

Energy Management Program

***Approved by Council:
June 23, 2009***





Overview of Program

Our program includes the following five key components:

- Energy Efficiency Goals for City-Owned Facilities
- Renewable Energy Applications and Development
- Fuel Consumption & Savings
- Investment in Hybrid Vehicles
- A “Green City” Program



Energy Efficiency – State & Federal Policy

- 80th Legislative Session of Texas in 2007
 - House Bill 3693 set a statewide goal of 15% for energy efficiency and conservation.
 - Senate Bill 12 passed requiring political subdivisions that are located in nonattainment or near nonattainment areas, which includes Nueces County, to establish goals to reduce electric consumption by 5% each year over a six year period beginning in 2007.
 - This provision thus applies to the City of Corpus Christi.
 - August 1 – July 31 is reporting period with 2007 being the base year and 2008 the first reporting period.

- We also anticipate federal energy policy (such as currently proposed H.R. 2454) will continue to place a large emphasis on energy efficiency and conservation strategies.

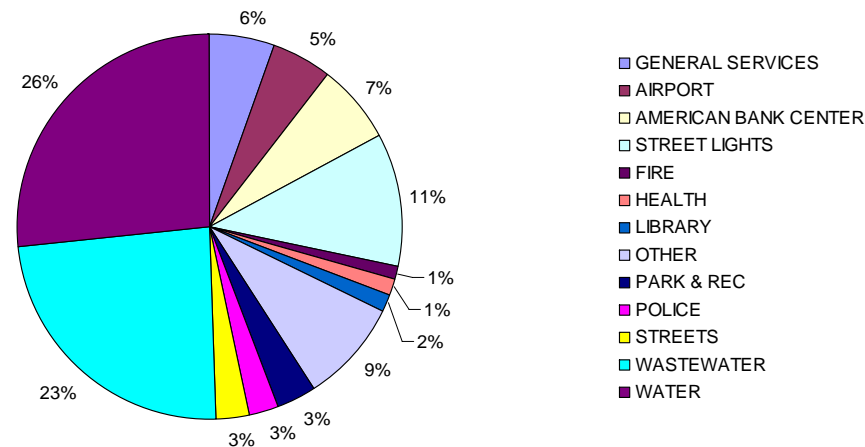


Energy Efficiency Goals

■ First Step - Data Mining on City Electric Accounts

- Over 800 City Electric Accounts
- Served by both Direct Energy & Nueces Electric Cooperative
- 140 Million kWhs in annual consumption
- \$15 million annual operating cost for electricity (or roughly 2.5% of our overall budget)
- Appx. 1.7 million square feet in conditioned space
- Understanding of Departmental Use

CITY ELECTRIC CONSUMPTION by Dept. - FY 2008





Energy Efficiency Goals & Strategies

- **Our goal, in compliance with SB 12, is a 5% annual reduction in electric consumption at city-owned facilities**

- **Strategies:**
 - Electric Account Auditing by each Department
 - Staff Training on Billing Systems and Reporting Capabilities
 - Energy Consulting Resources
 - Power Factor Correction
 - Building Audits
 - Performance Based Contracts
 - Partnership Opportunities
 - AEP City Smart Program MOU
 - State Energy Conservation Office Preliminary Assessment Program
 - US Department of Energy
 - Engineering Processes
 - Energy Management Systems
 - Equipment Standardization
 - Weatherization
 - Lighting Retrofits
 - Industrial & Pump Load Efficiency
 - Balance Scorecard Metrics



Energy Efficiency Financing

- **City has been allocated \$2.7 million in Energy Efficiency and Conservation Block Grants through Federal Stimulus Package**
- **We have identified over \$8 million worth of energy efficiency related projects that will be prioritized by City Staff**
- **Existing auditing pilot projects within Water & Fire Depts.**
- **Federal appropriation request submitted through Cong. Ortiz for FY2010 for \$500,000 for energy efficiency initiatives to help fund our program.**
- **CIP Funds**



Renewable Energy Development

- Multi-faceted renewable energy strategy

- Small scale renewable projects
 - Solar technology for lighting, parks, incidental usage
 - Wind components, such as the small wind turbines designed for Phase 1 of the Bayfront Development Implementation Plan (next to ABC)

- Large scale renewable projects
 - Cefe' Valenzuela Landfill Wind Project – Preliminary assessment on up to 15 large scale wind turbines plus future potential on landfill gas to energy project
 - Elliott Landfill Gas to Energy Project – Gathering system in place for methane gas collection, working with HDR Engineering to determine next steps on commercial scale project (\$1 million federal appropriation request submitted for FY2010)
 - Potential large scale solar project – CC Int'l Airport

- Ideas for a Renewable Energy Demonstration Park

- Key to successful renewable strategy is thoughtful selection of a potential capital and development partner on a comprehensive or project-by-project basis





Fuel Conservation

- Annual expenditures on vehicle fuel is appx. \$7 million
- 24 million miles driven annually by City vehicles in providing services to our citizens
- Initial step is a departmental review to determine savings opportunities
- Goal: 5% annual reduction in fuel consumption

- Strategies:
 - Better scheduling and organizing of daily schedules
 - Increased efficiency of routing and patrols
 - Reduction in vehicle idling
 - Policy review of city vehicle use
 - Investment in Fuel Management & Tracking Systems
 - CNG Conversions/Hybrid Vehicles



Hybrid Vehicles

- City fleet comprised of appx. 2000 vehicles
- On average, city replaces 100 to 150 vehicles annually (maybe less this budget cycle due to budget constraints)
- City's fleet includes appx. 50 compressed natural gas (CNG) vehicles and one hybrid vehicle
 - Note: Gas Department recently installed a small scale CNG station but we have a need for a fleet maintenance facility to enable larger scale CNG conversion
- Goal: A sustainable long-term reduction in fuel consumption

Additional Considerations:

- Investment in hybrid vehicles is a financial commitment to achieve a longer term reduction in fuel consumption
- Hybrids offer environmental benefits that allow council to make a policy statement on environmental stewardship
- If the city agrees to investing in hybrid vehicles for up to 5% of new vehicle purchases by the city, that would require fleet management to purchase 5 to 10 hybrids a year at an increase cost of \$5,000 per vehicle on average



“Green City” Program

Components of a “Green City” Program could include:

- Establishment of energy conservation goals for our community
- Public outreach campaign to raise awareness in our community
- Interagency effort between the city, county, RTA and other community agencies on program development
- Development of a website or other forum for sharing energy efficiency and conservation tips, funding and program opportunities and information with the public
- Strategic partnerships with electric industry and others on weatherization and energy conservation programs initiated at the state and federal levels
- Continuing the integration of green building principles and community renewable energy development within Development Services processes to assist our citizens
- Re-establishment of our recycling program in conjunction with our “Community Pride” campaign





Other Considerations

- This is a first attempt to institutionalize a comprehensive energy management program at the City of Corpus Christi
- State Comptroller recently recognized the City for our efforts to develop a comprehensive energy management program and for the detail with which we met our SB 12 reporting requirements
- City staff intends to aggressively pursue state and federal funds available through the federal stimulus package, federal appropriations processes, grant programs, and other partnership opportunities as they are made available to leverage against local investment
- Impetus to these recommendations is legislative policy at the state and federal level, and we will continue to follow these developments
- Requires a financial commitment
- Requires staff resources and education
- Provides opportunities for long-term financial savings and environmental benefits





QUESTIONS?

