

**PUCT PROJECT NO. 38533**

**PUC REVIEW OF ERCOT BUDGET        §    PUBLIC UTILITY COMMISSION  
   §  
   §                                    OF TEXAS**

**ERCOT’S 2018/2019 BIENNIAL BUDGET SUBMISSION**

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**PUC REVIEW OF ERCOT BUDGET        §    PUBLIC UTILITY COMMISSION  
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**ERCOT’S 2018/2019 BIENNIAL BUDGET AND  
SYSTEM ADMINISTRATION FEE SUBMISSION**

**COMES NOW**, Electric Reliability Council of Texas, Inc. (ERCOT) and files its *2018/2019 Biennial Budget and System Administration Fee Submission*, pursuant to 16 Tex. Admin. Code (TAC) § 25.363(d), H.B. No. 1600 (the Sunset Act),<sup>1</sup> and the Commission’s *Order Approving ERCOT’s 2016/2017 Biennial Budget and Authorizing System Administration Fee* (2016/2017 Order), for review by the Public Utility Commission of Texas (Commission). The 2018/2019 ERCOT biennial budget included in this submission does not contemplate a change in the ERCOT System Administration Fee, which ERCOT plans to maintain at \$0.555 per Megawatt hour (MWh) through 2020.

**I.        Procedural Requirements**

The Commission adopted 16 TAC § 25.363(d) on March 22, 2011. The rule provides that ERCOT’s annual budget and any change in the System Administration Fee, if one was sought, are subject to review by the Commission, and sets forth a process for Commission participation in the budget development process for ERCOT. On May 25, 2013, the Texas Legislature, through the Sunset Act, amended Public Utility Regulatory Act (PURA) Section 39.151 by amending Subsections (d-1) and (e), and adding Subsection (d-2), (d-3), (d-4), and (e-1), with an effective date of September 1, 2013. In relevant part, the Sunset Act specifies that the review and approval of ERCOT’s proposed budget, or a proceeding to authorize or set the range for the

<sup>1</sup> On May 25, 2013, Section 39.151 of the Public Utility Regulatory Act (PURA) was amended by the Texas Legislature by amending Subsections (d-1) and (e), and adding Subsection (d-2), (d-3), (d-4), and (e-1), with an effective date of September 1, 2013. See H.B. 1600, 83<sup>rd</sup> Leg., R.S., Article 1, Section 1.08, *available at* <http://www.capitol.state.tx.us/tlodocs/83R/billtext/html/HB01600F.htm>.

amount of a System Administration Fee is not considered a contested case.<sup>2</sup> The Sunset Act also authorizes the Commission to request ERCOT prepare biennial budgets.

The 2018/2019 ERCOT biennial budget included in this submission contemplates no increase in the ERCOT System Administration Fee of \$0.555 per MWh for years 2018 and 2019. ERCOT's request does not seek to revise the manner in which the System Administration Fee is charged and collected, which the Commission has previously found to be reasonable and competitively neutral.<sup>3</sup>

In its *2018/2019 Biennial Budget and System Administration Fee Submission*, ERCOT has included information and data supporting the reasonableness of its budget request that have been requested by Commission staff and have been presented to the ERCOT Board of Directors (ERCOT Board) as part of its consideration of the 2018/2019 ERCOT biennial budget and System Administration Fee.

**A. Contents of ERCOT's Budget Submission**

In addition to this pleading, ERCOT's budget submission includes the following attachments:

- A. ERCOT Board Resolution approving proposed budget and System Administration Fee;
- B. ERCOT Staff Presentation to the ERCOT Board of 2018/2019 Biennial Budget;
- C. Statement of ERCOT President and Chief Executive officer (CEO) Summarizing the 2018/2019 Biennial Budget;
- D. ERCOT 2018/2019 Biennial Budget Schedules and Workpapers;
- E. ERCOT 2014 – 2018 Strategic Plan; and
- F. ERCOT Report on Performance Measures.

<sup>2</sup> *Id.*, Subsection (e-1).

<sup>3</sup> See *Application of the Electric Reliability Council of Texas to Change the ERCOT Administrative Fee*, Docket No. 28832 (March 18, 2004); *Application of the Electric Reliability Council for Approval of the ERCOT Administrative Fee*, Docket No. 31824 (May 15, 2006).

## **B. Consultation with Commission Staff**

In accordance with 16 TAC § 25.363(d), ERCOT staff consulted “with commission staff designated by the executive director in connection with the development of the budget,” and provided “to the staff information concerning budget strategies, staffing requirements, categories of expenses, capital outlays, exceptional expenses and capital items, and proposals to incur additional debt.” ERCOT and Commission staff began regular consultation meetings on ERCOT’s budgets in March 2015. As early as February 2017, ERCOT and Commission staff continued to hold regular meetings as ERCOT prepared its 2018/2019 biennial budget for approval by the ERCOT Board in June 2017. Between the consultation meetings, ERCOT staff responded to informal information requests from Commission staff regarding particular budget categories and the format of ERCOT’s budget presentation. To ERCOT’s knowledge, it has responded to all the requests or concerns raised by Commission staff in the consultation process.

As part of the consultation meetings, Commission staff recommended that ERCOT continue to utilize a format for structuring the budget filed with the Commission that includes the key components of the Legislative Appropriations Request (LAR) utilized by the Texas Legislative Budget Board. ERCOT has organized its budget schedules to conform to the LAR format to the extent possible, and has prepared a summary statement from ERCOT’s President and Chief Executive Officer similar to the LAR “Administrator’s Statement.” After the passage of the Sunset Act, Commission staff requested that ERCOT file a biennial, rather than annual, budget for review beginning with the 2014-2015 budget cycle. As stated and pursuant to the 2016/2017 Order, ERCOT has organized its 2018/2019 Budget schedules, in which no Fee increase is being sought, to resemble the LAR format.

## **C. ERCOT Board Approval of 2018/2019 ERCOT Budget**

The ERCOT Board approved the proposed 2018/2019 ERCOT biennial budget at its meeting on June 13, 2017. The ERCOT Board adopted the budget recommendations of ERCOT staff and the Board’s Finance and Audit (F&A) Committee, which included identification of operating expenses, project spending, and debt service obligations. The F&A Committee

discussed the development of the 2018/2019 ERCOT biennial budget in public meetings held in the first and second quarters of 2017.<sup>4</sup> A copy of the June 13, 2017 ERCOT Board resolution approving the budget is included in this submission as Attachment A. The budget presentation made by ERCOT staff at the June 13, 2017 Board meeting is included as Attachment B.

