Public Utility Commission of Texas

Memorandum

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FROM: Cliff Crouch, Competitive Markets

DATE: January 14, 2019

RE: **Project No. 48017** – 2019 Report on the Scope of Competition in Electric Markets in Texas

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Attached is the final version of the 2019 Report to the 86th Legislature on the *Scope of Competition in Electric Markets in Texas* Report.

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Scope of Competition in Electric Markets in Texas

Report to the 86th Legislature

Public Utility Commission of Texas

January 2019

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January 15, 2019

Honorable Members of the 86th Texas Legislature:

We are pleased to submit the 2019 *Scope of Competition in Electric Markets* report, as required by Section 31.003 of the Public Utility Regulatory Act. The Report provides an overview of the current status of electric competition in Texas, and describes other electric industry matters for which the Public Utility Commission of Texas (the Commission) has responsibility under State law. The report concludes with a discussion of recommendations the Legislature may wish to consider.

We look forward to continued collaboration with the Legislature to secure a bright energy future for Texas's residents, businesses, and industries. If you need additional information about the issues addressed in the report or any other Commission issues, please contact us.

Sincerely,

DeAnn T. Walker
Chairman

Arthur C. D'Andrea
Commissioner

Shelly Botkin
Commissioner

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2019 Scope of Competition in Electric Markets in Texas

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I. INTRODUCTION

This report examines the status of electric markets in Texas throughout the two years since the submission of the previous *Scope of Competition in Electric Markets in Texas* to the 85th Legislature in 2017. The report identifies trends affecting competition in the wholesale and retail electric markets and Commission activities of notable interest over the last two years, including implementation of legislation, rulemaking activity, significant proceedings, and changes in the competitive ERCOT market. The report concludes with legislative recommendations.

The competitive electric marketplace in Texas continues to support a healthy number of retail electric providers and a wide variety of products to customers, competitive prices in wholesale markets, reliable service, and a diverse mix of generation resources.

Because of the timing of the preparation of this report, the data used to analyze retail and wholesale trends looks at the two-year period from September 1, 2016 through August 31, 2018, including record-setting peak demand in the summer of 2018.

II. STATE OF THE COMPETITIVE MARKET FROM 2017 TO 2018

A. Residential and Small Commercial Customers in Competitive Retail Markets

Texas is approaching the 20th anniversary of the restructuring of the retail electric market in the state. Passed in the 76th Legislative Session, Senate Bill 7 laid the foundation for a restructured electric market that continues to evolve. Since the implementation of customer choice, Texans in the competitive areas of ERCOT have been able to choose electricity products from a wide variety of retail electric providers (REPs), which offer products tailored to residential, commercial, and industrial customers. Nearly all customers have exercised their ability to choose their electricity provider since the market opened.[1]

1. Customer Choice

The Commission guides improvements to and enforces rules of Texas's competitive retail electric market. The number and diversity of REPs competing for customers provides an indicator of the health and the competitiveness of the retail market. Since the publication of the 2017 *Scope of Competition in Electric Markets in Texas* report, the number of REPs and competitive offers in the areas included in the Electric Reliability Council of Texas (ERCOT) has remained stable. As of September 2018, 116 REPs were operating in ERCOT, providing 315 total unique products, 77 of which solely support electricity generated from 100% renewable sources.[2]

Table 1. Number of REPs and Products Serving Residential Customers by Transmission Distribution Utility (TDU) Service Territory

September 2018 and September 2017

TDU Service Territory[3]	Residential Suppliers (Sept. 2018)	Residential Suppliers (Sept. 2017)	Number of Products (Sept. 2018)	Number of Products (Sept. 2017)
AEP Central	48	52	282	355
AEP North	24	49	237	295
CenterPoint	51	55	305	400
Oncor	50	55	311	390
TNMP	42	49	247	320

[1] ERCOT, *Observed Selection of Electric Providers September 2017 – September 2018*, http://ercot.com/content/wcm/key_documents_lists/89277/Observed_Selection_of_Electric_Providers_September_2018.ppt.pptx, October 1, 2018.

[2] Public Utility Commission, www.powertochoose.org, accessed September 1, 2018.

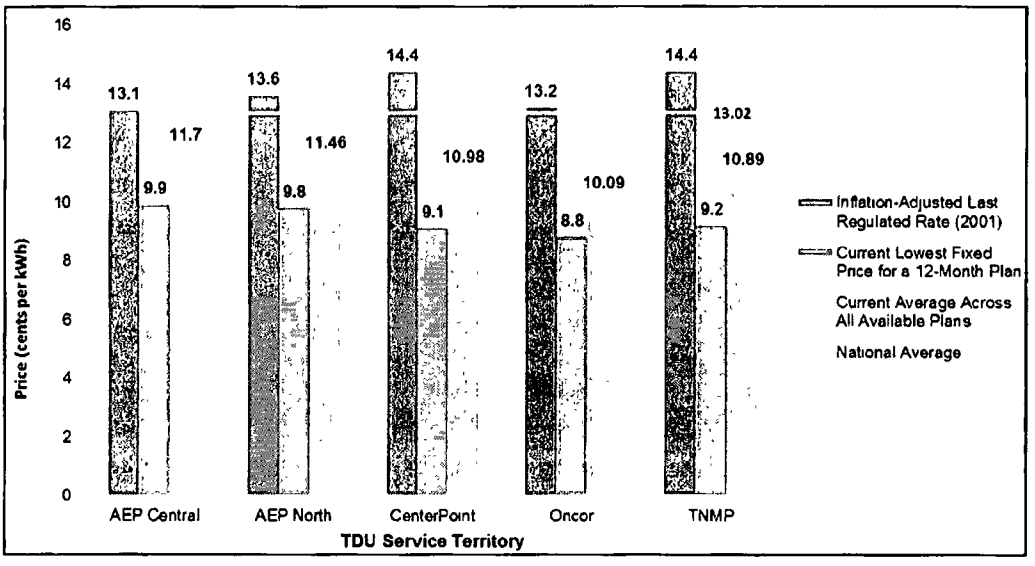
[3] American Electric Power – Texas Central Division ("AEP Central"); American Electric Power – Texas North Division ("AEP North"); CenterPoint Energy Houston Electric ("CenterPoint"); Oncor Electric Delivery Company ("Oncor"); and Texas-New Mexico Power Company ("TNMP").

The matured competitive market offers a variety of products to customers. As of September 2018, plans are available that offer 100% renewable electricity, time-of-use pricing such as free electricity on the weekends, and prepaid plans that allow customers to better budget. Contract terms vary from one month to as long as 60 months.

2. Retail Prices

Together, the REPs in the competitive market serve 6,362,771 residential customers, 1,081,646 commercial customers, and 4,607 industrial customers.[4] Figure 1 compares current offerings to the last inflation-adjusted regulated retail rate. As Figure 1 below demonstrates, rates in the ERCOT competitive market have decreased by 31% since the transition to the competitive market. Rates in the competitive market also remain lower than the national average of 13.02 cents per kWh, as of June 2018 according to the United States Energy Information Agency. The average lowest available residential price across the competitive market was 9.36 cents per kWh in September 2018, and the average price across all plans available in the competitive market in Texas was 10.3 cents per kWh.

Figure 1. Comparison of Currently Available Retail Rates to the National Average and Inflation-Adjusted Last Regulated Rate[5]



[4] ERCOT *Provider of Last Resort Counts,* June 1, 2018. Available at: http://www.ercot.com/content/wcm/key_documents_lists/89277/POLR_Counts_Energy_2018_Reporting.xlsx.

[5] Association of Electric Companies of Texas. Available at: http://www.aect.net/inside-the-charts-prices-available-in-the-competitive-market-today-well-below-the-last-regulated-rate/ and www.powertochoose.org.

3. Customer Education Activities

The Commission has telephone, web-based, and in-person contact with residential and small commercial electric customers. Commission staff provides information about retail electric competition through the Texas Electric Choice campaign and helps customers shop. Commission staff pro-actively participates in public events and responds to customer inquiries through a bilingual call center, the Commission's website, and the Power to Choose shopping website.

a. *Power to Choose Website, Customer Education Campaign, and Call Center*

The Power to Choose website, and its Spanish-language counterpart Poder de Escoger, provide a simple, one-stop shopping portal for Texans who live in an area open to customer choice. Customers can enter a ZIP code and browse through plans offered by the REPs in that area. From September 1, 2016 through August 31, 2018, over a million unique and potential customers visited the Power to Choose and Poder de Escoger websites. Commission staff also promotes the state's electric choice website through social media, as well as by maintaining an active presence at community events, trade shows, and expositions. Table 2 shows the number of visitors to each site.

