

Tolleson Union High School District #214 Utilities Use Plan

ENERGY MANAGEMENT AND CONSERVATION

The Governing Board believes that all reasonable measures should be taken to conserve energy. The Governing Board directs the administration, supported by the school staff, to implement cost effective operating procedures to reduce energy consumption in school facilities. The Governing Board further directs the administration and the staff to continually assess the consumption of energy and make recommendations for improved energy conservation.

Energy Operating Procedures and Guidelines

Goals

The goals of the District's Energy Management program are to:

1. Ensure safety (Please note: a request for an exception for a legitimate safety need, to any portion of this document, may be submitted to the superintendent in writing.)
2. Ensure necessary comfort during occupied times.
3. Maximize savings through:
 - a. Monitoring usage.
 - b. Implementing a preventive maintenance program for facilities and systems, including HVAC, building exterior envelope, and moisture management. The School Facilities Board (SFB) will be used as a guideline.
 - c. Educating all staff and students on appropriate energy savings practices.
 - d. Reporting energy usage and savings. Tracking will be thru Utility Direct, software the district currently has in place.

Responsibility

1. Responsibility for developing an "Energy Conservation Ethic" rests with all employees, students, and patrons.
2. The Building Principal has the primary responsibility of their respective campus for facility related items which will include total energy usage of his/her campus site. This responsibility may be delegated to an assistant principal who will oversee facility related items which may include the plant manager.
3. The primary occupant of a given space has responsibility within that space to implement energy conservation measures.
4. The plant manager is responsible for control of common areas, i.e. halls, cafeteria, etc. and to verify that non-occupied shutdown procedures are followed.
5. The Plant Manager and/or the District Director of Facilities will perform routine audits of usage/cost of individual campus sites and communicate the audit results and recommendations to the Building Principal.

General Energy Conservation Practices

1. Classroom doors are to remain closed when HVAC systems are operating.
2. Ensure doors between heated/air-conditioned spaces and non-heated/non-air-conditioned spaces remain closed at all times.
3. Passive energy consumers i.e. televisions, DVD/video players, etc. should be unplugged during periods of non-use. Please note: many appliances as noted draw energy even when turned off.
4. Microwaves, coffee pots, refrigerators, and personal appliances should be removed from classrooms and utilized in staff lounge areas only.
5. All exhaust fans should be turned off every day and during unoccupied hours.
6. Where possible, individual comfort levels should be managed with appropriate warm or cool clothing.
7. Kitchen equipment should only be turned on when in use.
8. Proper utilization of data logs will be initiated and maintained to monitor relative humidity, temperature, and light levels through the district's buildings to ensure compliance with district guidelines.

Heating and Cooling

1. Heating season set points include the following:
 - a. Occupied – 68-72 degrees.
 - b. Unoccupied winter – 60 degrees.
 - c. Unoccupied spring/fall – turned off (weather permitting).
2. Cooling season set points include the following:
 - a. Occupied – 74-78 degrees.
 - b. Unoccupied – setback to 82-83 degrees.
3. Additional Heating/Cooling Notes:
 - a. The unoccupied time begins when the students/teachers vacate the area for the day.
 - b. Air-conditioning and heating systems should be turned off during spring, summer, and fall days when the natural occurring temperatures are within the comfort ranges note above. In addition, during periods of mild weather and where cross-ventilation is available, shut down HVAC equipment and adjust the temperature with windows and doors.
 - c. Ensure outside air dampers are closed during unoccupied times.
 - d. For any 24-hour period of time, relative humidity levels should not average greater than 60%.
 - e. Air conditioning should be put in unoccupied mode (83 degrees) in buildings during the summer unless the facilities are being used for summer school or for team cleaning. Air Conditioning set back to 83 degrees should be used in the summer in unoccupied spaces. Rooms that are running PCs should have the A/C for cooling set no higher than 82 degrees for cooling of the equipment. Individual space cooling is allowed for employees during occupied times and activities

should be scheduled to allow for cooling of a single building on a multi-building campus where at all possible.

- f. Hot water systems should be set no higher than 120 degrees in restrooms and 140 degrees food service (with dish-washer boosters).
- g. Ensure all hot water re-circulating pumps are switched off during unoccupied times.
- h. For heat pumps, ensure a 6 degree dead-band between heating and cooling modes.

Lighting

- 1. All unnecessary light in unoccupied areas will be turned off. Teachers should make certain that lights are turned off when the classroom is unoccupied.
- 2. All outside lighting will be turned off during daylight hours.
- 3. Gym lights should be on only when the gym is being utilized.
- 4. All lights (except safety night lighting) will be turned off when students and teachers leave school. Custodians will turn on lights only in areas in which they are working.
- 5. Lights should be used only when definitely needed. During the air-conditioning season, unnecessary lights add to the air-conditioning costs as they are a heat generator.

Energy Management System (EMS) equipped schools

- 1. The plant manager will note on a log sheet on a weekly basis that the system has been checked.
- 2. The EMS check list will consist of start and stop times, temperature settings, and days of operations in regards to the districts holiday schedule, as well as, the schools operating calendar.

Water Management – Potable and Non Potable

- 1. Field watering will be monitored by the plant manager in conjunction with the assistant principal – athletics to maintain optimum field conditions.
- 2. Winter lawns (rye grass over seeding) will consist of 2 baseball infields and approximately 30,000sq.ft.

Summary

These procedures and guidelines supersede all previous instructions relating to energy conservation and building management. They are not intended to be all-inclusive and may be modified as needed by the superintendent or designee.