The ERCOT Board's decision to approve the 2018/2019 ERCOT budget was not appealed by any party to the Commission. The Commission's procedural rules require that if a party seeks Commission review of "ERCOT conduct," it must file its complaint at the Commission "within 35 days of the ERCOT conduct complained of ... ."<sup>5</sup> The term ERCOT "conduct" is defined as "a decision or an act done or omitted to be done."<sup>6</sup> Under ERCOT's governing documents, a vote of the ERCOT Board constitutes a "decision" made by ERCOT.<sup>7</sup> The thirty-five (35) day appeal period expired on July 18, 2017, and no party has contested the Board's approval of the 2018/2019 ERCOT biennial budget, which has a proposed effective date of the beginning of ERCOT's new fiscal year on January 1, 2018.

## **II. The ERCOT 2018/2019 Biennial Budget and System Administration Fee Proposal**

In its 2018/2019 biennial budget proposal, ERCOT seeks to implement a sustainable financial plan that meets ERCOT's technology and business requirements, while also maintaining the current System Administration Fee at \$0.555 per MWh. The proposed biennial budget approved by the Board includes \$222,261,598 for ERCOT's fiscal year 2018 and \$228,012,403 for ERCOT's fiscal year 2019 in total spending authorization for operating expenses, project spending, and debt service obligations. It is ERCOT management's intention that the \$0.555 per MWh System Administration Fee will remain in effect through the 2018/2019 biennium. ERCOT management is committed to promptly notifying the Commission

<sup>4</sup> The F&A Committee agendas and budget presentation materials are available at: [http://www.ercot.com/committees/board/finance\\_audit/](http://www.ercot.com/committees/board/finance_audit/).

<sup>5</sup> 16 TAC § 22.251(d). A party may also file a request for alternative dispute resolution (ADR) under Section 20 of the ERCOT Protocols to contest ERCOT decisions. ERCOT would not expect a party contesting the budget to file for ADR rather than appealing to the Commission under 16 TAC § 22.251, but ERCOT notes for the record that no party filed an ADR contesting the ERCOT Board's approval of the 2018/2019 ERCOT biennial budget.

<sup>6</sup> *Id.*, 16 TAC § 22.251(b).

<sup>7</sup> ERCOT Bylaws, Section 4.7(b).

and market participants of developments that would materially impact ERCOT's ability to operate within its requested budget and fee structure.

### **III. Budget Drivers for 2018/2019**

In its presentations to the ERCOT Board, and in its consultation meetings with Commission staff, ERCOT has identified three Budget request drivers for 2018/2019 as follows:

1. Maintain consistency with the approved 2016-2017 Budget;
2. Incorporate key initiatives; and
3. Comply with the Board's debt strategy.

#### Consistency with Approved 2016-2017 Biennial Budget

ERCOT has prioritized maintaining consistency with the approved 2016-2017 Biennial Budget as one of its three budget drivers. To maintain this consistency with the 2016-2017 Biennial Budget, ERCOT will maintain the current System Administration Fee of \$0.555 per MWh. In addition, ERCOT will continue budgeting with a multi-year planning horizon in which ERCOT incorporates known items in out years (*e.g.*, major information technology refreshes), accounts for the cost of inflation (such as labor at 4 percent, non-labor at 2.3 percent, and load growth at less than 2 percent), maintains the headcount of 749 full-time equivalent (FTE) employees consistent with the previously approved 2016-2017 Biennial Budget, and continues to use debt and working capital to keep the System Administration Fee consistent across years.

#### Incorporation of Key Initiatives

As another budget driver, ERCOT has incorporated key initiatives, including addressing the changing resource mix, improving training, and maintaining complex hardware and software systems. To address the changing resource mix, ERCOT continues to develop new tools and changes its operating practices to minimize risks associated with the changing mix and works with stakeholders to identify and implement protocol and guide changes to deliver grid reliability and support the success of the competitive market. ERCOT will improve training by enhancing its capability to provide effective training to ERCOT staff and market participants to support region-wide grid reliability by making new investments in ERCOT's operator training facilities.

To maintain its complex hardware and software systems, ERCOT will manage the technological sophistication required by a modern electric grid, update software and hardware systems for changes in ERCOT's market rules and reliability requirements, and periodically replace hardware systems.

#### Compliance with the Board's Debt Strategy

The final of ERCOT's budget drivers is its need to comply with the Board's debt strategy. In order to maintain compliance with this strategy, ERCOT will maintain or improve ERCOT's long-term financial integrity by continuing to decrease outstanding debt. ERCOT will maintain stable, fair and predictable fees by using debt matching appropriately. In addition, ERCOT will provide lowest cost to System Administration Fee-payers by using the lowest cost debt that is available and appropriate.

As an ongoing effort to maintain the current fee level, ERCOT management continues to seek areas of opportunity to improve operational efficiency. ERCOT management has improved operational efficiency through a variety of efficiency initiatives, such as, grid information enhancement, system consolidation, automated testing, and fast-path projects. ERCOT continues to enable grid and market operations teams to develop their own analytical and situational awareness tools, with no risk to production systems or extensive projects requiring significant staff time. In addition, ERCOT continues to automate several information technology testing processes and reduce staff time used on manual processes. By way of example, a recent emergency patch took three days to implement rather than the more typical two to three weeks, due to the implementation of automated technology testing processes. ERCOT continues to streamline its processes for low-risk, low-cost projects, thereby reducing complexity and staff time and delivering to the market and other users faster. To date in 2017, 22 processes for these low-risk, low-cost projects have been streamlined and have delivered improved efficiencies. ERCOT management will actively continue to seek these types of opportunities for improved operational efficiency throughout the 2018-2019 budget years.

**IV. Compliance with Instructions for Submission of ERCOT's Proposed 2018/2019 Biennial Budget**

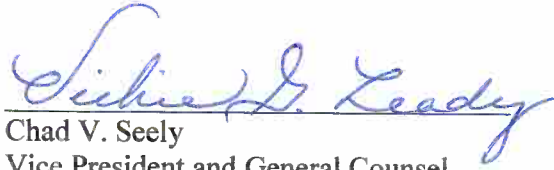
Pursuant to the 2016/2017 Order, ERCOT is filing this proposed Biennial Budget for its fiscal years 2018 and 2019 no later than September 1, 2017, and in accordance with the instructions for submission as provided in the 2016/2017 Order.

**V. Conclusion**

ERCOT's 2018/2019 Biennial Budget and System Administration Fee submission, and the consultation process with Commission staff prior to seeking ERCOT Board approval of its budget, conform to the requirements for approval of the ERCOT budget included in 16 TAC § 25.363(d), the Sunset Act, and the 2016/2017 Order. ERCOT respectfully requests that, prior to the beginning of ERCOT's 2018 fiscal year, the Commission take the actions necessary to approve the 2018/2019 ERCOT biennial budget and authorize the proposed maintenance of the current System Administration Fee of \$0.555 per MWh for ERCOT's fiscal years 2018 and 2019.