Table 2. Visitor Website Statistics for September 1, 2016 – August 31, 2018

Unique Visitors	Number
PowerToChoose.org	1,364,686
PoderDeEscoger.org	5,725

The Commission's Customer Protection Division staff speak both English and Spanish. They answer customer calls and provide informational materials comparing electric plans by mail for customers without Internet access. From September 2016 to August 2018, the Customer Protection Division staff handled 6,606 calls from customers requesting assistance with shopping for electric plans.

b. *Educational Literature*

In addition to the educational materials on the Commission's agency and Power to Choose websites, the Commission develops and disseminates brochures and fact sheets by mail and e-mail to community organizations, at public events, and in response to customer requests to the call center. For example, in FY 2017 and FY 2018, agency staff attended and distributed educational materials on electric choice and shopping at community events such as the DFW Family Fair, Earth Day Texas, Women's Expo Houston, Texas Black Expo, the 6 Stones Hurst/Euless/Bedford Back 2 School event, Energy Day Houston, and Round Rock Express, Corpus Christi Hooks, and Midland Rockhounds baseball games. These gatherings offer the agency a critical avenue for reaching diverse communities throughout the state to help ensure the widest engagement with the competitive electric market.

4. Customer Protection

The Commission's rules provide a process for customers to file a complaint with the Commission about electric service. Not every call results in a complaint, and frequently Commission staff is able to provide information that answers a customer's concerns. If the issue cannot be addressed by simply providing information, Commission staff works with the customer and electric service provider to resolve the issue in an informal complaint process. The Commission maintains records of these calls and complaints, and evaluates the complaint statistics as a barometer of a company's behavior and its effect on customers. The Commission staff uses the data to identify company-specific trends, and works with companies to address any issues. The Commission staff also uses the data as a basis for enforcement actions.

The call center receives thousands of electricity-related calls per month in both English and Spanish related to a variety of electric questions such as billing, customer service, and requests for assistance shopping for an electric plan. Historic low temperatures in the winter of 2017 - 2018 may have contributed to the high number of complaints with the ERCOT grid setting multiple new winter peak demand records in January 2018. During the historic cold temperatures in January and February of 2018, the Commission received a total of 1,209 complaints, of which 40% were related to rates and charges, and 23% were related to metering. During the same two-month period a year prior in 2017, the Commission received only 661 complaints. The increase in electricity usage and resulting higher bills prompt more customers to scrutinize their usage and contact the Commission to confirm rates, charges, and metering.

B. Wholesale Market in ERCOT

The Commission engages regularly with ERCOT to oversee market developments and ensure system supply, reliability, security, improved price formation and market outcomes. The Commission also collaborates with the statutorily-required Independent Market Monitor (IMM), as discussed in more detail below, to detect and prevent market manipulation strategies, as well as to identify potential design improvements for the ERCOT wholesale electric market. Changes made as a result of these working relationships have helped improve wholesale market efficiency by creating new opportunities for a variety of generation resources to enter the market and by enhancing wholesale price formation in order to reflect real-time market conditions more accurately.

1. Independent Market Monitor

PURA[6] § 39.1515 requires that the Commission contract with an independent organization to act as the Commission's wholesale electric market monitor. The Commission currently contracts with the statistical and economics consulting firm

[6] Public Utility Regulatory Act, Tex. Util. Code Ann. §§ 11.001-58.302 (West 2016 & Supp. 2018), §§ 59.001-66.016 (West 2007 & Supp. 2018) (PURA).

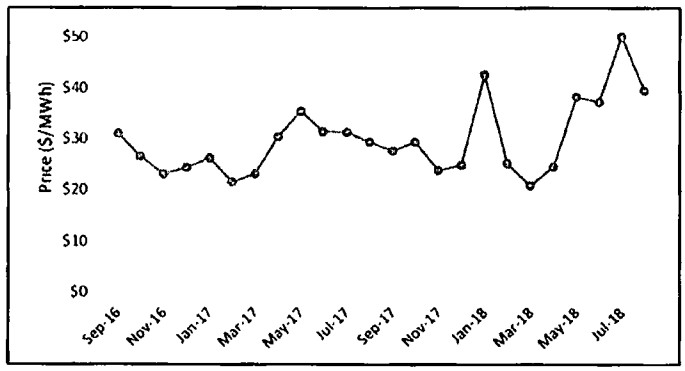
Potomac Economics to serve as its IMM. The IMM submits an annual report on the state of the ERCOT market, which examines whether market power exists and if attempts have been made to exercise it. In the 2017 *State of the Market Report for the ERCOT Electricity Markets* (State of the Market report), which was issued in May 2018, the IMM found that potential economic withholding levels for both the largest suppliers and small suppliers alike in 2017 were extremely low. These results, together with the evaluation of market outcomes presented, led the IMM to conclude that the ERCOT market performed competitively in 2017.

The State of the Market report also includes seven recommendations to improve the efficiency of the wholesale market. Generally, these recommendations relate to improvements to either market operation or price formation. The Commission is currently in the process of studying two of these recommendations, real-time co-optimization and marginal losses.

2. Wholesale Market Prices

Wholesale prices often correlate with prices for natural gas, the fuel used by a large proportion of the region's power plants. The average Houston Ship Channel spot price for natural gas was 19% higher in calendar year 2017 than the average realized in calendar year 2016, increasing from $2.51 per MMBtu in 2016 to $2.98 in 2017. The average price for 2018 through the end of August has risen slightly to $2.99 per MMBtu.[7] The influence of this increase in gas prices can be observed in Figure 2, which shows monthly average wholesale electricity prices. Load-weighted prices are calculated by dividing the price at a load zone by the associated demand. This metric provides a useful proxy for the actual wholesale prices paid by load.[8]

Figure 2. Load-Weighted Average Real-Time Monthly Settlement Point Prices for September 2016 – August 2018[9]



[7] S&P Global Market Intelligence, NYMEX Houston Ship Channel Natural Gas Prices, September 1, 2016 to August 31, 2018 (2018).

[8] Most power in ERCOT is sold through various non-public bilateral arrangements that are designed to hedge daily real-time market price risk.

[9] ERCOT Market Information, http://www.ercot.com/mktinfo/prices, accessed September 1, 2018.

Another significant component of the real-time price of electricity is the cost of transmission congestion. Transmission lines have a finite capacity to deliver electricity safely. If lower cost electricity is available from a given power plant, but the lines needed to deliver it to the customer are not available because the lines are already at maximum capacity, then electricity must be purchased from a different plant at a higher cost. The difference in the prices is the cost of transmission congestion. The cost of transmission congestion reflects the price of serving load and serves as a market signal to both transmission planners and generation market participants of locations where demand exceeds transmission capacity, indicating where additional transmission lines or generation would alleviate the congestion.

Areas of West Texas and Houston have experienced significant amounts of transmission congestion over the past several years. New transmission lines have partially relieved the cost burden in West Texas, but continuing oil and gas production growth in the Permian Basin and Eagle Ford shale areas has resulted in persistent transmission congestion and, as a result, relatively higher zonal prices. High congestion in the Houston area is largely due to planned transmission outages related to the construction of expanded transmission facilities serving this area. Significant portions of these new facilities went into service at the beginning of the summer of 2018 and have already lowered energy prices for customers in the Houston area.

3. Capacity, Demand, and Reserves Report

ERCOT's semi-annual Capacity, Demand, and Reserves report (CDR report) compares electricity generation capacity to estimated demand in the future. The CDR report estimates long-term supply and demand and the associated annual reserve margin (the amount of generation anticipated to be available in excess of forecast demand) for peak summer and winter conditions. While the CDR report is not a forecast of any particular outcome, it provides insight into possible resource adequacy trends. The CDR report estimates possible future outcomes, which vary depending on external variables such as differences in actual versus forecasted load growth, weather assumptions, resource unit retirements, and delays in new generation coming online. Reserve margin estimates taken from the current December 2018 CDR report are shown below in Table 3.

Table 3. December 2018 CDR Report for Peak Summer Conditions for 2019 – 2023

Peak Load (MW)	72,674	74,686	76,664	78,295	79,972
Total Capacity (MW)	78,555	82,652	86,016	85,958	85,958
Reserve Margin	**8.1%**	**10.7%**	**12.2%**	**9.8%**	**7.5%**

Because ERCOT operates an energy-only market, the Commission has not established a mandatory reserve margin level. However, the Commission has used a standard of one outage in ten years due to capacity shortage as a benchmark to evaluate the adequacy of the current and projected reserve margin in the CDR report. The reserve

margin necessary to satisfy this standard has been calculated to be 13.75%.[10] In 2017, the Commission decided to consider an additional standard, the economically optimal reserve margin (EORM), to evaluate installed capacity.[11] The EORM is an estimate of the reserve margin at which the cost of increasing reliability would exceed the value of a loss of load event. In conjunction with The Brattle Group, ERCOT staff completed a study of the EORM in October 2018. Preliminary results of that study conclude that the EORM for the ERCOT market is 9.0%. ERCOT staff and The Brattle Group have also studied the Market Equilibrium Reserve Margin (the reserve margin that the ERCOT market design is estimated to achieve in the long run) and concluded that the equilibrium reserve is 10.25%. The actual reserve margin at the beginning of the summer of 2018 was 11.0%.

