Simple guide to: **Internal Energy Management**

Thursday, Jan 8, 2009

Summary

TVA's Internal Energy Management Program (IEMP) was started in the 1970's with the passing of the National Energy Conservation Policy Act (NECPA). This act was later followed by the Energy Policy Act of 1992 (EPAct92), Energy Policy Act of 2005 (EPAct05), Energy Independence & Security Act of 2007 (EISA 2007), various Presidential Executive Orders, laws and guidance. These laws and regulations have required the reduction of energy use in TVA buildings and operations, reductions in potable water use, increases in vehicle fuel efficiency and the application of sustainable principles.

The TVA Internal Energy Management Program consists of the following people:

- John E. Long, Jr. - Executive Vice President of Administrative Services and TVA Senior Energy Official
- Al Nayadley - Chief Energy Manager
- David R. Zimmerman - Manager of Sustainable Design
- Agency Energy Management Committee – Made up of representatives from TVA SBUs and BUs that share information and work toward meeting agency energy efficiency goals.

Details

What we help TVA do…

- Represent TVA at interagency meetings in Washington, DC to influence energy, water and sustainable legislation.
- Reduce vehicle fleet annual petroleum consumption.
- Purchase and use alternative fueled vehicles.
- Increase passenger car and light truck fuel efficiency.
- Reduce potable water consumption and associated energy use in facilities.
- Purchase and use equipment (computers, monitors, telephones, TVs, microwaves, power tools, coffee makers, lamps, etc.) that use low standby power (typically one watt or less).
- Use recycled content, environmentally preferable and biobased products when developing plans, drawings, work statements and specifications for TVA facilities.
- Reduce petroleum in its facilities by switching to less polluting resources, renewable energy sources or eliminating unnecessary fuel use.
- Expand the use of renewable energy in facilities plus purchase electricity generated from renewable.
- Design & build all new buildings to perform 30% better than the ASHRAE 90.1 or International Energy Conservation Code. Apply sustainable design principles to the siting, design and construction of new facilities and major renovations to existing facilities. Plus upgrade 15% of existing facilities to be sustainable by FY2015. (Presidential E.O, 13423 & EPAct05).
- Install meters on all federal facilities where practicable by October 1st 2012 (EPAct05).
- Of total consumed, use renewable energy (3% by FY2007, 5% by 2010, & 7.5% 2013 (EPAct05)). Ensure that at least 1/2 of required renewable energy used comes from new renewable sources, and if possible is generated on agency property for agency use.
- Reduce facility energy use and resulting green house gas 3% each year from FY 2006 to FY 2015 with a base starting point of FY 2003. (EO 13423).
- Increase excluded facility (Generation & Transmission facilities) energy efficiency (EPAct05).
- Perform energy surveys and commissioning on 25% of TVA's "Covered Facilities" each year representing 75% of total agency facility energy use to identify energy/water conservation opportunities. Enter results into a national database. (EISA 2007).
- Ensure that all electric motors 1-500 HP purchased are premium efficient motors (EPAct05).

