



Regulatory Assistance Project

Research Brief

October 14, 2009

Texas Energy Efficiency Policy and Program Framework and Requirements

The Regulatory Assistance Project Research Staff prepared this overview of the Texas policy and program framework for delivering energy efficiency services. It is designed to provide a summary of the overall framework and requirements to the interested reader—rather than attempt to evaluate the effectiveness of this approach. The “resources” section at the end of this paper provides additional material on program assessment and achievements, as well as links for the Texas Public Utility filings that present the stakeholders’ views on program design and implementation.

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Overview of Statutory Framework

Provisions in Senate Bill 7¹ (SB7), enacted in the 1999 Texas legislature, mandate that at least 10% of an investor-owned utility’s (IOU’s) annual growth in electricity demand be met through energy efficiency programs each year. The Public Utility Commission of Texas (PUCT) codified this rule in 2000 in PURA 39.905². Substantive Rule §25.181 established the procedures for meeting this legislative mandate. House Bill 3693³ in 2007 amended this goal to be 15% in 2008 and 20% in 2009. The PUCT also made amendments to Substantive Rule §25.181⁴ for meeting these new mandates. Legislative efforts to extend specific savings goals requirements beyond 2009 have not succeeded.

The existing statute requires that, beginning in 2009, a utility’s goal for demand reduction (in MWs) for any year shall not be less than the previous year. Savings achieved through hard-to-reach

customers shall be no less than 5% of a utility’s total demand reduction goal. All programs are designed to reduce system peak demand, energy consumption, or energy costs.

To meet these goals, utilities administer energy savings incentive programs, which are implemented through retail electric providers and energy efficiency service providers (EESPs). 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 residential and commercial customers. Customers select the EESP⁵, decide what equipment will be installed, and choose what work the contractor will do. All programs are designed to reduce system peak demand, energy consumption, or energy costs and are made available to all customers, in all customer classes.

Texas has approximately nine electric transmission and distribution utility (TDU) territories. Two utilities, Oncor and Centerpoint Energy, comprise a combined total of approximately 80 percent of funds expended and deemed energy savings.

Energy Efficiency Program Administration and Implementation Requirements⁶

Standard Offer Programs (SOPs)

These programs typically are offered in categories identified in 25.184 or otherwise included in the deemed savings values. SOPs require EESPs to identify peak demand and energy savings for each program they submit to the utility. These programs shall be neutral to specific technologies, equipment, or fuels. Energy efficiency projects may lead to switching from electricity to another energy source, provided that the energy efficiency project results in overall lower energy costs, lower energy consumption, and the installation of high efficiency equipment. Utilities may not pay incentives for a customer to switch from gas appliances to electric appliances except in connection with the installation of high efficiency combined heating and air conditioning systems. The rules state that comprehensive programs incorporating more than one efficiency measure are to be encouraged but do not provide specific language or incentives for comprehensiveness⁷. SOPs shall be limited to projects that result in consistent and predictable energy or peak demand savings over a period of time based on the life of the measure.

Market Transformation Programs

These programs are strategic efforts to provide incentives and education to reduce market barriers for energy efficient

technologies and practices. These programs may be designed to obtain energy savings or peak demand reductions beyond savings that would be achieved through compliance with existing building codes and equipment efficiency standards or standard offer programs. Market transformation programs may operate over a period of more than one year and may demonstrate cost-effectiveness over a period longer than one year⁸. The utilities are required to include a method for measuring and verifying savings as part of their annual “Energy Plan and Report” submitted to the PUCT.

Hard-to-Reach Program Requirements

Hard-to-Reach Programs are defined as residential customers with an annual household income at or below 200% of the federal poverty guidelines. Each utility’s annual plan and report must include a description of the customer classes targeted by the utility’s energy efficiency programs, specifying the size of the hard-to-reach, residential, and commercial classes, and the methodology used for estimating the size of each customer class. A utility that meets at least 120% of its demand reduction goal with at least 10% of its savings achieved through hard-to-reach programs shall receive an additional bonus.

Avoided Cost Calculations

- Avoided cost of capacity: Initially set at \$80/kW per year. Adjusted annually based on the capacity costs of a new simple-cycle gas turbine.
- Avoided cost of energy is \$0.055/kWh. Adjusted annually to the simple average of the market clearing price in ERCOT for balancing energy for all hours during the peak period for the previous calendar year.
- Avoided costs do not currently include any valuation of avoided environmental, transmission or distribution costs.

