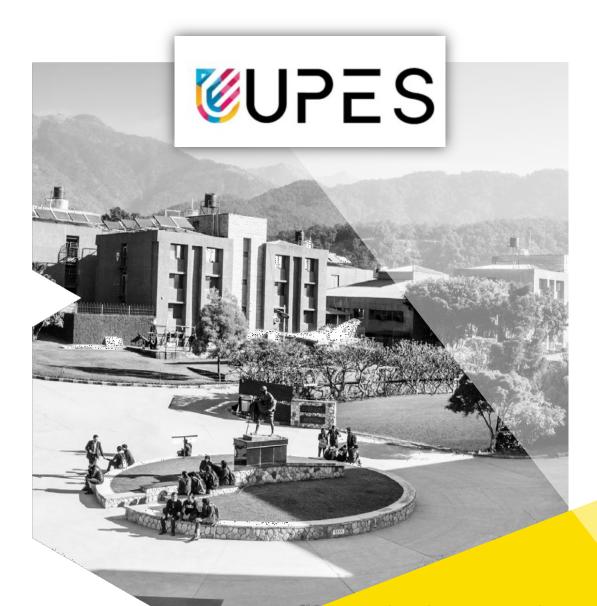


SUSTAINABLE DEVELOPMENT GOALS



SDG 7: AFFORDABLE AND CLEAN ENERGY

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<u>UPES's Green Building Policy and Energy Efficiency</u> Standards

Official Policy on Sustainable Construction

UPES (University of Petroleum and Energy Studies) in Dehradun has a formal sustainability policy that addresses green construction practices. The Institutional Sustainability Policy explicitly requires that "all new constructions and major renovations conform to green building standards and energy-efficient designs." upeswebsitecdn-prodhphqfhc0b8h2ffhf.a02.azurefd.net This means any new building project or significant refurbishment on campus must be planned and executed in line with recognized energy efficiency and green building norms. The policy also calls for using sustainable materials and modern techniques to minimize energy use and reduce greenhouse gas emissions during construction upeswebsitecdn-prod-hphqfhc0b8h2ffhf.a02.azurefd.net. These illustrate UPES's commitment to integrating sustainability into its campus infrastructure development. Notably, the policy appears to be an official internal document – it is marked for the exclusive use of UPES upeswebsitecdn-prod-hphqfhc0b8h2ffhf.a02.azurefd.net – but it has been made accessible via the university's website. This indicates that while the guidelines are primarily for internal governance, the university's sustainability commitments are transparent enough to be reviewed publicly (for example, through their SDG reports and published policy documents).

Standards Followed (ECBC, GRIHA and Others)

In practice, UPES aligns its building projects with well-known energy efficiency standards and green rating systems. The campus has implemented measures in compliance with India's Energy Conservation Building Code (ECBC) – a national code that sets minimum energy performance requirements for buildings. For instance, the design of UPES's facilities includes ECBC-compliant features such as high-performance building envelopes and energy-efficient lighting systems grihaindia.org. Compliance with ECBC ensures that aspects like insulation, glazing, HVAC, and lighting meet rigorous efficiency benchmarks. Additionally, UPES pursues green building certifications for its infrastructure. Notably, the university's campus buildings achieved a GRIHA (Green Rating for Integrated Habitat Assessment) certification of 4 stars grihaindia.org. (GRIHA is an indigenous Indian green building rating system recognized nationally.) Attaining a 4-star GRIHA rating signifies that the campus's design and operation incorporate a high level of sustainability and energy efficiency measures. In fact, UPES was reportedly the first (and for a time, the only) university in India to have a GRIHArated campus, an accolade presented by the President of India in recognition of its green construction efforts scribd.com. This achievement underscores that the university's buildings adhere to stringent criteria covering energy conservation, water management, and environmental quality.

While the **Institutional Sustainability Policy** does not list specific programs like *LEED* or *IGBC* by name, the emphasis on "green building standards" implies that recognized frameworks are to be used. In the Indian context, GRIHA is one such framework which UPES has embraced, and ECBC compliance is a baseline requirement for energy efficiency. Together, these ensure that both **new constructions** on campus and any **major renovation projects** are

aligned with established best practices in sustainable design. For example, as part of the GRIHA 4★ project at UPES, the university incorporated solar power (100 kW of solar panels) and achieved an ~40% reduction in annual energy consumption compared to conventional designs grihaindia.org. Features like solar photovoltaic energy, efficient HVAC, daylighting, and use of low-energy materials were integrated, all in line with the GRIHA and ECBC standards grihaindia.org grihaindia.org. This indicates that whether constructing a new academic block or retrofitting an existing facility, UPES applies these recognized efficiency standards to reduce its buildings' environmental footprint.

Coverage of New Buildings and Renovations

Crucially, UPES's policy covers **both new construction and renovation** activities. Many institutions focus only on new green buildings, but UPES extends this to "major renovations," ensuring older buildings are upgraded sustainably. According to the policy, any significant renovation on campus must also "conform to green building standards and energy-efficient designs", just like a new build upeswebsitecdn-prod-hphqfhc0b8h2ffhf.a02.azurefd.net. This means that when existing structures are refurbished or expanded, the upgrades should incorporate energy-saving technologies, efficient fixtures, and materials that meet modern sustainability criteria. By including renovations in the policy, UPES acknowledges that improving the performance of existing buildings is as important as constructing new efficient buildings. This comprehensive approach helps the university steadily improve the overall sustainability profile of all campus facilities, not just the brand-new ones.

In practice, this could involve measures such as retrofitting lighting with LED technology, enhancing insulation and ventilation in older buildings, installing solar water heaters or photovoltaics during remodels, and ensuring any new additions to old buildings are built to the latest green standards. The policy ensures such practices are not ad-hoc but mandatory for major refurbishment projects. This institutional mandate aligns with broader sustainable campus initiatives, likely contributing to UPES's recognition in green campus rankings and certifications. For example, the retrofits and energy-saving projects contribute to the same goals that earned the campus its GRIHA 4* rating and other sustainability accolades scribd.com.

Public Availability of the Policy and Reporting

UPES's commitments to energy-efficient buildings are documented in its policies and are partly available publicly. The Institutional Sustainability Policy detailing the green building requirements is an internal policy document (marked "for exclusive use of UPES") upeswebsitecdn-prod-hphqfhc0b8h2ffhf.a02.azurefd.net; however, the university has made this document available on its website for transparency. This suggests that while the primary audience is internal stakeholders (administrators, campus planners, and project teams), UPES is willing to share its sustainability guidelines openly, possibly as part of its compliance with accreditation or ranking frameworks that require disclosure of such policies.

Beyond the policy document itself, the university's sustainability efforts are also reflected in public reports and media. UPES participates in the United Nations Sustainable Development Goals (SDGs) reporting – for instance, aligning with **SDG 7:** Affordable and Clean Energy – where it highlights initiatives like energy-efficient campus infrastructure and renewable energy installations <u>upes.ac.in</u> upes.ac.in. These public disclosures (e.g., the SDG 7 report on

the UPES website) showcase the actions taken, such as constructing efficient buildings and installing solar plants, thus indirectly communicating the existence of an underlying policy/strategy. Furthermore, during events like the campus sustainability fair, the university has unveiled sustainability reports and highlighted infrastructure achievements, which implies that annual or periodic **Sustainability Reports** are produced <u>upeswebsitecdn-prodhphqfhc0b8h2ffhf.a02.azurefd.net</u>. Such reports would typically summarize initiatives including green building projects and energy savings, making the information accessible to students, staff, and external stakeholders.