



Public Utility
Commission of Texas

2020 ENERGY EFFICIENCY ACCOMPLISHMENTS

October 2021



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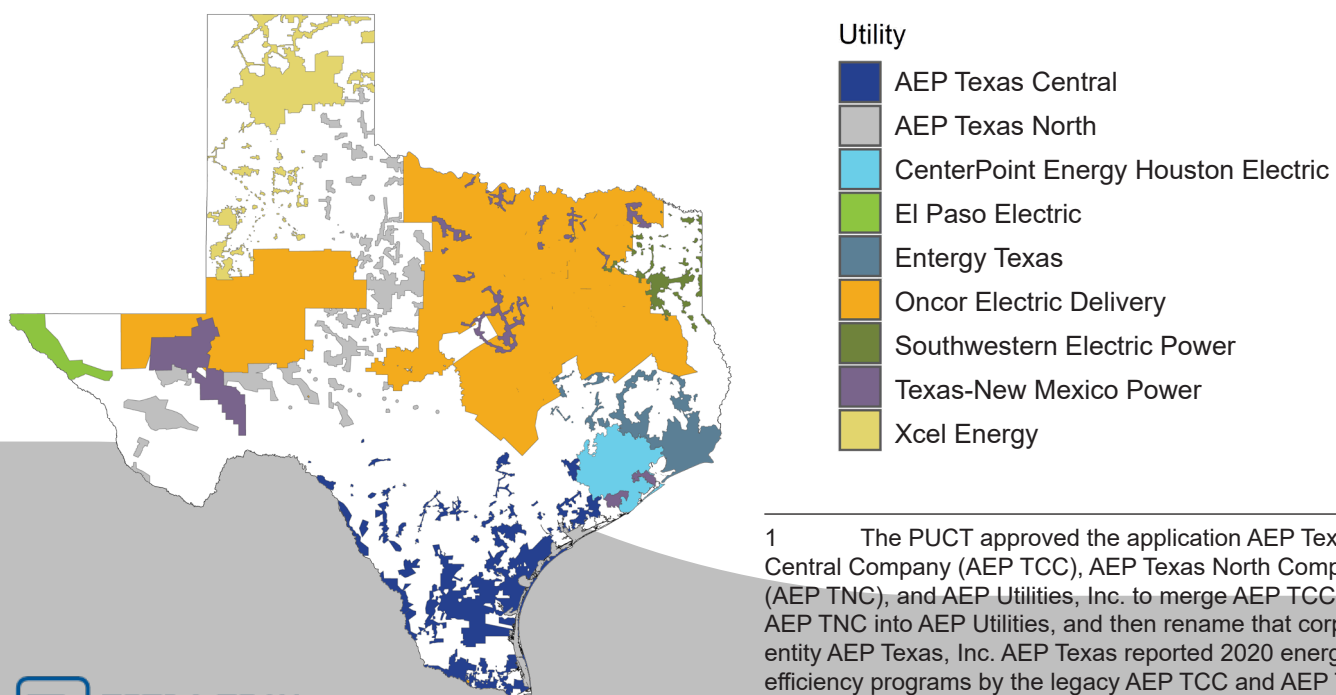
SECTION 1

Executive Summary

The Public Utility Commission of Texas (PUCT) oversees the energy efficiency programs delivered by the state's investor-owned electric utilities: AEP Texas¹, CenterPoint Energy Houston Electric (CenterPoint), Entergy Texas (Entergy), El Paso Electric, Oncor Electric Delivery (Oncor), Southwestern Electric Power (SWEPCO), Southwestern Public Service (Xcel SPS), and Texas-New Mexico Power (TNMP). The utilities' service territories are shown in Figure 1.

The Texas electric utilities administer a variety of programs that improve the energy efficiency of residential and commercial customers' homes and businesses. Standard offer programs (SOP) develop the infrastructure of service providers (e.g., contractors, distributors) and provide financial incentives to deliver higher-efficiency products and services. Utilities select implementation firms to run market transformation programs (MTP); MTPs provide additional outreach, technical assistance, and education to customers in harder-to-serve markets (e.g., small business, health care, data centers, and local governments) and for select technologies (e.g., recommissioning, air conditioner (AC) tune-ups, pool pumps). All utilities provide energy efficiency offerings to low-income customers through hard-to-reach (HTR) programs that are delivered similarly to the residential SOPs. The utilities that are part of the Electric Reliability Council of Texas (ERCOT) also offer targeted low-income programs that coordinate with the existing federal weatherization program. Finally, the utilities manage load management programs, which are designed to reduce summer peak demand.

