7.2.5 University undergo energy reviews to identify areas where energy wastage is highest

Alexandria University conducts systematic energy reviews to identify areas of highest energy wastage and improve overall efficiency across its faculties and institutes. Through accredited environmental assessments, digital monitoring, and expert-led energy audits, the university evaluates building performance, analyzes energy use, and ensures compliance with national environmental regulations. These reviews support informed decision-making, reduce carbon emissions, and strengthen the university's leadership in sustainable development aligned with Egypt's Vision 2030 and global climate goals.

- Alexandria University has the lead and leadership in establishing the environmental sector and community service, and it has an effective role in preserving the environment in Alexandria and the neighboring governorates. The university, with its various colleges and institutes, is committed to implementing Law No. 4 of 1994 and its regulations. The university has environmental records for most colleges and institutes, and it also conducts environmental impact assessment studies for all its projects by consultants accredited by the Ministry of Environment.
- Alexandria University has made significant academic and operational progress in sustainability over the past three years (2022–2025), aligning its institutional practices with Egypt's Vision 2030 and the United Nations Sustainable Development Goals (SDGs). The university's comprehensive 3R (Reduce, Reuse, Recycle) waste management framework is underpinned by a formal policy, defined institutional responsibilities, and quantifiable targets, which are monitored through annual reporting.
- Green-building measures are implemented across the campus. LED lighting with occupancy/daylight controls is installed; BMS-based scheduling and monitoring-based commissioning with sub-metering are applied; VFDs are fitted on major fans and pumps and AHU motors are upgraded; exterior lighting curfews with photocells are applied; rooftop/carport solar PV is deployed; heat-island reduction is addressed with cool roofs, shade trees, light/permeable paving, and PV canopies; rainwater harvesting and AC-condensate recovery are used for irrigation and flushing; smart irrigation and drip systems with drought-tolerant planting are in place; water-efficient fittings, leak detection, and water sub-metering are implemented; low-emitting, EPD/recycled-content materials are specified under a sustainable purchasing policy, and sustainably sourced timber is required; waste segregation for paper/card, plastics/metals, glass, e-waste, and organics is provided; ventilation and IAQ controls (CO_2 monitoring, filtration, ETS control, IAQ testing) are implemented; daylighting and glare control and acoustic comfort measures are provided; integrated pest and landscape management with erosion control is practiced; refrigerants with zero ODP and low GWP are specified with leak detection and recovery; safety programs and Building User Manuals are maintained; monthly KPIs (BEI, kWh saved, IAQ, faults closed) are reported; and innovation pilots (analytics/FDD, circular labs, low-carbon materials) are underway, while heat-recovery solutions for hot water/reheat are planned.


LED Lighting

Green building implementation through the use of sun breakers in the SSP building at the Faculty of Engineering

- The university also monitors greenhouse gases and suspended and inhaled solid particles. It is committed to preserving the environment from emissions that may lead to environmental pollution and then climate change. The monitoring is carried out by faculty members who hold consultant certificates for self-monitoring of facilities, as well as environmental measurements in laboratories accredited by the Environmental Affairs Agency.
- Alexandria University began its serious efforts to develop processes in preparation for digitalization in 2017, when the Development, Monitoring, and Administrative Reform Committee was established to analyze processes, eliminate waste, and save the university's resources. The committee also reviewed the integration and unification of documents for the various processes at Alexandria University and its faculties.
- Alexandria University has took the first steps to work on reducing carbon emissions as one of the most important sources of greenhouse gases and has implemented a plan to monitor and calculate the “Carbon Footprint since the academic year 2018 / 2019” for all its faculties, institutes and its administrative buildings in order to aid in decision-making.

- **Energy Conservation Advisory Group in Center for Graduate Studies and Research – Institute of Graduate Studies and Research – Alexandria University**

  This group is concerned with reviewing energy in all its forms at all levels, such as measuring and analyzing exhaust gases in furnaces and boilers with the aim of improving combustion efficiency and reducing emissions, measuring and analyzing boiler water, in addition to tests of thermal insulation efficiency, lighting efficiency, electrical energy analysis, and compatibility with electrical loads. It also determines the power factor to increase efficiency. Rationalizing the energy used, reviewing energy use, radiation measurements and safety tests for radioactive sources. The group has a mobile laboratory that can visit sites and make environmental measurements related to energy as well as emissions and study energy consumption and the extent of thermal insulation in industrial sites.