جامعة الخليج الطبية
GULF MEDICAL UNIVERSITY
ACADEMIC HEALTH CENTER

GMU-POL-S07-017 - Sustainable Resource Management Policy

Standard 07: Health, Safety and Environment

Process Owner	Vice Chancellor Academics
Prepared by	Health and Safety officer
Reviewed by	Chief Operating Officer
BOT Approval	Approved
First Issue Date	30/08/2024
Last Review Date	29/11/2024

Modification History

Policy / Version Number	Date	Revision Summary
1.1	29/11/2024	Added section on **climate action**. And GMU **net-zero emission target**

Relevant to

Colleges, Students, Academic & Administrative departments.

Purpose and Scope

This policy outlines the management commitment to reducing water and energy consumption, minimizing waste production, and promoting sustainable practices. The aim is to decrease environmental impact, improve resource efficiency, and comply with environmental regulations.

Policy

GMU is committed to reducing its environmental footprint by implementing practices that minimize water and energy use while reducing waste generation. This is to ensure long-term sustainability, conserve resources, and contribute positively to global environmental goals.

This policy and its associated procedures provide a roadmap for reducing water and energy consumption while minimizing waste production. Implementing the outlined strategies aims

to create a sustainable, resource-efficient environment that supports the long-term goals of environmental sustainability.

Objectives

- Reduce Water Consumption: Achieve a 10% reduction in water use over the next years.
- Reduce Energy Consumption: Reduce energy consumption by 10% over the next years.
- Minimize Waste Production: Reduce waste generation by 10% through recycling, reuse, and prevention strategies.
- Promote Awareness: Encourage employees to adopt sustainable practices in their daily operations.
- Achieve Net-Zero Emissions: Implement a comprehensive climate action plan to achieve net-zero emissions.

Procedures

1. Reducing Energy Consumption.

1.1 Energy Strategies

- Lighting
  - Replace all incandescent, halogen, or fluorescent lights with energy-efficient LED (Light Emitting Diode) bulbs, which consume up to 60% less energy and have a longer lifespan.
  - Install Smart Lighting Controls or occupancy sensors in classrooms, restrooms, and hallways to automatically turn off lights when rooms are unoccupied, saving significant energy.
  - Use daylight sensors that adjust indoor lighting levels based on the amount of natural light available, reducing reliance on artificial lighting during daylight hours.
- HVAC Systems
  - Installing ERV system "Energy Recovery Ventilation" to capture and reuse waste heat from exhaust air for pre-conditioning incoming fresh air, reducing the HVAC load.
  - Installing smart thermostats that adjust temperatures automatically based on occupancy schedules to avoid unnecessary cooling or heating in unoccupied spaces in real time.

- Conducting scheduled regular inspections and maintenance to ensure HVAC components like air filters, coils, and ducts are clean and functioning efficiently.

- Energy-Efficient Equipment
  - Implementing Smart Building Automation Systems that integrates all major systems (HVAC, lighting, security etc.) to monitor and optimize energy use in real-time.

1.2 Renewable Energy

- Install Rooftop Solar Panels on the rooftops of university buildings to harness solar energy and convert it into electricity.
- Build solar carports over parking areas to generate electricity while providing shaded parking spaces for students and faculty

2. Reducing Water Consumption

2.1 Water Conservation Strategies

- Water Efficient Fixtures
  - Install low-flow faucets and aerators in bathrooms, gyms, and dormitories to reduce water flow without sacrificing performance. This can cut water usage by up to 50%.
  - Use dual-flush toilets that offer different flush settings for liquid and solid waste, reducing water consumption per flush.
  - Install waterless urinals, which eliminate the need for flushing and significantly reduce water usage.
- Greywater Recycling Systems
  - Implement a greywater recycling system that captures gently used water from sinks and reuses it for irrigation or toilet flushing.
  - Install a dual plumbing system that separates potable and non-potable water for specific uses, allowing greywater to be reused efficiently.

3. Waste Production Reduction

3.1 Waste Prevention and Reduction

- Reduce Paper Waste
  - Transition to digital communications, including emails, newsletters, and e-signature platforms, to reduce the need for printed documents.
  - Set default printers to double-sided printing and implement limits on the number of pages that can be printed by students and staff.
  - Centralize printing stations to reduce the number of printers on campus, encouraging more thoughtful printing.
- Refillable and Reusable Products
  - Install water refill stations around campus to encourage the use of refillable water bottles instead of disposable plastic bottles.
  - Offer incentives (such as discounts) for using reusable coffee mugs.

3.2 Hazardous Waste

- Source Reduction and Recycling
  - Reduce over-ordering and ensure only the necessary amount of hazardous materials is stocked in every laboratory
  - Implement a centralized chemical or hazardous inventory management system to monitor chemical stocks and reduce duplicate purchases.
  - Implement micro-scale chemistry techniques for teaching and research labs, which use smaller quantities of reagents without compromising the results.
  - Set up a chemical exchange program within the university, where unused or surplus chemicals can be reused by other departments or labs instead of being disposed of.
  - Track expiration dates of chemicals closely using a chemical management system, and ensure chemicals are used before they expire or are shared with other labs in time.
  - Adopt green chemistry protocols that minimize the use of hazardous chemicals, reduce waste generation, and enhance energy efficiency in lab processes.

4. University Community Engagement

4.1 Sustainability Ambassadors Program

- Collaborate with the students clubs who will promote sustainability practices across campus.
- Create a campaign encouraging individuals to sign a pledge committing to specific water, energy, and waste reduction actions.

5. Climate Action Plan and Net-Zero Emission Target

5.1 Net-Zero Emission Commitment

GMU commits to achieving net-zero emissions by 2050 to align with international climate goals. This involves:

- Transitioning to 100% renewable energy sources for campus operations by 2040.
- Conducting annual carbon audits to measure and reduce greenhouse gas emissions.
- Enhancing energy efficiency in all new buildings and retrofitting existing facilities to meet green building standards.
- Promoting sustainable commuting options, such as carpooling, cycling, and electric vehicle infrastructure.
- Establishing partnerships with local and international organizations to support climate resilience and carbon offset programs.

5.2 Integration with Academic Programs

- Introduce interdisciplinary courses and research initiatives focusing on climate science and sustainability.
- Engage students and faculty in hands-on projects that contribute to climate action.

5.3 Monitoring and Reporting

- Publish an annual sustainability and climate action report.
- Establish a task force to oversee progress toward net-zero goals and recommend improvements.