

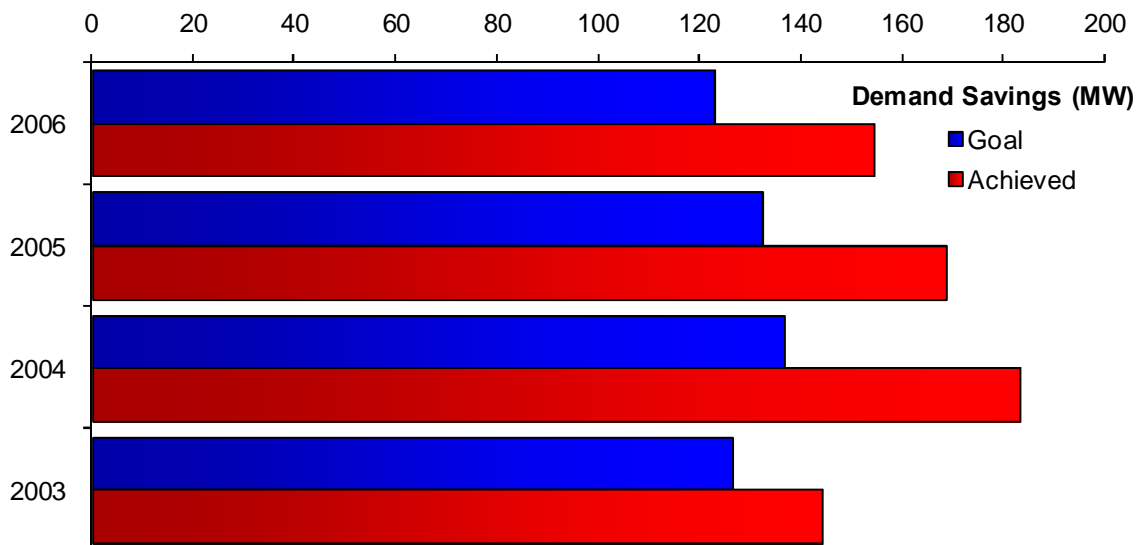
Energy Efficiency Accomplishments of Texas Investor Owned Utilities Calendar Year 2006

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1 Accomplishments

In 2006, the nine Texas investor-owned utilities (IOUs) exceeded their statewide legislative energy efficiency goals for the fourth straight year. The utilities achieved 164 Megawatts (MW) of peak demand reduction, which was 27% above their 129 MW goal, and 366 Gigawatt-hours (GWh) of energy reduction. These energy savings correspond to an equivalent reduction of 551,317 pounds of nitrogen oxide (NO_x) emissions per year.¹ Figure 1 illustrates the annual peak demand savings for the past four years.

Figure 1: Total Demand Savings by IOUs, 2003-2006



Most of the utilities' programs involve financial incentives, which were paid to project sponsors to offset the costs of a variety of energy efficiency improvements. The total amount of incentive funds expended to achieve 2006 savings was just over \$60 million.

¹ NO_x emissions in this report were calculated using emission factors from the 2007 eGRID database compiled by the EPA. The average emissions factor for the ERCOT utilities has been applied to non-ERCOT utilities to provide a rough estimate of their emissions reductions as well.

The Environmental Protection Agency (EPA) recognized four utilities in 2006 for their ENERGY STAR[®] Home Programs. They were CenterPoint Energy Company, TXU Electric Delivery Company (now Oncor Electric Delivery), Entergy Gulf States, Inc, and Texas-New Mexico Power Company. CenterPoint was also recognized by the EPA with a "Sustained Excellence Award".

As of January 1, 2007, the utility programs implemented after electric industry restructuring in Texas had produced 756 MW of peak demand reduction and 2,005 GWh of electricity savings for the years 1999 through 2006. This translates to approximately 2,660 tons of NOx emissions reductions.

2 Energy Efficiency Program Overview

The 75th Texas Legislature passed a law requiring IOUs to meet certain energy efficiency goals. To comply with this law, all IOUs partner with energy efficiency service contractors to install energy efficiency measures that result in peak demand reductions and electricity savings. Contractors install a variety of savings measures at homes and businesses within a utility's service area.