Respectfully Submitted,



Chad V. Seely  
Vice President and General Counsel  
Texas Bar No. 24037466  
(512) 225-7035 (Phone)  
(512) 225-7079 (Fax)  
[chad.seely@ercot.com](mailto:chad.seely@ercot.com)

Vickie G. Leady  
Assistant General Counsel  
Texas Bar No. 08122090  
(512) 275-7436 (Phone)  
(512) 225-7079 (Fax)  
[vickie.lead@ercot.com](mailto:vickie.lead@ercot.com)

ERCOT  
7620 Metro Center Drive  
Austin, TX 78744

ATTORNEYS FOR ELECTRIC RELIABILITY  
COUNCIL OF TEXAS, INC.

Attachment A

ERCOT Board Resolution Approving Proposed 2018/2019 Biennial  
Budget and System Administration Fee



**ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.**  
**BOARD OF DIRECTORS RESOLUTION**

WHEREAS, after due consideration of the alternatives, the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) deems it desirable and in the best interest of ERCOT to accept the recommendations of ERCOT staff and the Finance and Audit (F&A) Committee that the Board approve the ERCOT recommended 2018-2019 Biennial Budget (Budget), which includes operating expenses, project spending, and debt service obligations; and

WHEREAS, Sections 4.10 (*Duties*) and 10.3 (*Budget*) of the Amended and Restated Bylaws of Electric Reliability Council of Texas, Inc., approved on August 17, 2015 (Bylaws), requires that the Board approve the Budget; and

WHEREAS, ERCOT staff discussed financial assumptions, methodologies and schedules relating to the Budget in a public meeting with the F&A Committee, and consulted with the staff of the Public Utility Commission of Texas (PUCT) regarding development of the Budget; and

WHEREAS, ERCOT staff presented its recommended 2018-2019 Biennial Budget, which includes a total spending authorization of \$222,261,598 and \$228,012,403 respectively; and

WHEREAS, the Budget recommended by ERCOT staff will keep the ERCOT system administration fee flat at \$0.5550 for 2018 and 2019;

THEREFORE, BE IT RESOLVED, that the Board hereby:

- Approves the recommended 2018-2019 Biennial Budget as set forth in Attachment A, which includes \$222,261,598 and \$228,012,403 total spending authorization for operating expenses, project spending, and debt service obligations for 2018 and 2019, respectively; and
- Approves the request for the ERCOT system administration fee of \$0.5550 per megawatt-hour for 2018 and 2019 as set forth in Attachment B; and
- Authorizes ERCOT Legal to file the Board-approved 2018-2019 Biennial Budget for approval by the PUCT, pursuant to P.U.C. SUBST. R. 25.363(d).



**CORPORATE SECRETARY'S CERTIFICATE**

I, Vickie G. Leady, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its June 13, 2017 meeting, the ERCOT Board passed a motion approving the above Resolution by unanimous voice vote with no abstentions.

IN WITNESS WHEREOF, I have hereunto set my hand this 14<sup>th</sup> day of June, 2017.

  
Vickie G. Leady  
Assistant Corporate Secretary

Attachment A

Fiscal Years 2018-2019 Budget: Management Recommended Fee (\$0.555)

(\$ in Thousands)

Sources and Uses		2016	2017	2017	2018	2019	2020	2021	2022	2023
		Actual	Budget	Forecast	Request	Request	Projection	Projection	Projection	Projection
1	System Administration Fee Revenues	\$ 195,920	\$ 197,537	\$ 197,161	\$ 201,822	\$ 207,425	\$ 211,254	\$ 214,522	\$ 217,943	\$ 221,344
2	Reliability Organization Assessment	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
3	Other Revenues	5,639	4,609	5,911	5,440	5,587	5,704	5,824	5,946	6,071
4	Decrease in Working Capital	-	5,963	3,407	-	-	-	-	17,811	21,206
5	<b>Total Sources</b>	<b>\$ 215,536</b>	<b>\$ 223,108</b>	<b>\$ 220,824</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 256,700</b>	<b>\$ 263,621</b>
6										
7	Department Expenditures	\$ 148,375	\$ 163,608	\$ 161,979	\$ 171,264	\$ 174,933	\$ 180,461	\$ 186,834	\$ 192,700	\$ 199,621
8	Project Expenditures	31,805	40,500	40,500	28,500	28,500	27,000	29,000	45,000	45,000
9	Reliability Organization Assessment	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
10	Repayment of Long Term Debt	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
11	Increase in Working Capital	17,380	-	-	3,498	5,580	5,497	512	-	-
12	<b>Total Uses</b>	<b>\$ 215,536</b>	<b>\$ 223,108</b>	<b>\$ 220,824</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 256,700</b>	<b>\$ 263,621</b>

Schedule may not foot due to rounding.

Attachment B

Fiscal Years 2018-2019 Budget: Management Recommended Fee (\$0.555)

(\$ in Thousands except per GWH Amounts)

System Administration Fee Revenue Requirement									
	2016	2017	2017	2018	2019	2020	2021	2022	2023
	Actual	Budget	Forecast	Request	Request	Projection	Projection	Projection	Projection
1 Department Net Expenditures	\$ 142,736	\$ 159,000	\$ 156,068	\$ 165,824	\$ 169,346	\$ 174,757	\$ 181,010	\$ 186,754	\$ 193,550
2 Project Expenditures	31,805	40,500	40,500	28,500	28,500	27,000	29,000	45,000	45,000
3 Total Net Expenditures	\$ 174,541	\$ 199,500	\$ 196,568	\$ 194,324	\$ 197,846	\$ 201,757	\$ 210,010	\$ 231,754	\$ 238,550
4									
5 Long Term Debt	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
6 Change in Working Capital	17,380	(5,963)	(3,407)	3,498	5,580	5,497	512	(17,811)	(21,206)
7 Change in Debt & Working Capital	\$ 21,380	\$ (1,963)	\$ 593	\$ 7,498	\$ 9,580	\$ 9,497	\$ 4,512	\$ (13,811)	\$ (17,206)
8									
9 System Administration Fee Requirement	\$ 195,920	\$ 197,537	\$ 197,161	\$ 201,822	\$ 207,425	\$ 211,254	\$ 214,522	\$ 217,943	\$ 221,344
10 Energy Consumption (GWH)	353,009	355,922	355,245	363,643	373,739	380,637	386,527	392,690	398,818
11 System Administration Fee Rate	\$ 0.5550	\$ 0.5550	\$ 0.5550	\$ 0.5550	\$ 0.5550	\$ 0.5550	\$ 0.5550	\$ 0.5550	\$ 0.5550

Debt & Working Capital									
	2016	2017	2017	2018	2019	2020	2021	2022	2023
	Actual	Budget	Forecast	Request	Request	Projection	Projection	Projection	Projection
12 Debt & Working Capital Balance at End of Year	\$ 99,525	\$ 101,488	\$ 98,933	\$ 91,435	\$ 81,855	\$ 72,358	\$ 67,846	\$ 81,657	\$ 98,863
13 Yearly Change in Debt & Working Capital	\$ (21,380)	\$ 1,963	\$ (593)	\$ (7,498)	\$ (9,580)	\$ (9,497)	\$ (4,512)	\$ 13,811	\$ 17,206
14 Cumulative Change in Debt & Working Capital			\$ (593)	\$ (8,090)	\$ (17,670)	\$ (27,167)	\$ (31,679)	\$ (17,868)	\$ (662)
15 Interest Expense	\$ 1,934	\$ 3,682	\$ 2,112	\$ 2,069	\$ 1,997	\$ 1,910	\$ 1,752	\$ 1,467	\$ 1,347

Schedule may not foot due to rounding.

