



City School District of Albany

Energy Management Plan

June 2013

District Energy Plan

Objective

The district shall use energy resources in a safe and efficient manner, with an ongoing focus on identifying and implementing cost-saving measures and developing staff and students commitment to identified energy management practices.

We shall implement these principles by:

- Demonstrating community leadership and collaborative planning; and
- Adopting best energy management practices.

We also shall:

- Establish goals, objectives and indicators;
- Conduct an annual self-evaluation of our progress; and
- Communicate regularly with the school community.

Responsibility

Faculty, staff and students must use energy wisely. Don't assume someone else will do it!

- Turn off lights when rooms are not in use.
- Turn off energy-using devices like office equipment that is not being used.
- Maintain occupied-space temperature set points (see below).
- Keep windows and exterior doors closed to prevent the loss of air-conditioned air.
- Report inoperable equipment to maintenance staff.
- Report wasteful practices to 475-6160 so corrective action can be taken.

The energy manager will monitor utility usage and strive to promote and implement the guidelines in this plan.

General Guidelines

Temperature –To maintain reasonable comfort and lower energy expenditures, the school district has established the following standards for comfort heating and cooling.

Summer thermostat settings (air conditioning) during occupied periods are to be 72-74° F.

Winter settings (heating) during occupied periods are to be 68-70°F.

Exceptions to these guidelines must be approved by the energy manager.

To properly sense temperature in rooms, areas around thermostats must be clear of computers, televisions, and other electric appliances that give off heat. Additionally,

supply air vents must be clear of obstructions such as flags, banners, signs, etc., that may interfere with the design airflow which in turn affects occupant comfort.

Requests for heating and air-conditioning – The district strives to use resources in an efficient manner by adjusting temperatures in schools during unoccupied periods.

Thermostats are to be set 80 °F for cooling and 62 °F for heating when unoccupied. When activities are planned outside normal school operating hours, local overrides may be used or a request be made to the energy manager for heat/air-conditioning via the maintenance work-order system.

The work order should be submitted at least two business days in advance of the event and must include the date(s), start/end times and area of the school to be used. When a large crowd is expected for areas such as gymnasiums, it is advisable to include such information in the work order so adjustments can be made if necessary.

Day-to-day energy management – Windows and doors should be kept closed during the heating season and during the summer in areas that have mechanical cooling. Gym exhaust fans are to be turned off when the air-conditioning unit serving that area is operating.

Every member of the school district should assume the responsibility of closing windows, turning off office equipment when not in use and shutting off lights when leaving a room.

Computer monitors should be turned off when not in use and printers should be turned off at the end of the day. Computers should be turned off when school will be out for extended periods such as school holidays and summer vacation.

Energy management devices and strategies will continue to be added. Schedulers of classes, meetings, and other school activities should endeavor to minimize energy use. Evening activities should be concentrated in the fewest areas possible, and where appropriate, the areas used should be those that already have late night temperature setback.

Lighting – Interior lighting shall be fluorescent whenever possible. New energy-saving fixtures, lamps and ballasts will be used to replace existing, less-efficient lighting whenever economically feasible and appropriate. Decorative lighting shall be kept to a minimum. Lighting levels recommended by the most recent edition of the IES (Illuminating Engineering Society) Lighting Handbook shall be used as guidelines.

Where it makes economic sense, occupancy/motion sensors (ultrasonic or infrared) wired to area lighting will be installed to reduce and/or turn off lights in unoccupied, vacated areas. Day-lighting controls will be installed, if economically feasible, to automatically adjust lighting levels as appropriate. Task lighting, such as desk lamps, is recommended to reduce overall ambient lighting levels. Teachers are encouraged to

use task lighting at the end of the day after the students have left instead of the overhead fluorescent lighting. Compact fluorescent bulbs should be used in desk lamps. These are now readily available at local stores.

Space heaters – Whether purchased by the school district or personal property, space heaters pose two issues in buildings: fire safety and energy efficiency.

All space heaters used must be approved for fire safety, as classified by the National Fire Protection Association. No liquid fueled space heaters (e.g., kerosene heaters) shall be used in any office or classroom. Some electric space heaters also pose an unacceptable fire hazard.

All space heaters must meet the following four specifications. They must:

- (1) Be UL approved;
- (2) Have elements that are protected from contact;
- (3) Be tilt-proof (when tipped over, heater goes off); and
- (4) Be thermostat-controlled.

Space heaters must be unplugged when not in use. The issue of energy efficiency is also important; electric space heaters are a very costly means of heating. If a member of the school district feels that a space heater is necessary for adequate warmth, this may indicate that the central heating system needs repair. Maintenance should be consulted if the central heating system is incapable of meeting comfort requirements.

Maintenance also should be contacted if a space heater is to be used to offset excessive air conditioning. Excessive cooling of a space below the summertime Temperature Guidelines should be reported to maintenance so that air-conditioning levels can be adjusted.

Heating/cooling changeover – Certain school facilities require a heating/cooling changeover in spring and fall. Maintenance performs the changeover on the basis of priorities established to:

- (1) Provide comfort to students,
- (2) Maintain required temperatures to protect equipment, and
- (3) Serve the greatest number of individuals and activities.

Air conditioning may not begin until outside temperature has reached 75 °F for three consecutive days. Heating may not begin until the high outside air temperature has dropped below at least 55 °F for three consecutive days. Temperature projections are also considered. The wide swings in temperature during the spring of the year and the difficulty in switching between heating and cooling make this policy necessary. Special problems or hardships with this policy should be addressed to the director of Buildings and Grounds.

Holiday periods – A period of closure for the school district offers a great opportunity to save money on utilities that can be spent in other areas. Past history has shown that

very few people occupy the buildings for any substantial time during the holidays. With this in mind, buildings shall be only minimally heated/cooled during holiday periods. The energy manager will work with school personnel to determine which areas need regular heating and cooling during these periods.