Each utility contracts with national and local firms who contact electricity consumers (residential, commercial, or industrial) about performing work to save energy and reduce their electric bills. Customers select the contractor, decide what equipment will be installed, and choose what work the contractor will do. Price, warranty, financing, and other purchasing matters are entirely between the contractor and customer.

Table 1 lists the Texas IOUs and their common acronyms used throughout this report.

Table 1: Texas Investor Owned Utilities

Utility Name	Utility Acronym
American Electric Power-Southwestern Electric Power Company	AEP-SWEPCO
American Electric Power-Texas Central Company	AEP-TCC
American Electric Power-Texas North Company	AEP-TNC
CenterPoint Energy Company	CNP
El Paso Electric Company	EPE
Entergy Gulf States, Inc.	EGSI
Texas-New Mexico Power Company	TNMP
TXU Electric Delivery Company (now Oncor)	TXUED
Xcel Energy Company*	Xcel*

*voluntary participant in energy efficiency programs

2.1 Legislative Background

Provisions in Senate Bill 7 (SB7), enacted in the 1999 Texas legislature, mandate that at least 10% of an IOU's annual growth in electricity demand be met through energy efficiency programs each year. The Public Utility Commission of Texas (PUCT) Substantive Rule §25.181 establishes procedures for meeting this legislative mandate. Utilities are required to administer energy savings incentive programs, which are implemented through retail electric providers and energy efficiency service providers (EESPs). All programs are designed to reduce system peak demand, energy consumption, or energy costs.

Utilities must achieve their energy efficiency goals through either standard offer programs (SOPs) or limited, targeted market transformation programs (MTPs). Programs are made available to all customers, in all customer classes. This gives each customer a choice of a variety of energy efficiency alternatives. Table 2 lists the types of SOPs and MTPs offered by each utility. Table 3 gives each utility's 2006 program savings and its associated 2006 expenditures.

Table 2: Programs Offered by Utility in 2006

Program Type	Type	AEP ⁱ	CNP	EGSI	EPE	TNMP	TXUED	Xcel
Commercial & Industrial	SOP				ii			
Residential & Small Commercial	SOP							
Hard-to-Reach	SOP							
Load Management	SOP		iii					
Energy Efficiency Improvement Program ^{iv}	Non SB7							
Texas Dept. of Housing & Community Affairs, Low-Income Weatherization ^{iv}	Non SB7							
ENERGY STAR® New Homes	MTP							
Air Conditioning Distributor	MTP							
Air Conditioning Installer Training	MTP							
Retro-Commissioning	MTP							
Multifamily Water & Space Heating	MTP							
Texas SCORE/CitySmart	MTP							
Trees for Efficiency	MTP							
Third Party Contracts ^{iv}	Non SB7							

ⁱ AEP is American Electric Power, and includes Texas North, Texas Central, and SWEPCO in this table.

ⁱⁱ EPE's Commercial & Industrial SOP includes a Military Base Standard Offer Program (MBSOP) component.

ⁱⁱⁱ CNP's Load Management program was a pilot program discontinued midway through the year due to insufficient customer response.

^{iv} The Energy Efficiency Improvement Program (EEIP), the Texas Department of Housing and Community Affairs (TDHCA) Low-Income Weatherization Program, and the Third Party Contracts are all non-SB7 programs, but included here for completeness. The EEIP is an SOP at AEP-TCC and AEP-TNC.

Figure 2 depicts an overview of the Texas Energy Efficiency Process. Following is Figure 3, a map of Texas outlining the service areas of each of the IOUs.