Figure 1. Territories of Regulated Electric Utilities in Texas



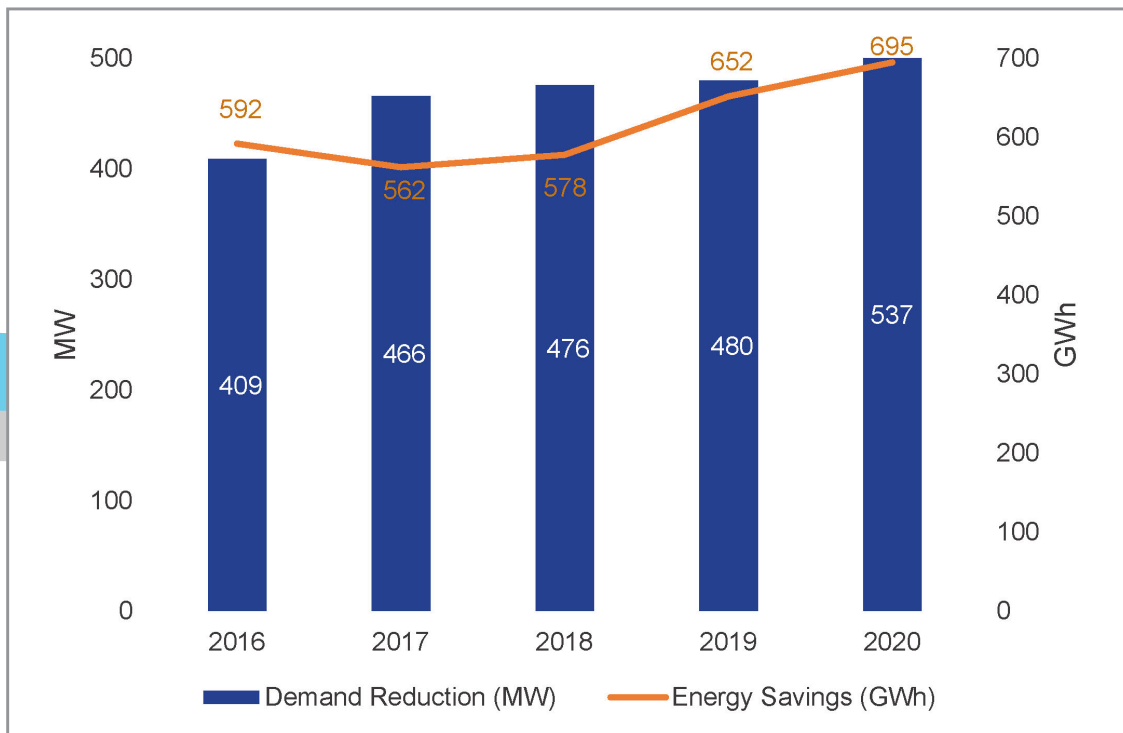
¹ The PUCT approved the application AEP Texas Central Company (AEP TCC), AEP Texas North Company (AEP TNC), and AEP Utilities, Inc. to merge AEP TCC and AEP TNC into AEP Utilities, and then rename that corporate entity AEP Texas, Inc. AEP Texas reported 2020 energy efficiency programs by the legacy AEP TCC and AEP TNC territories, which are now referred to as AEP Texas Central Division and AEP Texas North Division.

