

# ENERGY USAGE GUIDELINES

## **Mission**

The mission of Coppell ISD's Energy Management is to develop and implement energy resource strategies that increase conservation awareness from students, staff, and community, thereby minimizing total energy costs and allowing funds to be redirected to the educational needs of our students.

## **Purpose**

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CISD's Strategic Plan states, "We will actively seek alternative resources while ensuring the most effective use of all resources to achieve our mission and objectives."

The purpose of this document is to present District-wide guidelines to faculty and staff that are easy to understand and implement while meeting the objectives of the CISD Strategic Plan.

Although the guidelines are not exhaustive, they represent a good faith effort to address energy use at all levels and are subject to periodic revisions and updates.

Conservation of our natural resources is an exercise in discipline and can contribute to the educational process by re-enforcing good habits from staff, students, and community. Every student and employee can participate in conservation by following the Energy Management Guidelines and by being a wise energy user.

## **ENERGY INCENTIVE PROGRAM**

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As stated above, the purpose of energy conservation is to save dollars so that funds can be redirected to help meet the instructional needs of students. With this in mind, the following incentive program will be implemented effective January 1, 2005.

### **Percentage Payback of Savings**

This incentive rewards the schools who follow these energy guidelines, thereby reducing their total energy cost from the base year of January 1 through December 31, 2004. This is a considerable challenge due to ever-increasing utility rates. The reward will be a payback of fifty percent (50%) of the total net dollar amount saved for the District after energy management costs and will be distributed into the instructional account (e.g. Function 11) of the awarded school's choice according to the percentage the school contributed to the total net savings.

For example purposes only, should the total District-wide net savings be a total of \$50,000 and Lee Elementary contributes six percent (6%) of this total, then Lee would receive an award of \$1,500 [e.g.  $(\$50,000 \times .06) \times .50 = \$1,500$ ] to be used for student instructional purposes of their choice. Accordingly, the other schools with positive net

savings would receive the balance of the fifty percent based on their respective percentage of the overall net savings. The other fifty percent net savings would remain in the general fund for the Board of Trustees discretionary spending for instructional purposes.

This program will be effective beginning January 1, 2005. Actual electric and gas costs for the period of January 1, 2004 through December 31, 2004 will be used as the base year data for future award calculations.

### **CISD's Most Efficient Building Award**

*In addition to the "percentage payback award" explained above*, the Energy Management Department will award an annual Most Efficient Building Award to the school that demonstrates energy awareness and conservation through the following criteria:

- Decrease in utility cost per square foot
- Alignment with the Energy Management Guidelines
- Effective implementation of energy conservation programs for students, such as Watt Watchers.

The school who receives this award will receive an award of \$2,000 to be used for student instructional purposes. This award will be decided on an annual basis by committee.

Coppell Independent School District solicits the active participation of all staff and the community in adherence to these guidelines. **In order for campuses to be able to assess their month-to-month progress as compared to the base year and compared to other campuses, the energy manager will provide a monthly energy use report to each campus principal.**

### **GUIDELINES FOR DAILY OPERATION OF HVAC EQUIPMENT**

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1. Room temperatures should fall within a range that provides a reasonable level of comfort within the framework of appropriate dress. Temperatures will be set between 72 and 76 degrees during the cooling season and between 68 and 72 degrees during the heating season. A teacher who feels that her room is too hot or too cold may submit a request to the principal's office to have her respective room temperature adjusted up or down within the above prescribed ranges.
2. Placing lamps, computers, burners, or ice bags on or near the thermostat is not allowed. Tampering with thermostats is detrimental to the HVAC system and can cause costly repairs. Please report this type of activity to the energy manager.

