



## **Energy Management and Utilities Conservation Plan**

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May 3, 2016

### **PROPONENT**

Maintenance and Facilities Department

### **PURPOSE**

To delineate responsibilities and procedures for the effective management and efficient use of energy, water resources and recycling resources to meet the intent of Board approved policy, CL-Legal, (Buildings, Grounds and Equipment Management) and Goal #6 of the District Improvement Plan; the District will build and maintain facilities that are conducive to an effective learning environment.

### **GOALS**

To keep operating costs down by reducing energy and utilities waste while providing a safe, comfortable environment for learning. To utilize local resources to provide recycling opportunities that model to our students and staff the importance of taking care of our environment.

### **SCOPE**

These policies and procedures apply to all departments and campuses within the Los Fresnos Consolidated Independent School District.

### **RESPONSIBILITIES**

Conscientious and judicious use of the various energy systems and utilities at each school and business site shall be the joint responsibility of administration, instructional staff, custodial staff, and department heads. Specifically, the

1. **Facilities and Maintenance Department Director will:**
  - a) Be responsible for monitoring and managing the District's energy and utilities consumption practices and related data collection.
  - b) Work with campus administrative staff to implement and enforce energy, utility conservation and recycling policies, procedures and programs.
  - c) Work with the Superintendent and Chief Financial Officer to develop a program to recognize campus and department efforts to reduce energy and utility costs.
  - d) Identify and provide campus's with appropriate educational materials.
  - e) Coordinate with District communication staff to publicize energy/utility savings and innovative energy/utility conservation and recycling projects.

2. **Campus Administrators will:**

- a) Support all energy management and utility conservation initiatives.
- b) Identify an administrator to serve as the campus Energy/Utility Liaison to the Maintenance Department.
- c) Remind teachers and staff via email, newsletters, meetings to, "Turn It Off When Not Using".
- d) Encourage the integration of related educational materials into the curriculum as appropriate.
- e) Purchase Energy Star rated equipment to the extent that it is feasible.
- f) Work with the Maintenance Department to ensure the settings on thermostats and the building energy management system are in accordance with the settings in this plan.
- g) Coordinate adjustments to the settings to take into account extended periods of non-occupied periods such as Winter Break, Spring Break and summer.
- h) Work with the Maintenance Department when unusual variances in utilities consumption has been identified and take steps to correct as appropriate.
- i) Monitor exterior and interior lighting to ensure systems are operating properly. Submit work orders to report any related issues.
- j) During tutorials, summer school and other similar activities consolidate activities to minimize the number of rooms/buildings that require cooling and lighting.
- k) Report issues to the Director of Facilities & Maintenance.

3. **Teachers and Staff will:**

- a) Turn off lights when leaving the room.
- b) Turn off or place on "Sleep" mode all classroom computers/monitors at the end of the day.
- c) Not block or cover the thermostat or AC air supply or return grills with furniture or displays.
- d) Keep classroom doors and windows closed when the heat or AC is on.
- e) Turn back *non-programmable* thermostats to **80** degrees when leaving for the day.
- f) Incorporate energy and utility conservation lessons into curriculum when appropriate.

4. **Food Service, Technology and Transportation Departments will:**

- a) Support all energy management and utility conservation initiatives.
- b) Initiate other energy and utility conservation measures as appropriate.
- c) Purchase Energy Star rated equipment to the extent that it is feasible.
- d) Establish and publish standardized equipment start up and shut down times and procedures for kitchens.
- e) Establish and publish a shut down schedule for all networked computers district wide.

## POLICIES AND PRACTICES FOR ENERGY AND UTILITIES CONSERVATION

### 1. Facilities, General

- a) **Exterior and parking lot lighting.** If not activated via photocell sensor it will be programmed to activate at dusk, (sundown) and turn off at sunrise. Adjust for Daylight Savings time. Also during Winter Break and summer, parking lot lighting will be turned off.
- b) **After hour hallway/classroom lighting.** Custodial staff will only turn on those lights necessary for the areas they are cleaning
- c) **Summer months.** All electrical devices and appliances not in use will be left unplugged.
- d) **Building management systems.** The Maintenance Department will review settings for heating and cooling, occupied/unoccupied times and weekend operation during the months of October and April.
- e) **HVAC cooling stages.** Cooling will be brought on in stages 1 hour before needed. For example kitchen area will come on at 4:30 am, administration bldg at 5:30 am, classrooms at 7:00 am. Doing this will reduce electricity *demand* costs.
- f) **HVAC settings, cooling.** **Occupied** setting will be **73** degrees with a **1.5** degree variable. Which means that when the temperature reaches 73 the units will turn off until the room temperature hits 74.5 then it will kick back on. **Unoccupied Setback** setting will be **80** degrees. Units will be programmed to go into unoccupied mode 30 minutes before occupants are expected to depart.
- g) **HVAC settings, heating.** **Occupied** setting will be **68** degrees with a **1.5** degree variable. **Unoccupied Setback** setting will be **60** degrees. **Unoccupied Setback** setting will be **60** degrees. Units will be programmed to go into unoccupied mode 30 minutes before occupants are expected to depart the space.
- h) **HVAC, Fresh air units,** will be programmed to **start up** with the school day; 7:55 am for elementary, and 8:30 am for middle and high school. Units will be programmed to **shut off** at 2:00 pm for elementary and 3:00 pm for secondary- daily.
- i) **HVAC Equipment.** The Maintenance Department will implement a preventive maintenance program to keep equipment functioning efficiently and effectively to include-
  1. **HVAC filters.** Will be replaced monthly.
  2. **HVAC condenser and evaporator coils.** Condenser coils will be cleaned semi-annually, (June and December). Evaporator coils will be scheduled for cleaning every two years.
  3. **HVAC, Cooling Towers.** Clean the towers annually and perform other preventive maintenance checks as required. Water consumption will be metered and

