THE UNIVERSITY OF WINNIPEG

GUIDELINE TITLE: Energy Management Guideline

APPROVAL BODY: VP Finance & Administration

GUIDELINE PURPOSE

The purpose of these Guidelines is to set out the targets, roles and responsibilities, standard operating procedures and implementation strategies, performance measurement, and quality control processes for energy management at The University of Winnipeg.

APPLICABILITY

This Guideline applies to any buildings owned and/or operated by The University of Winnipeg.

RESPONSIBILITY

The Vice President, Finance and Administration is responsible for the development, administration and review of these Guidelines.

GUIDELINE ELEMENTS

Targets

Component	Goal	Performance Measurement Unit
Energy & Emissions Reductions	Achieve a 50% reduction of scope 1 (direct emissions related to operations – i.e. heating) and scope 2 (indirect emissions – i.e. electricity) GHG emissions compared to a 1990 baseline by 2020 and achieve 0 emissions by 2035.	Tonnes (CO_2e)
Energy Mix	5% of total energy use on campus derived from unconventional renewable energy sources (solar, geothermal, wind, sustainable biomass) by 2025	kWh eq or GJ

Roles and Responsibilities

The primary responsible party for these guidelines is Facilities Management. They are responsible for ensuring that these guidelines are implemented and that any contracted vendors performing exterior maintenance are informed of and adhere to the procedures outlined in these guidelines.

Facilities Management shall:

- Ensure tracking systems are in place to track progress towards targets outlined in the guidelines;
- Generate quarterly reports to track performance against targets and share these reports with the Campus Sustainability Office;
- Establish and implement processes and training required internal to Facilities to enable implementation of these guidelines;

- If any implementation targets are not being met, investigate the situation and work with the individuals involved in the relevant area to achieve better progress towards targets;
- In collaboration with the Campus Sustainability Office, review Targets and Standard Operating Procedures at least every 3 years and recommend changes to the VP Finance & Administration.

The Campus Sustainability Office shall:

- Receive and file quarterly performance data from Facilities and collate the data for annual reporting purposes;
- In collaboration with Physical Plant, review Targets and Standard Operating Procedures at least every 3 years and recommend changes to the VP Finance & Administration;
- Incorporate training related to these guidelines into applicable staff outreach programs and events.

iv. Standard Operating Procedures and Implementation Strategies

HEATING, COOLING & VENTILATION STANDARDS

- Building temperature conditions to be maintained through heating, cooling and mechanical ventilation systems;
- Building occupancy schedules:
    - Offices will be set to departmental hours; system will have the ability to be overridden on afterhours through the thermostat;
    - Classrooms to follow schedule data from R25 Live system;
    - All other spaces to follow general building hours set in the Building Access and Control Policy;
- Acceptable thermal comfort criteria has been established using current ASHRAE Standard 55 - Thermal Environmental Conditions for Human Occupancy : 20 °C to 27 °C;
    - Occupied building heating setpoint = 21°C;
    - Occupied building cooling setpoint = 25°C;
- Building occupants are expected to dress appropriately for the season;
- Ventilation rates for the building systems will be maintained based on current ASHRAE Standard 62.1 – Minimum Ventilation Rate in Breathing Zone;
- Demand control ventilation utilizing carbon dioxide (CO_2)detection technology to be implemented whenever possible and practical; this monitoring is used to determine where inadequate airflow exists by notifying Facilities when problems arise;
- To reduce energy consumption in buildings, temperature settings and ventilation rates are adjusted to save energy when unoccupied (excluding server rooms and other critical environmentally controlled zones);
    - Unoccupied building heating setpoint = 15°C
    - Unoccupied building cooling setpoint = 28°C
- Whenever possible classrooms, events and housing bookings should be scheduled in already occupied buildings;
- Fume hoods and ventilated lab benches should be closed and turned off if not in operation, classrooms at the Richardson College should be set back to the lower air exchange rate whenever possible (ex: teaching mode);
- Portable heaters or air conditioning units should not be used unless authorized by the Director of Physical Plant or Chief Engineer;

LIGHTING

- Acceptable lighting levels are based upon guidelines from the most recent edition of the Illuminating Engineering Society (IES) Lighting Handbook;

- Lighting should be light emitting diode technology (LED) where practical;
- Occupancy sensors and lighting control systems to be installed where practical;
- Building occupants are expected to turn off lighting when leaving a room unoccupied;

INFORMATION TECHNOLOGY

- Technology Solutions Centre (TSC) shall maximize opportunities for server virtualization;
- Computers shall have power settings adjusted for maximum energy savings;
    - Monitor and CPU set to enter Sleep mode after 15 minutes of inactivity;
    - Monitor and CPU set to enter Hibernation mode after 60 minutes of inactivity;
    - Ancillary equipment such as scanners shall be turned off when not in use
- Server rooms and data closets will have a targeted cooling setpoint of 24°C;

KITCHEN EQUIPMENT

- Cooking appliances shall be switched off when not in use;
- Dedicated kitchen ventilation equipment shall be turned off when not in use, technology to control ventilation demand (ex: infrared controls) will be installed where practical;
- Equipment to be Energy Star or equivalent rating system where possible.

v. Performance Measurement and Schedule for Reassessment

Facilities Management will review campus energy performance quarterly and evaluate whether the Guidelines described in this Guideline have been met. If changes are necessary to the Guidelines, they will determine how best to change the Guidelines to meet the specified goals.

vi. Quality Assurance/Quality Control Processes

The Building Systems Manager will review this guideline and the procedures herein annually to ensure that the overall Standard Operating Procedures and Implementation Strategies are being properly met. Updates to the standards such as ASHRAE or IES as noted above will be completed annually by Facilities Management. Air balancing will be completed every 5 years or as needed to ensure that our systems are performing adequately and are in compliance with the above ASHRAE standards in section IV. As needed air balancing are determined from building management feedback and occupant complaints.

The University has a computerized maintenance management system that centralizes all complaints. When the University receives a complaint through our maintenance system, Facilities creates a ticket and with this ticket, our maintenance staff will act to solve the problem.

After finishing the corrective action, Facilities sends feedback to the individual who registered the concern.

The campus community is encouraged to comment on this guideline and the procedures herein. Please forward comments to the Campus Sustainability Office.

ASSOCIATED POLICY & PROCEDURE

- Asset Management Policy
- Sustainability Policy