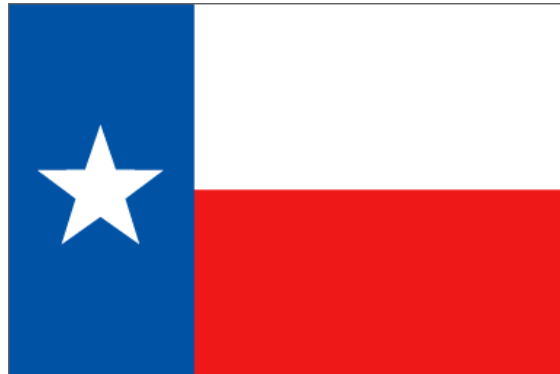


Energy Efficiency in Public Facilities

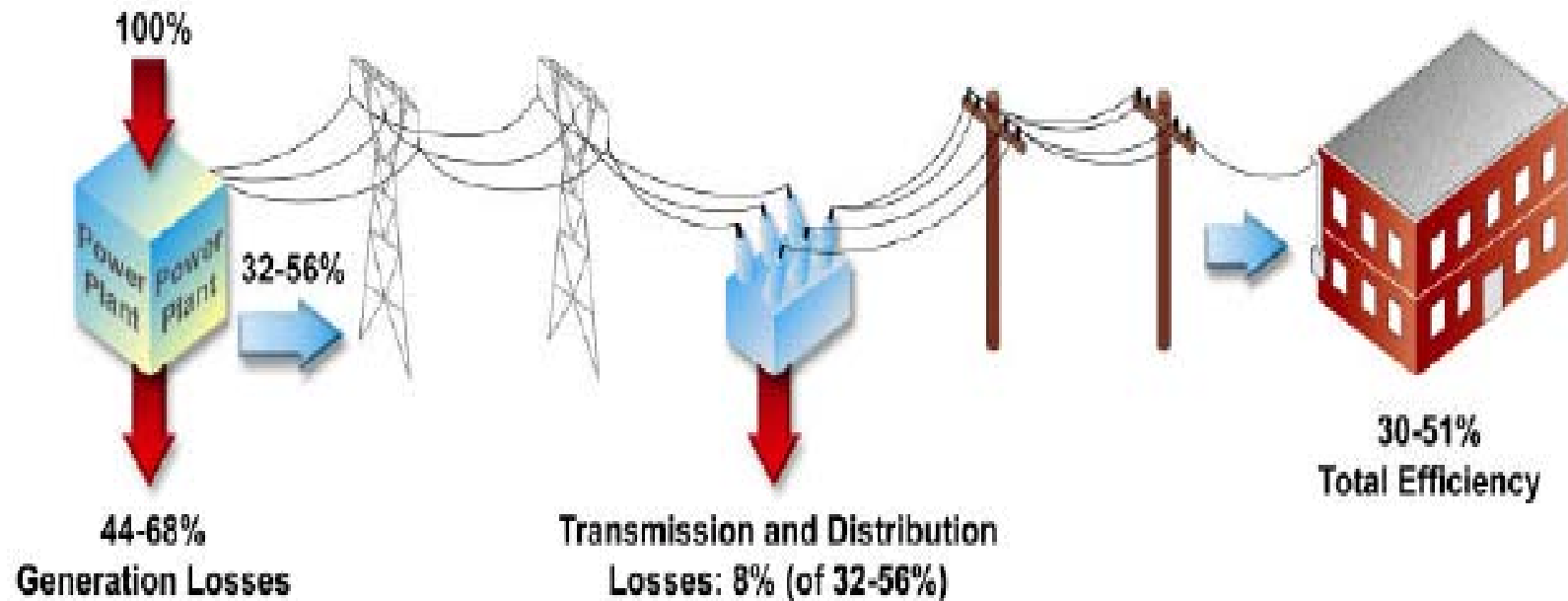


Dub Taylor, Director
Texas State Energy Conservation Office

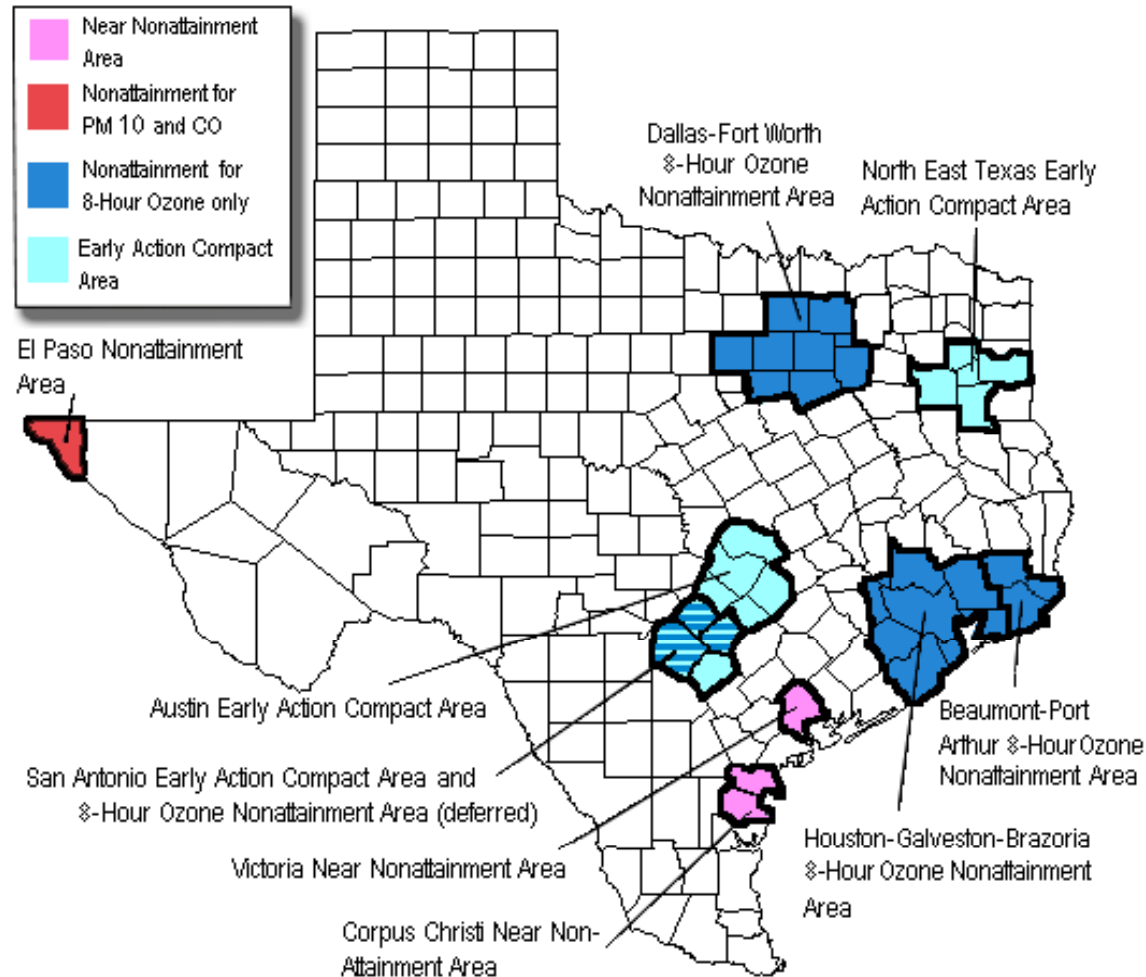
Why Energy Efficiency?

- ❖ Efficiency vs. Conservation
- ❖ Stewardship of natural resources & taxpayer dollars
- ❖ Deferred maintenance via energy savings projects
- ❖ Lead by example

How Electric Consumption Impacts Emissions (3-1 Rule)



Texas Ozone Non-Attainment and Near Non-Attainment Counties



SIP-Creditable EE



- ❖ **Building energy codes**
- ❖ Local solar photo-voltaic (PV) installations
- ❖ Local solar thermal installations
- ❖ Zero emission distributed generation (Fuel cells)
- ❖ Wind power purchases
- ❖ **Water/wastewater energy-related improvements**
- ❖ **Street lighting and traffic signal lighting improvements**
- ❖ **Energy conservation building retrofits**
- ❖ Appliance upgrades and cool roofs
- ❖ LEED-certified or comparable new buildings
- ❖ **Building commissioning projects**

Texas Emissions Reduction Plan

Mobile

- ❖ Emissions Reduction Incentive Grants
- ❖ New Technology Research and Development

Building Energy Efficiency

- ❖ **Building Energy Performance Standards**
- ❖ **Local Government Energy Efficiency**