What we impact…

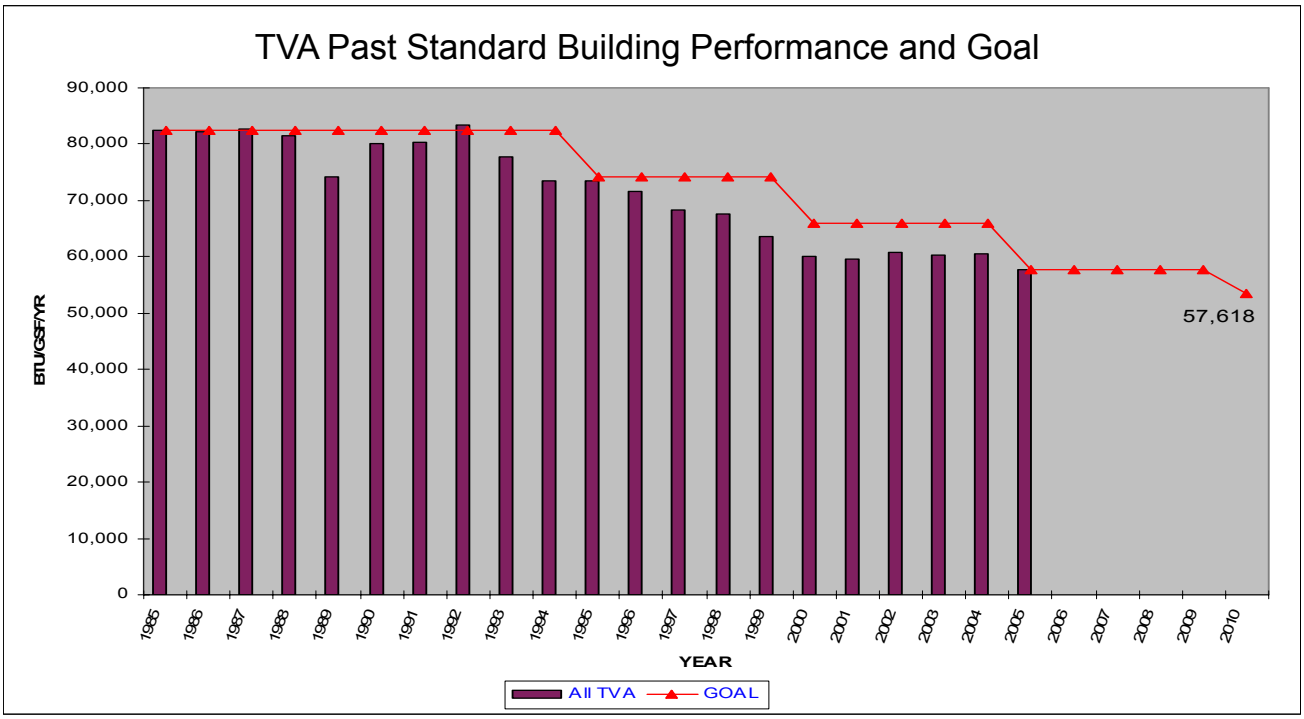
- 2,922 TVA owned and leased vehicles that use an average of $5,700,000 in fuel each year.
- 714,900,000 gallons of potable water costing $2,216,100 per year.
- 1,135 "goal subject facilities" totaling 9,066,031 square feet and using $7,721,800 worth of energy per year.
- 1,619 power plant and transmission buildings totaling 19,100,800 square feet and using $16,841,500 worth of energy per year which are used to generate, control and transmit electricity. The energy intensive nature of these buildings and the past energy efficiency efforts have allowed these buildings to be "excluded" from the EPAct05 energy reduction goals but not the EISA 2007 surveys.
- Reduce station service use (increase plant efficiency) in hydro, fossil & nuclear plants.