Figure 2: Overview of Texas Energy Efficiency Programs

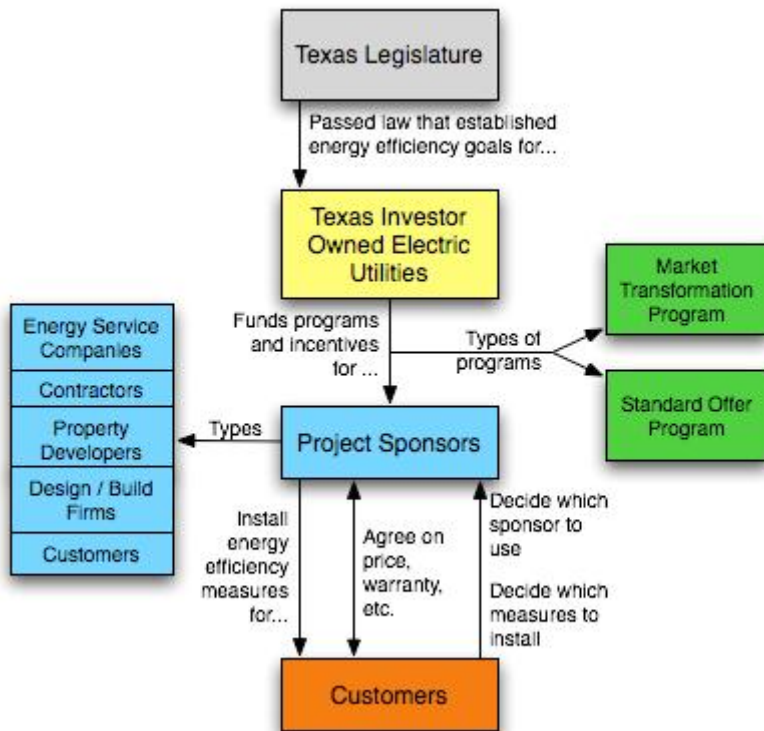


Figure 3: Texas Investor Owned Utility Service Area Map

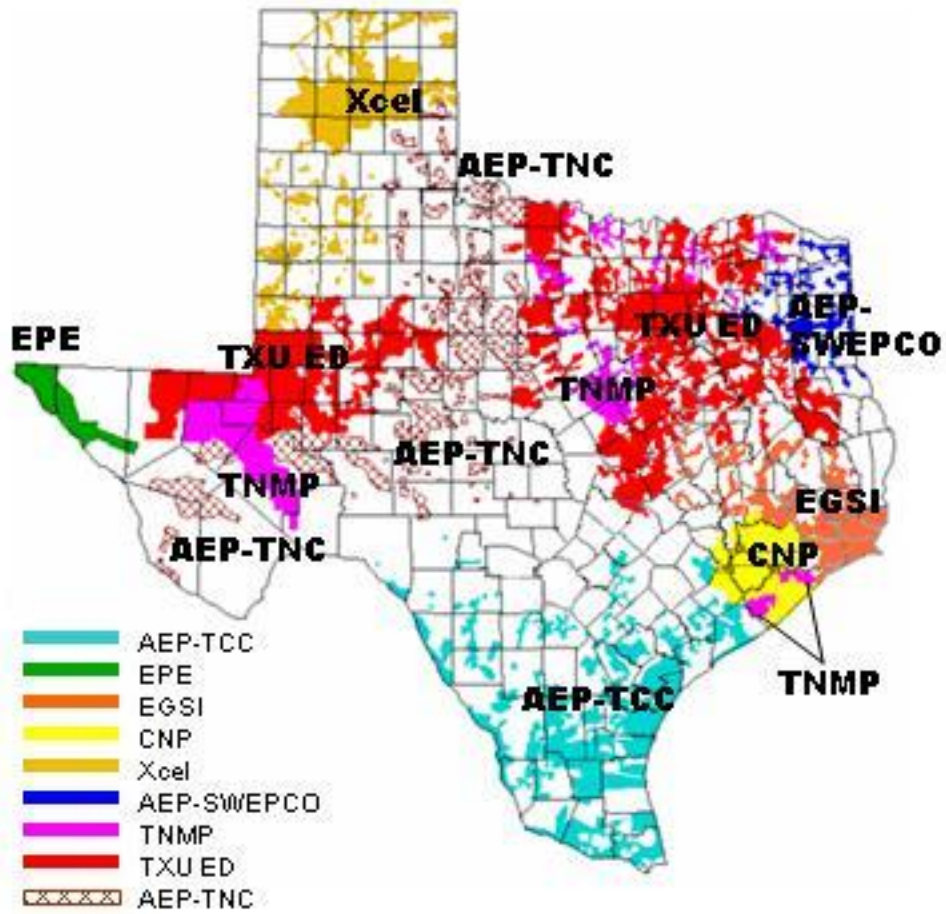


Table 3: Utility Funds Expended with Associated Demand and Energy Savings 2006

(From the Annual Energy Efficiency Reports, including SB7 and non-SB7 programs.)