The retirement of a number of older coal-fired generation plants during the winter of 2017-2018 raised concerns that the corresponding lower reserve margin could result in reliability issues in the summer of 2018. While the region set new all-time peak demand records and prices were higher than in previous years, the system operated reliably and efficiently throughout the summer.

The ERCOT system performed well with respect to available system capacity throughout calendar years 2016 and 2017, and the Commission is currently reviewing results from 2018. The Commission continues to devote significant attention to monitoring ERCOT's reserve margin, operational reliability, and developing a wholesale market design that allows customers to continue to receive low-cost and reliable electricity over the long term.

C. Non-ERCOT Utilities: Market Development

Senate Bill 7, the original bill that deregulated Texas electric markets, granted the Commission authority to delay retail competition in areas where deregulation would not result in fair competition and reliable service. Utilities outside of the ERCOT region remain vertically integrated, owning generation, transmission, and distribution assets, as well as selling power to end-use customers. Those utilities include El Paso Electric Company, Southwestern Public Service Company, Southwestern Electric Power Company, and Entergy Texas, Inc. These vertically-integrated utilities are subject to traditional utility regulation, including retail rate setting by the Commission. Customers served by these utilities do not have a choice of provider unless the customer is located in a multiply-certificated area.

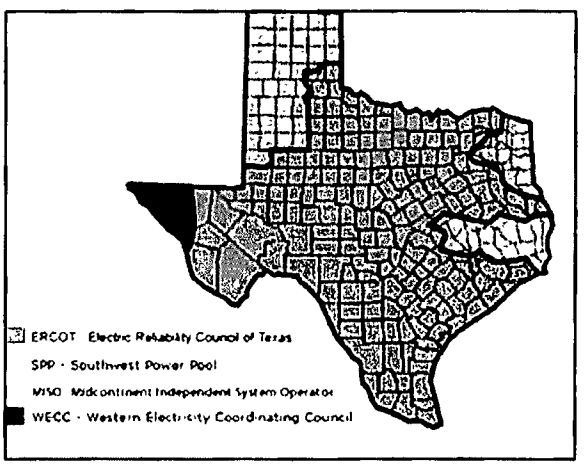
The Commission provides policy oversight and makes recommendations to the non-ERCOT portions of the state through the commissioners' participation in state and regional planning groups. The Federal Energy Regulatory Commission (FERC) has

[10] This reserve margin was approved by the ERCOT Board at the November 16, 2010 Board Meeting.

[11] Commissioners directed the study of the Economically Optimal Reserve Margin metric at the September 22, 2016 open meeting, as part of Project No. 42302, *Review of the Reliability Standard in the ERCOT Region*.

regulatory jurisdiction over wholesale power sales and transmission rates outside of ERCOT. The Commission has the authority to retain counsel and consulting experts in order to participate in certain legal proceedings at the FERC and at courts reviewing those FERC proceedings. Figure 3 shows each of the regional transmission organizations' territory in Texas.

Figure 3. Map of Regional Transmission Organizations in Texas



1. Southwest Power Pool

The Southwest Power Pool (SPP) is the regional transmission organization for areas of Northeast Texas and the Texas Panhandle, serving Southwestern Electric Power Company, Southwestern Public Service, several electric cooperatives, and various municipally owned utilities. SPP also includes parts of Arkansas, Iowa, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, South Dakota, Wyoming, and all of Kansas and Oklahoma. The SPP Market Monitoring Unit concluded that the SPP wholesale markets were "workably competitive" in 2017.[12]

Chairman DeAnn T. Walker represents the Commission as a voting member on SPP's Regional State Committee, which consists of the state regulatory agencies in the region. The Regional State Committee meets quarterly and advises SPP on issues such as cost allocation methodologies for transmission upgrades, allocation of Financial Transmission Rights, and the approach used for resource adequacy across the SPP region.

2. Midcontinent Independent System Operator

The Midcontinent Independent System Operator (MISO) is the regional transmission organization that serves all or part of 15 states in the central United States,

[12] *State of the Market 2017*, SPP Marketing Monitoring Unit, at 1, May 2018. Available at: https://www.spp.org/documents/57928/spp_mmu_asom_2017.pdf

one Canadian province, and the portion of eastern Texas served by the vertically integrated utility, Entergy Texas, Inc. MISO is also subject to FERC jurisdiction. The Commission, through outside counsel, has been an active party in recent FERC proceedings, arguing for the right to address generation resource adequacy at the state level, increased regulatory certainty, fair cost allocation across MISO states, and increased market efficiency. The MISO Independent Market Monitor concluded that the MISO wholesale markets were competitive in 2017.[13]

Commissioner Arthur C. D'Andrea represents the Commission as a voting member of the Organization of MISO States (OMS), which coordinates regulatory oversight among the retail regulators in the MISO region and makes recommendations to MISO, FERC, and other entities. Commissioner D'Andrea also represents the Commission as a voting member of the Entergy Regional State Committee, which has certain FERC-approved authority over the Entergy operating companies' cost allocation for transmission projects and addition of transmission projects to the Entergy construction plan.

3. Western Electricity Coordinating Council

The Western Electricity Coordinating Council (WECC) is a regional entity that includes the area surrounding El Paso and extends from Canada to Mexico, including the provinces of Alberta and British Columbia, the northern portion of Baja California, and all or portions of the 14 western states. WECC is the Regional Entity responsible for bulk electric system reliability in the western interconnection and associated compliance monitoring and enforcement. WECC connects electric utilities in the West to operate at a common synchronized frequency, with 38 separate balancing authorities. El Paso Electric Company is the only investor-owned vertically-integrated utility in Texas that is a member of WECC.[14]

[13] *2017 State of the Market Report for the MISO Electricity Markets*, Potomac Economics, June 2018. Available at: https://www.potomaceconomics.com/wp-content/uploads/2018/07/2017-MISO-SOM_Report_6-26_Final.pdf.

[14] El Paso Electric Company's service territory in WECC is not part of a competitive energy market.

III. SIGNIFICANT COMMISSION ACTION FROM 2017 TO 2018

The Commission develops and modifies rules, policies, and procedures for the competitive electric market in Texas. Within the ERCOT region, transmission and distribution utilities remain subject to traditional rate regulation by the Commission. This section provides an overview of the Commission's actions that reflect changes in the scope of competition in electric markets, including rulemaking activities and legislative implementations, taken from calendar year 2016 through 2018.

A. Retail Market

1. Project No. 45625: Rulemaking Related to the Use of Hand-Held Electronic Devices for Retail Customer Enrollment

On February 14, 2017, the Commission adopted an amendment to 16 TAC § 25.474 to allow a REP or aggregator to use a portable electronic device during customer enrollments via door-to-door sales. The amendment provided customer protections while allowing the option of using new technologies for enrollments.

2. Project No. 47343: Amendments to Reflect the Elimination of the System Benefit Fund and Project No. 48337: Rulemaking to Amend 16 TAC § 25.45 to Provide for a Low Income List Administrator Opt-In Process

In May 2018, the Commission opened Project No. 48337 to fulfill the rulemaking requirements of SB 1976 of the 85th Legislature. The bill modified PURA § 17.007 to require the Commission, upon request by a REP, to facilitate a process with the Texas Health and Human Services Commission to develop a low-income customer identification service. A REP can obtain a list of prequalified low-income customers in order to provide targeted customer service, discounts, bill payment assistance, or other methods of assistance. PURA § 17.007 also requires that the requesting REPs finance the cost of the list. In Project No. 48337, the Commission will consider modifications to 16 TAC § 25.45 to develop details for the process by which REPs receive the list. The rule will also define the method by which the Commission approves the allocation of the cost of developing the low-income customer identification service among the REPs that request the service.

3. Project No. 47545: Rulemaking Proceeding to Establish Filing Schedules for Investor-Owned Electric Utilities Operating Solely Inside ERCOT

In April 2018, the Commission adopted new 16 TAC § 25.247, to fulfill the rulemaking requirements of Senate Bill 735 of the 85th Legislature. The rule applies only to investor-owned electric utilities operating solely inside ERCOT, and establishes a schedule that requires those utilities to make periodic filings with the Commission to modify or review transmission cost of service rates. The key provision of the rule establishes a default time period of 48 months between the date of a utility's last Commission order in a comprehensive rate proceeding and the filing date of the company's

next comprehensive rate proceeding. The 48-month period may be extended under certain limited circumstances specified in the rule.

