Future Sustainable Developments

The Rockefeller Block stands as a symbol of Chitkara University's dedication to sustainable development. Its energy-efficient technologies, water-saving systems, and waste management initiatives provide a blueprint for future green buildings on campus and beyond.

We invite you to explore the Rockefeller Block and see firsthand how we are shaping a more sustainable future for our community.