TERP – Public Facility Energy Efficiency

Political subdivisions, agencies, higher education in 41 urban and surrounding counties in Texas must:

- ❖ Implement all cost-effective energy-efficiency measures to reduce electric consumption by existing facilities
- ❖ Adopt a goal of reducing electric consumption by 5 percent a year for 6 years, beginning September 1, 2007 (K-12)
- ❖ Report annually to the State Energy Conservation Office



www.texasenergypartnership.org

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Texas Energy Partnership Solutions

A Creating Your Master Plan for Energy Savings

B Discovering Your Current Energy Use

C Identifying Your Energy-Saving Opportunities

D Saving Energy With Little or No Money

E Upgrading Your Building for the Long Term

F Finding the Money to Pay for It All

G Learning About the Texas Energy Partnership

H Success Stories


I News and Events

J TEP Reporting

The Texas Energy Partnership has created this Web site to provide information designed to facilitate compliance with Texas Senate Bill 5 (SB5), also known as the Texas Emissions Reduction Plan, by the 77th Texas legislature. The bill was enacted in 2001 to assist the state in complying with the Federal Clean Air Act and contains new energy-efficiency measures that are designed to decrease electric consumption while improving air quality. All political subdivisions in 38 urban and surrounding counties in Texas are required to:

- Implement all cost-effective energy-efficiency measures to reduce electric consumption by existing facilities;
- Adopt a goal of reducing electric consumption by 5 percent a year for 5 years, beginning January 1, 2002;
- Report annually to the State Energy Conservation Office.

For more information about the Texas Energy Partnership and SB5 compliance, see the [Learning About the Texas Energy Partnership](#).



SECO Technical Assistance

❖ Preliminary Energy Assessments

- ❖ Baseline energy analysis
- ❖ Identify system optimization and equipment replacement projects
- ❖ Cost estimates – equipment and installation
- ❖ Estimated energy and cost savings
- ❖ Payback analyses for each recommended project

❖ Project implementation support

- ❖ Energy Savings Performance Contracting
- ❖ LoanSTAR financing



Energy Saving Performance Contracting (ESPC)

Authorizing Statutes:

- ❖ K-12 Public Schools
 - ❖ Texas Education Code, § 44.901
- ❖ Public Higher Education
 - ❖ Texas Education Code, § 51.927
- ❖ State Agencies
 - ❖ Texas Government Code, § 2166.406
- ❖ City/County Governments
 - ❖ Texas Local Government Code, § 302



Texas ESPC Provisions

- ❖ Design-build w/performance guarantee
- ❖ Professional services procurement
- ❖ Energy and/or water savings measures and related costs eligible
- ❖ Savings \geq costs
- ❖ 20 year maximum term (SB831, 80R)
- ❖ Savings guarantee required
- ❖ Payment and performance bond required
- ❖ Third party review required

Texas LoanSTAR Program

(Saving Taxes And Resources)

- ❖ Low interest revolving loan program for energy efficiency building retrofits
- ❖ Borrowers - any public entity in Texas
- ❖ 187 loans, 5.5 year average payback
- ❖ Cumulative energy savings – over \$200 million
- ❖ Cumulative emission reductions since 1990:
 - ❖ NO_x 7,073 tons
 - ❖ CO₂ 2.1 million tons
 - ❖ SO₂ 4,788 tons



LoanSTAR Projects

❖ City of San Antonio

- ❖ LED traffic and pedestrian signals
- ❖ \$1.7M loan, \$880K savings, 2 yr ROI

❖ Collin County

- ❖ Lighting, water, pumps, motors, HVAC
- ❖ \$4.7M loan, \$470K savings, 10yr ROI

❖ City of Dallas

- ❖ Lighting, EMS, pumps, motors, HVAC
- ❖ \$3.5M loan, \$390K savings, 9 yr ROI

❖ City of Ft Worth

- ❖ Lighting, EMS, HVAC, design/engineering
- ❖ \$5M loan, \$700K savings, 7 yr ROI



Resources

- ❖ **State Energy Conservation Office**

www.seco.cpa.state.tx.us

- ❖ **Texas Energy Efficiency Index**

www.ase.org/content/article/detail/2586

- ❖ **Energy Efficiency Program Database**

www.aceee.org/new/eedb.htm

- ❖ **Database of Incentives for Renewables and Efficiency**

www.dsireusa.org