In November 2018, the Commission amended the rule to adopt scheduling requirements for the filing of rate updates by non-investor-owned utility (non-IOU) companies, municipally owned utilities, and electric cooperatives that provide wholesale transmission service in ERCOT. A non-IOU company with a wholesale transmission cost of service equal to or greater than one percent of the total amount of ERCOT transmission costs must file an application for a rate update at least every 48 months. A non-IOU company with a wholesale transmission cost of service less than one percent of the total ERCOT transmission costs must file for a rate update at least every 96 months. During an initial 24-month transition period, all non-IOU companies that have not had a recent rate change must file for an initial (transitional) rate update prior to beginning the scheduled periodic filing requirements.

4. Senate Bill 559: Required No Commission Action

The 85th Legislature passed SB 559, which amended Section 182.022(a) of the Tax Code by clarifying that miscellaneous gross receipts taxes are imposed on each utility company making sales to ultimate customers within a city or town having a population of more than 1,000 regardless of the company's physical location. The bill did not require any Commission rulemaking activities or change Commission ratemaking treatments.

5. Senate Bill 1002: Required No Commission Action

The 85th Legislature passed SB 1002, which addressed recent Accounting Standards Updates issued by the Financial Accounting Standards Board (FASB). These updates adopted changes in the presentation of retirement benefits costs to allow for greater transparency and easier analysis by the financial community. The updated language reflects the FASB changes related to the presentation of pension-related costs and did not require any Commission rulemaking activities or change Commission ratemaking practices.

6. Docket No. 47416: Advanced Meter Deployment in Entergy

Senate Bill 1145, enacted by the 85th Texas Legislature, added PURA § 39.452(k) to address the deployment of advanced metering and meter information networks by Entergy Texas, Inc. (Entergy). In December 2017, the Commission approved Entergy's application for a deployment plan for advanced meters in Docket No. 47416.[15] Deployment of the advanced meter communication network began in September 2018. Deployment of approximately 475,000 advanced meters at customer premises is scheduled to begin in 2019 and be completed by 2021. Entergy's deployment plan includes an educational component to introduce customers to advanced meters and familiarize them with the various features and benefits enabled by advanced meters. The plan also includes a provision for customers who decline to have an advanced meter installed at their

[15] *Application of Entergy Texas, Inc. for Approval of Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fees*, Docket No. 47416 (December 14, 2017).

premises. Additionally, the final Commission order approving Entergy's deployment plan required the company to initiate a proceeding to address whether and to what extent the company will participate in Smart Meter Texas. On October 9, 2018, Entergy initiated a proceeding, Docket No. 48745, *Compliance Filing of Entergy Texas, Inc,* which will address: (1) whether and to what extent Entergy will participate in Smart Meter Texas; (2) what changes, if any, should be made to Entergy's web-based customer interface; and (3) whether and to what extent Entergy should provide a process for a customer to authorize third-party direct access to customer advanced metering data.[16]

7. Smart Meter Texas

In the ERCOT competitive market, the transmission and distribution utilities jointly own and operate a web portal known as Smart Meter Texas, which allows residential and small commercial customers with advanced meters access to electric consumption data. PURA § 39.107(b) states that "All meter data, including all data generated, provided or otherwise made available, by advanced meters and meter information networks, shall belong to a customer," and that "a customer may authorize its data to be provided to one or more REPs under rules and charges established by the commission." In May 2018, the Commission approved new parameters related to accessing that data as part of Docket No. 47472.[17] The new parameters are expected to improve the function of Smart Meter Texas, reduce costs, and streamline the process that allows customers to grant a competitive service provider access to their data for home energy management and other programs.

8. Docket No. 45414: Sharyland Utilities Legal Transfer of Assets and Effect on Rates

In December 2015, the Commission ordered Sharyland Utilities to file a comprehensive base rate case by April 30, 2016, due to a significant number of complaints regarding high electricity bills.[18] The Commission staff's report filed in Project No. 44592 found that Sharyland rates for its Cap Rock service territory were two to three times higher than those of other transmission and distribution utilities in Texas due to its small size and low customer density.[19] In the pendency of its 2016 rate case, Sharyland agreed to sell its distribution assets to Oncor Electric Delivery Company in exchange for certain Oncor transmission assets. In March 2017, Oncor also filed a comprehensive base rate case.[20] Because Sharyland did not have a historical test year operating as a transmission-only utility, the Sharyland rate case was dismissed on the condition that Sharyland file a new

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[16] *Compliance filing of Entergy Texas, Inc. Relating to Participation in Smart Meter Texas and Changes to its Advanced Metering System,* Docket No. 48745 (pending).

[17] *Commission Staff's Petition to Determine Requirements for Smart Meter Texas*, Docket No. 47472 (Jul. 12, 2018).

[18] *Review of the Rates of Sharyland Utilities, L.P., Establishment of Rates for Sharyland Distribution and Transmission Services, LLC., and Request for Grant of a Certificate of Convenience and Necessity and Transfer of Certificate Rights*, Docket No. 45414 (Sept. 29, 2017).

[19] *Relating to a Project Regarding Sharyland Utility Complaints*, Project No. 44592 (Sept. 8, 2015).

[20] *Application of Oncor Electric Delivery Company, LLC, for Authority to Change Rates*, Docket No. 46957 (Oct. 13, 2017).

base rate case in 2020 with a historical test year ending December 31, 2019. Oncor's base rate proceeding was settled, and rates were established for Oncor, including the new customers formerly served by Sharyland.

As shown in Table 4, the individual rate decreases for Sharyland's residential customers ranged from 31% to 84% following the transfer. The amount charged for a typical 1,000 kWh monthly bill decreased by 60%. Similar levels of rate reductions for non-residential customers also occurred. Sharyland's former retail customers transitioned from paying among the highest distribution rates in the state to among the lowest.

Table 4. Effect of Sharyland Distribution Transfer on Residential Rates[21]

Residential Rates			
	Sharyland (Cap Rock) Sept. 1, 2017	**Oncor Mar. 1, 2018**	**Percentage Change**
Customer Charge (per month)	$5.69	$0.89	(84%)
Metering Charge (per month)	$4.31	$2.60	(40%)
Transmission Charge (per kWh)	$0.017564	$0.012056	(31%)
Distribution Charge (per kWh)	$0.062669	$0.021141	(66%)
Typical Residential Bill Impact of Transmission and Distribution Costs			
	Sharyland (Cap Rock) Sept. 1, 2017	**Oncor Mar. 1, 2018**	**Percentage Change**
Monthly Bill (1,000 kWh)	$93.26	$37.67	(60%)

9. Sempra Energy's Acquisition of Oncor

Since the 85th Legislative Session, there were two separate applications to purchase Oncor, the largest transmission and distribution utility in Texas. Oncor's former parent company, Energy Future Holdings (EFH), was in bankruptcy proceedings and still owned an interest in Oncor. EFH was required by the bankruptcy court to obtain Commission approval to proceed with any sale of its Oncor subsidiary. Ultimately, one offer was withdrawn, and the Commission approved the second offer and associated conditions of the purchase.

In October 2016, NextEra Energy filed a joint application with Oncor seeking approval from the Commission for NextEra to purchase Oncor. In March 2017, the

[21] This table shows the impact of the Sharyland to Oncor transfer on a residential customer's transmission and distribution portion of their bill; this does not represent a typical final bill as it does not include energy costs.

Commission indicated that it would require several conditions to approve the transaction: a specific organizational structure, including an independent board; an Oncor credit profile separate from NextEra's; and certain customer protections for Oncor's ratepayers, specifically, assurances to hold ratepayers harmless from risks associated with the transfer. NextEra was unwilling to accept those conditions, and the Commission denied approval of the transaction.

In October 2017, Sempra Energy filed a joint application with Oncor seeking approval from the Commission for Sempra Energy to purchase Oncor. In March 2018, the Commission approved a unanimous settlement agreement containing numerous regulatory commitments—generally referred to as "ring-fencing" provisions—that would continue to protect the integrity of the utility as well as Oncor's ratepayers. The Commission's conditions included an Oncor board independent of Sempra Energy, a requirement that Oncor's credit profile was independent of Sempra Energy, and that Oncor's ratepayers be held harmless from risks associated with the transaction.

