

CASA GRANDE ELEMENTARY SCHOOL DISTRICT**ENERGY AND WATER CONSERVATION**

The Governing Board believes that measures to conserve energy and water resources, reduce the school district's carbon footprint, and assist utilities in meeting future demands must be an integral part of the school program. The rising cost of energy and its impact on the District budget mandate that the District develop and implement plans to conserve all forms of energy used throughout the District.

The Superintendent will develop an energy and water conservation program. Principals and administrators should advise and direct their personnel regarding this program and conservation goals. Guidelines for addressing the conservation goals should be emphasized at the beginning of each school year and reiterated throughout the year as the need arises.

Cooperation and some sacrifices will be required of each employee and student to achieve a meaningful energy conservation program that results in a more efficient use of energy resources as well as a reduced burden on the District budget.

CASA GRANDE ELEMENTARY SCHOOL DISTRICT

ENERGY AND WATER CONSERVATION

The Casa Grande Elementary School District Governing Board establishes the following goals for the District Energy Conservation Program:

1. Monitor energy use so that the instructional program and support services are effectively delivered while conserving energy dollars.
2. Eliminate energy waste in our buildings while ensuring a comfortable and safe learning environment for all students and employees.
3. Educate all students and employees to contribute to energy efficiency in our District. Every person will be expected to be an “energy saver”.

The Casa Grande School District Governing Board additionally establishes the following guidelines as the initial steps to energy conservation:

1. The principal/administrator and all building employees will be responsible for total energy usage at their building.
2. The teacher will be responsible for implementing the guidelines in the classroom.
3. Facility Services will be responsible for the run times of the HVAC equipment.
4. Facility Services will make available the data reflecting energy consumption to the principal/administrator at each school or administrative building on a monthly basis by issuance of “monthly utility” invoices.
5. Facility Services will provide support for each building’s energy conservation efforts. The goal of this program will be to integrate the school’s curriculum (providing information), energy conservation goals and energy conservation accomplishments.
6. In an effort to encourage ongoing commitment to energy conservation, the principal/administrator at every school and administrative building will:
 - a. Educate employees and establish a program for continued involvement.
 - b. Set up programs where students and employees actively participate in energy conservation.
 - c. Submit a report to the Administrative Services Manager in October and March each year that details the program implemented and the accomplishments related to energy conservation attained.

The Casa Grande School District Governing Board additionally establishes the following procedures for energy conservation:

Procedures for General Energy Usage

1. In order to maintain an environment conducive to the educational process, the classroom temperature, during occupied times should be in the following range:

- a. Cooling - Set-point will be 75 degrees with adjustment to the set-point by one degree warmer or one degree cooler for an individual room.
 - b. Heating - Set-point will be 68 degrees with adjustment to the set-point by one degree warmer or one degree cooler for an individual room.
 - c. Set-Back Procedures
 - i. Cooling
 - 1. Weekdays, the operating temperature will be set at 80 degrees after 5:00 p.m. This setting will continue until 11:00 p.m. at which time the equipment will be shut off and will be programmed on a site-by- site basis to reach set-back temperature (80 degrees) by 6:00 a.m. and set-point temperatures (75 degrees) by 7:00 a.m.
 - 2. Set-back temperatures (80 degrees) will be in effect on Saturday from 8:00 a.m. until 12:00 noon. The equipment will be shut off at that time and be programmed on a site-by-site basis to reach set-back temperatures (80 degrees) by 6:00 a.m. and set-point temperatures (75 degrees) by 7:00 a.m. Monday mornings.
 - 3. All cooling equipment will be off during all District holidays.
 - ii. Heating
 - 1. Weekdays, the operating temperature will be set at 63 degrees after 5:00 p.m. This setting will continue until 11:00 p.m. at which time the equipment will be shut off and will be programmed on a site-by- site basis to reach set-back temperature (63 degrees) by 6:00 a.m. and set-point temperatures (68 degrees) by 7:00 a.m.
 - 2. Set-back temperatures (63 degrees) will be in effect on Saturday from 8:00 a.m. until 12:00 noon. The equipment will be shut off at that time and be programmed on a site-by-site basis to reach set- back temperature (63 degrees) by 6:00 a.m. and set-point temperatures (68 degrees) by 7:00 a.m. Monday mornings.
 - 3. All heating equipment will be off during all District holidays.
- 2. Lighting will be turned off in unoccupied areas (even if vacant for a short period of time). After the school day, custodians will use half lighting in the hallways where possible. Custodians will turn on lighting only in areas where they are working or for scheduled facility use. Additionally, Facility Services will schedule the work required to clean buildings in a way that best utilizes their manpower to save energy use.
 - 3. Lights in all gymnasiums, cafeterias and auditoriums will be off unless the area is being utilized (Note: Sodium lighting, used mostly in gymnasiums, does require a start-up time.).
 - 4. All outside lights should be turned off during daylight hours.