SECTION 2

PY2020 Energy Efficiency Summary Results

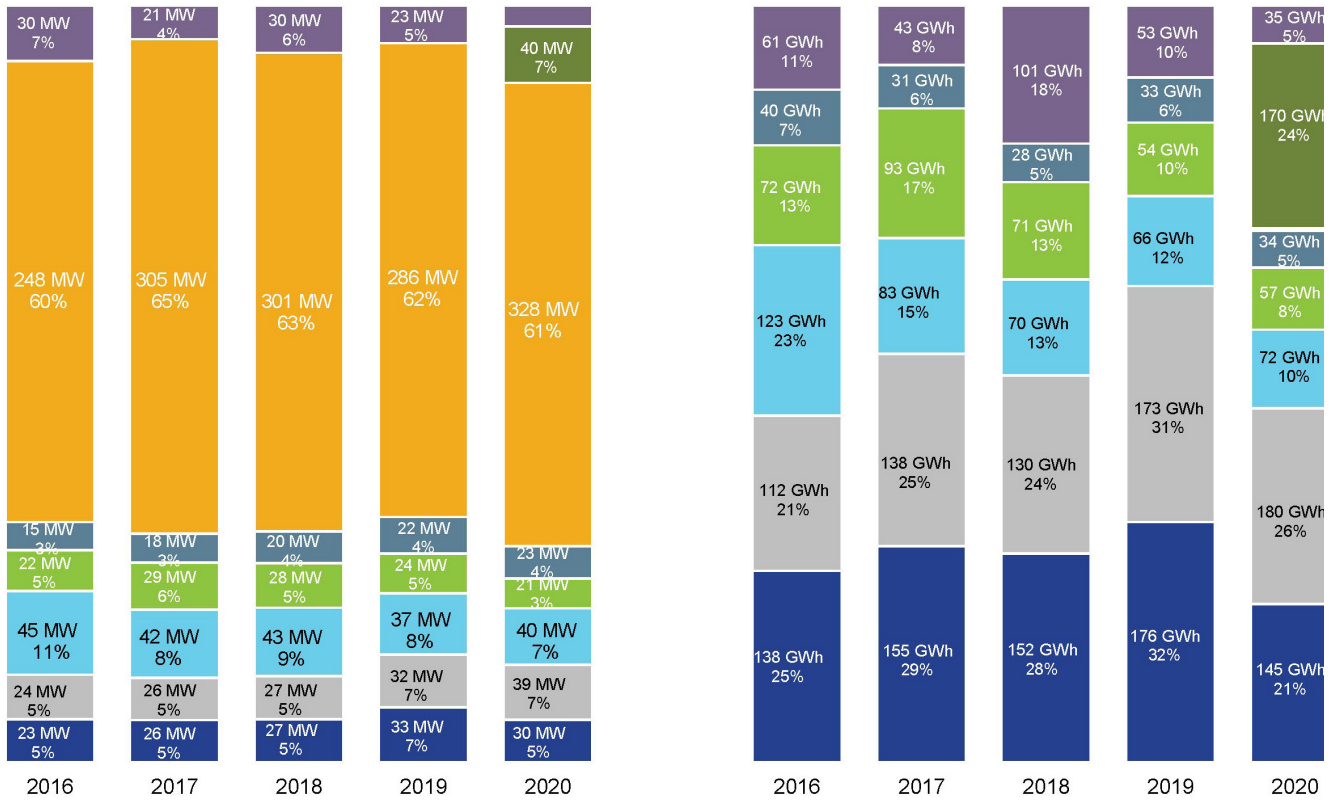
In program year (PY) 2020, the Texas electric utilities achieved statewide demand reductions of 536,770 kilowatts (kW) at a lifetime savings cost of \$11.56 per kW. The utilities achieved statewide energy savings of 695,012,552 kilowatt-hours (kWh) at a lifetime savings cost of \$0.02 per kWh.

**Figure 2. Total Statewide Portfolio:
Evaluated Gross Demand Reduction and Energy Savings by Program Year**



Load management programs consistently account for the majority of the statewide demand reductions (megawatt, MW). Due to the growth in the upstream/midstream programs, we present it as a separate category in PY2020, as it is now the second-largest contributor to statewide energy savings, slightly behind commercial MTPs (Figure 3).

Figure 3. Evaluated Gross Demand Reduction and Energy Savings by Program Type



Other: HTR MTP, LI, PV/Solar (prior to PY2020, *Midstream* was captured under *Other*)



Energy savings and demand reductions from the energy efficiency programs persist beyond the program year. The duration of savings is based on the type of energy efficiency improvement made and how long it typically lasts. The cumulative savings the utilities had achieved since PY2012—when the EM&V effort began—are shown in Figure 4 (demand reduction) and Figure 5 (energy savings). Demand reductions and energy savings are expected to continue through 2048. Lighting, HVAC, and building shell improvements are delivering the most savings over time. Load management delivers demand reductions only in the program year and accounts for the spike and drop-off after 2020.