Cost Effectiveness Standard

An energy efficiency program is deemed to be cost effective if the cost of the program to the utility is less than or equal to the benefits of the program. The cost of a program includes the cost of incentives, measurement and verification, and actual or allocated research and development and administrative costs. Utilities may determine incentive payments and structure for the EESPs largely at their own discretion. No requirements exist to pass through any portion of incentives to customers.

Annual Energy Efficiency Goals

Electric utilities administer energy efficiency programs to achieve at least a 15% reduction in the utility's annual growth (residential and commercial) by Dec 31, 2008; and 20% of the utility's annual growth in demand by December 31, 2009. In addition, beginning in 2009, a utility's demand reduction goal in MWs for any year shall not be less than the previous year. Savings achieved through hard-to-reach customers shall be no less than 5% of the utility's total demand reduction goal.

Utilities must file an Energy Efficiency Plan and Report each year on April 1st. This Report contains information about the previous five years' energy efficiency programs and program forecasts for the next two years. In addition, it also includes demand savings goals and targets for the previous five years and forecasts for the following three years.

The current goals have proven to be achievable for the large utilities. However, for some of the smaller utilities, just meeting the existing goals has proven to be difficult.

Cost Recovery

The Energy Efficiency Cost Recovery Factor⁹ (EECRF) is a new mechanism with open applications before the PUCT. An

EECRF rate schedule is to be included in each utility's tariff to permit the utility timely recovery of reasonable costs of providing energy efficiency programs beginning in 2009. The EECRF is calculated to recover the costs associated with each program from the customer classes that receive services under each program. Each year, a utility with an EECRF shall apply to adjust the EECRF in order to reflect changes in costs and bonuses and minimize over- or under- collection of energy efficiency costs resulting from the use of the EECRF. An application to change an EECRF will take effect January of the following year if filed by May 1st. The EECRF will be set to allow the utility to earn revenues equal to the cost of the energy efficiency costs, net of energy efficiency costs included in base rates, the energy efficiency performance bonus earned for the prior year, and any adjustment for past over- or under recovery of energy efficiency revenues. Each utility shall file an application at least every three year calendar years to reconcile costs recovered through its EECRF.

The PUCT explicitly sets budget ceilings for utility program expenditures. For instance, existing rules require that a utility's program expenditures for 2008 shall not exceed 175% of its program budget for 2007, and a utility's program expenditures for 2009 shall not exceed 250% of the 2007 program budget.

The EECRF includes incentive payments for each customer class. Incentives shall not exceed 100% of avoided cost. Incentives shall be set by each utility with the objective of achieving its energy and deemed savings goals at the lowest reasonable cost per program.

Energy Efficiency Performance Bonus

A utility that exceeds its demand reduction goal at a cost that does not exceed

the limit established in this section shall be awarded a performance bonus on an annual basis. The utility is entitled to a share of the net benefits realized in meeting its demand reduction goal. Net benefits are calculated as the sum of total avoided cost associated with the eligible programs minus the sum of all program costs.

The incentive structure is as follows:

- A utility that exceeds 100% of its demand reduction goal (DRG) shall receive a bonus equal to 1% of the net benefits for every 2% that the demand reduction is exceeded, with a maximum of 20% of the utility program costs.
- A utility that meets at least of 120% of its demand reduction goals with at least 10% of its savings achieved through hard-to-reach program shall receive an additional bonus equal to 10% of the bonus described above.

Administrative Costs

The cost of administration may not exceed 10% of a utility's total program costs. Research and development shall not exceed 10% of a utility's program costs.

Measurement and Verification

Each SOP shall include an industry-accepted measurement and verification (M&V) protocol. Independent audits are not required. An EESP shall not receive final compensation until it establishes that the work is complete and M&V in accordance with the protocol verifies that the savings will be achieved. Commission approved deemed energy savings may be used in lieu of the EESP's M&V. Deemed savings approved by the Commission before December 31, 2007 are continued in effect unless superseded by Commission Action. Deemed savings values are not updated on a regular basis and tend to be updated on a case by case basis through application.

On April 1st each year, utilities are required to submit compliance filings for the year prior as well as provide forecasted savings for the next three years.

Compliance generally follows deemed savings methodologies as reported by the ESCOs to the utilities. An independent audit of the programs was done by Summit Blue Consulting for the 2003-2004 program years. No significant concerns were identified. The PUC may choose to engage in future independent audit but nothing is scheduled or budgeted at this time.

Statewide Coordination

The Electric Utility Marketing Managers of Texas (EUMMOT) meets several times each year (typically four to six times). The EUMMOT organization is comprised of the energy efficiency program managers at the investor-owned electric utilities responsible for administering energy efficiency programs under 25.181.

