Energy Efficient Renovation and Building Policy

Policy title	**Health and Safety Policy**
Policy type	Estates and Facilities management
Policy owner	**HSE manager**
Policy number	Estates and facilities management / 3
Pertinent dates	**Drafted on** **Approved on: 13 April 2025** **Revised on:**

1. Purpose:

This policy aims to:

- Significantly reduce overall energy consumption on campus
- Promote the adoption of energy-efficient construction technologies and designs
- Support the transition toward low-carbon, climate-resilient campus infrastructure
- Encourage sustainable building material usage and responsible resource management
- Enhance indoor environmental quality to improve student and staff productivity and comfort
- Set a benchmark for sustainable development among educational institutions in Egypt and the region

2. Scope:

This policy applies to:

- All new construction projects on BUE campus
- Major renovations and retrofitting of existing structures
- Upgrades to mechanical, electrical, and plumbing systems
- Landscaping and site development works
- Interior modifications with significant energy implications

This policy is applicable to all areas within the BUE campus, including but not limited to academic buildings, laboratories, administrative offices, student residences, recreational zones, and landscaping areas.

Energy-efficient Renovation and Building Policy

Introduction

The British University in Egypt (BUE) firmly believes that responsible energy management and sustainable building practices are critical to addressing global environmental challenges and fulfilling its role as a leader in higher education. As the world grapples with the consequences of climate change, resource depletion, and rising energy costs, academic institutions are uniquely positioned to influence both policy and practice. Universities serve not only as centers for learning and research but also as living laboratories where future-oriented solutions can be tested, refined, and modeled for society at large.

BUE recognizes that its physical infrastructure significantly contributes to its environmental footprint. From the energy used to heat, cool, and light campus buildings to the materials selected during construction and renovation, every design choice has environmental, economic, and social implications. As such, BUE is committed to minimizing energy consumption, reducing greenhouse gas emissions, and improving indoor environmental quality through strategic renovation and building practices that adhere to the highest standards of energy efficiency.

This Energy-Efficient Renovation and Building Policy articulates a comprehensive framework to guide the development, improvement, and management of the university's built environment. It reflects BUE's broader sustainability agenda and aligns with international best practices in green construction and retrofitting. This policy is grounded in the principles of lifecycle thinking, innovation, and continuous improvement, and it emphasizes the importance of collaboration among students, faculty, administrators, and external partners. Through this initiative, BUE aims to:

- Create resilient, cost-effective, and environmentally friendly campus facilities;
- Equip students and staff with the knowledge and tools needed to participate in sustainability;
- Fulfill national and global commitments to sustainable development;
- And foster a vibrant, forward-looking campus culture that values and prioritizes sustainability in all dimensions of university life.

Signed: …… Date: ……

Prof. Mohamed Loutfi.

University President.

Signed: …… Date: ……..

ENG. Youssef Youssef.

Chief Operation Officer.

Signed: ……. Date: ……..

Eng. Mohamed Kassem.

HSE Manager.

Energy-Efficient Renovation Guidelines

- Renovation projects must prioritize upgrading windows, doors, roofing, and insulation to reduce heating and cooling loads.
- Inefficient HVAC systems, lighting fixtures, and controls must be replaced with high-efficiency models wherever feasible.
- Building automation systems will be installed or updated to enable intelligent energy management, including occupancy sensors and programmable thermostats.
- Energy audits shall be performed before and after renovation to assess baseline performance and quantify efficiency improvements.
- All changes must consider both immediate energy savings and long-term operational benefits.

II. Energy-Efficient New Construction

- New buildings must integrate passive design elements such as strategic orientation, shading devices, thermal mass utilization, and natural ventilation.
- Site planning must minimize environmental disruption and support green mobility, including pedestrian-friendly layouts and cycling infrastructure.
- High-performance building envelopes, energy-efficient lighting, water-saving fixtures, and renewable energy readiness (e.g., solar PV compatibility) are to be standard features.
- Smart meters and integrated building management systems (BMS) must be incorporated to optimize performance.
- Building projects are encouraged to pursue certifications such as LEED, BREEAM, or EDGE, aiming for at least minimum certification thresholds.

III. Sustainable Building Materials and Construction Waste Management

- The selection of construction materials must emphasize recycled content, low embodied energy, and low emissions (e.g., low-VOC paints and adhesives).
- Procurement practices should favor local and regionally sourced materials to reduce transportation-related emissions.
- Contractors must implement construction waste management plans with targets for landfill diversion, reuse, and recycling.
- Construction site operations should aim to minimize energy use and environmental disruption throughout project execution.

IV. Monitoring, Maintenance, and Reporting

- Energy monitoring systems shall be installed in all major buildings to track consumption and detect anomalies.
- Maintenance teams will receive specialized training in energy-efficient system operation and preventative maintenance practices.
- Performance data will be compiled into an annual sustainability report detailing energy use intensity (EUI), savings achieved, and areas for improvement.

- Lessons learned from past projects will be integrated into future planning and shared as case studies with the university community.

V. Education, Training, and Awareness

- Energy-efficient building design and sustainable architecture will be embedded into academic curricula where appropriate.
- Workshops, training sessions, and guest lectures will be organized for students, faculty, and facility managers.
- Visual signage and real-time displays of energy performance may be installed in high-traffic areas to raise awareness.
- Student-led initiatives and research projects related to energy efficiency will be supported and encouraged.

VI. Compliance, Oversight, and Accountability

- All building projects must comply with national energy codes, environmental regulations, and health and safety standards.
- The Facilities Management Office, in coordination with the BUE Sustainability Committee, will oversee policy implementation.
- Regular reviews and third-party assessments will be conducted to ensure adherence to policy goals and identify areas for improvement.
- Contractors and consultants engaged in construction or renovation must demonstrate experience in sustainable design and provide evidence of compliance.

Implementation Date

This policy is effective as of April 2025 and apply to all qualifying projects initiated after this date.

Policy Review and Updates

The Energy-Efficient Renovation and Building Policy will be reviewed every three years or sooner, as needed, to reflect technological advancements, policy developments, or institutional goals. Updates will be guided by feedback from stakeholders, performance data, and best practices in sustainable campus development.