



TITLE: Consider/Discuss/Act on a Resolution Establishing a Goal to Reduce Electric Consumption for City Facilities by Five Percent Per Year for Ten Years

MEETING DATE: October 2, 2012

DEPARTMENT: Public Works

CONTACT: Hal Cranor, Director

RECOMMENDED CITY COUNCIL ACTION: Approve Resolution

ITEM SUMMARY:

- In 2002 the State of Texas 77th Legislature passed Senate Bill 5 (SB5), which requires municipalities in non-attainment areas to accomplish three objectives:
 1. Establish goals to reduce its municipal electric consumption by five percent per year for five years beginning January 2002; and
 2. Implement cost-effective energy efficiency projects for existing facilities that will realize a reduction in the use of electricity; and
 3. Report annually to the State Energy Conservation Office (SECO) the municipality's results and the progress of its efforts.
- In response to SB5, during the five year period from 2002 to 2006, the City of McKinney reduced its municipal energy consumption by implementing several different energy saving programs. Then, in 2007, the Texas Legislature essentially extended SB5 by passing a follow-on bill, Senate Bill 12 (SB12). The requirements for SB12 are similar to those which SB5 prescribes, except that SB12 sets a usage reduction goal of five percent per year for a period of six years.
- Major energy efficiency measures that have been instituted since 2002 include the following:
 1. Developed a Centralized Automatic Air Conditioning Control System.
 2. Implemented an Air Conditioning Replacement Program to replace existing HVAC units with hi-efficiency HVAC units.
 3. Replaced or retrofitted lighting systems with energy efficient lighting.
 4. Modified or replaced traffic lights and street and parking lot lights with LEDs.
 5. Continued a comprehensive Periodic Maintenance Program for all facility equipment, such as HVAC units, ice machines, drinking fountains, light fixtures, etc.

6. Retrofitted Fire Station No. 6 via a Solar Array Project to provide approximately 45% of the energy needs of the station (SECO funded).
 7. Retrofitted the Gabe Nesbitt Concession Stand, a Parks, Recreation & Open Spaces facility, with Solar Thermal Water, Wind Turbine, and Solar Photovoltaic (DOE funded) (6kw) for educational purposes.
 8. Implemented Water Conservation and Employee Energy Awareness Programs.
- Although the City of McKinney continues a moderate pace of growth, this population growth nevertheless prompts increased energy demand, especially at the three water pump facilities.
 - Staff will file the required annual SB898 reports to document the City of McKinney's decreased demand for electric consumption.
 - Recently, Mayor and Council approved two (2) programs which support the effort to meet the goal of the resolution.
 - Remote-controlled athletic lighting system which will allow staff to regulate athletic field lights at nine (9) city parks
 - Remote-controlled system for school zone traffic signals and flashers.

BACKGROUND INFORMATION:

- 2011 was a challenging climatological year for the entire State of Texas. Locally, North Texas experienced record-setting cold winter weather, severe drought conditions, and record-setting high temperatures during the summer. However, despite these challenges, the City's energy savings were significant. **In 2011, overall energy consumption for all city facilities decreased 17% vs. the previous year.** Additionally, the 17% reduction in energy use for 2011 is the highest energy savings realized since the program was implemented in 2002.
- Last year the legislature approved Senate Bill 898 (SB898), which extends SB5 and SB12. Subsequently, the required annual reduction goal of five percent per year has been extended for ten more years beginning September 1, 2011. The new baseline year to report future electric usage consumption is September 1, 2011, through August 31, 2012.

FINANCIAL SUMMARY:

- Staff will request funds to implement practicable energy efficiency alternatives by the normal budget process and by grant applications. All programs submitted for funding will include specific cost analysis, i.e., implementation cost vs. the number of years for payback and subsequent future savings.

BOARD OR COMMISSION RECOMMENDATION: N/A