10. Effect of the Tax Cuts and Jobs Act of 2017 on Rates

On December 22, 2017, Congress signed into law the Tax Cuts and Jobs Act. Several provisions of this legislation significantly affect electric utilities, most conspicuously through the reduction in the maximum corporate income tax rate from 35% to 21%. In January 2018, the Commission opened Project No. 47945 in response to this federal tax legislation to address its impacts on the rates of regulated utilities in Texas.[22]

In February 2018, the Commission exercised its authority under PURA § 14.151 and issued an accounting order in Project No. 47945 that directed regulated utilities and Commission staff to work together on a case-by-case basis to determine the appropriate mechanism to incorporate the new lower federal income tax amount into the rates paid by customers. The order instructed utilities to preserve any changes in federal income tax expense charged by utilities until rates can be changed by recording as a regulatory liability: (1) the difference between revenues collected under existing rates and the revenues that would have been collected had those rates been set using the revised, lower income tax rates and (2) the balance of any excess accumulated deferred federal income taxes (ADFIT) resulting from the decrease in the tax rate.

The Commission approved final orders with provisions similar to those discussed above for three electric utilities with base rate orders dated either just prior to or just after enactment of the Tax Cuts and Jobs Act. As instructed by the Commission, other regulated electric utilities have utilized various available alternative rate mechanisms, such as interim transmission and distribution cost recovery filings or credit tariff riders, to take the first step of reflecting the impact of the lower federal income tax expense in rates charged to customers. Two utilities had previously planned to initiate full base rate proceedings in the spring of 2018 and those companies incorporated the impacts of the Tax Cuts and Jobs Act into those filings. As of the date of this report, the Commission has approved Texas

[22] *Proceeding to Investigate and Address the Effects of the Tax Cuts and Jobs Act of 2017 on the Rates of Texas Investor-Owned Utility Companies*, Project No. 47945 (Aug. 30, 2018).

electric rates approximately $333 million lower than they would have been absent the change in federal income tax expense.

Reflecting the change in income tax expense is the first step in the process of reflecting the lower tax rate in the bills of electric customers. The return of excess ADFIT is another significant impact of the Tax Cuts and Jobs Act. ADFIT is collected from ratepayers at the higher 35% tax rate, but is now owed to the federal government at the lower 21% rate. The calculation of excess ADFIT is complicated by the normalization provisions of the Internal Revenue Code. Some electric utilities have already reflected the return of excess ADFIT through the alternative rate mechanisms discussed above. However, the majority of electric utilities will address the issue in future base rate proceedings. Not all impacts of the Tax Cuts and Jobs Act have been identified to date. The Commission will address such impacts as they become known and quantifiable.

The Commission does not have rate jurisdiction over power generators and REPs within ERCOT and thus has no ability to require reductions in federal income tax expense to be flowed through to ratepayers. However, the Commission expects that the forces of competition will encourage these entities to flow these reductions to the customer and reduce prices.

II. Hurricane Harvey Storm Costs

Hurricane Harvey, one of the most costly natural disasters in United States history, made landfall near Rockport, Texas on August 25, 2017 as a Category 4 storm. The wind speeds dropped quickly, but the rainfall persisted as the storm slowly moved northeast to Houston. Before Hurricane Harvey exited Texas the following Wednesday, the storm caused widespread flooding. Wind damage to utility facilities was concentrated in the area where Harvey initially made landfall, whereas damage to utility infrastructure because of the flooding was widespread throughout the affected region. The storm ultimately affected the Texas coastline from Corpus Christi to the Louisiana border. The hurricane damaged transmission and distribution infrastructure, flooded substations, and caused widespread power outages and displaced numerous customers. Hurricane Harvey resulted in a peak of 323,320 electric outages at any one time, and damage to electric infrastructure is estimated at approximately $700 million. Four Texas utility companies have requested recovery of costs related to Hurricane Harvey through rate applications: AEP Texas, Entergy Texas, Texas New Mexico Power Company (TNMP), and CenterPoint.

PURA § 36.401 enables an electric utility to obtain timely recovery of storm reconstruction costs and to use securitization financing to recover those costs, which lowers the carrying costs relative to conventional financing methods. On August 7, 2018, AEP Texas filed an application under PURA § 36.401-.405 to begin the process of securitizing Hurricane Harvey storm costs.[23] The system restoration costs presented in its case total $415,166,903, which includes costs incurred through April 30, 2018.

[23] *Application of AEP Texas Inc. for Determination of System Restoration Costs,* Docket No. 48577 (Aug. 7, 2018) (pending).

Entergy Texas is requesting recovery of $20.5 million in Hurricane Harvey reconstruction costs though its base rate proceeding filed on May 15, 2018.[24] TNMP is requesting recovery of $6.6 million in Hurricane Harvey reconstruction costs through its base rate proceeding filed on May 30, 2018.[25]

CenterPoint incurred and recorded as a regulatory asset $59.2 million of Hurricane Harvey reconstruction costs. CenterPoint has included approximately $23 million in Hurricane Harvey distribution related capital costs in its recent Distribution Cost Recovery Factor application.[26] CenterPoint is preparing to file a comprehensive base rate proceeding in April 2019 in which the company is expected to seek recovery of the remaining reconstruction costs. CenterPoint may seek recovery of the remaining Hurricane Harvey reconstruction costs as part of its base rate proceeding, during which the prudence, reasonableness, and necessity of all reconstruction costs will be determined.

12. Power to Choose

The Power to Choose website allows REPs to display retail electric offers on a Commission-run website to aid customers living in an area open to customer choice to choose a retail electric plan. In response to the Commission's direction at its June 28, 2018 open meeting, Commission staff identified a number of opportunities to increase transparency in offers and improve the customer's shopping experience.

After reviewing these issues, the Commission directed staff to include a search filter that allows customers to exclude pricing plans that include minimum usage fees and plans that charge a different price per kWh depending on the total amount of kWh used. The Commission also directed staff to limit the number of plans of any one given type (fixed, variable, and indexed) that a REP may post on the website to encourage REPs to offer a variety of meaningfully different plans and also to display offers from more REPs on the first page of search results. Commission staff also developed instructional material for the website that focuses on helping customers use the website to better choose the right plan.

The Commission also directed each REP to develop a Spanish-language version of each offer it places on www.powertochoose.org for the Commission-managed Spanish-language site www.poderdeescoger.org. The Commission continues to monitor each site to ensure the same plans are available.

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[24] *Entergy Texas Inc.'s Statement of Intent and Application for Authority to Change Rates*, Docket No. 48371 (May 15, 2018) (pending).

[25] *Application of Texas-New Mexico Power Company for Authority to Change Rates*, Docket No. 48401 (May 30, 2018) (pending).

[26] *Application of CenterPoint Energy Houston Electric, LLC for Approval to Amend Its Distribution Cost Recovery Factor*, Docket No. 48226, (Apr. 5, 2018).

13. Docket No. 46368: Application of AEP Texas North Company for Regulatory Approvals Related to the Installation of Utility-Scale Battery Facilities

In Docket No. 46368, which was initiated in September 2016, AEP requested that the Commission declare that AEP's proposed installation of two utility-scale lithium-ion batteries complies with Texas law and that the batteries would be considered distribution assets eligible for inclusion in distribution cost of service rates. AEP proposed installing each battery for two specific technical problems that could be addressed by a utility-scale battery. One design would provide a source of electric energy to serve retail customers when AEP's transmission facilities could not deliver electricity to those customers. The other battery was intended to provide a source of electric energy to prevent exceedances of the rated capacity of AEP's distribution facilities. The cost of the facilities would be included within the company's distribution rates. AEP proposed that the cost of the energy used to charge the two batteries be passed on to all ERCOT customers through unaccounted-for-energy (UFE) charges.

The Commission determined that the case did not provide sufficient information to allow the Commission to make the declarations sought by AEP with respect to the proposed battery installations. Further, the Commission deemed it imprudent to make any declarations in the docket because any such declaration could limit unnecessarily the future use of energy-storage devices in ERCOT. Ultimately, the Commission dismissed the proceeding and directed Commission staff to open a project in which the necessary policy issues could be addressed. Project No. 48023, *Rulemaking to Address the Use of Non-Traditional Technologies in Electric Delivery Service*, was initiated in February 2018 and is currently pending at the Commission.

B. ERCOT Wholesale Market

1. Operating Reserves Demand Curve

The Operating Reserve Demand Curve (ORDC), implemented at the Commission's direction in June 2014, improves price formation by allowing wholesale prices to reflect more fully the value of operating reserves during resource scarcity. The ORDC assigns an economic value to the amount of operating reserves, which is the amount of excess generating capacity available to maintain reliability. In 2018, the Commission directed ERCOT to remove capacity that ERCOT procures through out-of-market actions from the ORDC calculation. Removing out-of-market actions ensures price formation for market-based decisions is not impeded when reserves are scarce. The Commission continues to evaluate the ORDC to ensure its contribution to price formation appropriately reflects the costs of meeting demand and the underlying needs of the system, and results in market-based offers sufficient to meet system demand and ensure reliability.