**Attachment B**

**ERCOT Staff Presentation of 2018/2019 Biennial Budget  
and System Administration Fee to the Finance and  
Audit Committee of the ERCOT Board**

**The Finance & Audit (F&A) Committee is  
expected to consider  
F&A Committee Agenda Item 3:**

***Recommendation Regarding 2018-2019  
Budget and Fee***

**at its meeting on June 12, 2017.**

**The Board of Directors is expected to hear  
the F&A Committee's recommendation on  
this matter as part of the F&A Committee  
Report at the Board meeting on  
June 13, 2017.**

**Attached are the Board materials in relation  
to these agenda items.**





**Item 3: Recommendation Regarding 2018-  
2019 Budget and Fee**

*Sean Taylor*  
Controller

Finance & Audit Committee Meeting

ERCOT Public  
June 12, 2017

## 2018-2019 Budget and Fee Requirements

### ERCOT Bylaw Requirement

- Sections 4.10 (Duties) and 10.3 (Budget): It is the duty of the ERCOT Board to approve the budget.

### Finance & Audit Committee Charter Requirement

- With respect to budget oversight...
  - Annually or biennially, the Committee shall review staff's proposed budget for the following year(s).
  - The Committee shall review the staff's recommendation of the amount and type of financing needed, both revenue and debt financing, to support the proposed budget and meet the Company's liquidity needs.
  - Following the Committee's review of the above items, the Committee shall recommend to the Board, a proposed budget and associated financing plan for the following year(s).

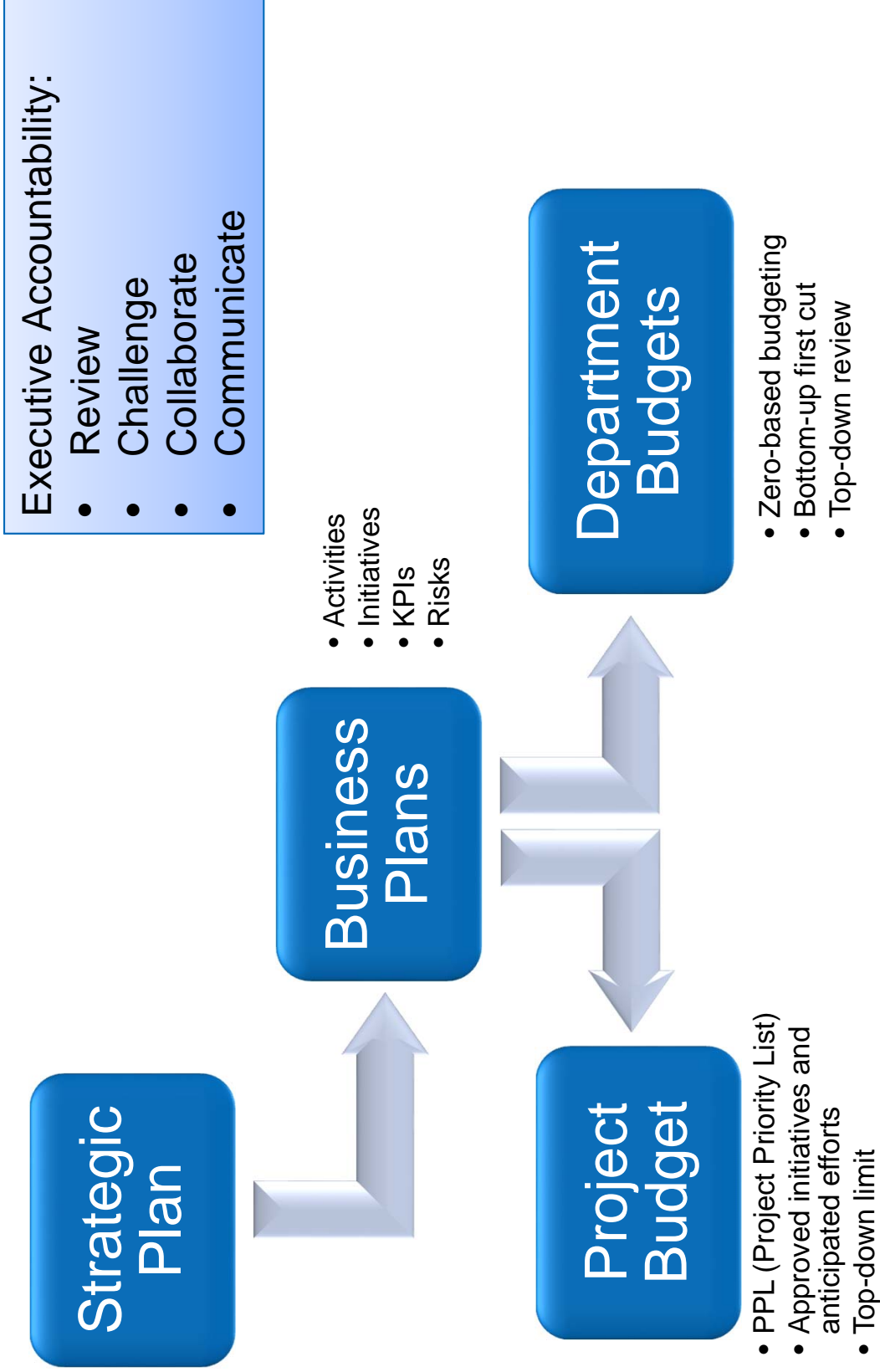
**<VOTE>** following presentation



## Agenda

1. Overview of the Budget Process
2. Budget Request Drivers
  - Be Consistent with 2016-2017 Approved Biennial Budget
  - Incorporate Key Initiatives
  - Comply with Board's Debt Strategy Guidance
3. Budget Request
4. Risks to Meeting 2018-2019 Management Recommended Budget
5. Request for Vote

# Overview of the Budget Process



## **Budget Request Drivers: Be Consistent with 2016-2017 Approved Biennial Budget**

- System Administration Fee**
- Remains the same at \$0.5550

### **Multi-Year Planning Horizon**

- Continues to incorporate known items in out years (e.g., major refreshes)
- Accounts for the cost of inflation
  - Labor 4%
  - Non-labor 2.3%
  - Load growth less than 2%
- Maintains 2016-2017 budgeted headcount of 749 FTEs
- Continues to use debt and working capital to keep fee consistent across years

## **Budget Request Drivers: Incorporate Key Initiatives**

### **Address Changing Resource Mix**

- Continue to develop new tools and change operating practices to minimize risks associated with the changing mix.
- Work with stakeholders to identify and implement protocol and guide changes to deliver grid reliability and support the success of the competitive market.