arrangements will be made with the campus water provider to eliminate paying sewer services for water that has evaporated (thus not being returned to the water system).

- j) **Kitchen/Cafeteria operational hours.** Kitchens are operational from 5:30 am to 3:00 pm. The operational hours for the cafeteria need to be coordinated with the respective campus. The Maintenance Department will ensure kitchen exhaust fans are turned off after cooking hours.
  - k) **Thermostats.** Programmable thermostats will be used at any location that is not connected to a building management system. Settings will be the same as above; **73** degrees during normal hours of usage, **80** degrees at a pre-determined time agreed to by the campus and Energy Manager.
  - l) **Irrigation.** Inspect for proper operation regularly. Schedule PM inspection of system semi-annually. To extent possible set program schedule to water in the early morning hours only as this will minimize evaporation and potential for diseases. Monitor and adjust watering schedules to avoid over watering during seasonal rains.
  - m) **Plumbing.** Inspect all plumbing for proper operation regularly and repair leaks as needed.
  - n) **Water heaters and boilers** will be set at 120 degrees except in food preparation areas.
  - o) **Weather stripping, door closers and caulking.** Repair/replace weather stripping, caulking and door closers as needed.
2. **Recycling.** The Texas Health and Safety code, Section 361.425 requires that school districts with 5,000 or more students to establish a program for the separation and collection of all recyclable materials generated by the entity's operations, including, at a minimum, aluminum, steel containers, aseptic packaging and polycoated paperboard cartons, high-grade office paper, and corrugated cardboard. As of January 2016 the District has implemented a district-wide program using the services of Redfish Recycling. It is estimated that over a **130 tons** of recyclable material will be collected each school year period (ten months).
3. **Trash collection.** The maintenance department will annually conduct an evaluation to determine if the size containers being used and the frequency of the collections is in line with the needs of the campuses. Also during Winter Break and summer, trash collections will be **suspended** to the extent possible.
4. **Campus Administration will:**
- a) Avoid using large assembly areas such as the gym for small groups that can comfortably meet in smaller areas.
  - b) Schedule the use of classrooms and other spaces wisely. Use the fewest number of rooms possible for summer or night programs. Minimize the number of buildings being used.
  - c) Remind teachers/staff to turn off lights when not being used and to keep windows closed.
  - d) Remind teachers/staff to keep all exterior doors closed. This will keep heat, humidity and

pests out.

- e) Report any issues that are causing energy/water resources to be wasted.

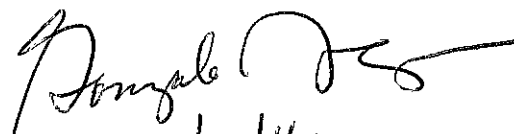
**5. Child Nutrition Department will:**

- a) Ensure staffs turn off lights and other equipment when they are not needed.
- b) Purchase Energy Star rated equipment when feasible.
- c) Identify items that can be turned off during extended school closures.
- d) Report any issues that are causing energy/water resources to be wasted.
- e) Initiate other energy and utility saving measures as appropriate.

**6. IT Department will:**

- a) Review the feasibility of installing and implementing a software application that will operate through the network to put computers in a "sleep" or "hibernate" mode at a designated time. EZ GPO is a free application that can be downloaded from the EnergyStar.gov site.
- b) Join the Energy Star "Low Carbon IT" campaign by completing the Pledge Form located at the EnergyStar.gov website.
- c) Report any issues that are causing energy resources to be wasted.
- d) Initiate other energy and utility saving measures as appropriate.

This plan will be reviewed annually. Conserving and reducing the District's energy and utility costs as well as recycling demonstrates LFCISD's commitment to being good stewards of our financial resources as well as being proactive about preserving our environment.

  
8/13/14