2. Wholesale Market Design Initiatives

The Commission continues to consider any potential improvements to the market design and its rules that could yield additional price formation efficiencies, reduce the impact of out-of-market actions on market-based offers, and provide opportunities for entry of new technology, while maintaining reliability. The Commission is currently evaluating various proposals that may improve the market design. One such initiative is real-time co-optimization, which may allow for more efficient dispatch of existing generation capacity across the entire ERCOT resource fleet. The Commission is also considering whether to incorporate marginal transmission losses into the real-time dispatch model. The farther the distance that electricity must travel from generation to load, the greater the loss of electricity over transmission lines. Accounting for marginal losses may incentivize generators to locate closer to load and may result in changes to energy prices based on location of the load relative to generation resources. The Commission has opened two projects to evaluate these concepts.[27]

3. Review of ERCOT Market Performance in Summer 2018

The retirement of a number of older coal-fired generation plants during the winter of 2017-2018 raised concerns that the corresponding lower resulting reserve margin (the margin by which generation capacity exceeds the anticipated peak consumption by customers - the peak demand) could result in reliability issues in the summer of 2018. While the region set new all-time peak demand records and prices were higher than in previous years, the system operated reliably and efficiently throughout the summer.

In August 2018, the Commission opened a project to review ERCOT market performance in the summer of 2018.[28] In this project, the Commission solicited comments from market participants to assist in evaluating the market performance with respect to retail mass transitions, market participant credit, grid readiness, and wholesale price formation. In 2018, the ERCOT system broke the August 2016 all-time system-wide peak demand record of 71,093 MW twice in July: on July 18, ERCOT hit a system-wide peak demand of 72,192 MW and July 19, ERCOT once again set a new all-time system-wide peak demand of 73,308 MW. Table 5 shows the ERCOT peak demand growth since 2011.

[27] *Review of the Inclusion of Marginal Losses in Security-Constrained Economic Dispatch,* Project No. 48539 (pending) and *Review of Real-Time Co-optimization in the ERCOT Market,* Project No. 48540 (pending).

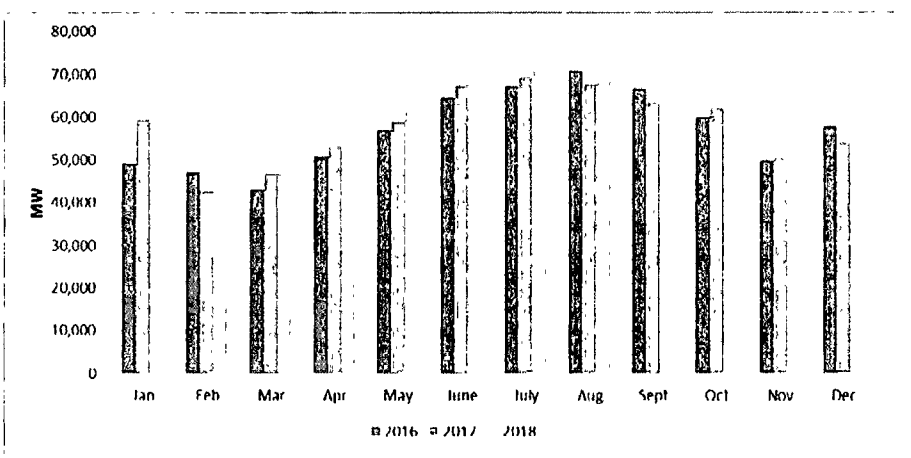
[28] *Review of Summer 2018 ERCOT Market Performance,* Project No. 48551 (pending).

Table 5. ERCOT Peak Demand Growth for 2012 – 2018

Year	ERCOT Peak Demand (MW)	Percentage Change from Prior Year
2011	68,379	-
2012	66,548	(2.78%)
2013	67,245	1.05%
2014	66,454	(1.18%)
2015	69,877	5.15%
2016	71,093	1.74%
2017	68,028	(4.31%)
2018	73,308	7.776%

Figure 4 shows the hourly peak load in ERCOT for each month from January 2016 to August 2018.

Figure 4. Monthly Peak Demand in ERCOT for January 2016 – August 2018



4. Project No. 45078: Rulemaking Related to Distributed Generation Interconnection Agreements

Distributed generation generally refers to small-scale electricity generation such as rooftop solar panels or windmills that are close to the end user. In December 2016, in Project No. 45078, the Commission adopted changes to the agreement form in the standard utility tariff for interconnection of distributed generation.[29] This interconnection agreement is technical in nature, providing for specifications and parameters for interconnecting a customer's distributed generation facility with a utility's distribution system. The adopted

[29] *Rulemaking Related to Distributed Generation Interconnection Agreement*, Project No. 45078 (December 19, 2016).

amendments accommodate changes in the distributed generation market, recognizing that end use customers may authorize third parties that may have more technical expertise and knowledge to enter into the interconnection agreement with the utility on behalf of the end-use customer. The adopted amendments clarify for the end-use customer that the Commission does not regulate the relationship between the end-use customer and any entity that the customer may authorize to enter into the agreement on their behalf unless that entity is already regulated by the Commission. The amendments also allow the end-use customer the flexibility to select an arrangement that best suits individual needs.

5. Project No. 45927: Rulemaking Regarding Emergency Response Service

Beginning in June 2016, the Commission considered amendments to the rules governing ERCOT Emergency Response Service. The proposed changes considered whether ERCOT should be authorized to deploy Emergency Response Service to forestall load curtailment due to local transmission emergencies, and whether current Emergency Response Service providers should be released from their contracts to allow participation in alternative services markets, such as Must-Run Alternative and Reliability Must-Run Service. After considering comments from interested parties, the Commission declined to adopt the proposed changes related to deployment for local transmission emergencies, but adopted changes to 16 TAC §25.507 to permit Emergency Response Service participants to be released from their contracts in order to participate in Must-Run Alternative services.[30]

6. Project No. 46369: Reliability Must-Run Service in ERCOT

In 2017, the Commission amended 16 TAC §25.502 to lengthen the advanced notice to ERCOT that a generation resource owner must provide of its intent to suspend operations. This change permits ERCOT 60 additional days to request and evaluate market-based offers to replace any capacity that may be necessary to maintain reliability, rather than taking an out-of-market action, such as requiring the retiring unit to stay online. In addition, the Commission changed its rules to allow resources that participate in a voluntary interruptible load response program to submit market-based offers for this capacity replacement.[31]

7. Load Transfers Between Regions

Four utilities have requested to transfer load to or from the ERCOT region: Lubbock Power and Light, Rayburn Country Electric Cooperative, East Texas Electric Cooperative, and Lyntegar Electric Cooperative.

On September 1, 2017, Lubbock filed an application in Docket No. 47576 seeking approval from the Commission to transfer 470 MW of its load from SPP into ERCOT by June 2021, citing lower rates for the utility's customers, congestion reduction, production

[30] *Rulemaking Regarding Emergency Response Service*, Project No. 45927 (Mar. 30, 2017).

[31] *Rulemaking Relating to Reliability Must-Run Service*, Project No. 46369 (Sept. 29, 2017).

cost savings, and operational benefits. In March 2018, the Commission approved, with modifications, an unopposed stipulation between the parties that resolved all of the pending issues in the proceeding.[32] The settlement requires Lubbock to pay $22 million annually for five years to ERCOT wholesale transmission customers through a monthly credit rider, and a one-time payment of $24 million to Southwestern Public Service Company upon disconnection from SPP. Lubbock also agreed that it would not disconnect the transferred load from ERCOT in the future without prior approval from the Commission. Although Lubbock is not required to enter retail competition, the stipulation represented Lubbock's intention to study doing so. The remaining 170 MW of Lubbock's load will remain in SPP.

In August 2018 the Commission also approved Lyntegar Electric Cooperative's application to build a transmission line, which resulted in the transfer of five megawatts of load in west Texas from ERCOT into SPP as part of a CCN to serve a new transmission level customer.[33]

Two other electric cooperatives have requested to transfer load into ERCOT. Rayburn Country Electric Cooperative, in northeast Texas, has requested to transfer 96 MW of load from SPP into ERCOT by 2020; the request is pending in Docket No. 48400.[34] East Texas Electric Cooperative, also located in northeast Texas, has requested to transfer 35 MW of load from SPP into ERCOT by 2018; the request is pending in Docket No. 47898.[35]

Because the majority of the issues raised in the Lubbock case were settled, issues related to future transfers, such as which entity should bear the cost, remain to be answered in future cases. In response to these recent requests, the Commission opened Project No. 48249, *Rulemaking Regarding Load Transfer between Power Regions*, to address the process for future requests to transfer load into or out of ERCOT.[36]

8. Southern Cross Transmission

In August 2016, the Commission opened Project No. 46304 and ordered ERCOT to complete twelve directives regarding market participant issues, operational considerations, and emergency procedures in order to facilitate the interconnection of the

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[32] *Application of the City of Lubbock through Lubbock Power and Light for Authority to Connect a Portion of its System with the Electric Reliability Council of Texas*, Docket No. 47576 (Mar. 15, 2018).