### **Improve Training**

- Enhance our capability to provide effective training to ERCOT staff and Market Participants to support region-wide grid reliability by new investments in our facilities.

### **Maintain Complex Hardware and Software Systems**

- Manage the technological sophistication required by a modern electric grid.
- Update software and hardware systems for changes in ERCOT's market rules and reliability requirements.
- Periodically replace hardware systems.

## **Budget Request Drivers: Comply with Board's Debt Strategy Guidance**

### **Maintain or Improve ERCOT's Long-Term Financial Integrity**

- Continue to decrease outstanding debt

### **Maintain Stable, Fair and Predictable Fees**

- Use debt matching appropriately

### **Provide Lowest Cost to Fee-Payers**

- Use lowest cost debt that is available and appropriate

# Budget Request: Management Recommended Flat Fee (\$0.5550)

		<b>System Administration Fee Revenue Requirement</b>								
		2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Department Net Expenditures	\$ 142,736	\$ 159,000	\$ 156,068	\$ 165,824	\$ 169,346	\$ 174,757	\$ 181,010	\$ 186,754	\$ 193,550
2	Project Expenditures	31,805	40,500	40,500	28,500	28,500	27,000	29,000	45,000	45,000
3	<b>Total Net Expenditures</b>	<b>\$ 174,541</b>	<b>\$ 199,500</b>	<b>\$ 196,568</b>	<b>\$ 194,324</b>	<b>\$ 197,846</b>	<b>\$ 201,757</b>	<b>\$ 210,010</b>	<b>\$ 231,754</b>	<b>\$ 238,550</b>
4										
5	Long Term Debt	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
6	Change in Working Capital	17,380	(5,963)	(3,407)	3,498	5,580	5,497	512	(17,811)	(21,206)
7	<b>Change in Debt &amp; Working Capital</b>	<b>\$ 21,380</b>	<b>\$ (1,963)</b>	<b>\$ 593</b>	<b>\$ 7,498</b>	<b>\$ 9,580</b>	<b>\$ 9,497</b>	<b>\$ 4,512</b>	<b>\$ (13,811)</b>	<b>\$ (17,206)</b>
8										
9	<b>System Administration Fee Requirement</b>	<b>\$ 195,920</b>	<b>\$ 197,537</b>	<b>\$ 197,161</b>	<b>\$ 201,822</b>	<b>\$ 207,425</b>	<b>\$ 211,254</b>	<b>\$ 214,522</b>	<b>\$ 217,943</b>	<b>\$ 221,344</b>
10	Energy Consumption (GWH)	353,009	355,922	355,245	363,643	373,739	380,637	386,527	392,690	398,818
11	<b>System Administration Fee Rate</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>
		<b>Debt &amp; Working Capital</b>								
		2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
12	Debt & Working Capital Balance at End of Year	\$ 99,525	\$ 101,488	\$ 98,933	\$ 91,435	\$ 81,855	\$ 72,358	\$ 67,846	\$ 81,657	\$ 98,863
13	Yearly Change in Debt & Working Capital	\$ (21,380)	\$ 1,963	\$ (593)	\$ (7,498)	\$ (9,580)	\$ (9,497)	\$ (4,512)	\$ 13,811	\$ 17,206
14	Cumulative Change in Debt & Working Capital			\$ (593)	\$ (8,090)	\$ (17,670)	\$ (27,167)	\$ (31,679)	\$ (17,868)	\$ (662)
15	Interest Expense	\$ 1,934	\$ 3,682	\$ 2,112	\$ 2,069	\$ 1,997	\$ 1,910	\$ 1,752	\$ 1,467	\$ 1,347

Schedule may not foot due to rounding.





# Budget Request: Management Recommended Flat Fee (\$0.5550)

Sources and Uses		2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	System Administration Fee Revenues	\$ 195,920	\$ 197,537	\$ 197,161	\$ 201,822	\$ 207,425	\$ 211,254	\$ 214,522	\$ 217,943	\$ 221,344
2	Reliability Organization Assessment *	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
3	Other Revenues	5,639	4,609	5,911	5,440	5,587	5,704	5,824	5,946	6,071
4	Decrease in Working Capital	-	5,963	3,407	-	-	-	-	17,811	21,206
5	<b>Total Sources</b>	<b>\$ 215,536</b>	<b>\$ 223,108</b>	<b>\$ 220,824</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 256,700</b>	<b>\$ 263,621</b>
6										
7	Department Expenditures	\$ 148,375	\$ 163,608	\$ 161,979	\$ 171,264	\$ 174,933	\$ 180,461	\$ 186,834	\$ 192,700	\$ 199,621
8	Project Expenditures	31,805	40,500	40,500	28,500	28,500	27,000	29,000	45,000	45,000
9	Reliability Organization Assessment *	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
10	Repayment of Long Term Debt	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
11	Increase in Working Capital	17,380	-	-	3,498	5,580	5,497	512	-	-
12	<b>Total Uses</b>	<b>\$ 215,536</b>	<b>\$ 223,108</b>	<b>\$ 220,824</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 256,700</b>	<b>\$ 263,621</b>
* Reliability Organization Assessment is a pass-through collected on behalf of the Texas Regional Entity; it is not set by ERCOT.										
Schedule may not foot due to rounding.										