In addition, an Energy Efficiency Implementation Project (EEIP) Committee is in place at the Commission's pleasure. This Committee is made up of interested persons and allows for feedback to the Commission. This Committee has no binding standing, formal voice, or decision making ability.

Summary

The combination of Standard Offer Programs using deemed savings protocols and adopted avoided cost savings, statutory energy savings goals, clear performance bonus structure, clear rules regarding budget limits and incentives, and the current implementation of EECRF have enabled Texas to quickly ramp up efficiency programs over the last five years in particular. Utilities, EESPs, energy efficiency advocates, and the environmental community have been largely pleased with the results. Consumer advocates on the other hand are concerned that the savings

goals are not aggressive enough and therefore the performance bonus based upon budget rather than actual savings, incentive payments, and cost recovery structure are skewed. Also of concern is the lack of transparency and rigor regarding measurement and verification. Furthermore, the existing technology standards and deemed savings values are not considered to be aggressive by some stakeholders.

The overarching complaint is that it is difficult to provide holistic feedback regarding the Texas energy efficiency programs as the system is parsed out in separate narrow proceedings without opportunity for overall review. On a related note, it is also difficult for the average consumer to determine and understand what programs are available and/or where to get information. This difficulty is at least partially the result of the restructuring. In the ERCOT IOU service areas, the interactions between transmission and distribution utilities (TDUs) and their end-use customers are limited by PUC rules (unless there is a meter or distribution line issue). Therefore, the TDUs are limited in their ability to advertise and rely upon project sponsors /EESPs to get the word out about the programs.

Despite the concerns characterized above, many participants believe the benefits of streamlining the program are significant because they allow for the utilities to move quickly to implement energy savings without significant concern about cost recovery.

As of this publishing, the PUCT has convened Energy Efficiency Implementation Meetings to seek input from stakeholders about potential improvements to the overall program and will likely continue to fine tune implementation details and policies as needed.¹⁰

Resources

1. See Texas PUC statute §25.181 for rules regarding the Energy Efficiency Goals:
www.puc.state.tx.us/rules/subrules/electric/25.181/25.181.pdf
2. See Texas PUC statute 25.183 for M&V rules:
www.puc.state.tx.us/rules/subrules/electric/25.183/25.183.pdf
3. Link to look up PUC filings (enter case number after clicking on “login”. Case numbers are identified below within parentheses.)
<http://interchange.puc.state.tx.us/WebApp/Interchange/application/dbapps/login/pgLogin.asp>
 - a. Implementation of 25.181 and 21.184, see April 2008 order (33487)
 - b. Utility EECRF Filings:
 - i. Centerpoint Application for Cost Recovery (36952)
 - ii. Southwestern Cost Recovery Application (36951)
 - iii. Oncor Cost Recovery Application (36958)
 - c. Calendar Year 2008 Energy Efficiency Reports (36689)
 - d. Rulemaking for Energy Efficiency Implementation Project including rules for 25.184 implementation (27903)
 - e. Section PURA code 39.905 adopted in Feb 2000 codifying Senate Bill 7 (project 21074)
4. Annual savings reports prepared by Frontier Associates on behalf of the utilities (very layperson friendly with helpful overview):
www.texasefficiency.com/report.html
5. Related PUC docs
www.puc.state.tx.us/rules/rulemake/33487/33487.cfm

6. Itron Assessment of Achievable Savings Levels 2009-2018
www.aceee.org/energy/state/texas/Texas-EE-Potential-Study-Final.pdf
7. Summit Blue Consulting's audit of 2003-2004 energy efficiency programs
www.puc.state.tx.us/electric/reports/EEP/EEP_Audit_Rpt_03-04.pdf
8. Itron's Assessment of the Feasible and Achievable Levels of Electricity Savings from Investor Owned Utilities in Texas: 2009-2018
www.puc.state.tx.us/rules/rulemake/33487/EE_Potential_Study.pdf

Standard Offer Templates

The PUC developed the energy efficiency "templates" (P.U.C. SUBST. R. 25.184) through a series of public meetings and forums with IOUs, energy efficiency service providers and consumer advocate groups resulting with the following programs:

- Commercial and Industrial Standard Offer Program
- Load Management Standard Offer Program
- Residential and Small Commercial Standard Offer Program
- Hard-to-Reach Standard Offer Program
- Residential ENERGY STAR® New Windows Program
- Multi-Family Water and Space Heating Market Transformation Program
- Air Conditioning Distributor Market Transformation Program
- Air Conditioning Installer Market Transformation Program
- Compressed Air Market Transformation Program
- ENERGY STAR® New Homes Market Transformation Program