Figure 4. PY2012–PY2048 Life Cycle Demand Reduction by Measure Category (MW)

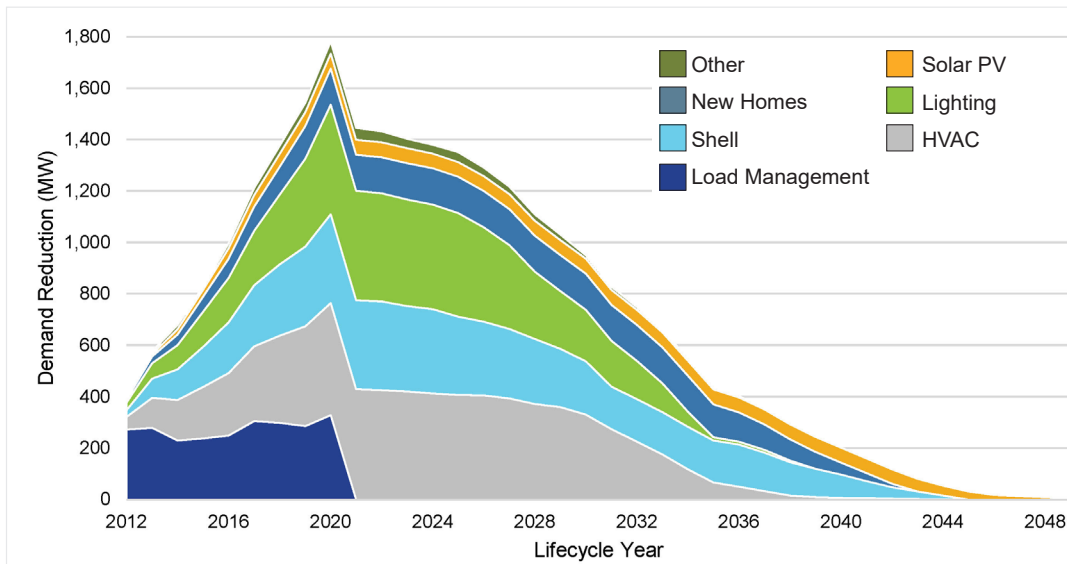
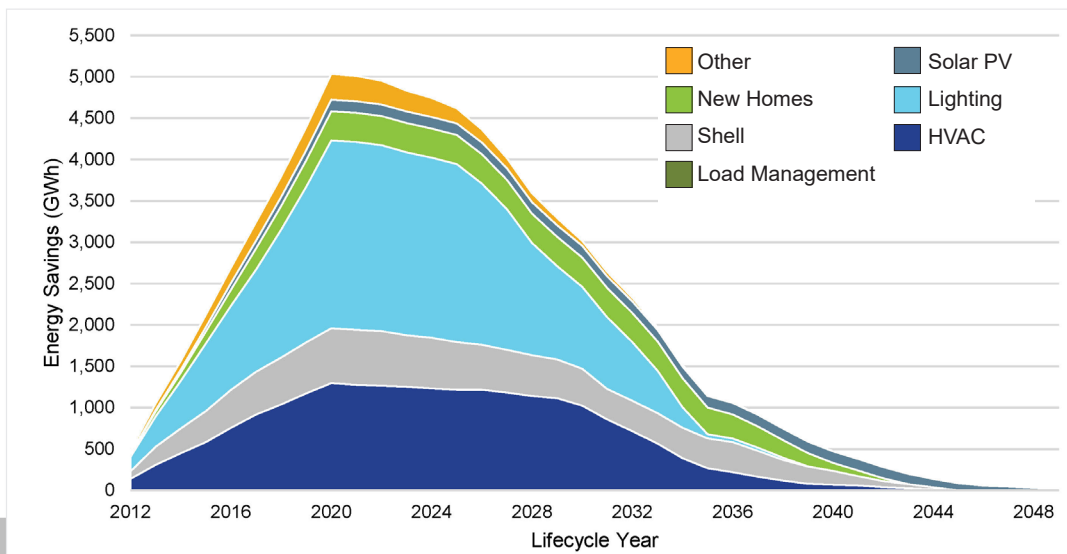


Figure 5. PY2012–PY2048 Life Cycle Energy Savings by Measure Category (GWh)



SECTION 3

Evaluation, Measurement, and Verification Overview

In 2011, the Texas Legislature enacted SB 1125, which required the PUCT to develop an evaluation, measurement, and verification (EM&V) framework that promotes effective program design and consistent and streamlined reporting. The PUCT's EM&V independently verifies claimed savings across all programs through program tracking data that is received from the utilities. Additional EM&V activities included 118 engineering desk reviews, interval meter data analysis for a census of load management participants and a sample of commercial

participants, and in-depth interviews with all utilities to understand program responses to the pandemic and low-income-eligibility verification processes.