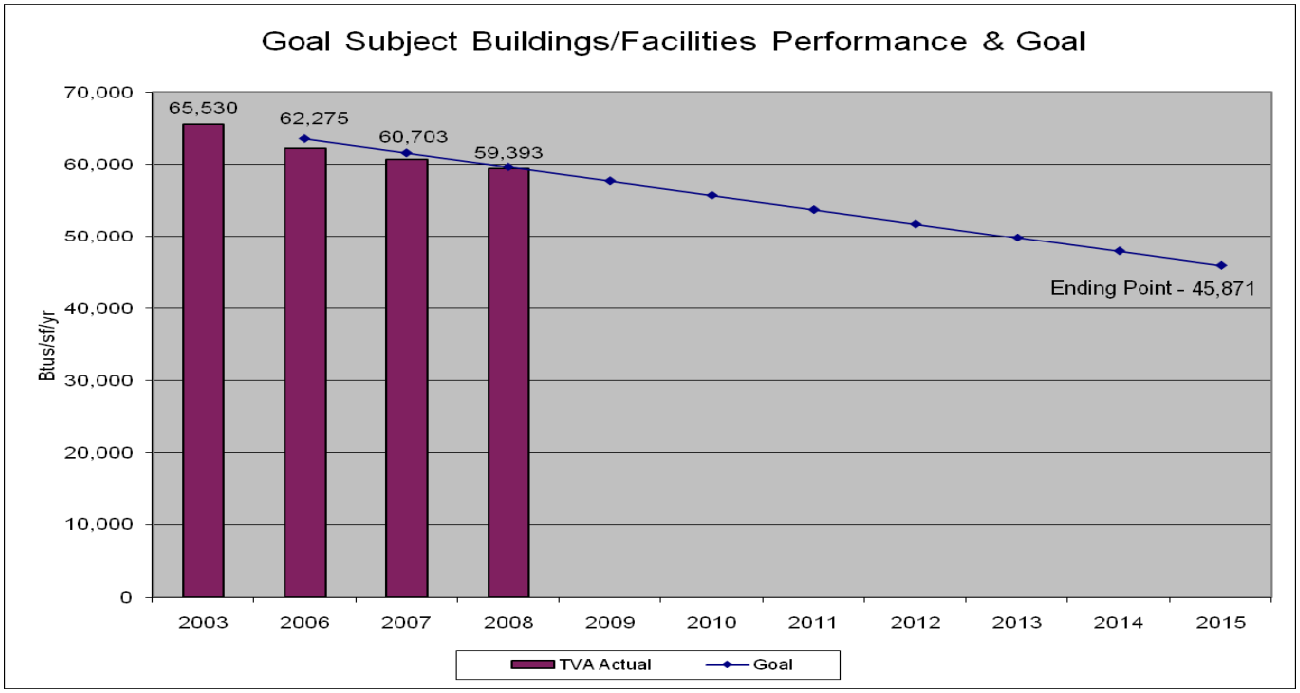
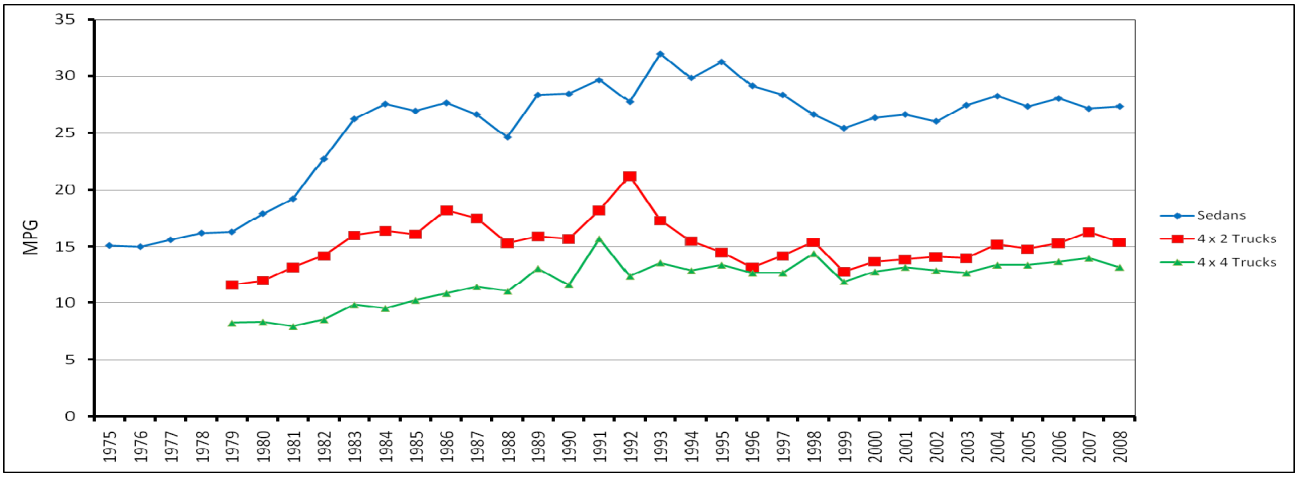
What you can do to help…

- Turn off your, monitor, printer & task lights at the end of the day.
- Turn off lights in unoccupied spaces.
- Report water leaks to Facilities Management (x2700) or your site maintenance personnel.
- Make efficient use of TVA vehicles by sharing rides and teleconferencing instead of traveling.
- Make energy saving suggestions (call: 751-7708).

Progress to Date (over)

Building Energy Performance





Vehicle Performance