

LAMAR STATE COLLEGE - PORT ARTHUR

STATE AGENCY ENERGY SAVINGS PROGRAM

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1. Executive Order RP 49 by the Governor of the State of Texas

State Agency Energy Savings Program

Each state agency shall develop a plan for conserving energy and shall set a percentage goal for reducing its usage of electricity, gasoline, and natural gas.

Each state agency shall submit the energy conservation plan to the Office of the Governor and the Legislative Budget Board (LBB) no later than December 1, 2005.

Each state agency shall report back to the Office of the Governor and the LBB with goals achieved, and ideas for additional savings on a quarterly basis. The first quarterly report shall be due no later than April 1, 2006.

Each state agency shall post its report in a conspicuous place on its internet site for public inspection.

2. Overview of Lamar State College - Port Arthur's Campus

Lamar State College - Port Arthur's (LSC-PA) campus consist of twenty-seven (27) buildings wholly owned by the College and one (1) leased space, sited on a campus of approximately fifty (50) acres. The total gross square footage of campus buildings is 299,654 square feet. There are twenty-five (25) separate electrical services supplying power on campus. We also lease some area-lighting fixtures from our electrical utility provider (these fixtures are grandfathered in and will not be replaced once removed). LSC-PA also has twenty (20) natural gas meters, serving 271,641 square feet of space on campus. Each of our buildings derives their water and sanitary sewer service from the City of Port Arthur municipal water / sewer service.

3. Summary of State Energy Savings Plan

Below is a narrative summary of the overall goals, strategies, and desired outcomes for addressing utility use at the LSC-PA campus. By identifying and implementing these measures the LSC-PA campus plans to reduce energy consumption by 1 to 3 percent.

Since LSC-PA is not in an area served by an ERCOT member, we must purchase our electrical power from the sole provider in our area, Entergy Texas, Inc. This eliminates any competitive option in our purchase of electrical energy. The same is true of our natural gas service, since there is no other gas company providing service in our area. This lack of competitive option in our area means that although we have some control over the amount of energy we consume, we have no control over the rates that we are charged for that energy. Considering the historic escalation of energy cost, it is likely that even with a significant reduction in consumption; we may still experience a rise in actual cost of energy.

Goals

- Identify energy and water cost reduction measures
- Implement feasible cost reduction measures
- Further strengthen current energy management processes
- Increase employee awareness of utility conservation measures
- Effectively reduce energy and water consumption

Strategies

- Form an Energy Management Team comprised of representatives from the administrative staff and faculty for assessment, implementation, and monitoring of the program
- Develop an Energy Action Plan to identify energy reduction steps available to the campus
- Audit utility consumption and budget information
- Assess building/equipment make up and efficiency
- Analyze data obtained through energy audits and assessment reports
- Allocate resources, staffing and process alignment to support energy management plan
- Ensure endorsement of the energy management plan by institutional leadership
- Provide employee training to maintain continued energy conservation and cost savings
- Monitor the implementation status of energy conservation measures

Desired Outcomes

- LSC-PA's mission and operations are maintained at optimum levels
- Implementation of measurable energy conservation actions are successful
- Energy Savings Plan has a positive environmental impact both in reduced consumption and aesthetically with the relocation / consolidation of electrical services.
- Energy reduction and cost savings are realized

4. Implementation Schedule of Goals and Measures for Cost Reduction

The Lamar State College - Port Arthur Energy Management Team plans to achieve the College's established goals by implementing the recommended cost effective energy savings measures that are identified in the Energy Savings Plan and by monitoring the status of implementation of the plan.

After completing preliminary utility audits and energy analyses, the Energy Management Team will designate items identified as potential cost saving measures. Some of these items have already been implemented and others will be implemented in the short term. Some items will have a cost associated with them and some will not. Other items will have a significant financial impact and will be implemented in the long term, pending budgetary approval.

Short Term

- Replace incandescent light bulbs with energy saving fluorescent bulbs
- Use automatic power-save-mode on electronic equipment
- Lower thermostats in winter
- Raise thermostats in summer
- Reduce heating/air conditioning load during unoccupied hours
- Install exterior shading devices
- Turn off equipment when not in use
- Turn off interior lighting when not in use
- Monitor timers to achieve optimum control of exterior lighting
- Monitor and adjust as necessary the temperature of water heater
- Monitor and adjust the watering of exterior foliage as to need
- Seal cracks around windows and doors

Long Term

- Construct a Central Physical Plant building, adding new chillers and boilers to serve the major buildings on campus
- Construct a College owned high-voltage substation on campus to provide one-point metering and power distribution to the majority of the buildings on campus
- Continue the replacement of analog thermostats with programmable models
- Replacement of T-12 fluorescent lighting with more efficient fixtures utilizing T-8 lamps and electronic ballast
- Retrofit exit signs with energy efficient LED light sources
- Replace inefficient boilers and water heaters with high efficiency units
- Replace older DX air conditioning units in buildings remote from the center of the campus with high SEER units.
- Replace energy management system at Student Center with more modern system that is compatible with the other building systems on campus.
- Expand the use of the Energy Management Program to other buildings.

