7.2.2. Alexandria University – Plans to Upgrade Existing Buildings to Higher Energy Efficiency

Alexandria University is committed to improving the energy efficiency of its existing buildings through institutional energy conservation programmes, building modernization, and the increased adoption of renewable energy technologies.

Alexandria University has documented plans to improve the energy efficiency of existing buildings, including a building-upgrade project developed in cooperation with the European Union, a university-wide energy conservation programme, and subsequent initiatives involving solar energy and building energy management. As part of its sustainability strategy, the University developed a building-upgrade initiative in cooperation with the European Union, initially identifying three buildings for feasibility assessment:

- the Specialized Scientific Programmes Building at the Faculty of Engineering,
- the Faculty of Education Building within the Humanities Faculties Complex, and
- the Manchester Building at the Faculty of Medicine.

The initiative addresses opportunities to reduce energy consumption through energy-efficient lighting, improved use of natural daylight, reduced air-conditioning loads, and rooftop photovoltaic electricity generation. Building selection was informed by structural suitability, available roof space, and solar exposure.

These measures complement the University's wider energy conservation programme, which promotes LED lighting, occupancy sensors, energy-efficient equipment, natural ventilation, and improved electricity management across university facilities.

The University's 2024–2025 Sustainability Report further documents institutional progress in energy conservation and renewable energy deployment, demonstrating the integration of energy efficiency into its sustainability planning and campus management.

Collectively, these initiatives provide evidence of Alexandria University's commitment to upgrading existing buildings and progressively improving their energy performance in support of SDG 7: Affordable and Clean Energy.

1. European Union-supported green building upgrade project

The University documented an EU-supported project to convert selected buildings into more energy-efficient green buildings.

Faculty of Engineering – Specialized Scientific Programmes Building

Selected for feasibility assessment of rooftop solar electricity generation and measures to reduce electricity consumption.





2. Faculty of Education – Building within the Humanities Faculties Complex

Identified as one of the initial buildings for studying solar generation potential and energy-efficiency improvements.

3. Faculty of Medicine – Manchester Building

Included in the first phase of buildings selected for energy-efficiency feasibility assessment and potential rooftop solar installation.

The project considered four main technical interventions:



- Replacing conventional lighting with more efficient lighting systems.
- Increasing the use of natural daylight.
- Reducing air-conditioning loads.
- Installing rooftop photovoltaic systems where structural capacity and solar exposure permit.

The initial selection involved assessing roof load-bearing capacity, available installation space and sunlight exposure. The documents establish a concrete plan and feasibility work, but do not confirm that every proposed intervention was completed.

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Official documentary evidence:

2. University-wide energy conservation and building improvement programme

Alexandria University's published energy conservation programme identifies measures applicable to existing buildings, including LED lighting, occupancy sensors, natural ventilation, energy-efficient air conditioners and laboratory equipment, and improved energy management.

The University's Green University policy also calls for controlling electricity use in classrooms and administrative offices, reducing waste outside working hours and adopting smart-building technologies.

3. Evidence of progress in the 2024–2025 Sustainability Report

The University's official 2024–2025 Sustainability Report provides quantitative evidence of progress in energy conservation and renewable energy use.

Reported electricity consumption

4.23 million

kWh in 2024–2025

Reported renewable electricity share

28.69%

of annual electricity use



Energy Efficient Appliances Usage: Use of LED lighting and lamps (New Abbes Campus, Alexandria University)

The report also states that electricity consumption decreased by 6.42% compared with the previous reporting period, and attributes reductions partly to infrastructure energy-efficiency upgrades and renewable energy initiatives.

These are useful institutional performance indicators

Evidences for THE Impact Rankings

Evidence document	**Relevance to indicator 7.2.2**	**Assessment**
EU-supported building upgrade project	Names existing buildings and proposed technical improvements	Strong evidence of an upgrade plan
University Energy Conservation Programme	Identifies energy-saving measures across campus buildings	Strong supporting policy evidence
Sustainability Report 2024–2025	Reports energy performance and efficiency-related progress	Strong supporting performance evidence
2026 Renewable Energy Unit and solar installations	Demonstrates continued implementation planning	Supplementary evidence for a later reporting period