Utility	Funds Expended (\$)	Demand Savings (MW)	Energy Savings (MWh)
AEP-SWEPCO ⁱ	\$1,656,948	.96	4,514
AEP-TCC ⁱ	\$6,334,949	11.98	35,628
AEP-TNC ⁱ	\$1,251,621	1.63	5,118
CNP	\$13,974,725	41.45	123,906
EGSI	\$3,472,098	5.80	17,020
EPE	\$1,124,600	1.05	4,697
TNMP	\$1,113,101	2.27	3,345
TXUED ⁱ	\$28,794,198	98.37	171,475
Xcel	\$3,045,773	2.95	6,068
TOTAL	\$60,768,013	163.51	365,703

ⁱ Demand and energy savings for AEP and TXU were reported at the meter. A 7% T&D adjustments was used to convert these to savings at the source for this report.

3 Standard Offer Programs

An SOP is a type of energy efficiency program where parties enter into a contract with standard terms and conditions. Utilities offer standard incentives for a wide range of measures that are bundled together as a project. Incentives are based on prescribed avoided costs, and there is a 20% limit per project sponsor. Payment is based on energy efficiency performance. The following sections describe each SOP type offered by Texas IOUs.

Figure 4 shows the electricity savings from each SOP. The outer ring shows energy savings; the inner ring denotes the demand savings.

3.1 Commercial & Industrial

The Commercial and Industrial (C & I) program targets large commercial and industrial customers with a maximum demand of more than 100 kW. Utilities pay incentives to project sponsors for certain measures installed in new or retrofit applications that provide verifiable demand and energy savings. Each project must reduce peak demand by at least 20 kW. Typical projects include chillers, lighting, and industrial process retrofits.

3.2 Residential & Small Commercial

The Residential and Small Commercial program (RSC SOP) targets small commercial customers as well as multi-family, single-family, and mobile homes. (Small commercial

customers are retail, non-residential customers with a maximum demand that does not exceed 100 kW). The program provides incentives for the installation of a wide range of measures that reduce system peak demand, energy consumption and energy costs. Retrofits and efficient new construction of low-income housing may also be undertaken.

Utilities pay incentives to Energy Efficiency Service Providers (EESPs). These incentives are based on deemed savings when available. (Deemed savings estimates are predetermined, validated estimates of energy and peak demand savings attributable to an energy efficiency measure.) Otherwise, the EESPs must follow the measurement and verification (M&V) protocol adopted by the PUCT. In this case, the incentives are based upon verified peak demand or energy savings using the International Performance Measurement and Verification Protocol.

The primary objective of RSC SOP is to achieve cost-effective reduction in energy consumption during peak summer demand. There are five additional objectives of the program: (1) to encourage private sector delivery of energy efficiency products and services; (2) to achieve customer energy and cost savings; (3) to significantly reduce barriers to participation by streamlining program procedures and M&V requirements; (4) to encourage participation by a wide range of EESPs; (5) to produce demand, energy, and bill savings in new single-family affordable housing projects and in new multifamily projects.

3.3 Hard-to-Reach

The Hard-to-Reach program encourages energy efficiency improvements in households with annual incomes at or below 200% of the federal poverty guideline. It is designed to be a comprehensive program by emphasizing first improving the building shell and then addressing end uses. It is a retrofit program that targets multi-family, single-family, and mobile homes.

Incentives are paid to project sponsors for eligible measures that provide verifiable demand and energy savings. Special measures include compact fluorescent lighting and water savers.