# Budget Request: Comparison to 2016-2017 Approved Budget Debt & Working Capital Balance at End of Year 2019

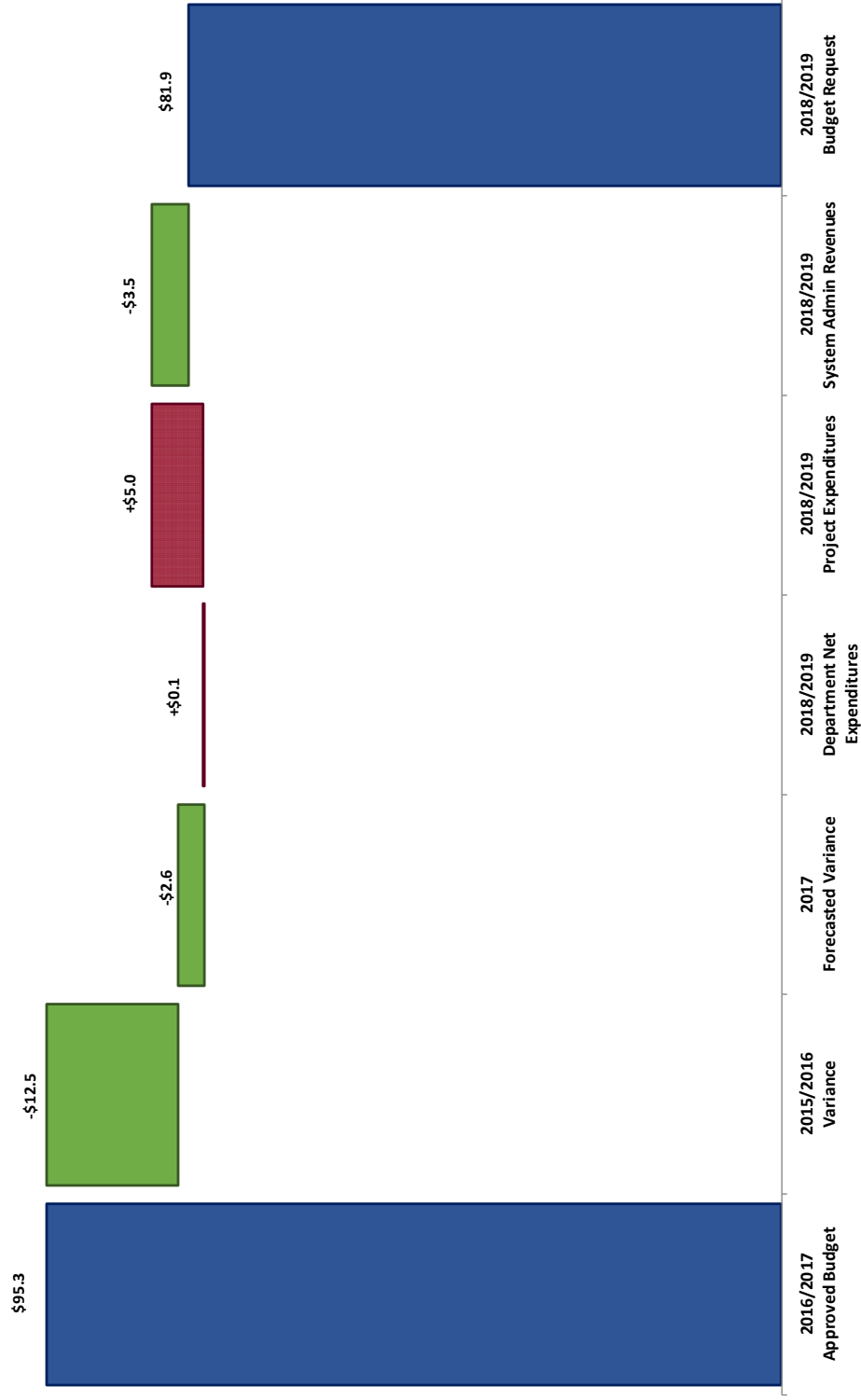


Chart may not foot due to rounding.



## **Budget Request: Risks to Meeting 2018-2019 Management Recommended Budget**

### **Potential Risks**

- Labor and Technology Costs Increase
- Exceptional Items
- Lower-than-Projected Load Growth

### **Risk Characteristics**

- Low Probability
- Slow Velocity

### **Mitigation Responses**

- Targeted Hiring for Critical Positions
- Prioritize Spending
- Delay Projects
- Working Capital Utilization

# Budget Request: Risks to Meeting 2018-2019 Management Recommended Budget

<b>System Administration Fee Revenue Requirement</b>						
	2018 Request	2019 Request	2018 Risk Impact	2019 Risk Impact	2018 Scenario	2019 Scenario
1	\$ 165,824	\$ 169,346	\$ 1,200	\$ 1,300	\$ 167,024	\$ 170,646
2	28,500	28,500	5,000	5,000	33,500	33,500
3	<b>\$ 194,324</b>	<b>\$ 197,846</b>	<b>\$ 6,200</b>	<b>\$ 6,300</b>	<b>\$ 200,524</b>	<b>\$ 204,146</b>
4						
5	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ 4,000	\$ 4,000
6	3,498	5,580	(8,700)	(11,300)	(5,202)	(5,720)
7	<b>\$ 7,498</b>	<b>\$ 9,580</b>	<b>\$ (8,700)</b>	<b>\$ (11,300)</b>	<b>\$ (1,202)</b>	<b>\$ (1,720)</b>
8						
9	<b>\$ 201,822</b>	<b>\$ 207,425</b>	<b>\$ (2,500)</b>	<b>\$ (5,000)</b>	<b>\$ 199,322</b>	<b>\$ 202,425</b>
10	363,643	373,739	(4,505)	(9,009)	359,139	364,730
11	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>

<b>Debt &amp; Working Capital</b>						
	2018 Request	2019 Request	2018 Risk Impact	2019 Risk Impact	2018 Scenario	2019 Scenario
12	\$ 91,435	\$ 81,855	\$ -	\$ -	\$ 100,135	\$ 101,855
13	\$ (7,498)	\$ (9,580)	\$ 8,700	\$ 11,300	\$ 1,202	\$ 1,720
14	\$ (8,090)	\$ (17,670)	\$ 8,700	\$ 20,000	\$ 610	\$ 2,330
15	\$ 2,069	\$ 1,997	\$ -	\$ -	\$ 2,069	\$ 1,997

Schedule may not foot due to rounding.



## Request for Vote

### **ERCOT staff recommends that the ERCOT Finance & Audit Committee recommend that the Board of Directors:**

- Approve the recommended 2018-2019 Biennial Budget which includes \$222,261,598 and \$228,012,403 total spending authorization for operating expenses, project spending, and debt service obligations for 2018 and 2019, respectively;
- Approve the recommended ERCOT System Administration Fee of \$0.5550 per megawatt-hour for 2018 and 2019; and
- Authorize ERCOT Legal to file the Board-approved 2018-2019 Biennial Budget for approval by the PUCT, pursuant to P.U.C. Substantive Rule Section 25.363(d).

# Appendices

# Department Net Expenditures by Office

## Budget Request: Department Net Expenditures by Office

Department Net Expenditures		2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Information Technology	\$ 59,619	\$ 63,747	\$ 64,625	\$ 68,598	\$ 69,622	\$ 71,612	\$ 74,278	\$ 76,497	\$ 79,353
2	Operations	54,391	60,180	60,046	63,987	65,310	67,708	70,294	72,907	75,689
3	Finance & Treasury	12,224	15,883	13,380	14,474	14,915	15,268	15,566	15,754	16,123
4	External Affairs & Corporate Communications	6,194	6,444	6,127	6,622	6,883	7,147	7,427	7,712	8,014
5	Human Resources	4,611	5,317	5,289	5,268	5,518	5,670	5,827	5,991	6,160
6	General Counsel	3,469	4,975	4,498	4,804	4,970	5,142	5,322	5,508	5,702
7	Corporate Administration	2,228	2,454	2,104	2,071	2,127	2,210	2,296	2,385	2,508
8	<b>Department Net Expenditures</b>	<b>\$ 142,736</b>	<b>\$ 159,000</b>	<b>\$ 156,068</b>	<b>\$ 165,824</b>	<b>\$ 169,346</b>	<b>\$ 174,757</b>	<b>\$ 181,010</b>	<b>\$ 186,754</b>	<b>\$ 193,550</b>

Schedule may not foot due to rounding.



