School District U-46

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Energy Conservation Program Guidelines

1. Responsibilities:

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

    1.2   As directed by the School Board, all staff members are responsible for following this Energy Conservation Guidelines document during the time they are present in or around any School District U-46 building.

    1.3   Buildings are responsible for control of common areas, i.e. halls, commons rooms, gyms, lighting in all external areas.

    1.4   The custodians and contracted custodial services will work in collaboration with Plant Operations to verify the buildings are setback every evening, since custodians and contracted custodians are the last employees to leave the building on a daily basis.

    1.5   The Energy Specialists will perform audits and provide the audit results, including regular Energy Savings and program updates.

    1.6   The Energy Specialists will work in collaboration with the Plant Operations department to indirectly make adjustments to the School District's Building Automation System (BAS), including temperature settings and run times for Heating, Ventilation and Air Conditioning (**HVAC**) and other controlled equipment.

    1.7   The Energy Specialists will provide monthly energy savings reports to building and Plant Operations administrators detailing performance results.

    1.8   School District administration will regularly communicate the importance and impact of the Energy Conservation program to its internal and external constituents.

    1.9   The School District Administration is committed to and responsible for a safe and healthy learning environment.

    1.10 To complement the Energy Conservation program, the Plant Operations department shall administer the Preventive Maintenance (PM) program and energy monitoring plan for all District buildings and building systems.

2. <u>General:</u>

   2.1 All classroom doors should remain closed when the HVAC system is running. Ensure doors between conditioned space and non-conditioned space remain closed at all times (i.e. between hallways and gym or pool area, where fire codes are not violated).

   2.2 Proper and thorough utilization of data loggers will be implemented and maintained to monitor relative humidity, temperature, and light levels throughout the organization's facilities. Energy Specialists will verify data loggers for proper operation.

   2.3 All exhaust fans, with approved exceptions, will be turned off daily when the building is in an unoccupied mode.

   2.4 This Energy Conservation Program Guidelines document and program actions will adhere to all Illinois Department of Public Health (IDPH) codes, Health and Life Safety Codes, and any other municipal, county or state law as defined by the Illinois State Board of Education and the Kane County Regional Office of Education.

3. <u>Computers and Office Machines:</u>

   3.1 All office machines (copy machines, laminating equipment, etc.) shall be switched off each night and during unoccupied times. Fax machines should remain on.

   3.2 All computers should be turned off each night with approved exceptions. This includes the monitors, printers, and speakers. Head-end network equipment is excluded and should remain on. Approved exceptions include: Safety, security and building systems.

   3.3 All capable PCs should be programmed to turn off automatically. "Energy saver" modes in computers still use energy. A "sleeping" monitor still uses energy. Ensure they are turned off.

4. <u>Temperature Set Points:</u>

   Cooling Season Occupied Set Points[1]: 73°F +/- 2°
   Unoccupied Set Points: 85°F +/- 2°

   Heating Season Occupied Set Points[1]: 70°F +/- 2°
   Unoccupied Set Points: 55°F +/- 2°

   [1] Set points, with managed exceptions, are in accordance with ASHRAE 55 "Thermal Conditions for Human Occupancy"

5. Air Conditioning Equipment:

    5.1   During unoccupied times, the air conditioning equipment shall be setback. The unoccupied period begins when the students leave the area at the end of school day. It is anticipated that the temperature of the instruction rooms will be maintained long enough to afford comfort for the period of time that staff remain in the instruction room after the students have left, or at the end of the educational operations day, with managed exceptions.

    5.2   Air conditioning start times may be adjusted (depending on weather) to ensure instruction room comfort when instruction begins.

    5.3   Ensure outside air dampers are closed during unoccupied times and on days when the outside temperatures will be below 32°F.

    5.4   Relative humidity levels shall not exceed 60% for any 24-hour period.

    5.5   Ensure dry food storage areas are maintained within code requirements. Typically, this is 68° to 78°F in temperature and 35%-60% relative humidity. Utilize data loggers to verify humidity levels, and coordinate with all applicable stakeholders.

    5.6   Air conditioning will be put into a setback mode during the summer months unless the facilities are being used for summer school. Carpet cleaning should not be performed on Fridays.

    5.7   The doors to halls that lead to air conditioned instruction rooms should be kept closed as much as possible, especially in areas which have evaporative coolers such as shops, kitchens and gyms.

6. Heating Equipment:

    6.1   The unoccupied temperature setting shall be setback to 55°F. This may be adjusted during extreme weather. The unoccupied time shall begin when the students leave an area at the end of day.

    6.2   During the spring and fall seasons when there is no threat of freezing, all steam and forced air heating systems should be setback during unoccupied times. Hot water heating systems should be setback using the appropriate loop pumps.

    6.3   Ensure all domestic hot water systems are set no higher than 115°F at the faucet/fixture, with an exception of 165°F for cafeteria dishwashing areas, per IDPH codes.

    6.4   Ensure all domestic hot water re-circulating pumps are setback where applicable during school break periods.

    6.5   For heat pumps, ensure a 6°F dead-band between heating and cooling modes where applicable.

7. Lighting:

   7.1 All unnecessary lighting in unoccupied areas will be turned off, where applicable and where lighting sensors are not used. Staff should make certain that lights are turned **off** when leaving the instruction room or office when empty.

   7.2 All outside lighting shall be **off** during daylight hours and all parking lot lights turned off at 9 p.m. daily, or later upon special request for safety purposes.

   7.3 Gym lights should be off unless the gym is being used. Use daylight where appropriate.

   7.4 All lights will be turned **off** when students and staff leave for the day. Custodians and contractor custodians will turn on lights only in the areas in which they are working/cleaning. Refrain from turning lights on unless definitely needed.

   7.5 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.

   7.6 Restrooms, small offices and closets (custodial and storage) should have occupancy sensors installed, where applicable, to minimize lighting being left on.

   7.7 Convert all incandescent bulbs to LED type lighting.

   7.8 Any new construction projects should have LED lighting built into the construction specifications.

8. Water:

   8.1 Ensure all plumbing and/or intrusion (i.e. roof) leaks are called in and reported for repairs immediately.

   8.2 Grounds watering should only be done between 4 a.m. – 10 a.m. Do not water during the heat of the day, typically between 10 a.m. – 8 p.m.

   8.3 When spray irrigating, ensure the water does not directly hit the building.

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.