

## **CHAPTER 7**

### **7.10 Conservation of Energy (Adopted 12/13/83) (Revised 10/26/04)**

Marshall County Schools expects every student and employee to contribute to energy efficiency. Each person is expected to be an energy saver as well as an energy consumer.

The superintendent shall periodically present to the local board a plan for energy conservation. In order to determine areas in which energy savings may be made, the board shall then review said plan of recommended measures as well as a statement of projects previously accomplished.

The teacher is responsible for implementing the guidelines during the time that he/she is present in the classroom. The custodian is responsible for control of common areas, i.e. halls, cafeteria, etc. The principal is responsible for the total energy usage of his/her building. The head custodian, and/or his designee will be responsible for a complete shutdown of the facility when closed for the evening. The Energy Manager will perform routine audits of all facilities and communicate the audit results to the appropriate personnel. The Energy Manager will also provide regular reports to principals indicating the performance of their school with regards to energy savings.

The plan presented for review shall include, but not be limited to:

- a. fuel usage within the schools buildings,
- b. fuel consumption of the transportation fleet,
- c. building thermostat control,
- d. boiler inspection reports,
- e. review of commercial contracts for air conditioning and heating maintenance for specified buildings,
- f. curtailment of extra-curricular trips when deemed essential, and
- g. periodically inform all personnel of other means by which energy savings may be achieved.

The board will direct necessary action in accordance with the plan presented and the financial resources available.

#### **7.10.1 Physical Plan and Operations Energy Conservation**

It is essential that energy regulations be observed in the operation of the cooling and heating equipment. The principal or designee will be provided information reflecting the energy consumption for the building on a monthly basis.

##### **7.10.1.1**

1. To maintain an environment that is conducive to the educational process. The occupied classroom temperature should be between 74 and 78 degrees during the cooling season and between 68 and 72 degrees during the heating season.

2. The unoccupied classroom temperature should be 85 degrees during the cooling season and between 55 and 60 degrees during the heating season.
3. Unnecessary lighting will be turned off in unoccupied areas with lights being turned off when students and teachers leave school. Custodians will turn on lights only in the area in which they are working. Hallway lighting will remain on when students are in the building in accordance with State Fire Marshall Code.
4. During the summer school closure, air conditioning will be used only in schools having summer school and in office areas.
5. The custodian designated by the principal at each school will be responsible for the evening shutdown of the facility.

#### **7.10.1.2 Procedures for Operating Air Conditioning Equipment**

The following energy conservation procedures are to be utilized in those buildings possessing air conditioning equipment:

1. In buildings with windows and ceiling fans, the principal or designee should:
  - a. Refrain from turning the air conditioning equipment on until the outside temperature exceeds 78 degrees. Temperature control should be achieved by the use of ceiling fans and window adjustments. During air conditioning season, the custodian should raise the classroom windows upon arrival each morning (if applicable) if the outside temperature is below 78 degrees.
  - b. Close all windows and doors when the heating or air conditioning system is operating.
  - c. Start the air conditioning equipment at each school as late as possible while allowing time to cool the building to guideline temperature by the beginning of classes.
  - d. Set the thermostat controls at 74 to 78 degrees when air conditioning is in operation. Ceiling fans should be utilized unless air conditioning is in operation.
  - e. Close individual classroom and office doors when the air conditioning equipment is in operation.
  - f. Refrain from turning lights on unnecessarily.
  - g. Turn off air conditioning equipment when the students leave school.

- h. Air conditioning will only be utilized during the summer months in classrooms and offices where summer school is being held, or in areas where carpet has been cleaned (until dry).
  - i. Where applicable, the principal, in coordination with the energy manager, will devise a plan for turning air conditioning units on in phases to prevent overloading of the system.
  - j. 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.
2. In those air conditioned areas within a building that have windows and no ceiling fans, the same procedures as listed in item 1 should be observed with the following exceptions:
- a. Air conditioning equipment is not to be turned on until the outside temperature exceeds 75 degrees.
  - b. The thermostat controls are to be set no lower than 74 degrees when the air conditioning equipment is in operation.
  - c. Buildings without windows and ceiling fans should maintain a thermostat setting of no less than 75 degrees.

### **7.10.1.3 Procedures for Operating Heating Equipment**

The following energy conservation guidelines are to be utilized when operating heating equipment in school buildings:

1. The thermostat controls shall be set no higher than 72 degrees.
2. Individual classroom and office doors will be closed when the heating equipment is in operation.
3. In buildings with central controls, the principal or designee should start the heating equipment as late as possible while allowing time to heat the building by the beginning of classes.
4. In buildings with central controls, the principal or designee will be responsible for the setting of the thermostat at 55 or 60 degrees at the end of each day.
5. The principal or designee will be responsible to ensure the completion of the end-of-day setback on Monday through Thursday and a weekend setback on Friday.

6. If a 55 to 60 degree setback will not allow the building to heat to a comfortable level by the time the students arrive, the principal or designee will notify the maintenance director and energy manager immediately.

#### **7.10.1.4 Procedures for Operating Lighting Equipment, Fans, Office Equipment, and Computers**

1. Teachers should turn off lights when leaving the classroom for more than 15 minutes.
  2. Lights in gymnasiums should be off unless it is being utilized, except for locations with mercury vapor lights, etc.
  3. All outside lights should be turned off during daylight hours.
  4. When in the building during non- instructional hours, custodians should turn lights on only in the specific area in which they are working.
  5. Exhaust fans in the restrooms should be off at the end of the day.
- All office machines (copy machines, laminating equipment, computers, etc.) shall be switched off each night and during unoccupied times. Fax machines and network servers are excluded.
  - All capable PC's should be programmed for the energy saver mode after 10 minutes of inactivity.
  - All classroom computers (except for network servers) should be turned off at the end of the last class.

#### **7.10.1.5 Procedures for Water**

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