

ENERGY MANAGEMENT & CONSERVATION - AR

I. Responsibilities

- A. Every person employed by Talbot County Public Schools (TCPS) is expected to be an "energy saver" as well as an "energy consumer.
- B. Employees are responsible for implementing the guidelines during the time that he/she is present in the classroom, office or other work area.
- C. The Custodian is responsible for control of common areas, such as halls, cafeteria, etc.
- D. Since the Custodian is typically the last person to leave a building in the evening, he/she is responsible for verification of the nighttime shutdown.
- E. The School Manager, Plant Operations/ Maintenance Manager are responsible for the total energy usage of his/her building.
- F. The Energy Education Manager will perform routine audits of all facilities and communicate the audit results to the appropriate personnel.
- G. The Energy Education Manager provides regular reports to the School Managers and Plant Operations Manager indicating performance with regards to energy savings.
- H. To complement the energy management program, TCPS will update and maintain its Comprehensive Maintenance Plan which details a preventive maintenance and monitoring plan for its facilities and systems, including HVAC, building envelope, and moisture management.

II. General

- A. Classroom 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).
- B. Proper and thorough utilization of data loggers will be initiated and maintained by the Energy Education Manager to monitor relative humidity, temperature, and light levels throughout the district's buildings to ensure compliance with district guidelines.
- C. All exhaust fans should be turned off every day and during unoccupied hours.

- D. All office machines (copy machines, laminating equipment, etc.) shall be switched off each night and during unoccupied times. Fax machines should remain on.
- E. All computers should be turned off each night. This includes the monitor, local printer, and speakers. Network equipment is excluded.

- F. All capable PC's should be programmed for the "energy saver" mode using the *power management* feature. If network constraints restrict this for the PC, ensure the monitor "sleeps" after 10-minutes of inactivity.
 - G. Cooling Season Occupied Set Points*: 74° F - 78° F
Unoccupied Set Point: 85°
 - Heating Season Occupied Set Points*: 68° F - 72°
Unoccupied Set Point: 55°
- *Set points are in accordance with ASHRAE 55 "Thermal Conditions for Human Occupancy"

III. Air Conditioning Equipment

- A. Occupied temperature settings shall NOT be set below 74°F.
- B. During unoccupied times, the air conditioning equipment shall be set at its highest possible temperature to avoid air quality issues. The unoccupied period begins when the students leave the area at the end of the school day. It is anticipated that the temperature of the classroom will be maintained long enough to afford comfort for the period the teacher remains in the classroom after the students have left.
- C. Air conditioning start times may be adjusted (depending on weather) to ensure classroom comfort when school begins.
- D. Ensure outside air dampers are closed during unoccupied times.
- E. For any 24-hr period of time, relative humidity levels shall NOT average greater than 60%.
- F. Air conditioning will be set at its highest possible temperature to avoid air quality issues in classrooms during the summer months unless the classrooms are being used for summer school or other approved use. Air conditioning may be used by exception only, or in those schools that are involved in team cleaning.
- G. In all areas which have evaporative coolers such as shops, kitchens and gymnasiums, the doors leading to halls which have air conditioned classrooms or dining areas should be kept closed as much as possible.
- H. Where cross-ventilation is available during periods of mild weather, HVAC equipment will be adjusted for minimum use and temperature will be adjusted with windows and doors. Cross-ventilation is defined as having windows and/or doors to the outside on each side of a room.

IV. Heating Equipment

- A. Occupied temperature settings shall NOT be above 72° F.
- B. The unoccupied temperature setting shall be 55° F (i.e. setback). This may be adjusted to a 60° F setting during extreme weather.
- C. The unoccupied time shall begin when the students leave an area.
- D. During the spring and fall when there is no threat of freezing, all steam and forced air heating systems should be switched to their lowest possible setting during unoccupied times. Hot water heating systems should be switched to their lowest possible setting.
- E. Ensure all domestic hot water systems are set no higher than 120° F or 140° F for cafeteria service (with dishwasher booster).
- F. Ensure all domestic hot water re-circulating pumps are set to their lowest possible setting during unoccupied times.
- G. For heat pumps, ensure a 6° F dead-band between heating and cooling modes.

V. Lighting

- A. All unnecessary lighting in unoccupied areas will be turned off. Employees should make certain that lights are turned off when leaving the classroom or work area empty. Utilize natural lighting where appropriate.
- B. All outside lighting shall be off during daylight hours.
- C. Gym lights should not be left on unless the gym is being utilized.
- D. All lights will be turned off when students and staff leave school. Custodians will turn on lights only in the areas in which they are working.
- E. 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.

VI. Water

- A. Ensure all plumbing and/or intrusion (i.e. roof) leaks are reported immediately.
- B. All watering should be done between 5:00 AM and 10:00 AM.
- C. When spray irrigating, ensure the water does not directly hit the building.

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