State Preservation Board
Energy Conservation Quarterly Update - January 2007

The SPB is responsible for the operation and building management of the Capitol, Capitol Extension, Capitol Visitors Center, the Capitol Visitors Parking Garage, and the Bob Bullock Texas State History Museum.

The buildings' uses range from office and meeting space, to display space for historic artifacts, visitor programs, dining facilities, retail space, auditoriums, theaters, and parking facilities. Each of these buildings provides opportunities for the agency to conserve energy. The agency will continue to identify energy savings it can directly affect and will work with the TBPC and the executive and legislative agencies it serves to reduce energy consumption wherever possible.

Capitol/Capitol Extension
The HVAC staff continues to collect data on air handler loading, as well as data on chill and hot water flow. There is no reset on the domestic hot water at this time. Staff are reviewing steam generator replacement options, and potential energy savings are a key component in this decision making process. The energy management system also continues to provide energy conservation assistance by reducing energy usage when there is a reduction in demand. Pricing and information on length of payback and potential energy savings for variable frequency drives for selected exhaust fans and air handlers is being collected by staff as well.

The electrical staff continues to collect baseline Kilowatt Hour (KwH) usage data in order to improve SPB's energy conservation efforts; historical usage data is held at TBPC, since they are the agency appropriated dollars to pay the utility bills for all of our buildings. The SPB has purchased 124 compact fluorescent light fixtures to replace existing 150 watt quartz light fixtures in the Capitol. At this time sixty-five of the 124 fixtures have been installed. The remainder should be completed in the next quarter. With a 24 hour per day burn time it is expected there will be an estimated 117,165 KW reduction on an annualized basis. Mechanical timers set for 30 minutes have been installed in janitors' closets in both the Capitol and the Extension. Further lighting upgrades using compact fluorescents to reduce energy usage are planned for this summer. Exterior nighttime lighting of the building has been adjusted and the exterior thirty foot pole lights continue to turn off automatically at midnight.

Bob Bullock Texas State History Museum
In addition to continued conservation efforts itemized in this document the facilities staff is evaluating performance-based energy management contracting with the technical assistance of the State Energy Conservation Office.

The natural gas-fired boiler sequencing and pressure settings have been tuned to run with less swings in the firing operation in order to reduce natural gas usage while continuing to maintain proper humidity settings. The maintenance staff reduced the boiler usage to one boiler in May from the usual two. Both boilers were turned off in July to see if we could operate without a boiler and still maintain artifact humidity control, which is critical to artifacts on loan in the exhibits. Toward this end, a de-humidifier was purchased for the IMAX equipment room, which allows us to manipulate temperature and humidity levels to maintain optimum environmental conditions. Chiller usage is monitored so that one chiller is used until day time temperatures are expected to be above 97 degrees, and then the second system is started early in the day to reduce the demand charge later in the day. Chiller and boiler operations account for a significant amount of energy consumption. SPB anticipates that the natural gas savings due to turning off the 100 HP boiler should be seen in the next quarter, along with decreased electrical demand.

Day to day maintenance practices continue to emphasize preventive work in order to keep equipment operating at best efficiencies. This includes cleaning exchangers in the steam and chill water systems to obtain optimal heat transfer, as well as maintaining proper building pressure for temperature and humidity control.

Other Efforts

All SPB staff have been notified to use the "hibernation" setting on computers to reduce energy usage. Both agency vehicles are well maintained in order to operate as close to the optimum gas mileage ratings as possible.

Future projects include continued focus on switching to compact fluorescent light fixtures in other areas of SPB-managed buildings which offer immediate savings while still maintaining the illumination levels desired. Although the offices and conference rooms in our buildings are often used after hours, especially during Legislative Sessions, night setbacks continue to be studied.