3.4 Load Management

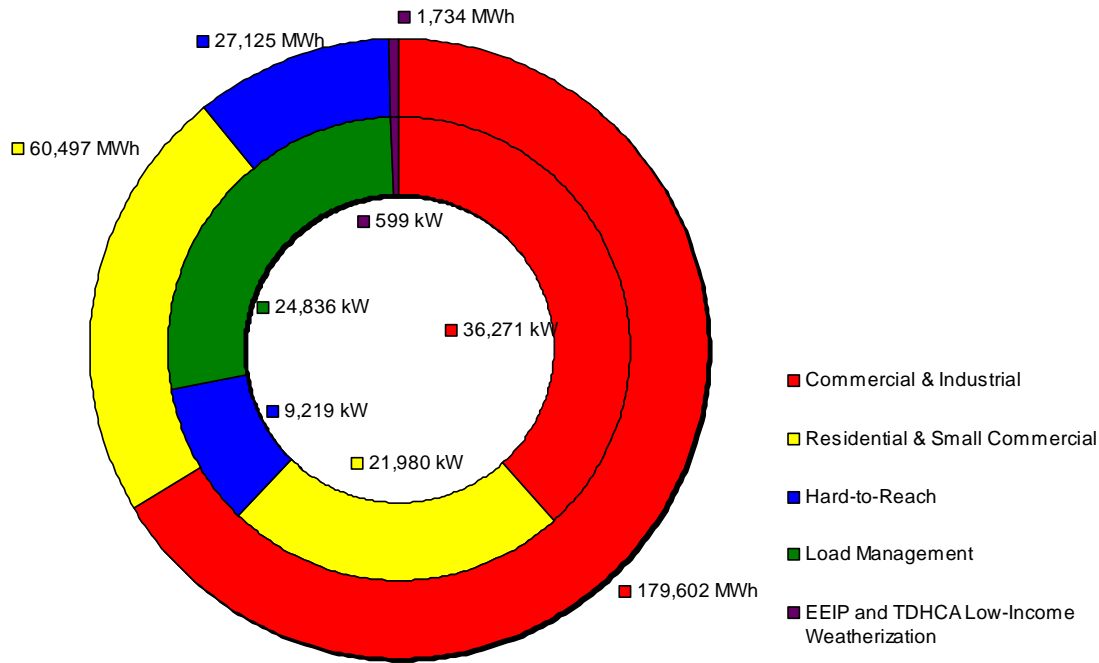
Load Management programs encourage electric load control or shifting of electric loads in C&I facilities. The load control or load shift must be provided for a minimum of 10 years. The load must be under control of the project sponsor, utility, or Independent System Operator or other transmission organization. This program targets a mix of industrial, office, and hospital facilities.

3.5 Energy Efficiency Improvement Program

Not-for-profit (NFP) organizations are eligible for a special program offered by AEP. The EEIP provides financial assistance to NFPs that serve hard-to-reach customers. The program provides funding for the installation of energy efficiency improvements in the

NFP administration facilities. These improvements reduce the organizations' operating costs by making the buildings they occupy more energy efficient.

Figure 4: Demand & Energy Savings* by Standard Offer Program in 2006



*For completeness, this chart includes the savings associated with Energy Efficiency Improvement Programs (EEIP), and Texas Dept. of Housing & Community Affairs (TDHCA) Low-Income Weatherization Programs even though these programs are not SB7 programs. EEIP and TDHCA combined are too small to distinguish on the chart. The EEIP is an SOP at AEP-TCC and AEP-TNC.

4 Market Transformation Programs

An MTP is a strategic effort to make lasting changes in the market that result in increased adoption of energy efficient technologies, services, and practices. MTPs are designed to overcome specific market barriers that prevent energy efficient technologies from being accepted. Following is a description of each type of MTP offered in Texas by the IOUs.

Figure 5 shows the electricity savings from each MTP type. The outer ring shows energy savings; the inner ring represents the demand savings.

