Utilities and Energy Efficiency Improvement

How Does Texas A&M University Manage Utilities and Energy?
The Utilities & Energy Management (UEM) department monitors, evaluates, and manages all utilities and energy on the Texas A&M University campus. UEM determines all purchased energy requirements; manages extensive utility production and delivery systems for electricity, cooling, heating, and water systems; manages all building automation to maintain the environment; meters and recovers cost for all utilities; and provides the expertise and service to optimize the use of energy. Other services include solid waste and recycling, water production and management, and operation of two wastewater treatment facilities.

How Has Utilities & Energy Management Been Improved?
- $200 million invested in utility infrastructure capacity, reliability and efficiency capital upgrades since 2000
- 36 percent reduction in energy consumption per gross square foot over the last nine years (FY02 to FY11)
- Upgraded Combined Heat and Power (CHP) Generation in 2011
- Improvements to building cooling and heating system operation and control
- Improved operation and management of utility/energy infrastructure with significantly improved efficiency, reliability, and safety

Utility Infrastructure Expansion and Upgrade – Since 2002
- Connected additional 3.9 million gross square feet into utility infrastructure
- Major upgrades in all four campus utility plants
- Installed 11 new high-efficiency chillers
- Installed 15 new high-efficiency boilers
- 1,500 revenue-quality meters installed in 500 buildings
- Utility plant monitoring and control system upgrade
- Electrical generation, distribution, and monitoring system upgrades
- Numerous cooling tower, pumping, and auxiliary system upgrades
- Significant improvement in capacity, safety, reliability, and efficiency of utility plant and building utility/energy systems

Reduced Consumption and Cost Over Nine Years – Since 2002
- Over 22% reduction in energy consumption with 21% increase in square footage
- Corresponding reduction in Green House Gas emissions (GHG footprint)
- $120 million in energy cost avoidance as result of improved efficiency
- 25% reduction in domestic water consumption
- 500% increase in quantity of solid waste diverted from landfill to recycled material

Upgraded Combined Heat and Power (CHP) Generation
- Major new CHP equipment fully operational August 1, 2011
- $73.25 million project to be completed in 2011
- $10 million Department of Energy grant awarded to TAMU (reduced university funding requirement)
- Significant reduction in energy consumption, GHG emissions, and operating cost
- CHP to achieve additional $6 million annual cost avoidance

Improved Building Automation and Control
- 120 buildings on building automation system – one of the largest building automation systems in the world
- $15 million Heating, ventilation and air conditioning (HVAC) control and lighting upgrades installed in 24 facilities in 2011 – improves service and adds additional $1.5 million annual cost avoidance
- Precise control of environmentally sensitive research labs and other spaces
- UEM assumed additional responsibility in 2011 for comprehensive management of all building automation and environmental control - to raise standards and improve customer service

To learn more, contact us at 979.845.1210 or visit http://utilities.tamu.edu.