

TWU Energy Savings Program – 4Q-2006 Update

October 1, 2006

Summary of Overall Strategy

Texas Woman's University (TWU) has been a leader among state agencies in implementing energy efficiency strategies and techniques over the past five years. With the performance contract project currently generating approximately \$2.5 million in utility cost savings annually, TWU has turned its attention toward more no cost-low cost, operational utility savings strategies, utility procurement and tracking processes and unique ways of procuring utilities as a means to build on these impressive utility savings.

The construction of a new campus in Houston and the retro-commissioning of an existing building on one of the Dallas campuses has set the stage for many operational savings strategies, serving as a pilots for the technology and tactics to be expanded to any new construction and existing buildings.

Operational Utility Savings Strategies

The implementation of an operational utility savings is largely not possible on a large scale and must be implemented a building-at-a-time. The new campus in Houston utilizes several technologies and tactics that TWU hopes to extend to new construction projects and large renovations. These include:

1. An integrated, Web-accessible building control system consolidating all intelligent building controls under one front end. This consolidation permits the sharing of data that optimizes the operation of HVAC, lighting and powered plumbing systems. These systems will likely be used in any new construction and has already been implemented on a spot basis in the Denton and Dallas campuses.
2. In addition, this control system is much more suited to monitor the actual operation of these systems because of its data-handling capabilities. This feature allows the adjustment and fine-tuning of strategies as conventional systems cannot.
3. These systems feed utility usage data into advanced tracking tools that can help diagnose excessive usage and assist in optimizing systems operation as well as providing ways to automatically reconcile and monitor utility bills, cutting labor extended in this effort significantly.

The classroom building of the Dallas Parkland campus completed a retro-commissioning of the 2nd floor's HVAC and controls system. This extensive study, test/adjust/balance and control system adjustment has eliminated numerous comfort issues and has appeared to reduce energy consumption. This procedure will be used as a template for implementation of other TWU building with comfort and /or excessive energy use.

Utility Procurement

Use of the deregulated electricity market to advantage continues at the Houston and Dallas campuses. As the contract nears expiration

TWU has participated in the deregulated natural gas market for many years, but has negotiated favorable rates from and stayed with the Texas General Land Office. Our participation in an indexed rate has hurt for a few months where spikes were experienced but in an overall sense has allowed costs to come in under budget. We are trying to hedge spikes by converting a portion of our consumption to a fixed rate when those rates are more favorable. We will also be entering into a new gas transportation contract this coming November and are currently in negotiation for that.

As mentioned in previous updates, our flagship campus is located in a city with a municipal electric utility that has not entered the deregulated power market. This restrictive circumstance is not within our power to influence, but TWU does challenge the electric utility to provide the most favorable rates available within its legislated rate schedules for each of the meters that serve us. The same can be said of water/wastewater usage.

Utility Tracking and Monitoring

TWU currently logs all utility bills in an inexpensive, on-line web-based tracking program. Again due to some software implemented in the new Houston campus, the plan is to migrate this tracking system to an advanced tracking tool that not only uses billing data, but monitored data directly from the building systems.

TWU has also reformulated its utility allocation formulas, in part based on the data being collected from a utility monitoring system implemented in the last few years. TWU plans to complete the major portion of this system this fiscal year.

Utility Savings Goals

It appears that utility savings are being boosted by outside forces (the reductions in fuel, natural gas and electric rates). In this temporary lull, TWU plans to shore up its tracking systems, make sound procurement choices and develop the mechanisms to optimize its utility use with low cost, building-by-building strategies for existing buildings and efficient design of new buildings and major renovations for the inevitable re-escalation of utility costs.