4.1 ENERGY STAR® New Home Construction

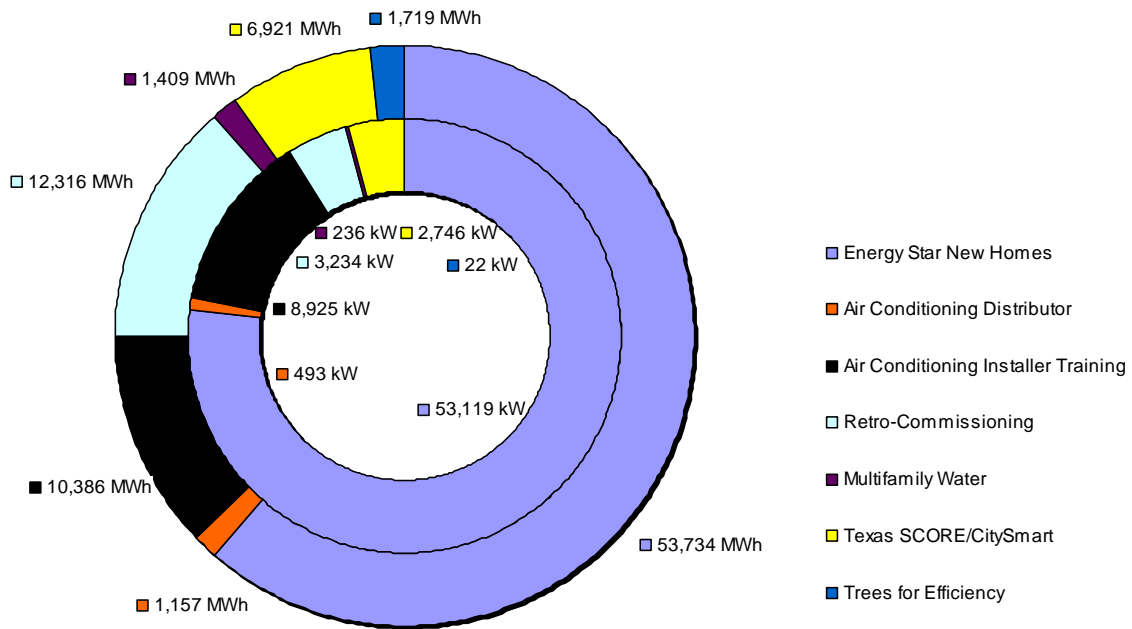
The ENERGY STAR® New Home Construction program targets residential new construction. It promotes the construction of energy efficient ENERGY STAR® new homes. To qualify, homes must score an 85 or less on the Home Energy Rating System and be 15% more efficient than the energy requirements of the 2004 International Energy Conservation Code. The program provides education and technical assistance to builders

and subcontractors. In addition, the program is supported by training, education, and advertising components.

4.2 Air Conditioning Distributor

The Air Conditioning (A/C) Distributor Program promotes the sale of matched, high efficiency air conditioning units. Qualifying equipment must have a capacity of 5 tons or less and be rated at a Seasonal Energy Efficiency Ratio (SEER) of 14 or above. A complete system change-out is required. Both single and multi-family, new and existing homes (retrofits) are eligible.

Figure 5: Demand & Energy Savings by Market Transformation Program in 2006



4.3 Air Conditioning Installer Training

The Air Conditioning Installer Training Program targets improved installation practices of heating, ventilation, and air conditioning contractors. The program provides training, education, and incentives. It encourages proper sizing, charging, and duct sealing. Local Air Conditioning Contractors Association chapters implement this program.

4.4 Retro-Commissioning

The Retro-Commissioning program helps energy end users reduce their peak demand and energy usage. The program provides expert analysis and systematic evaluation of building systems. By implementing low-cost and no-cost measures that improve system operation, customers reduce energy and peak demand while maintaining or improving customer comfort.

4.5 Multifamily Water and Space Heating

The Multi-family Water and Space Heating Program promotes the installation of non-electric water and space heating over less efficient electric based counterparts. Incentives to multifamily housing project developers encourage these installations.

4.6 Texas Schools Conserving Our Resources (SCORE)/CitySmart

The Texas SCORE Program promotes a structured process to K-12 school districts to identify opportunities and implement energy efficiency measures. Incentives to school districts encourage these installations. Non-cash incentives promote best business practices. The Texas CitySmart Program promotes a similar program to a targeted audience of local and state government entities and municipalities.

4.7 Trees for Efficiency

The Trees for Efficiency Program promotes strategic landscaping through planting of shade trees, which are trees purposely planted to shade residences. Utilities educate the public on the energy efficiency benefits of planting these shade trees, and are currently testing market delivery channels for residential consumers.

5 NOx Emission Reductions

Table 4 shows the emission reductions of all Texas IOUs implementing SOPs and MTPs as part of the Texas Energy Efficiency Program.

