

**Texas Workforce Commission (TWC)**  
**Update to State Agency Energy Savings Plan**

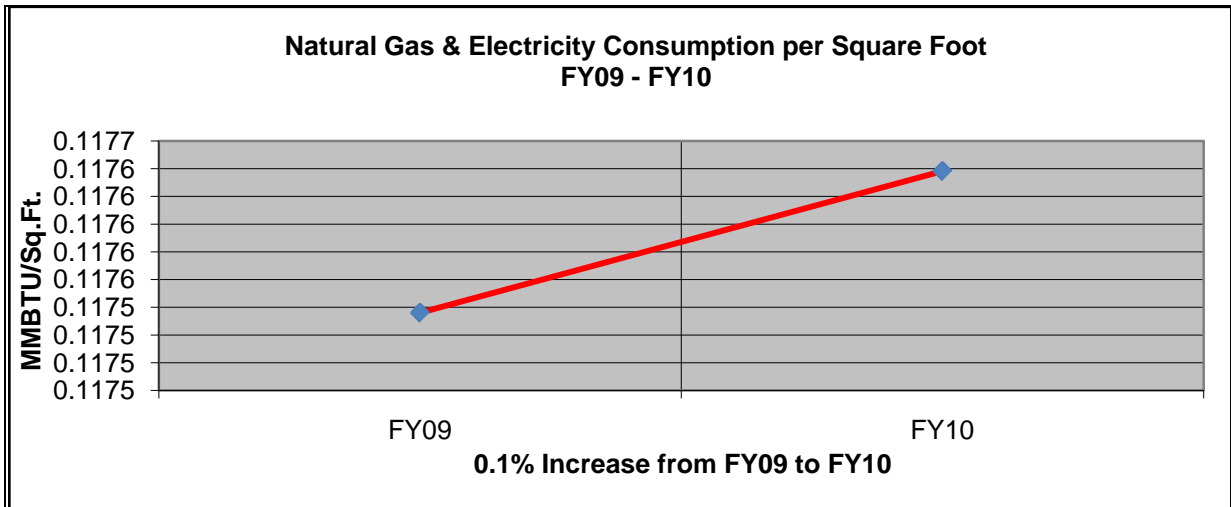
**April 2010**

**A. TWC Energy Consumption Update**

With Executive Order RP49, TWC established a goal to reduce electric and natural gas energy consumption (reported as MMBTUs/sq. ft.) by **2%** per year for 5 years. Since December 2005, TWC has met or exceeded our goal.

**Electricity and Natural Gas – FY10 Update**

TWC did see a very slight **.1%** energy consumption increase the period September to January of FY10 compared to the same period of FY09. TWC added over 700 staff this past year, as well as an additional Telecenter, to meet the increased Unemployment (UI) Claims and workforce development needs during the economic downturn this past year. So, for our energy usage during this period to remain virtually unchanged illustrates that TWC has reduced its energy consumption on a per capita basis.



**Vehicle Fleet Fuel Usage - FY 10 Update**

TWC is in the process of completing its latest scheduled vehicle replacement which will be alternative-fuel compliant. TWC's fleet is 99% capable of using alternative fuels or is waived from the alternative fuel requirements due to vehicle size.

Overall fuel usage **increased slightly by 7.5%** for September to January of FY 10 over the same time period for FY09. The increase in usage was due to transporting materials and equipment associated with the opening of a new Telecenter in San Antonio and the State Conference. As a result, fleet services were used more heavily than in previous years.

TWC believes the long term trend in fuel usage will continue to be downward in the future.

## ***B. Results of Planned Initiatives to Increase TWC Consumption Goals***

Detailed below is an update to the deferred maintenance projects initiated this year intended to reduce future energy consumption. Completed in FY2010 and current projects are listed.