5. Utility Awareness Plan

This section describes how to make employees aware of utility conservation measures by using methods which directly effect changes in behavior.

The following will be used as tools to increase employee awareness and participation. These tools will be developed by the Energy Management Team once the preliminary utility audits and energy analyses have been completed and recommendations have been made.

Surveys and Metering: Surveys of staff members will be useful in a variety of ways. First, survey results will be used to assist in the implementation and monitoring of the energy plan. Staff members will be asked about their current energy-use practices (control of temperature settings, use of window coverings, fans, lighting, etc.) and actions they are already taking to be energy efficient. This information will then be used to help identify desired behaviors and actions to emphasize in the plan.

Second, utility bills will be analyzed to indicate consumption per building, i.e. kilowatt hours divided by gross area and dollars billed divided by gross area. Each building will be compared for operating cost and hours of utilization. The buildings will then be ranked in order of perceived efficiency. Mechanical corrections and occupant training will be concentrated first in the buildings with the most need.

Third, to use a pre-condition survey and metering data as benchmarks for later comparison and evaluation with a post-survey. Using this approach, responses about energy-use behaviors can be compared both before and after the original surveys to help evaluate the effectiveness of the campaign in changing employee's values and habits.

Fourth, to use the pre-condition survey to initiate and introduce the behaviors targeted for change. By asking employees if they are already taking actions to save energy, you are also educating them about what those actions are and implying that some are better or more important than others.

Review: Personal interviews will be used to obtain input from administration, faculty, and staff. These people can help evaluate the plan and provide comments on what actions will be required of staff and faculty members and the responsibilities of different departments.

Delivery methods for the above mentioned utility awareness tools may include staff meetings, departmental meetings, email, etc.

All recommendations will be reviewed with the President at the regularly scheduled Projects Planning Meeting. Any plans or actions will be approved by the President or his designee prior to implementation.

By utilizing these methods of information gathering and dissemination on an on-going basis, energy saving actions realized may include, but are not limited to the following:

- Keep blinds or curtains drawn during a hot summer day; open them during the sunny part of a winter day
- Make sure floor or wall vents are not blocked by furniture or other obstructions
- Use daylight instead of electric light whenever possible
- Turn out lights when you leave your office for more than a few minutes
- Avoid using space heaters
- Turn off office machines overnight
- Share printers and fax machines instead of purchasing separate ones for each person
- Turn off water taps when water is not being used; report all leaks promptly
- Leave thermostats at pre-set temperatures

6. Savings Monitoring and Evaluation Plan

This plan will be developed by the Energy Management Team after completion of the initial Energy Savings Plan. Development and implementation of monitoring and evaluation tools will be ongoing and subject to change as needed.

7. Project Implementation Update

This narrative will describe actions taken since the initial Energy Savings Plan was submitted. This section will be one of the reporting criteria to the Governor's Office and LBB. It will be addressed initially on April 1, 2006 and quarterly thereafter.

8. Lamar State College - Port Arthur Energy Savings Plan

As per Section 1 as ordered by the governor, state agencies are required to implement an energy savings program. This order requires each agency to develop a plan for conserving energy and set a percentage goal for reducing its usage of electricity, gasoline, and natural gas. LSC-PA Energy Management Team members have developed this plan as a group and will jointly evaluate, implement, and monitor the energy savings measures that are identified.

9. Fleet Fuel Management Plan

LSC-PA has a fleet of 12 vehicles. Of these six (6) are maintenance vehicles that are essentially rolling tool boxes that rarely leave the campus. Fuel consumption on these vehicles is so low as to be negligible. Two (2) of the vehicles are for courier and security services. The other four (4) vehicles on campus are used for transportation of students and faculty. We currently have a State approved Fleet Management Plan that defines the allocation process for these fleet vehicles. We will continue to review the utilization of these vehicles to make sure that we are managing these assets as efficiently as possible.

10. Contact Information

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