- Home Performance with ENERGY STAR® Market Transformation Program
- Retro-commissioning Market Transformation Program

Market Transformation Program Requirements

A market transformation program shall identify:

- (A) program goals;
- (B) market barriers the program is designed to overcome;
- (C) key intervention strategies for overcoming those barriers;
- (D) estimated costs and projected energy and capacity savings;
- (E) a baseline study that is appropriate in time and geographic region. In establishing a baseline, the study shall consider the level of regional implementation and enforcement of any applicable energy code;
- (F) program implementation timeline and milestones;
- (G) a description of how the program will achieve the transition from extensive market intervention activities toward a largely self-sustaining market;
- (H) a method for measuring and verifying savings; and
- (I) the period over which savings shall be considered to accrue, including a projected date by which the market will be sufficiently transformed so that the program should be discontinued.
- (J) A market transformation program shall be designed to achieve energy or peak demand savings, or both, and lasting changes in the way energy efficient goods or services are distributed, purchased, installed, or used over a defined period of time.

(K) A load-control standard-offer program shall not permit an energy efficiency service provider to receive incentives under the utility program for the same demand reduction for which it is compensated under a demand response program conducted by an independent organization, independent system operator, or regional transmission operator.

Energy Efficiency Service Provider (EESP) Requirements

Section 25.181(i)(1) **Requirements for standard offer and market transformation programs.** A utility’s standard offer and market transformation programs shall meet the requirements of this subsection.

(D) shall provide for a complaint process that allows:

- (i) an energy efficiency service provider to file a complaint with the commission against a utility; and
- (ii) a customer to file a complaint with the utility against an energy efficiency service provider;

(F) may require energy efficiency service providers to provide the following:

- (i) a description of how the value of any incentive will be passed on to customers
- (ii) evidence of experience and good credit rating;
- (iii) a list of references;
- (iv) all applicable licenses required under state law and local building codes;
- (v) evidence of all building permits required by governing jurisdictions; and
- (vi) evidence of all necessary insurance.

Reported Savings: Summary of Texas Energy Efficiency Program Savings and Expenditures 2006-2008¹¹

Table 3: Utility Funds Expended with Associated Demand and Energy Savings 2008
(From the Annual Energy Efficiency Plans and Reports (Project No. 36689), including SB7 and non-SB7 programs.)
All energy savings are calculated at the meter.

Utility	Funds Expended (000)	Demand Savings (MW)	Energy Savings (MWh)
AEP-SWEPCO	\$2,446	6.26	14,876
AEP-TCC	\$6,649	13.07	36,118
AEP-TNC	\$1,373	1.93	5,660
CNP	\$24,271	68.11	177,221
EPE	\$1,574	2.92	12,494
ETI	\$2,838	5.53	13,361
TNMP	\$1,160	3.27	7,088
Oncor	\$53,377	97.15	302,242
Xcel	\$2,894	3.92	12,566
TOTAL	\$96,582	202.16	581,626

Table 3: Utility Funds Expended with Associated Demand and Energy Savings 2007
(From the Annual Energy Efficiency Reports including SB7 and non-SB7 programs.)
All energy savings are calculated at the meter.

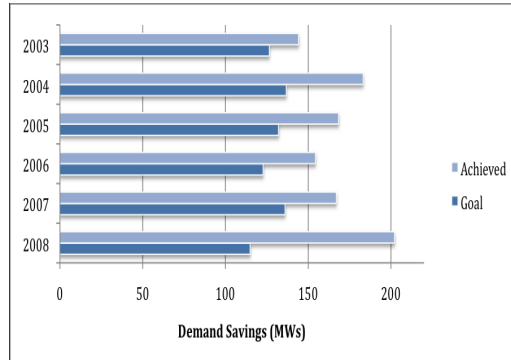
Utility	Funds Expended (000)	Demand Savings (MW)	Energy Savings (MWh)
AEP-SWEPCO	\$1,234,200	1.61	5,496
AEP-TCC	\$5,203,100	9.50	25,491
AEP-TNC	\$993,800	1.37	4,894
CNP	\$19,563,098	52.28	135,364
EGSI	\$2,968,000	5.34	15,034
EPE	\$1,115,000	1.21	5,000
TNMP	\$819,757	2.30	3,394
Oncor	\$46,384,709	89.23	216,371
Xcel	\$2,008,000	4.14	16,818
TOTAL	\$80,289,664	166.98	427,862

Table 3: Utility Funds Expended with Associated Demand and Energy Savings 2006
(From the Annual Energy Efficiency Reports including SB7 and non-SB7 programs.)
Demand and energy savings for AEP and TXU were reported at the meter. A 7% T&D adjustment was used to convert these to savings at the source for this report.