[33] *Application of Lyntegar Electric Cooperative, Inc. to Amend a Certificate of Convenience and Necessity for the Welch 115-kV Transmission Line Project in Gains and Dawson Counties*, Docket No. 47838 (Aug. 30, 2018).

[34] *Joint Application of Rayburn Country Electric Cooperative, Inc. and Lone Star Transmission LLC to Transfer Load to ERCOT, for Sale of Transmission Facilities, and Transfer of Certificate Rights in Henderson and Zandt Counties*, Project No. 48400 (pending).

[35] *Petition of East Texas Electric Cooperative, Inc. for Authority to Transfer 35 Megawatts of Load into the Electric Reliability Council of Texas*, Docket No. 47898 (pending).

[36] *Rulemaking Regarding Load Transfer Between Power Regions*, Project No. 48249 (pending).

Southern Cross Transmission Direct Current Tie (DC Tie).[37] In September 2016, the Commission approved a transmission line to interconnect the Southern Cross Transmission DC Tie to the ERCOT grid in Docket No. 45624. The Commission's order on rehearing identified operational, emergency, and market implementation issues that needed resolution to implement the order.[38] The procedures developed under these directives will set the standards for the Southern Cross Transmission DC Tie as well as any future similar projects. Currently, ERCOT is working within its stakeholder groups to resolve the issues identified in the twelve directives and is submitting regular updates to the Commission regarding its progress.

C. Oversight and Enforcement Actions

The Commission enforces statutes, rules, and orders to protect customers, the electric markets, and the reliability of the electric grid, and to promote fair competition. The Commission's enforcement efforts in the electric industry focus on violations of PURA, the Commission's rules, and ERCOT protocols.

During the period from September 1, 2016 through August 31, 2018, the Commission assessed $5,735,900 in penalties against electric market participants. These penalties are remitted to the state's general revenue fund. Table 6 summarizes electric industry notices of violations since September 2016 by each market sector. During this time period, Commission staff opened 312 investigations for the electric industry and closed 276 investigations.

Table 6. Notices of Violations

Retail Market Violations	$3,632,600
Service Quality Violations	$1,152,300
Wholesale Market Violations	$951,000
TOTAL	**$5,735,900**

In addition to the imposition of administrative penalties, the Commission uses other mechanisms in exercising its enforcement duties, including revoking a company's certificate to operate. In addition, some companies may be required to relinquish a certificate as part of a settlement after enforcement action has concluded. Table 7 provides the number of certificates revoked or relinquished.

[37] *Oversight Proceeding Regarding ERCOT Matters Arising Out of Docket No. 45624 (Application of the City of Garland to Amend a Certificate of Convenience of Necessity for the Rusk to Panola Double-Circuit 345-kV Transmission Line in Rusk and Panola Counties)*, Project No. 46304 (pending).

[38] *Application of the City of Garland, Texas, for a Certificate of Convenience and Necessity for the Proposed Rusk to Panola Double-Circuit 345-kV Transmission Line in Rusk and Panola Counties, Texas*, Docket No. 45624 (May 23, 2017).

Table 7. Certificates Revoked or Relinquished

Certificates Revoked	0
Certificates Relinquished as Part of Settlement	0
Certificate Relinquished Voluntarily	8

The Oversight and Enforcement Division also issues warning letters to companies in the electric market when it determines that a violation occurred, but given the circumstances surrounding the violation and other mitigating concerns, no administrative penalty is warranted. During the period from September 1, 2016 to August 31, 2018, the Oversight and Enforcement Division issued 203 warning letters. Table 8 details the warning letters issued by the agency since September 1, 2016.

Table 8. Warning Letters

Retail Market Warning Letter	39
Service Quality Warning Letter	1
Wholesale Market Warning Letter	163
TOTAL	**203**

Finally, the Commission generally seeks to reimburse money directly to customers when appropriate. From September 1, 2016 to August 31, 2018, the Commission ordered the reimbursement of $1,661,692 to Texas electric customers.

In addition to its enforcement activities, the Commission also enters into voluntary mitigation plans with companies owning generation that request one through a contested case proceeding pursuant to PURA § 15.023(f) and 16 TAC § 25.504(e). A voluntary mitigation plan provides a safe harbor against allegations of market manipulation. Generators with less than 5% of installed capacity cannot exercise market power under PURA. The generators with installed generation capacity above the threshold have the ability to request that the Commission approve certain bidding practices. Currently, Calpine and NRG have voluntary mitigation plans. Luminant's voluntary mitigation plan was terminated during the recent merger proceeding.[39] The Commission entered into one voluntary mitigation plan in 2017[40]; however, Exelon's installed capacity is now lower than 5%, so its voluntary mitigation plan was terminated.

[39] *Application of Luminant Power Generation LLC, Big Brown Power Company LLC, Comanche Peak Power Company LLC, La Frontera Holdings, LLC, Oak Grove Management Company LLC, And Sandow Power Company Under Section § 39.158 Of The Public Utility Regulatory Act,* Docket No. 47801 (April 2, 2018).

[40] *Request for Approval of a Voluntary Mitigation Plan for Exelon Generation Company, LLC,* Docket No. 47378 (Aug. 31, 2017).

IV. LEGISLATIVE RECOMMENDATIONS

1. Outside Counsel for Proceedings before Regional Transmission Organizations

Regional Transmission Organizations (RTOs) manage the power grid across wide regions of the United States. Most of Texas is inside the ERCOT region; however, there are significant portions of East Texas and the Panhandle that are in the Midcontinent Independent System Operator and the Southwest Power Pool. Issues arise in these RTOs that have significant impact on Texas ratepayers, such as how transmission infrastructure costs will be shared. These proceedings tend to be lengthy and complicated, requiring specialized legal and consulting services.

Texas Utilities Code § 39.4525 currently authorizes the Commission to use outside consultants, auditors, engineers, or attorneys to represent the Commission in proceedings before the Federal Energy Regulatory Commission. This provision has been an important tool for the Commission to respond to complex matters in the federal arena to enable it to protect the public interest in Texas. The Commission recommends that the Legislature expand the language in this statute to include the ability to hire outside assistance for proceedings before the RTOs to provide those same protections to Texas ratepayers in those areas.

2. Default Violations

Under Section 15.024(d) of the Texas Utilities Code, if a person that the Commission issues a Notice of Violation against does not respond to the Notice of Violation within twenty days, then the Commission considers the person to be in default of the Notice of Violation. Section 15.024(f) requires the Executive Director of the Commission to set a hearing at the State Office of Administrative Hearings (SOAH) even though the person has been non-responsive to the Notice of Violation. After the SOAH hearing, the violation is then decided by the Commission. The Commission proposes that the Legislature consider amending Section 15.024(f) to remove the requirement for an administrative hearing before proceeding to the Commission in situations in which a person has failed to respond to the Notice of Violation. This change would allow these default violations to move more quickly through the process; thus, providing a faster resolution and saving resources for both the Commission and SOAH. The proposed change is also consistent with the Texas Water Code; therefore, the change would align telecommunications and electric proceedings with the Commission's process in water utility proceedings.

3. Registration of Retail Electric Brokers

The Commission currently has the authority to certify retail electric providers and register electric aggregators. However, there are additional businesses that help customers navigate the marketplace to find a retail electric plan. Retail electric brokers connect buyers with sellers of electricity. While not necessary for every customer, some customers use brokers and are willing to pay for this service. Many non-residential electric customers

use brokers as an alternative to developing in-house expertise to negotiate a retail electric contract. These can be commercial and industrial business owners, but also includes churches, schools, and other community organizations.

Some non-residential customers have the desire and the ability to enter into more sophisticated contracts for retail power. This increase in complexity allows non-residential customers to achieve lower rates, but can also expose them to more financial risk. For residential customers, retail electric brokers often use the "concierge" business model, in which the customer authorizes the retail electric broker to make electricity contract decisions on his behalf. This requires the concierge broker to maintain customer-specific information related to the customer's energy usage and payment information. For all types of service, the customer depends on the retail electric broker's energy expertise. When a retail electric broker offers bad advice, it is the final customer who ultimately pays the price.

The Commission regulates many participants in the retail electric market and has a suite of customer protection rules, including requirements that those participants demonstrate industry expertise and financial stability. Electric aggregators perform many of the same functions as retail electric brokers and are required to register with the Commission under section 39.353 of the Texas Utilities Code. The Commission does not regulate retail electric brokers, and there are currently no customer protection or business requirements specifically for individuals or companies acting as brokers. There is no recourse for customers beyond civil litigation and fraud statutes.

