



NEBO SCHOOL DISTRICT ADMINISTRATIVE DIRECTIVE

Directive
No.
2.3

SECTION: FACILITIES
TITLE: ENERGY CONSERVATION
DATE: FEBRUARY 2013

Nebo School District governs its business according to sound financial management principles. One item of fiscal responsibility is the District's use of energy and natural resources. The District believes in being judicious in the use of energy, and in being socially responsible to conserve natural resources. The District considers it the responsibility of employees and students to be conscious of and assist in the conservation of energy and natural resources. For this purpose, the District has adopted a behavior-based energy conservation program in coordination with Cenergistic, Inc. This energy conservation program requires a joint and cooperative effort by administration, faculty, staff, students, and Cenergistic.

The basic structure of the energy conservation program is as follows:

1. The energy conservation program will be implemented primarily through two (2) District Energy Specialists.
2. A designated building administrator or department supervisor will be accountable for the use and conservation of energy at his/her facility.
3. Energy Specialists will conduct energy audits and provide timely feedback to the building administrators and department supervisors.
4. Employees at each District or school facility are expected to make a positive contribution to energy conservation in order to produce energy savings for the District.
5. Accurate records of energy consumption and costs will be maintained by the Energy Specialists for each District or school facility to provide verifiable performance results on the goals and progress of the energy conservation program.

Energy Conservation Guidelines

The following Energy Conservation Guidelines are expected to be followed at each District and school facility, except in the event a particular guideline(s) would: (a) likely cause of violation of applicable state and federal laws, rules, and regulations, contracts, or District policies; (b) adversely affect working or learning conditions; (c) adversely affect the operation of educational or extracurricular classes, programs, services, activities, or events, including scheduled community and other after hours use of District or school facilities; (d) violate the rights of employees or students; or (e) jeopardize the health, safety, and welfare of employees, students, or patrons. These guidelines are not intended to be all-inclusive, and they may be modified for specific District and school facilities and other conditions as determined by the Operations Department.

Responsibilities:

1. Employees are expected to become "energy savers" as well as "energy consumers."
2. Employees are responsible for implementing these guidelines during the time that he/she is present in the classroom or office.
3. The custodian of the District or school facility is responsible for the control of common areas (i.e., hallways, cafeterias, auditoriums, gymnasiums, etc.).
4. In the high schools and junior high schools, the custodians are responsible for verification of the nighttime shutdown. In the elementary schools, the principals or their designees are responsible for verification of the nighttime shutdown.
5. The building administrator or department supervisor is responsible for the total energy usage of his/her facility.
6. The building administrator or department supervisor will regularly communicate the importance and impact of the energy conservation program to his/her employees, students, and patrons.
7. The Energy Specialists shall perform routine audits of all District and school facilities and communicate the audit results to the building administrator or department supervisor.
8. The Energy Specialists will provide monthly energy savings reports to building administrators and department supervisors detailing performance results.
9. The Energy Specialists will provide regular reports on the energy savings program (at least semi-annually) to the Superintendent and the Board of Education.
10. The Energy Specialists, under the direction and approval of the Director of Operations, are responsible to make appropriate adjustments to District and school facility systems, including temperature settings and run times for Heating, Ventilation and Air Conditioning (HVAC) and other controlled equipment.
11. To promote a safe and healthy work and learning environment, and to complement the energy conservation program, each District or school facility should develop, review, and adhere to preventive maintenance and monitoring procedures and plans applicable to its facilities and systems, including HVAC, building envelope, and moisture management.

General:

1. Classroom doors should remain closed when HVAC systems are operating. Doors between conditioned space and non-conditioned space should remain closed at all times (i.e., between hallways and the gymnasium).
2. Data loggers will be installed and maintained to monitor relative humidity, temperature, and light levels throughout the District and school facilities to ensure compliance with these 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 computers should be programmed for the "energy saver" mode using the power management feature. If network constraints restrict this for the computer, ensure the monitor "sleeps" after 10-minutes of inactivity.

HVAC Systems:

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 for Specified Facilities
Unoccupied Set Point: 65°F for Specified Facilities (Dec., Jan. & Feb.)

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

Heating:

1. Occupied temperature settings during the heating season should not be set above 72°F.
2. During unoccupied times, the temperature setting shall be set at 55°F (i.e., setback). This may be adjusted to a 65°F setting during extreme weather (generally during the months of December, January, and February) with direction from the Operations Department. The unoccupied time shall begin when the students leave an area.
3. During the spring and fall when there is no threat of freezing, all steam, hot water, 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 or through the building management system.
4. Domestic hot water systems are to be set no higher than 120°F or 140°F for cafeteria service (with dishwasher booster).
5. Domestic hot water re-circulating pumps are to be switched off during unoccupied times.
6. For heat pumps, ensure a 10°F dead-band between heating and cooling modes.
7. Propane levels should be measured and recorded at least on the following intervals: (a) recurring scheduled monthly date; (b) immediately before new delivery; and (c) immediately after delivery.

Air Conditioning:

1. Occupied temperature settings during the cooling season should not be set below 74°F.

2. During unoccupied times, the air conditioning equipment shall be turned off. The unoccupied period begins when the employees and students leave the area at the end of day. It is anticipated that the temperature of classrooms will be maintained long enough to afford comfort for the period the teacher and staff remain in the classroom after the students have left.
3. Air conditioning start times may be adjusted (depending on weather) to ensure classroom comfort when instruction begins.
4. Ensure that outside air dampers are closed during unoccupied times. Ceiling fans should be operated in all areas that have them.
5. Relative humidity levels shall not exceed sixty percent (60%) for any twenty-four (24) hour period.
6. Air conditioning should not be utilized in unoccupied District or school facilities during the summer months. Air conditioning may be used in unoccupied District or school facilities at times when the facilities are being cleaned.
7. In areas which have evaporative coolers (i.e., shops, kitchens, and gymnasiums), the doors leading to hallways which have air conditioned classrooms and other areas of the facility should be kept closed as much as possible.
8. Where cross-ventilation is available during periods of mild weather, the HVAC equipment should be shut down and temperatures adjusted with opening windows and doors. Cross-ventilation is defined as having windows and/or doors to the outside on each side of the room.
9. Dry food storage areas shall be maintained within legal requirements and guidelines. Typically, this is a temperature of 55°F to 75°F, and a relative humidity of 35% to 60%. Data loggers can be utilized to verify.

Lighting:

1. All unnecessary lighting in unoccupied areas should be turned off. Employees should make certain that lights are turned off when leaving the classroom or office when empty. Utilize natural lighting where appropriate.
2. All outside lighting should be turned off during daylight hours.
3. Gym lights should not be left on unless the gym is being utilized.
4. All lights are to be turned off when students and employees leave for the day. Custodians should turn on lights only in the areas in which they are working.
5. Employees should 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.

Water:

1. All plumbing and/or intrusion (i.e., roof) leaks should be immediately reported and repaired.
2. Outside watering should only be done between 8:00 p.m. to 10:00 a.m. Outside watering should not take place during the heat of the day, typically between 10:00 a.m. to 8:00 p.m. District schools and facilities that are not able to accommodate this watering schedule should contact the Operations Department.
3. When spray irrigating, sprinkler heads must be adjusted to hit only the green space.
4. Under the direction of the Operations Department, water sub-meters on irrigation and cooling tower supply lines may be installed.