The PUCT's EM&V team maintains the Texas Technical Reference Manual (TRM)—a centralized reference document updated annually that provides guidance on how to calculate savings for the wide range of energy efficiency improvements included in the programs. Findings from the PY2020 EM&V inform updates for the PY2022 TRM.

SECTION 4

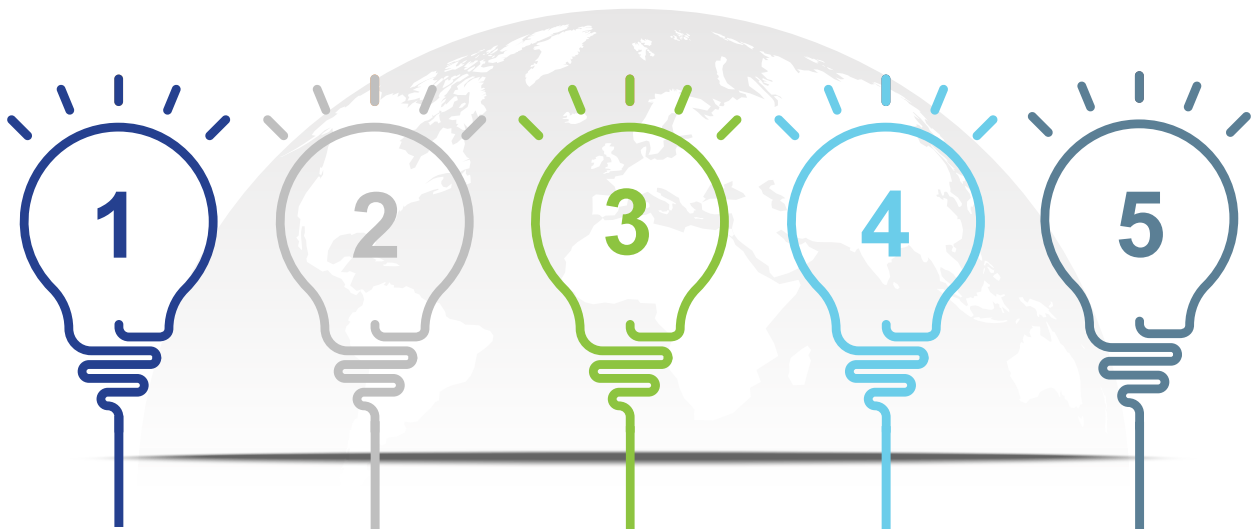
Key Findings

The overall evaluation results for the utilities' portfolios are positive, with claimed savings similar to evaluated savings. This is a result of well-established program design and delivery processes, tracking systems, documentation, and savings tools, coupled with the utilities' collaboration with and responsiveness to the EM&V effort and improvements in the TRM.



SECTION 5

PY2020 Energy Efficiency Accomplishments

**Responded Effectively to the Pandemic**

All utilities exceeded goals while responding to program challenges and implementing virtual QA/QC.

Expanded Energy Efficiency Offerings

Increased measures and delivery mechanisms.

Increased Savings

PY2020 saw both the highest demand reductions and energy savings in the last five years.

Worked Collaboratively on Improvements

Collaborated to improve low-income and hard-to-reach program outreach and eligibility verification processes.

Achieved Highest Cost-Effectiveness to Date

While primarily driven by high avoided costs, expansion of midstream and upstream programs also increased cost-effectiveness.

SECTION 6

Recommendations

The PUCT's EM&V recommendations facilitate more accurate, transparent, and consistent savings calculations and program reporting across the Texas energy efficiency programs, as well as provide feedback that can lead to improved program design and delivery. The PUCT and EM&V team work with the utilities to document *action plans* on how the utilities will respond to recommendations within the next program year. Utilities have been responsive to prior recommended changes in their program implementation, savings calculations, and reporting.

In PY2020, the utilities responded to 43 recommendations from the PY2018 EM&V completed in 2019. The PY2020 evaluation resulted in an additional 31 recommendations for PY2022 implementation across commercial programs (9), residential programs (9), load management programs (4), and cross-sector areas (9). Recommendations include opportunities to improve program performance, internal processes, tracking data and documentation, and TRM updates for more accurate savings calculations.

The PY2020 Evaluation
Resulted in

**31 NEW
RECOMMENDATIONS**

