

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

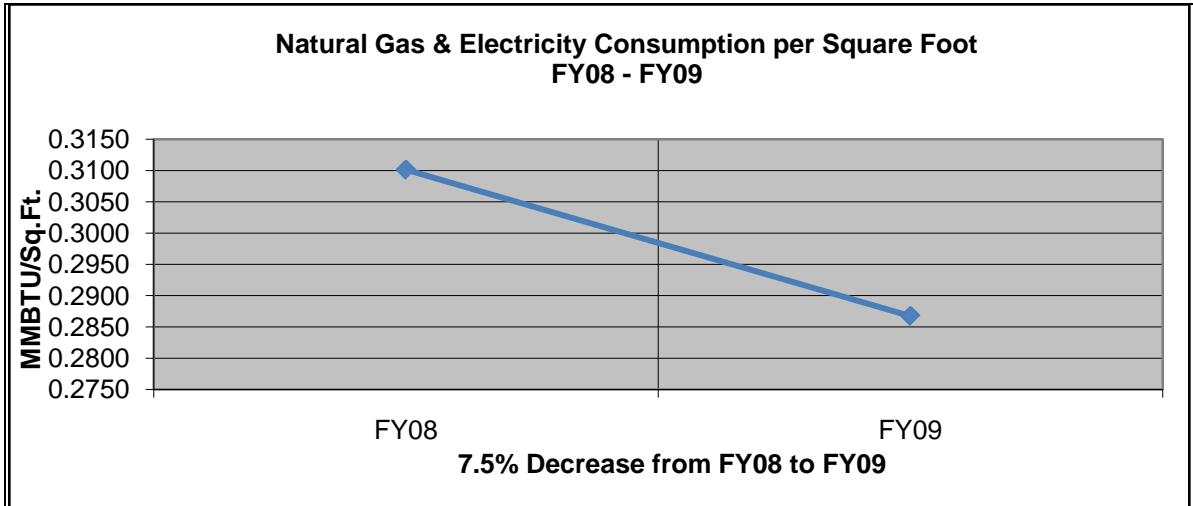
January 2010

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.

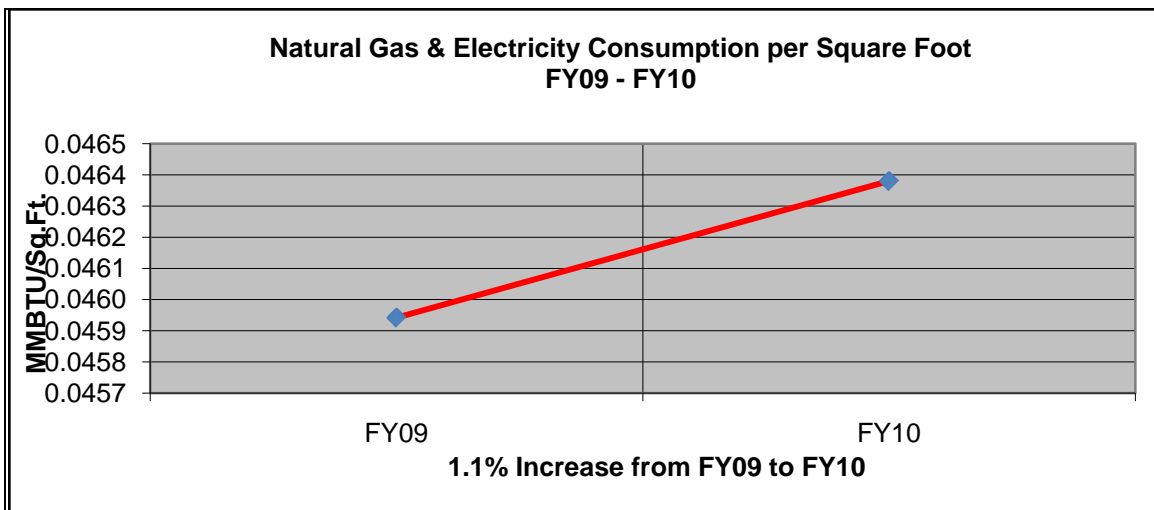
Electricity and Natural Gas – FY09 Results

TWC is pleased to report that it exceeded its energy consumption goal for FY 09. TWC had a decrease of **7.5%** in energy consumption for the period of FY09 compared to FY08.



Electricity and Natural Gas – FY10 Update

TWC did see a very slight **1.1%** energy consumption increase the period September to October of FY10 compared to the same period of FY09. This is due to an increase in usage at the Fort Worth building from September to October. TWC believes, as more months of data become available, we will continue to see the long term trend of an overall energy consumption decrease.



Even with this slight increase in usage for September and October 2009, TWC believes that energy conservation efforts and the installation of energy efficient systems and equipment have significantly contributed and will continue to contribute to our overall consumption savings efforts.

Vehicle Fleet Fuel Usage - FY 09 Results

TWC's is also pleased to announce it again exceeded its goal of reducing gasoline and overall fuel consumption by 2% per year for five years. Reduction in overall fuel usage was **decreased 5.3%** for FY 09 over the same time period for FY08.

With vehicle replacements being almost complete, TWC's fleet is 99% capable of using other alternative fuels (propane or E-85 alternative fuel).

As of October 2009, TWC had 9 active vehicles. Two vehicles use diesel only, two use gasoline only and five can use either gasoline or alternative fuel.

Vehicle Fleet Fuel Usage - FY 10 Update

Overall fuel usage **increased slightly by 1.4%** for September to October of FY 10 over the same time period for FY09. 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.

- **Trinity Headquarters Building - Roof Replacement:** The new roof system is 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 has been increased; the existing roof was rated at R14.5, the new insulation system is rated at R19.

The Trinity roof project was completed in July 2009.

- **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 is scheduled to be completed in December 2009.

- **McAllen Telecenter Building - HVAC unit replacement:** TWC installed two roof top air conditioners (Carrier 48PG units) equipped with natural gas heat. These Carrier 48PG units provide industry-leading operating efficiencies and are fully ASHRAE 90.1 compliant.

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

- **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.

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

- Request employees to shut off non-essential computers, coffee makers, other nonessential equipment and if feasible, 50% of copiers.
- Turn off the water cooler during periods of high electrical use, which is from 4 to 8 PM.
- Consider using battery-powered laptop computers in place of docking stations, and charge the batteries at night during off-peak hours.
- Increase telecommuting options where feasible.
- Have security personnel ensure all lights are turned off after office hours.

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.