3. Unoccupied building mechanical and structural systems will be maintained by assuring that building temperatures do not drop below 55 degrees in the heating months or exceed 80 degrees in the cooling months. Minimum and maximum temperatures will be maintained within the recommendations as set forth by CISD's HVAC engineers in order to ensure healthy air quality.
4. At no time will the HVAC system be scheduled to accommodate individuals for unauthorized use.
5. Administrative facilities may require schedules that differ from the school campuses, including some weekend and summer schedules. Normal working temperatures will be maintained in those facilities when requested.
6. Doors to individual classrooms should remain closed during HVAC operation. Door stop devices violate fire codes and hinder proper HVAC operation.
7. For energy and safety concerns, exterior doors are not to be propped open under any circumstance.
8. The normal school day is typically defined as the classroom hours plus 1/2 hour before the start of school and 1 hour after the end of school. However, campus principals will have the opportunity to work with the Energy Manager at the beginning of each academic year in order to establish an HVAC start and end time most conducive to the individual campus needs. Due to the large amount of labor and programming necessary to change HVAC system start and end times, a campus will have this opportunity only one time per academic year. It is expected that residual heating and/or cooling will support those staff members who wish to remain in the building after the prescribed HVAC end time. HVAC equipment will be scheduled to run and maintain the specified temperature range during the prescribed hours, with the following exceptions:
  - a. Office/administrative areas may be extended one additional hour.
  - b. Kitchen areas will be shut down after final serving and clean up (2:00 p.m. – 2:30 p.m.).
  - c. Cafeterias, gyms, and other areas will be shut down early if not in use.
  - d. During extreme weather the HVAC system may be scheduled to come on early enough to ensure that the temperature range is reached by the start of classes.
  - e. Properly authorized after hours school events and/or facility rental events will be scheduled for HVAC and maintain the same temperature range mentioned previously. During extreme weather HVAC may be scheduled to come on early enough to ensure that the temperature range is reached by the start of the event. **(Examples of appropriately authorized events would include teacher team meetings, site-based meetings, faculty meetings, PTO meetings, school plays, etc.)**
  - f. Administrators should monitor classrooms that are not in use for an extended period of time and make suggestions for turning air off.

- g. HVAC will not be scheduled to accommodate pets, including but not limited to birds, rabbits, hamsters, snakes, and fish, except when live animals are periodically utilized for class room experiments; and such experiments are part of the approved curriculum (e.g. Foss Kit experiments).
- 9. The Maintenance Department will schedule regular preventive maintenance, filter replacement, and vent cleaning to ensure peak efficiency of all HVAC systems.
- 10. The Maintenance Department will continue to work with campuses to properly balance the air flow of the HVAC systems in order to minimize temperature variances throughout buildings.

### Facility Use Requests

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Proper use of FS Direct on School Dude and approval from General Services will ensure heating/air conditioning is scheduled for the event. Heating/air conditioning will not be scheduled for events not properly authorized through General Services.

1. Facility rental events are scheduled by completing the Facility Use Application and submitting it to Merry Dunphy (214) 496-8082 in General Services. All facility rental requests must be made in accordance with facility use guidelines.
2. All Coppell ISD daytime and after hours events are scheduled through FSDirect at schooldude.com and is submitted, by the School Dude system, for approval through Merry Dunphy (214) 496-8082 in General Services. All requests must be made in accordance with facility use guidelines.
3. Individual requests for heating or air-conditioning outside normal school hours will not be approved. **(Examples of appropriate requests would include teacher team meetings, site-based meetings, faculty meetings, PTO meetings, school plays, etc.)**
4. General Services will help ensure that the space requested by internal and external groups is appropriate for the event. This includes, but is not limited to classrooms, commons areas, and stadium use.

### Weekends, Holidays, and Summer

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The HVAC system will be scheduled off during weekends, holidays, and summer except for the following:

1. Properly authorized school-sanctioned or facility rental events listed on the Facility Set-Up Report.
2. Summer School will maintain normal HVAC scheduling and temperatures for the portion of the building being used.
3. Campus administrative offices may be conditioned as requested by campus administration.
4. Special custodial or maintenance needs may be addressed (carpet cleaning, painting, etc.) on an individual basis. Every effort will be made to ensure custodial and maintenance staff are working within safe and acceptable temperature ranges after hours, as well as during holidays and summer. The custodial and maintenance staff will work directly with the energy manager to address their specific needs and concerns.
5. Modified schedules and temperatures will be resumed in the summer one week prior to the teacher start date.
6. When possible, the consolidation of buildings should be used for summer activities.

### **TEACHER / STAFF CONTROL OF HVAC SYSTEMS**

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Teacher and staff control of the HVAC System was a major concern of the Energy Management Committee that assisted and advised in the drafting of this guideline document. However, CISD's current energy management system (e.g. hardware and software) was not initially designed and wired to allow for direct teacher control in the classrooms. However, as the system ages it will become necessary to upgrade and/or replace the existing system. As technology and funding allow, the District will explore systems that allow defined parameters of direct campus and/or teacher control. For example, systems can be wired and configured to allow a teacher to adjust a room's temperature up or down by three degrees (e.g. a seven degree spread). Upon Board of Trustees approval, such a system could possibly be purchased and installed with dollars derived through future energy savings. As explained on Page 3, Section e., the Energy Manager will accommodate all appropriately authorized after-school or weekend events.