# Budget Request: Department Net Expenditures by Office Information Technology

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Salaries	\$ 30,064	\$ 32,703	\$ 32,325	\$ 33,851	\$ 35,205	\$ 36,613	\$ 38,078	\$ 41,185
2	Benefits & Taxes	9,212	10,744	10,708	11,208	11,656	12,073	12,556	13,580
3	Project Funded Labor	(7,620)	(7,920)	(7,683)	(8,715)	(8,624)	(9,163)	(9,163)	(9,702)
4	<b>Department Labor</b>	<b>\$ 31,656</b>	<b>\$ 35,526</b>	<b>\$ 35,350</b>	<b>\$ 36,343</b>	<b>\$ 38,237</b>	<b>\$ 39,523</b>	<b>\$ 41,471</b>	<b>\$ 42,957</b>
5	Materials, Supplies & Equipment	1,367	950	950	1,491	1,558	1,594	1,631	1,668
6	HW/SW License & Maintenance	21,196	22,151	21,751	22,289	21,747	22,247	22,758	23,282
7	Outside Services	2,941	1,484	2,684	4,612	4,154	4,250	4,347	4,447
8	Utility, Maintenance & Facility	4,735	4,681	4,681	4,774	4,954	5,068	5,185	5,304
9	Employee Expenses	591	887	887	1,143	1,150	1,177	1,204	1,231
10	Insurance	-	-	-	-	-	-	-	-
11	Interest & Fees	-	-	-	-	-	-	-	-
12	Other Expenses	704	813	813	1,003	1,025	1,049	1,073	1,098
13	Management Challenge	-	(1,354)	-	(1,199)	(1,135)	(1,179)	(1,226)	(1,327)
14	<b>Department Expense</b>	<b>\$ 63,188</b>	<b>\$ 65,138</b>	<b>\$ 67,116</b>	<b>\$ 70,455</b>	<b>\$ 71,691</b>	<b>\$ 73,728</b>	<b>\$ 76,442</b>	<b>\$ 78,712</b>
15	Minor Capital	138	780	380	654	590	604	617	646
16	Common Infrastructure	-	1,000	300	300	300	307	314	329
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 63,326</b>	<b>\$ 66,918</b>	<b>\$ 67,796</b>	<b>\$ 71,409</b>	<b>\$ 72,581</b>	<b>\$ 74,639</b>	<b>\$ 77,374</b>	<b>\$ 79,665</b>
18									
19	<b>* Revenues</b>	<b>\$ (3,707)</b>	<b>\$ (3,172)</b>	<b>\$ (3,172)</b>	<b>\$ (2,811)</b>	<b>\$ (2,959)</b>	<b>\$ (3,027)</b>	<b>\$ (3,096)</b>	<b>\$ (3,167)</b>
20									
21	<b>Total Department Net Expenditures</b>	<b>\$ 59,619</b>	<b>\$ 63,747</b>	<b>\$ 64,625</b>	<b>\$ 68,598</b>	<b>\$ 69,622</b>	<b>\$ 71,612</b>	<b>\$ 74,278</b>	<b>\$ 76,497</b>

Schedule may not foot due to rounding.

\* Private Wide-Area Network Fees

# Budget Request: Department Net Expenditures by Office Operations

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Salaries \$ 37,008	\$ 40,776	\$ 39,745	\$ 41,754	\$ 43,424	\$ 45,155	\$ 46,968	\$ 48,846	\$ 50,800
2	Benefits & Taxes 11,521	13,447	13,454	13,785	14,336	14,894	15,491	16,111	16,755
3	Project Funded Labor (1,565)	(819)	(1,275)	(925)	(1,040)	(1,106)	(1,106)	(1,171)	(1,171)
4	<b>Department Labor \$ 46,964</b>	<b>\$ 53,403</b>	<b>\$ 51,925</b>	<b>\$ 54,614</b>	<b>\$ 56,720</b>	<b>\$ 58,943</b>	<b>\$ 61,353</b>	<b>\$ 63,786</b>	<b>\$ 66,385</b>
5	Materials, Supplies & Equipment 192	155	155	201	205	210	215	220	225
6	HW/SW License & Maintenance 41	-	-	-	-	-	-	-	-
7	Outside Services 5,673	6,569	6,661	8,291	7,326	7,494	7,666	7,843	8,023
8	Utility, Maintenance & Facility 1	8	8	15	16	16	16	17	17
9	Employee Expenses 944	1,178	1,178	1,583	1,586	1,623	1,660	1,698	1,737
10	Insurance -	-	-	-	-	-	-	-	-
11	Interest & Fees -	-	-	-	-	-	-	-	-
12	Other Expenses 1,147	640	640	951	911	932	954	976	998
13	Management Challenge -	(1,253)	-	(1,478)	(1,399)	(1,454)	(1,512)	(1,573)	(1,636)
14	<b>Department Expense \$ 54,961</b>	<b>\$ 60,701</b>	<b>\$ 60,567</b>	<b>\$ 64,177</b>	<b>\$ 65,365</b>	<b>\$ 67,764</b>	<b>\$ 70,352</b>	<b>\$ 72,966</b>	<b>\$ 75,749</b>
15	Minor Capital 471	604	604	830	965	987	1,010	1,033	1,057
16	Common Infrastructure -	-	-	-	-	-	-	-	-
17	<b>Subtotal - Department Expenditures \$ 55,432</b>	<b>\$ 61,305</b>	<b>\$ 61,171</b>	<b>\$ 65,007</b>	<b>\$ 66,330</b>	<b>\$ 68,752</b>	<b>\$ 71,362</b>	<b>\$ 73,999</b>	<b>\$ 76,806</b>
18									
19	<b>* Revenues \$ (1,041)</b>	<b>\$ (1,125)</b>	<b>\$ (1,125)</b>	<b>\$ (1,020)</b>	<b>\$ (1,020)</b>	<b>\$ (1,043)</b>	<b>\$ (1,067)</b>	<b>\$ (1,092)</b>	<b>\$ (1,117)</b>
20									
21	<b>Total Department Net Expenditures \$ 54,391</b>	<b>\$ 60,180</b>	<b>\$ 60,046</b>	<b>\$ 63,987</b>	<b>\$ 65,310</b>	<b>\$ 67,708</b>	<b>\$ 70,294</b>	<b>\$ 72,907</b>	<b>\$ 75,689</b>

Schedule may not foot due to rounding.