Table 4: Annual Emission Reductions by Utility for Activities Completed in 2006*

Utility	Electricity Savings (MWh)	Emission Factor (lbs NO _x /MWh)	Emission Reduction (lbs NO _x)**
AEP-SWEPCO	4,514	1.429	6,450
AEP-TCC	35,628	1.122	39,975
AEP-TNC	5,118	1.122	5,743
CNP	114,459	1.629	201,843
EGSI	15,870	1.429	24,322
EPE	4,697	1.429	6,712
TNMP	3,345	1.222	4,088
TXUED	171,475	1.529	262,186
Xcel	6,068	1.429	8,671
TOTAL	346,003		551,317

*Emission factors are from the 2007 eGRID database compiled by the EPA; these factors are the same as those reported to the Texas Commission on Environmental Quality by the Energy Systems Laboratory for the Public Utility Commission of Texas SB7. The average emissions factor for the ERCOT utilities has been applied to the non-ERCOT utilities, as well, to provide a rough estimate of the emissions reductions achieved by the programs implemented by the non-ERCOT utilities.

**NO_x Emission Reduction values assume discount (0%), and degradation (0%). There is a 7% T&D adjustment.

6 National Awards

In 2006, CNP, TXUED, EGSI, and TNMP each received an award from the EPA for their ENERGY STAR[®] Home Programs. CNP and TXUED received the EPA's ENERGY STAR[®] Partner of the Year Award for excellence in promoting the construction of ENERGY STAR[®] homes, and educating consumers and builders. CNP also received the EPA's Sustained Excellence Award for being a Partner of the Year four years in a row. EGSI and TNMP each received a performance award from the EPA.

7 Summary & Conclusion

Once again, the nine Texas investor-owned utilities exceeded the legislature's statewide goals for energy efficiency. The utilities exceeded their 2006 demand reduction goal of 129 MW by 27%, achieving 164 MW of demand reduction. Furthermore, 366 GWh of energy savings were achieved, effectively reducing NO_x emissions by 551,317 pounds for the year.

8 Appendices

8.1 Acronyms & Abbreviations

A/C	Air Conditioning
C&I	Commercial & Industrial
EEIP	Energy Efficiency Improvement Program
EEM	Energy Efficiency Measure
EESP	Energy Efficiency Service Provider
EPA	Environmental Protection Agency
GW	Gigawatt=one billion watts
GWh	Gigawatt-hour
IOU	Investor Owned Utility
kW	Kilowatt=one thousand watts
kWh	Kilowatt-hour
MTP	Market Transformation Program
M&V	Measurement & Verification
MW	Megawatt=one million watts
MWh	Megawatt-hour
NFP	Not-For-Profit
NOx	Nitrogen Oxides
PUCT	Public Utility Commission of Texas
RSC	Residential and Small Commercial
SB7	Senate Bill 7
SEER	Seasonal Energy Efficiency Ratio
SOP	Standard Offer Program
TDHCA	Texas Department of Housing and Community Affairs

8.2 Key Terms

Deemed savings estimate: a predetermined, validated estimate of energy and peak demand savings attributable to an energy efficiency measure. Deemed savings estimates may be used instead of determining energy and peak demand savings by measurement and verification activities.

Energy efficiency measure: systems, pieces of equipment, or materials that result in either reduced electric energy consumption, reduced peak demand, or both.

Nitrogen oxides: gases consisting of one molecule of nitrogen and one or more molecules of oxygen. Power plants and gasoline-powered vehicles typically emit NO_x. When NO_x molecules reach the atmosphere, they often contribute to the formation of smog. NO_x are thus considered pollutants and are recognized as such by the EPA.

Market transformation program: strategic efforts to induce lasting structural or behavioral changes in the market that result in increased adoption of energy efficient technologies, services, and practices.

Measurement & verification: all necessary equipment surveys, metering and monitoring, statistical estimation and analysis, and reporting used to quantify the energy savings and demand savings resulting from the installation of energy efficiency measures.

Standard offer program: a type of energy efficiency program where parties enter into a contract with standard terms and conditions, and utilities offer standard incentives for a wide range of installed energy efficient measures bundled together as a project.