

**FY 2005 RESOURCE EFFICIENCY PLAN
For Sam Houston State University**

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INTRODUCTION

The Resource Efficiency Plan was first written in FY 2003.

This Resource Efficiency Plan (REP) is submitted to satisfy Government Code Chapter 447. STATE ENERGY CONSERVATION OFFICE AS AMENDED BY CHAPTER 1398, 77TH LEG. The implementation is assigned to the Comptroller of Public Accounts and listed in Texas Administrative Code Title 34 part 1 Chapter 19 Subchapter B Rule 19.14.

Rule 19.16 requires a Long Range Utility Services Plan (LRUSP) which "... may be submitted ... as part of, the Resource Efficiency Plan." Sam Houston State University (SHSU) has chosen to include the LRUSP as part of this REP.

The REP is a tool to report energy and water use as well as the potential for facility upgrades and utility savings. The REP is updated and certified by the President and/or Vice President of SHSU every two years beginning with the 2003 fiscal year. The progress of the water and energy conservation retrofit program and utility consumption as of the end of the fiscal year, August 31, are to be reported by October 31 and the next six months through February are to be reported by April 30.

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DEFINITIONS

Available Funding --- Any funds that are appropriated for utility efficiency improvements or related capital upgrades, repairs, maintenance, and operations of utility systems; funds that would ordinarily be allocated to pay for utility expenses; and funding from a financing method that is prescribed by Government Code, 2166.406.

Comprehensive Project --- All utility related facility and operational improvements which, when considered together, can cost effectively be implemented at one time.

Cost Effective Measure --- Efficiency measures that individually or as a group create measurable and verifiable utility cost savings that are at least as great as their cost within their useful life, not to exceed 15 years.

Five-Year Energy Management Plan --- A comprehensive plan that consists of a Resource Efficiency Plan and a Long Range Utility Services Plan.

Long Range Utility Services Plan --- A long range plan for the delivery of reliable, cost-effective utility services for the agency or institution.

Preliminary Energy Audit (PEA) --- An overview of facility energy and water use including an examination of utility bills conducted during a walk through of the facility and brief interviews of facility personnel designed to identify potential cost effective energy and water conservation measures.

Preliminary Utility Audit (PUA) --- Used interchangeably with Preliminary Energy Audit defined above.

Resource Efficiency Measure --- Any cost effective measure that is designed to reduce utility consumption costs and related operating costs of governmental facilities.

Resource Efficiency Plan --- A comprehensive biennial plan that a state agency or institution of higher education prepares and that identifies potential cost effective measures for minimizing utility consumption and costs in all agency facilities and buildings, along with implementation schedules and methods of financing the measures as outlined in this chapter.

Resource Efficiency Plan Completion Certification Document --- a document submitted by a state agency or institution of higher education to the State Energy Conservation Office (SECO). In a format specified by SECO, indication that the agency or institution has completed or updated its Resource Efficiency Plan, and the Plan is available for review by SECO.

Utility --- Electricity, gas, thermal or other energy resource, water, and wastewater.

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Utility Assessment Report (UAR) --- A detailed assessment of utility and utility related operational efficiency that is prepared by, or under the supervision of, a person who is registered as a professional engineer under the Texas Engineering Practice Act, and which identifies each of the cost effective utility and utility related operational efficiency measures or practices that apply to the building or facilities of a state agency or institution of higher education.

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PLAN REQUIREMENTS

SECTION (1) – Utility Strategy and Goals

Promote water and energy (utility) conservation through cost low cost and no cost upgrades by the University's maintenance employees.

Promote utility system upgrades identified by PEA's with one year or less paybacks from utility funds.

Identify and seek funding sources for utility retrofits identified by PEA's with paybacks of one to two years.

As funds are made available have UARs performed, as required, by a professional engineering firm.

Evaluate other options for utility conservation strategy implementation such as the LoanSTAR program or third party finance and implementation as allowed by the Education Code Chapter 51.

Reduce consumption per square foot of gross area by 1 percent per year from baseline year of 2000.

SECTION (2) - Utility Assessment Reports (UAR)

Buildings and facilities will be listed according to their utility consumption with high utility consuming buildings receiving PEA before those with lower consumptions per square foot. Within 2 years PEA will be completed on buildings representing an aggregate total of 80% of the campus utility consumption.

A sub-committee of the REP implementation committee will oversee and/or perform the PEA at the rate of not less than 4 per month beginning in March, 2003.

The UAR which requires a professional engineering study are funding depended and a funding request of those buildings and facilities representing the greatest potential will be made as soon as the PEA process begins. As noted above buildings with the greatest potential will have PEA completed first.

APPENDIX 1 – UTILITY STRATEGY AND GOALS SUMMARY

APPENDIX 2 – UTILITY ASSESSMENT REPORTS (UAR)

Utility assessment reports have not been prepared. These reports cannot be generated until preliminary energy audits have been conducted. A timetable for PEA's has been

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APPENDIX 3 – IMPLEMENTATION SCHEDULE

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Fleet Vehicle Fuel Conservation Plan

Fleet Management Background

Fuel Sources at Sam Houston State University

Three fuel sources have been used at Sam Houston State University over the past 10-15 years: gasoline, diesel, and propane gas.

Propane gas was aggressively pursued in the mid 1990's but usage came to a halt around 2000. The price of propane gas made it economically unfeasible as a fuel source. Additionally, maintenance services became increasingly difficult to obtain and new car dealerships were beginning to back down on warranties where fuel conversions had been made. Vehicle operating characteristics never were stable on any of our propane powered vehicles. No conservation programs are proposed in this area.

Diesel fuel has been traditionally a fuel of choice in grounds maintenance and in our larger fleet vehicles. Recently the use of diesel has expanded into more cargo or passenger related vehicles. The consumption is still at rather low levels and vehicles using this source are selected mainly for their power needs. No conservation programs are proposed in this area.

Gasoline, the final fuel type, is by far the primary source of fuel on campus and it poses the most opportunity for conservation programs. The Fleet Data Management System now permits us to easily track consumption of fuel alongside other significant vehicular information. Good data is available beginning in FY 2003.

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Consumption History

Gasoline Consumption History

<u>Fiscal Year</u>	<u>Gallons Consumed</u>	<u>Miles Driven</u>	<u>Fleet MPG</u>	<u>Percent Chg</u>
2003	38,391	508,073	13.23	Baseline
2004	42,672	599,831	14.06	+6.27%
2005	41,206	609,354	14.79	+12.02%

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Goals and Conservation Strategy

Maintenance Conservation Initiatives

End User Awareness Programs

Purchasing Initiatives

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Long Range Utility Services Plan

Water

Water and sewage services are provide by the City of Huntsville and are fixed by Council vote based on a cost of service study with consideration that state institutions do not pay property taxes. Little opportunity for negotiating rates exists for these services.

Electrical

Electrical service is provided by Entergy, the local electrical monopoly, with deregulation of electrical possibly later in 2003. Entergy operates across state lines therefore Federal Regulations have limited deregulation to this date. We have been contacted by electrical power providers and will have an opportunity to competitively bid electrical power in the near future dependant upon Public Utility Commission action. A sub-committee of the REP implementation committee will develop an enquiry document before the end of this fiscal year which ends August 31, 2003.

Natural Gas

Natural gas is primarily provided by Texas General Land Office with Centerpoint Energy (alias Entex) transporting the gas and billing locally.

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CERTIFICATION

University President's Certification of Plan