The Commission recommends that the Legislature require retail electric brokers to register with the Commission in a manner similar to retail electric aggregators to ensure that customers who use a retail electric broker have adequate consumer protections.

4. Electric Industry Security

The security and safety of electric utility assets has always been a prime concern for utility operators. Without secure infrastructure, utilities cannot meet their obligations to provide electric service and cannot meet their fiduciary obligations to their shareholders. As such, utilities have invested substantially, including physical, financial, and intellectual resources, toward ensuring the safety of their assets. Much of this investment is on prominent display when utilities respond to and recover from natural disasters. However, utilities are also protecting infrastructure in numerous ways not evident to the public and need to be careful not to disseminate information about the grid's potential vulnerabilities.

Utilities' efforts to secure their information resources against malicious actors have continued to evolve since the introduction of computer technology. Cybersecurity is a challenging field for a regulatory agency such as the Commission, which typically sets specific rules for utilities to follow. Because of the rapidly evolving nature of the threat, prescriptive regulation has limited effectiveness in combatting cybersecurity threats. In addition, a focus on compliance to regulation may draw resources away from effective responses that are not part of the regulations. The Commission can bring value in a facilitation role to ensure continued public confidence in the safety and reliability of

electric service and to respond to legislative concerns. For that reason, the Commission has brought on additional staff to collaborate with utilities on their cybersecurity efforts.

The Commission recommends that the Legislature establish a collaborative cybersecurity outreach program that would bring additional resources to bear, without impeding work already being done by utilities. This program would include regular meetings with utilities to identify best practices and emerging threats, coordination of workforce training and security exercises, and related research.

5. Review of Power Generation Mergers and Acquisitions

Over the last few years, the Commission has begun receiving more applications for review of power generation company mergers and acquisitions, growing from five such applications in 2015 to 26 in 2018. Furthermore, the applications are not filed at a steady pace over time, but tend to arrive late in the year. These merger and acquisition transactions may be put on hold pending Commission review, causing regulatory uncertainty and impeding business. Two sections of the Texas Utilities Code are relevant to the review of these applications. In the course of processing these applications, the Commission has noted that opportunities may exist to harmonize and clarify these two sections, improving the speed and efficiency of such transactions and reducing regulatory burden.

Section 39.158 requires the Commission to review mergers and acquisitions of entities if the newly merged companies will "offer for sale" more than one percent of the "total electricity for sale" in the state. The Commission is further required by Section 39.158 to approve the merger or acquisition, unless the new company exceeds a 20% installed generation capacity limit set by Section 39.154. The review required by Section 39.158 serves as a threshold to determine whether review for compliance under Section 39.154 is necessary. While the two sections use similar language, the phrasing is not identical.

First, the phrase "total electricity for sale" is not defined in the statute but, because Section 39.158 functions as a trigger for review under Section 39.154, may be inferred to mean installed generation capacity. The Legislature may wish to clarify that the two phrases are intended to be synonymous.

Texas Utilities Code Section 39.154 also specifies that the prohibition on ownership of more than 20% of the installed generation capacity is applicable only in a power region open to customer choice. This provision was intended to prevent a power generation company from having the oligopoly power to influence electricity prices on its own. For power regions that have not instituted customer choice, Commission oversight of the rate-regulated utilities suffices to protect retail customers. The Legislature may wish to clarify that the review under Section 39.158 applies only in a power region open to customer choice.

Finally, the Legislature should consider whether the one percent threshold for review of mergers may be overly stringent. At a one percent threshold, numerous

transactions are required to undergo regulatory review despite the negligible likelihood of breaching the 20% limit, which delays these transactions unnecessarily. Therefore, the Commission recommends increasing the threshold for review of mergers and acquisitions of power generation companies from one percent to 10% of installed generation capacity. The Commission does not recommend changing the limit that prevents one company from owning more than 20% of the installed generation capacity.

6. Use of Battery Storage in ERCOT

Since the unbundling of the electric market in ERCOT into retail, generation, and transmission and distribution businesses, new technologies have developed that the Commission believes pose new questions for the Legislature's consideration. Specifically, the ownership and deployment of electricity from battery storage devices has emerged as an issue that would benefit from legislative clarity.

Transmission and distribution utilities

AEP Texas, a TDU operating in ERCOT, brought this issue to the Commission in the form of a request to install utility-scale batteries to address reliability issues in two sparsely populated areas in its distribution system. The Commission dismissed the docket on the grounds that there was insufficient information for a decision. To gather additional information, the Commission opened a project to evaluate more broadly the possibility of an electric utility owning and operating an energy storage device. In this project, the Commission has received extensive, sharply differing comments on whether PURA currently allows a TDU to own or operate an energy storage device.

Texas Utilities Code Section 35.152 provides that electric energy storage that is "intended to be used to sell energy or ancillary services at wholesale" are generation assets, and the owner or operator is a power generation company. However, section 31.002(10) defines a power generation company as a person that generates electricity that is intended to be sold at wholesale, does not own a transmission and distribution facility, and does not have a certificated service area. Finally, Section 39.105 states that a TDU "may not sell electricity or otherwise participate in the market for electricity except for the purpose of buying electricity to serve its own needs." For a TDU that owns and operates a storage device on its system, an argument can be made that the TDU does not "intend" to sell power at wholesale or participate in the market for electricity. Rather, the device is intended to support reliability. Others argue the opposite.

A number of options exist for the ownership and operation of energy storage devices by TDUs. Options include the following: prohibiting a TDU's involvement with an energy storage device other than to provide transmission and distribution service to it; allowing a TDU to contract with a power generation company for reliability service from an energy storage device; limiting a TDU's ownership and operation of an energy storage device only to limited, specified circumstances such as to address a reliability issue in a sparsely populated area in its distribution system; and allowing a TDU to own and operate an energy storage device in circumstances where the TDU's ownership and operation of the device would provide the lowest cost transmission and distribution service. The Legislature may

consider whether further direction is warranted regarding the ownership and operation of energy storage devices by TDUs.

Electric cooperatives and municipally owned utilities

A related, but distinct, ownership issue exists for electric cooperatives and municipally owned utilities. As previously mentioned, Texas Utilities Code Section 31.002(10) defines "power generation company" using the term "person" to describe the entity being defined. However, the definition of "person" in Texas Utilities Code Section 11.003(14) excludes electric cooperatives and municipally owned utilities. Further, both electric cooperatives and municipally owned utilities can, and do, own transmission and distribution facilities and have certificated service areas in this state.

Texas Utilities Code sections 35.151 and 35.152 require the "owners or operators" of electric energy storage equipment (i.e. batteries) to register as a power generation company. However, electric cooperatives and municipally owned utilities cannot qualify as a "power generation company" as defined by Section 11.003(14). Therefore, it could be inferred that they are not permitted to own or operate a battery without bringing into question their status as a municipally owned utility or electric cooperative.

The Legislature could provide clarity with a statutory exemption for electric cooperatives and municipally owned utilities in Texas Utilities Code sections 35.151 and 35.152 to allow them to own or operate batteries without registering as a power generation company.

7. Recovery of Costs of Advanced Meter Deployment in All Non-ERCOT Areas of the State

The Commission recommends that utilities regulated under PURA Subchapters K and L, electing to deploy advanced meters and metering information networks, be allowed to recover the reasonable and necessary costs of advanced meter deployment. Senate Bill 1145 enacted in 2017 paved the way for Entergy's advanced meter deployment plan. Legislation allowing for cost recovery would expand the benefits of grid modernization to the utility customers in the remainder of the State.

Appendix A – Acronyms and Abbreviations

AEP	American Electric Power
AEP Central	American Electric Power · Texas Central Division
AEP North	American Electric Power – Texas North Division
ADFIT	Accumulated Deferred Federal Income Tax
CenterPoint	CenterPoint Energy Houston Electric, LLC
Commission	Public Utility Commission of Texas
ERCOT	Electric Reliability Council of Texas
FERC	Federal Energy Regulatory Committee
IMM	ERCOT Independent Market Monitor
kWh	Kilowatt-hour
MISO	Midwest Independent System Operator
MMBtu	One Million British Thermal Unit (BTU)
MW	Megawatt
MWh	Megawatt-hour
NextEra	NextEra Energy
OMS	Organization of Miso States
Oncor	Electric Delivery Company
ORDC	Operating Reserves Demand Curve
PURA	Public Utility Regulatory Act
REP	Retail Electric Provider
Sempra	Sempra Energy
Sharyland	SharylandUtilities, L.P.
SPP	Southwest Power Pool
TDU	Transmission and Distribution Utility
TNMP	Texas-New Mexico Power Company
WECC	Western Electricity Coordinating Council