- a. Parking lot lighting should have time-clock override or light sensors to reduce parking lot lighting after night events.
5. The exhaust fans in the restrooms will be turned off when students are not present.
6. Copy machines and other office machines will be turned off nightly.
7. Due to the high energy use of laminators, each school will create schedules to ensure that machines are only used when needed and that they are turned off after use.
8. Teachers will ensure that all classroom computers, monitors, local printers, and speakers (some computer speakers have own power source) are turned off during periods of time the buildings are not occupied by students. These units will be programmed for the “energy saver” (stand-by) mode by the IT department.
9. Space heaters are not allowed.
10. Coffee pots are not permitted in classrooms or private office areas. Coffee should be brewed at a central location or brought from home in thermos containers for individual use.
11. Toaster ovens and hot plates are not permitted in classrooms or private office areas.
12. Compact refrigerators must be manufactured after 2004 and have an Energy Star rating using a maximum of 1.5 amps.
13. Microwaves are permitted in the classrooms.
14. All District buildings have a centralized Energy Management System (EMS) that is controlled by Facility Services. A representative from each building will submit a schedule of special activities weekly in a format developed by Facility Services. Facility Services will program the EMS for cooling or heating needed outside the normal heating or cooling schedule.
 - a. Schools will develop a plan to schedule off-hour activities in common areas to optimize control of energy use.

Procedures for Operating Air Conditioning Equipment

1. When the temperature is such that cooling is needed at the beginning of the school day, the start time for air conditioning equipment will be set as late as possible while allowing time to cool the building to guideline temperature settings.
2. Thermostat controls will be set at 75 degrees during regular business hours and 80 degrees before and after regular business hours. Weekend setback will be at set-point from 8:00 a.m. to 12:00 noon, and then the system will be shut off from noon Saturday to Monday morning. Systems will be shut off during holidays.
3. Refrain from turning lights on unless necessary. Lights not only consume electricity, but also give off heat, placing an additional load on the air conditioning equipment and the use of electricity necessary to cool the room.
4. The air conditioning equipment will be turned off (or adjusted based on individual building history) at the approximate time the students leave school. It is anticipated that the temperature of the classroom will be maintained long enough to afford comfort while the teacher remains in the classroom after the students have left.

5. Close individual classroom and office doors when the air conditioning equipment is in operation.

Procedures for Operating Heating Equipment

1. The thermostat controls shall be set at 68 degrees with adjustment to the set point by one degree cooler or one degree warmer when rooms are occupied during the heating season. The District's Facility Services Department must approve exceptions in advance.
2. Close individual classroom and office doors when the heating equipment is in operation.
3. The goal of this program is to have automatic temperature controls for buildings; the start time for the heating equipment should be set as late as possible while allowing time to heat the building to guideline temperature by the beginning of class.
 - a. Set-back temperature will be set at 63 degrees (or appropriate set-back temperature based on building history) at the close of the school day or scheduled facility use.
 - b. Facility Services shall ensure the EMS performs end-of-the-day shutdowns on Monday through Thursday and a weekend shutdown on Friday to make certain that the building systems are set in an energy efficient mode of operation.
4. Domestic hot water systems will be set between 120 degrees F or 140 degrees F for cafeteria service (with dishwasher booster). Ensure all domestic hot water circulating pumps are off during unoccupied times.
 - a. New construction guidelines to ensure only cold water to classrooms and restrooms. Tempered water will be supplied to special classrooms, i.e., kindergarten, special ed, art, etc.
5. During spring and fall when there is no threat of freezing, all steam and forced air heating systems will be switched off during unoccupied times. Hot water systems will be switched off using the appropriate loop pumps.
6. On extremely cold nights, when the temperature drops below 40 degrees, the EMS will optimize and run circulation pumps to prevent freezing and allow proper space warm-up.

Procedures for Water Conservation

1. In order to ensure that all plumbing (leaks, faucets, flush valves, etc.) and/or areas where water is entering the building (i.e., roof leaks, basement water intrusions) or humidity sources (condensation on pipes, sweating walls) are reported and repaired immediately, all employees and students must take an active roll in reporting the problems to appropriate personnel.
2. Facility Services will develop and propose a plan for turf reduction. Turf area standards will be developed with involvement by middle and elementary school principals.
3. In new construction/major renovations, Facility Services will specify waterless urinals and low flow water closets and faucets.

Procedures for Recycling

Schools and administrative buildings will continue their individual efforts for recycling programs with involvement by student groups and individual employees.

Procedures for New Construction and Major Renovations

As funding allows, the District will strive to meet the processes and procedures of Leadership in Energy and Environmental Design (LEED) certification. LEED certification is the recognized standard for measuring building sustainability and is intended to promote design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being.