### **Projects completed in FY2010:**

- **Trinity Headquarters Building – HVAC System Upgrade:** The upgrade at the Trinity building replaced three old air handlers in the building. By replacing these units with one energy efficient unit, it has reduced maintenance and consumption while improving the comfort of TWC staff working on the first floor.

The replacement unit is a reciprocal 110 ton chiller with a scroll chill water compressor. The Energy Efficiency Ratio (EER), which is the ratio of output cooling vs. input power in watts, went from a 9 EER rating to a 16 EER rating that will almost double the efficiency. TWC received a rebate check from the City of Austin for buying this energy efficient product, and the earth friendly refrigerant counted as green building points.

Upgrade of the DDC systems for the new air handler will allow a zone by zone time and temperature setting, allow for night and weekend setback temperatures and better control of fresh air into the building. The energy savings using the new direct digital control system is estimated at 10-20% over existing consumption.

*This project was completed in January 2010.*

- **Austin Annex Headquarters Building - lighting replacements:** During Our Annex building renovation project we replaced 600 existing 4 lamp T12 magnetic lighting fixtures with 3 lamp-T8 recessed indirect electronic lighting fixtures and 120 corridor T12 fixtures with T8 fixtures. Modern Fluorescent fixtures with the newer T8 lamps and electronic ballasts far surpass the benefits of traditional T12 fluorescents. T8 lamps use Electronic ballasts, which use semi-conductor components, along with other components. They also provide increased efficiency in light output with less energy consumption than traditional T12 magnetic ballasts. From old technology (4 lamp-T12 magnetic fixtures) to new technology (3 lamp-T8 electronic fixtures) actual energy savings on our lighting cost will average 40 percent. All light switches have been replaced with light control sensors in all offices for better control of lighting and switching lighting off that is not in use. Overall lower operating temperatures of lighting will reduce air conditioning costs also. These changes will promote significant returns in operational efficiency and reduced environment impact by using less energy.

*The project was completed in December 2009.* TWC will closely monitor the energy consumption of this building in the future.

By making incremental improvements to building performance in areas like lighting and lighting sensors for controls TWC has made exceptional progress in energy savings in many of our buildings.

**Projects currently in progress:**

• **Austin Main Roof Replacement:**

New roof system (partial) will be a combination of standard 3-ply fiberglass felt over a vented base sheet with a modified bitumen reflective cap sheet (white solar reflected roof increasing energy savings). The bottom layers of the roof system are standard construction, the cap sheet adds the energy efficiency by reflecting heat. In addition, the R value of the insulating system will be R-19.

• **Fort Worth Roof:**

New roof system will be a combination of standard 3-ply fiberglass felt over a vented base sheet with a modified bitumen reflective cap sheet (white solar reflected roof increasing energy savings). The bottom layers of the roof system are standard construction, the cap sheet adds the energy efficiency by reflecting heat. In addition, the R value of the insulating system will be R-19. The old roof was rated R-13.

• **Houston Beechnut HVAC, Roof Repairs:**

The project replaces 6 of 8 roof top units with new SEER ratings of 14.6. TWC's installation of natural gas service for heat and iLON digital controls that will monitor HVAC efficiency should reduce energy consumption and costs as well.

• **Paris HVAC:**

TWC is replacing the building HVAC system with new system that will have a SEER rating of 13.0. TWC's installation of natural gas service for heat and iLON digital controls that will monitor HVAC efficiency should reduce energy consumption and costs as well.

***C. Additional ideas/actions the agency has for reducing energy expenditures***

- Activate power management policies that turn off or reduce use of networked assets based on business hours and periods of low use.
- Consider transitioning to a virtualized desktop enterprise that can centralize and control power consumption.
- Increase telecommuting options where feasible.

***D. Additional ideas/actions to minimize fuel usage of all vehicles***

- Replacing all agency vehicles with hybrid electric/gasoline vehicles or motorized carts to perform campus facility services. This is done as we refresh vehicles. Currently five (5) out of nine (9) of our vehicles are capable of using alternative fuel.