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THE MALDIVES NATIONAL UNIVERSITY

Building Energy Efficiency Upgrade Plan

Approved Date: 18th October 2026

Approved by: MNU Sustainability Committee

Introduction

The MNU Sustainability Action Plan calls for facilities to be upgraded with LED lighting, energy-efficient systems and automated controls, and for rooftop solar panels to be introduced. This plan sets out how the University will upgrade its existing buildings to higher energy efficiency. Its purposes are to:

- set out the upgrade measures the University will carry out in existing buildings.
- set priorities, phases and responsibilities for those measures; and
- provide for funding, monitoring and public reporting of progress.

Definition of Terms

Existing building: Any building owned or operated by the University that is in use at the date this plan takes effect.

Upgrade measure: A change to a building or its equipment that reduces the energy needed to operate it.

Energy review: A review carried out under the MNU Energy Review and Audit Procedure.

Baseline: The energy consumption of a building in the baseline year, against which savings are measured.

Statement of Policy

MNU is committed to upgrading its existing buildings to higher energy efficiency. Every existing building shall be assessed, and the upgrade measures in this plan shall be applied to it in order of priority, so that the energy used per square metre of floor space falls each year.

Scope

This plan applies to:

1 all existing buildings on all MNU campuses, including student accommodation (Dhanaal);

2 lighting, air conditioning, ventilation, water heating, pumps, building envelope and controls in those buildings; and

3 the installation of rooftop solar photovoltaic systems on existing buildings.

New buildings and major renovations are governed by the Energy-Efficient Buildings Policy.

Policy Implementation

The Vice Chancellor shall oversee this plan. The head of Facilities Management shall lead its implementation, with the Projects section for works that require design or contracting. Campus Managers shall coordinate implementation on campuses outside Male'.

Upgrade measures shall be selected for each building on the basis of the findings of energy reviews and shall be ranked by energy saved, life-cycle cost and payback period.

Upgrade Measures

1 **Lighting** - Complete the replacement of all remaining non-LED lighting with LED, and install occupancy or daylight controls in classrooms, corridors and washrooms where practical.

2 **Air conditioning** - Replace old and inefficient air conditioning units with inverter units of the highest energy rating reasonably available, starting with the oldest and most heavily used. Service all units on a fixed schedule and set a standard temperature range for cooled spaces.

3 **Building envelope** - Reduce heat gain through roof insulation or reflective roof coating, window shading or film, and sealing of doors and windows in air-conditioned spaces.

4 **Controls and metering** - Install separate electricity meters for each building, and timers or automated controls for air conditioning, lighting and water heating.

5 **Solar** - Assess the roof of every existing building for solar photovoltaic panels and install systems where feasible, in line with the applicable net-metering arrangements.

6 **Equipment** - Replace refrigerators, water heaters, pumps and other equipment with energy-efficient models when they reach the end of their life.

Phasing

Phase	Period	Actions
Phase 1	Year 1	Complete the building inventory in Annex 1; complete energy reviews of all buildings; finish the LED programme; set the baseline
Phase 2	Years 2 to 3	Replace the least efficient air conditioning units; install building meters and controls; carry out envelope measures in priority buildings; install solar on the first group of roofs
Phase 3	Years 4 to 5	Extend air conditioning replacement, envelope measures and solar to remaining buildings; review results and update this plan

The University shall set an annual target for the number of buildings upgraded and for the reduction in energy use per square metre once the baseline is established. [Targets to be inserted after the baseline year.]

Funding

Upgrade measures shall be included in the University's annual budget under the dedicated sustainability budget provided for in the Sustainability Action Plan. The University shall also seek Government, donor and partner funding, and may use savings from reduced electricity bills to fund further measures.

Roles and Responsibilities

Facilities Management

Facilities Management shall:

1 maintain the building inventory and upgrade schedule in Annex 1;

2 carry out or supervise the upgrade measures;

3 record the energy use of each building before and after upgrading; and

4 report progress to the Sustainability Committee twice a year.

Projects section

The Projects section shall design and manage upgrade works that require contracting, and shall apply the Energy-Efficient Buildings Policy to them.

Finance and Procurement

Finance shall include the upgrade programme in the annual budget. Procurement shall apply energy efficiency and life-cycle cost criteria to the purchase of equipment.

Sustainability Committee

The Sustainability Committee shall approve the annual upgrade schedule, monitor progress and include the results in the annual Sustainability Report.

Deans, Heads and Campus Managers

Deans, Heads and Campus Managers shall facilitate upgrade works in their buildings and ensure that upgraded systems are used as intended.

Monitoring and Reporting

Progress against this plan shall be measured by the number of buildings upgraded, the share of lighting that is LED, the number of inefficient air conditioning units replaced, installed solar capacity, and energy use per square metre. Progress shall be published each year on the University website.

Related Documents

- MNU Sustainability Policy (Academic Senate, 28 September 2025)
- MNU Sustainability Action Plan
- MNU Energy-Efficient Buildings Policy
- MNU Energy Efficiency and Conservation Plan
- MNU Energy Review and Audit Procedure
- Maldives Energy Efficiency Guideline for Buildings (2023)

Policy Review

This plan shall be reviewed every year by the Sustainability Committee and revised at least once every three years.

Annex 1: Building Inventory and Upgrade Schedule

Building / campus	Floor area (m2)	Year built	Lighting LED (%)	Air conditioning units: number and age	Solar feasible (Yes / No)	Planned measures	Target year
[to be completed by Facilities Management]							