

Energy Conservation and Building Management
Guidelines

Responsibilities:

Every person is expected to become an "energy saver" as well as an "energy consumer."

The staff member is responsible for implementing the guidelines during the time that he/she is present in the instruction room or office.

The custodian is responsible for control of common areas, i.e. halls, cafeteria, etc.

Since the custodian is typically the last person to leave a facility in the evening, he/she is responsible for verification of the nighttime shutdown.

The facility administrator is responsible for the total energy usage of his/her facility.

The Energy Education Specialist provides regular (at least semi-annual) program update reports to the Board.

The Energy Education Specialist performs routine audits of all facilities and communicates the audit results to the appropriate personnel.

The Energy Education Specialist is responsible for either directly or indirectly making adjustments to the Organization's Energy Management System (EMS), including temperature settings and run times for Heating, Ventilation and Air Conditioning (HVAC) and other controlled equipment.

Administration will regularly communicate the importance and impact of the energy conservation program to its internal and external constituents.

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The Energy Education Specialist provides monthly energy savings reports to facility administrators detailing performance results.

The organization is committed to and responsible for a safe and healthy learning environment.

To complement the organization's behavioral-based energy conservation program, the organization shall develop and implement a preventive maintenance and monitoring plan for its facilities and systems, including HVAC, building envelope, and moisture management.

General:

1. Instruction room doors shall remain closed when HVAC is operating. Ensure doors between conditioned space and non-conditioned space remain closed at all times (i.e. between hallways and gym or pool area).
2. Proper and thorough utilization of data loggers will be initiated and maintained to monitor relative humidity, temperature, and light levels throughout the organization's facilities to ensure compliance with organization guidelines.
3. All exhaust fans should be turned off daily.
4. All office machines (copy machines, laminating equipment, etc.) shall be switched off each night and during unoccupied times. Fax machines should remain on.
5. All computers should be turned off each night. This includes the monitor, local printer, and speakers. Network equipment is excluded.
6. All capable PC's should be programmed for the "energy saver" mode using the power management feature. If network

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constraints restrict this for the PC, ensure the monitor "sleeps" after 10-minutes of inactivity.

Cooling Season Occupied Set Points¹:	74°F - 78°F
Unoccupied Set Point:	85°F
Heating Season Occupied Set Points¹:	68°F - 72°F
Unoccupied Set Point:	55°F

¹ Set points are in accordance with ASHRAE 55 "Thermal Conditions for Human Occupancy"

Air Conditioning Equipment

1. Occupied temperature settings shall *NOT be set below 74°F.*
2. During unoccupied times, the air conditioning equipment shall be **off**. The unoccupied period begins when the students leave the area at the end of day. It is anticipated that the temperature of the instruction room will be maintained long enough to afford comfort for the period the staff remains in the instruction room after the students have left.
3. Air conditioning start times may be adjusted (depending on weather) to ensure instruction room comfort when instruction begins.
4. Ensure outside air dampers are closed during unoccupied times.
5. Ceiling fans should be operated in all areas that have them.
6. Relative humidity levels shall not exceed 60% for any 24 hour period.

7. Air conditioning should not be utilized in facilities during the summer months unless the facilities are being used for summer school or year-round school. Air conditioning may be used by exception only or in those facilities that are involved in team-cleaning.
8. In all areas which have evaporative coolers such as shops, kitchens and gymnasiums, the doors leading to halls which have air conditioned instruction rooms or dining areas should be kept closed as much as possible.
9. Where cross-ventilation is available during periods of mild weather, shut down HVAC equipment and adjust temperature with windows and doors. Cross-ventilation is defined as having windows and/or doors to the outside on each side of a room.
10. Ensure dry food storage areas are maintained within code requirements. Typically, this is 55F-75F temperature and 35%-60% Relative Humidity. Utilize loggers to verify.

Heating Equipment

1. Occupied temperature settings shall NOT be above 72°F.
2. The unoccupied temperature setting shall be 55°F (i.e. setback). This may be adjusted to a 60°F setting during extreme weather.
3. The unoccupied time shall begin when the students leave an area.
4. During the spring and fall when there is no threat of freezing, all steam and forced air heating systems should be switched off during unoccupied times. Hot water heating systems should be switched off using the appropriate loop pumps.

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5. Ensure all domestic hot water systems are set no higher than 120°F or 140°F for cafeteria service (with dishwasher booster).
6. Ensure all domestic hot water re-circulating pumps are switched off during unoccupied times.
7. For heat pumps, ensure a 6 °F dead-band between heating and cooling modes.
8. Heating oil and propane (if applicable) levels should be physically measured and recorded by "sticking the tanks" at least on the following intervals: 1) recurring scheduled monthly date 2) immediately before new delivery, 3) immediately after delivery.

Lighting

1. All unnecessary lighting in unoccupied areas will be turned **off**. Staff should make certain that lights are turned off when leaving the instruction room or office when empty. Utilize natural lighting where appropriate.
2. All outside lighting shall be **off** during daylight hours.
3. Gym lights should not be left on unless the gym is being utilized.
4. All lights will be turned **off** when students and staff leave for the day. Custodians will turn on lights only in the areas in which they are working.
5. Refrain from turning lights on unless definitely needed. Remember that lights not only consume electricity, but also give off heat that places an additional load on the air conditioning equipment and thereby increases the use of electricity necessary to cool the room.

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Water

1. Ensure all plumbing and/or intrusion (i.e. roof) leaks are reported and repaired immediately.
2. Grounds watering should only be done between 4am-10am. Do not water during the heat of the day, typically between 10am - 8pm.
3. When spray irrigating, ensure the water does not directly hit the facility.
4. Consider installing water sub-meters on irrigation and cooling tower supply lines to eliminate sewer charges.

(After official approval by administration a copy should be disseminated to all organization personnel. Copies should be posted on bulletin boards, staff lounges, organization newsletters, etc.)

Disclaimer: The organization shall adopt, observe and implement these guidelines as provided. However, these guidelines are not intended to be all-inclusive, and they may be modified for local conditions. These guidelines supersede all previous instructions related to energy conservation or facility management.