



## LINKING ENERGY EFFICIENCY TO AIR QUALITY IN TEXAS

PRESENTED TO

**ACEEE**

AMERICAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY

SEPTEMBER 26, 2005  
BERKELEY, CALIFORNIA



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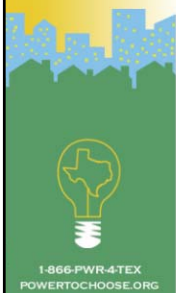


### BACKGROUND ELECTRIC EFFICIENCY PROGRAMS

- **Policy Drivers**
  - Clear Air Act
  - Continuation of Energy Efficiency in Competitive Environment
  
- **Policy Implementation**
  - State Statute
  - Public Utility Regulation

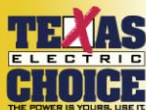


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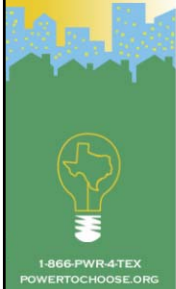
## BACKGROUND ELECTRIC EFFICIENCY PROGRAMS

- Retail competition in ERCOT began January 1, 2002 for investor-owned utilities (Senate Bill 7 – 1999 session)
- SB 7 also required utilities to conduct energy-efficiency programs
- Deregulated environment
- Decoupled – transmission & distribution utilities administer energy-efficiency programs



## ENERGY EFFICIENCY PROGRAMS

- Senate Bill 7 (1999 session) required utilities to conduct energy-efficiency programs
- Senate Bill 5 (2001 session) required PUC to conduct energy-efficiency grant program; multi-agency responsibilities
- SB 5 required calculation of reduction in air emissions from SB 5 and SB 7 programs



## SENATE BILL 7 ENERGY EFFICIENCY PROGRAM

- Utilities required to meet 5% of growth in demand through energy-efficiency programs by January 1, 2003 and 10% of growth in demand by January 1, 2004 - five year rolling average of historical peak average of year preceding the goal year
- **Achievements**
  - 11% above goal in 2003
  - 35% above goal in 2004
- Standard offer and market transformation programs
- Funded by Transmission & Distribution Rate
- Objective to obtain cost-effective energy-efficiency programs from third parties



## DESIGN ISSUES §25.181 Energy Efficiency Goal

- **Eligible Sectors**
- **Incentive Levels Set as a Percentage of Avoided Cost**
  - 100% for hard-to-reach customers
  - 50% for residential and small commercial customers
  - 35% for large commercial and industrial customers
  - 25% for load management programs
  - constrained areas commercial and industrial 35%, residential 55%
- **Deemed Savings or IPMVP**
- **Independent M&V Expert**





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### BASELINE FOR MEASURING SAVINGS

#### §25.181 Energy Efficiency Goal

- **Deemed Savings or IPMVP**  
quantifiable and verifiable energy and demand savings
- **Independent M&V Expert**  
the PUC shall select an independent M&V expert to verify the energy and peak demand savings, including deemed savings, reported by energy efficiency service providers
- **Update Deemed Savings**  
to reflect market standards and avoid rewarding business improvements




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### Environmental Benefits

#### EPA - EGRID

#### Emissions & Generation Resource Integrated Database

- integration of 24 different federal data sources on power plants and power companies
- power plant emission rates, historical relationships between the areas of power production and areas of consumption, and the primary fuel type utilized to generate electricity
- Energy Information Administration generation data to generate the value of pounds per megawatt-hour (lbs/MWh) that is a direct correlation between electrical generation and environmental quality



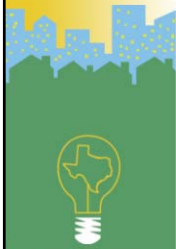
**SB 7 Results - 2004**  
**\$85 Million**

- **4.4 Tons NOx Avoidance – Per Day**
- **Value of Saved Energy \$25 Million / Year**



**Legislative Issues Supporting  
Clean Air**

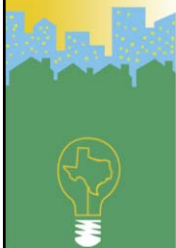
- Energy efficiency
- **Renewable resources**
- Retrofit older power plants



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## Renewable

- **Wind**  
**5.4 Tons NO<sub>x</sub> / Per Day**
- **Renewables are about 2.6% of existing ERCOT generating capacity**



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## Renewable Energy

- **Additional 2,000 MW of generating capacity from renewable energy technologies by 2009 (Now 1400 MW in 2005)**
- **5,000 MW new renewable by 2015**
- **ERCOT estimates additional transmission capacity to accommodate 5,000 MW in West Texas at \$ 1 billion. Adding .50 cents- \$1.00 to residential bill (1,000 kWh).**
- **Renewable energy credit (REC) trading program**
- **Definition of qualifying resources**
  - **Solar, wind, hydro, geothermal, wave, tidal, biomass, landfill gas**



## Economic Impact of Renewables



- **Tax revenue for rural school districts**
- **14% increase in tax base for remote counties**
- **Construction jobs**
- **Jobs in service, manufacturing, transportation**
- **Royalties to landowners**



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## Contacts

**Theresa Gross**

[theresa.gross@puc.state.tx.us](mailto:theresa.gross@puc.state.tx.us)

**512-936-7367**

**David Hurlbut**

[david.hurlbut@puc.state.tx.us](mailto:david.hurlbut@puc.state.tx.us)

**512-936-7387**



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