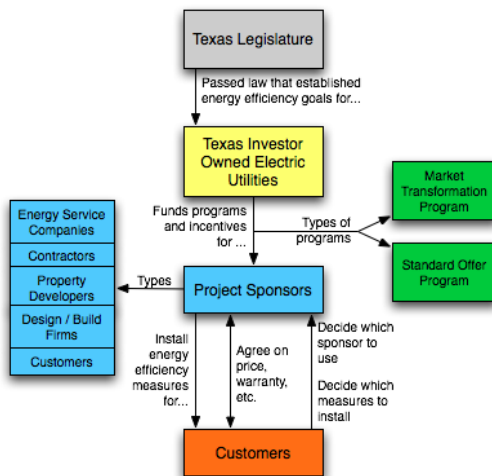
Utility	Funds Expended (000)	Demand Savings (MW)	Energy Savings (MWh)
AEP-SWEPCO ⁱ	\$1,656,948	.96	4,514
AEP-TCC ⁱ	\$6,334,949	11.98	35,628
AEP-TNC ⁱ	\$1,251,621	1.63	5,118
CNP	\$13,974,725	41.45	123,906
EGSI	\$3,472,098	5.80	17,020
EPE	\$1,124,600	1.05	4,697
TNMP	\$1,113,101	2.27	3,345
TXUED ⁱ	\$28,794,198	98.37	171,475
Xcel	\$3,045,773	2.95	6,068
TOTAL	\$60,768,013	163.51	365,703

Historical Savings:

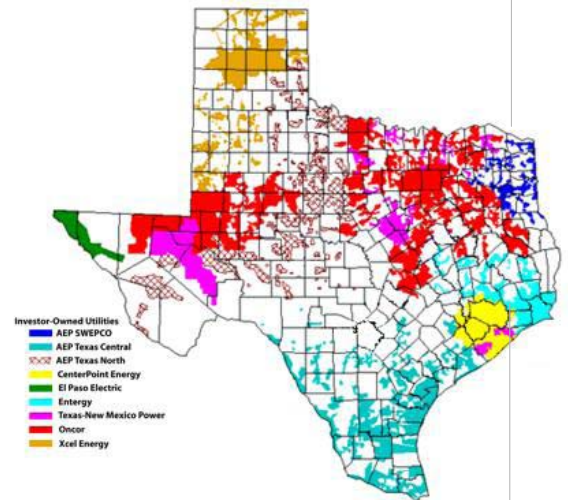
Figure 1: Total Energy Savings by IOUs, 2003-2008



Overview of Texas Energy Efficiency Programs¹²



Texas Investor Owned Utility Service Territory Map¹³



1

www.capitol.state.tx.us/tlodocs/76R/billtext/html/SB00007F.htm

² See project 21074 on the PUCT's website.

3

www.capitol.state.tx.us/tlodocs/80R/billtext/html/HB03693F.htm

⁴ See project 33487 on the PUCT's website.

⁵ EESPs *may* be required by the utility to provide evidence of experience, insurance, appropriate licensing, and references, among other elements listed under section 25.181(i)(F). No formal verification of the EESP certification or licensing compliance is required by the PUCT or utility. However, under section 25.181(i)(D), the programs are required to provide a complaint process for customers to file complaints with the utility against an EESP. See EESP requirements below for more details.

⁶ See project 33487 on the PUCT's website for 25.181 and 25.184 implementation details.

⁷ See section 25.181(i)(1) and subrules for specific requirement (link provided below under "Resources"). Comprehensiveness is not a component of the rules nor is it a component of the bonus structure.

⁸ See Market Transformation Program requirements on page 6 of this document for additional information.

⁹ NOTE: The EECRF is a new cost recovery tool being implemented right now. Prior to the EECRF, utilities were typically granted cost recovery through general rate cases or utility applications. The EECRF is an effort to standardize and simplify the process and schedule. Individual case numbers are listed below under "Resources".

¹⁰ See

<http://www.puc.state.tx.us/rules/rulemake/33487/33487.cfm> for additional information.

¹¹ All information listed under this "Reported Results" section is posted at www.texasefficiency.com/report.html in the annual energy efficiency reports prepared by Frontier Associates.

¹² From Frontier Associates July 6, 2009 Report: Energy Efficiency Accomplishments of Texas Investor Owned Utilities Calendar Year 2008.

¹³ sic