### **EXHAUST FANS**

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All exhaust fans that are not interlocked with the HVAC equipment will be turned off at the end of the day including restroom exhaust fans. Maintenance will verify that all minimum outside air intake regulations meet EPA air quality standards and code for all HVAC equipment and systems.

## **LIGHTING**

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Lighting affords one of the best opportunities for full participation in energy conservation. It is recommended that each school implement an energy conservation program, such as Watt Watchers, involving the students. For information about how to implement Watt Watchers visit <http://wattwatchers.org/> and contact the CISD Energy Manager.

Please follow these simple guidelines:

1. Classroom lights should be turned off when rooms are not in use, even for short periods of time.
2. Lights should be turned off during the day in offices and classrooms with windows that provide a sufficient amount of natural light.
3. Workroom lights should be turned off when the rooms are not in use.
4. Gyms, cafeterias, stadiums, and other high-use areas should have the lights turned off when not in use for extended periods of time. Generally, if a large room such as the gym, auditorium, or cafeteria will be unoccupied for at least one hour or more, the lights should be turned off to conserve energy.
5. After-hours events should use lighting only in the areas of use, including access hallways to the areas.
6. Evening custodians and/or maintenance workers should use lighting only in the immediate areas where they are working and should turn off those lights when the work is complete.
7. Parking and soffit/security lights should not be on during daylight hours. Report problems to the Maintenance Department (214) 496-8040 for correction.
8. The District will continually assess the need for timers and motion detectors on lighting in order to achieve maximum energy efficiency.
9. The District will assess the feasibility and potential cost savings of retrofitting existing T-12 light fixtures with more energy efficient lighting equipment.

## **ELECTRICAL EQUIPMENT**

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Energy management efforts are not intended to interfere with the direct needs of the instructional programs or office functions. Faculty and staff can assist by following the guidelines noted below:

1. Copiers, faxes, typewriters, computers, monitors, printers, computer labs, and other electrical equipment should be turned off when not in use. After-hours shutdown of equipment is essential to the success of the program.

2. Individual coffee makers, microwaves, refrigerators, and other equipment of this type are strongly discouraged in classrooms and should only be used in break rooms.
3. Portable electric heaters pose a considerable fire risk and are high energy users. Therefore, their use is strongly discouraged in all buildings.
4. Electrical shop equipment, kilns, and other similar equipment are high-energy users and should be used and monitored prudently.
5. Vending machines will be reviewed for possible energy savings including disconnecting the light, summer shutdown, and eliminating supply during summer and holiday shut downs.
6. Where possible, electric water fountains will be disconnected from the electrical supply during summer and holiday shutdowns.

### **ADDITIONAL EQUIPMENT**

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1. Water heaters should generally deliver water not to exceed 105 degrees. Water to kitchens should not exceed 140 degrees (where there is a local booster heater) and 180 degrees where there is no booster heater.
2. During summer shutdown and long holidays, water heaters and boilers will be turned off where possible. During summer break unoccupied buildings will have the main gas line shut off.
3. During summer break perishable items will be consolidated and kitchen equipment shut down.
4. Child Nutrition, Maintenance, and Custodial Services should continually review their equipment use and scheduling and recommend ways to save energy.

### **WATER**

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1. Every effort should be made to minimize water use with restroom faucets. Everyone can “slow the flow” of water and still get his hands clean.
2. Any running water problems should be immediately reported to the Maintenance Department. This includes running/leaking commodes, faucets, and water fountains.
3. Any visible lawn sprinkler system problems, such as lawn sprinklers running during the daytime or broken sprinkler heads should be reported to the Maintenance Department.
4. Maintenance will ensure all campus lawn sprinkler systems have functional rain detection systems that disable systems when it rains.

## RECYCLING

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One of the best opportunities to conserve our natural resources is through recycling. Each of our schools has an Abitibi recycling dumpster where newspapers, magazines, shopping catalogs, office paper, and mail can be recycled. This is a free service with the opportunity for the schools to earn money after 2 tons of material is collected per month.

Payment schedule is as follows:

0-1.99 tons	Free service
2-3.99 tons	\$5.00 per ton
4 or more	\$15.00 per ton

For example, during 2004 Mockingbird Elementary received \$600 from recycling over 40 tons of material.

The Abitibi recycling program is a community effort. Students and staff are encouraged to bring recycling items from home.

In addition to helping our environment and being a money making opportunity, recycling results in less trash pickups thereby reducing trash removal fees charged by the City.