\* Generation Interconnection Study Fees, Operations Training Seminar Registration Fees, Risk Management Verification Fees, and Blackstart Training Registration Fees

# Budget Request: Department Net Expenditures by Office

## Finance & Treasury

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection	
1	Salaries	\$ 2,695	\$ 2,832	\$ 2,987	\$ 3,021	\$ 3,142	\$ 3,268	\$ 3,398	\$ 3,534	\$ 3,676
2	Benefits & Taxes	785	931	936	992	1,032	1,073	1,116	1,160	1,207
3	Project Funded Labor	(7)	-	(14)	(149)	-	-	-	-	-
4	<b>Department Labor</b>	<b>\$ 3,473</b>	<b>\$ 3,763</b>	<b>\$ 3,909</b>	<b>\$ 3,864</b>	<b>\$ 4,174</b>	<b>\$ 4,340</b>	<b>\$ 4,514</b>	<b>\$ 4,694</b>	<b>\$ 4,882</b>
5	Materials, Supplies & Equipment	382	415	415	503	528	540	552	565	578
6	HW/SW License & Maintenance	37	-	-	-	-	-	-	-	-
7	Outside Services	388	382	319	403	319	326	334	341	349
8	Utility, Maintenance & Facility	4,398	5,288	5,132	5,230	5,732	5,864	5,999	6,137	6,278
9	Employee Expenses	127	120	120	190	189	194	198	203	207
10	Insurance	1,853	1,965	2,215	2,697	2,804	2,931	3,063	3,202	3,348
11	Interest & Fees	1,934	3,682	2,112	2,069	1,997	1,910	1,752	1,467	1,347
12	Other Expenses	21	17	17	24	24	24	25	26	26
13	Management Challenge	-	(249)	-	(107)	(101)	(105)	(109)	(114)	(118)
14	<b>Department Expense</b>	<b>\$ 12,614</b>	<b>\$ 15,383</b>	<b>\$ 14,238</b>	<b>\$ 14,874</b>	<b>\$ 15,665</b>	<b>\$ 16,024</b>	<b>\$ 16,327</b>	<b>\$ 16,521</b>	<b>\$ 16,897</b>
15	Minor Capital	174	500	444	900	550	563	576	589	602
16	Common Infrastructure	-	-	-	-	-	-	-	-	-
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 12,788</b>	<b>\$ 15,883</b>	<b>\$ 14,682</b>	<b>\$ 15,774</b>	<b>\$ 16,215</b>	<b>\$ 16,586</b>	<b>\$ 16,903</b>	<b>\$ 17,110</b>	<b>\$ 17,500</b>
18										
19	<b>* Revenues</b>	<b>\$ (564)</b>	<b>\$ -</b>	<b>\$ (1,302)</b>	<b>\$ (1,300)</b>	<b>\$ (1,300)</b>	<b>\$ (1,318)</b>	<b>\$ (1,337)</b>	<b>\$ (1,356)</b>	<b>\$ (1,376)</b>
20										
21	<b>Total Department Net Expenditures</b>	<b>\$ 12,224</b>	<b>\$ 15,883</b>	<b>\$ 13,380</b>	<b>\$ 14,474</b>	<b>\$ 14,915</b>	<b>\$ 15,268</b>	<b>\$ 15,566</b>	<b>\$ 15,754</b>	<b>\$ 16,123</b>

Schedule may not foot due to rounding.

\* Interest Income

# Budget Request: Department Net Expenditures by Office External Affairs & Corporate Communications

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection	
1	Salaries	\$ 4,515	\$ 4,649	\$ 4,186	\$ 4,755	\$ 4,945	\$ 5,143	\$ 5,348	\$ 5,562	\$ 5,785
2	Benefits & Taxes	1,423	1,534	1,488	1,564	1,627	1,692	1,759	1,830	1,903
3	Project Funded Labor	(75)	(146)	(25)	(89)	(103)	(110)	(110)	(116)	(116)
4	<b>Department Labor</b>	<b>\$ 5,864</b>	<b>\$ 6,038</b>	<b>\$ 5,648</b>	<b>\$ 6,230</b>	<b>\$ 6,468</b>	<b>\$ 6,724</b>	<b>\$ 6,998</b>	<b>\$ 7,276</b>	<b>\$ 7,571</b>
5	Materials, Supplies & Equipment	17	8	8	6	6	6	6	7	7
6	HW/SW License & Maintenance	1	-	-	5	5	5	5	5	5
7	Outside Services	135	104	32	281	282	289	296	302	309
8	Utility, Maintenance & Facility	-	-	-	-	-	-	-	-	-
9	Employee Expenses	118	146	146	207	218	223	228	233	239
10	Insurance	-	-	-	-	-	-	-	-	-
11	Interest & Fees	-	-	-	-	-	-	-	-	-
12	Other Expenses	106	334	334	102	103	106	108	111	113
13	Management Challenge	-	(144)	-	(168)	(159)	(165)	(172)	(179)	(186)
14	<b>Department Expense</b>	<b>\$ 6,241</b>	<b>\$ 6,486</b>	<b>\$ 6,169</b>	<b>\$ 6,662</b>	<b>\$ 6,923</b>	<b>\$ 7,187</b>	<b>\$ 7,469</b>	<b>\$ 7,754</b>	<b>\$ 8,058</b>
15	Minor Capital	-	-	-	-	-	-	-	-	-
16	Common Infrastructure	-	-	-	-	-	-	-	-	-
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 6,241</b>	<b>\$ 6,486</b>	<b>\$ 6,169</b>	<b>\$ 6,662</b>	<b>\$ 6,923</b>	<b>\$ 7,187</b>	<b>\$ 7,469</b>	<b>\$ 7,754</b>	<b>\$ 8,058</b>
18										
19	<b>* Revenues</b>	<b>\$ (46)</b>	<b>\$ (42)</b>	<b>\$ (42)</b>	<b>\$ (40)</b>	<b>\$ (40)</b>	<b>\$ (41)</b>	<b>\$ (42)</b>	<b>\$ (43)</b>	<b>\$ (44)</b>
20										
21	<b>Total Department Net Expenditures</b>	<b>\$ 6,194</b>	<b>\$ 6,444</b>	<b>\$ 6,127</b>	<b>\$ 6,622</b>	<b>\$ 6,883</b>	<b>\$ 7,147</b>	<b>\$ 7,427</b>	<b>\$ 7,712</b>	<b>\$ 8,014</b>

Schedule may not foot due to rounding.

\* Market Participant Registration Fees

# Budget Request: Department Net Expenditures by Office

## Human Resources

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection	
1	Salaries	\$ 2,873	\$ 3,039	\$ 2,907	\$ 2,983	\$ 3,105	\$ 3,193	\$ 3,284	\$ 3,380	\$ 3,479
2	Benefits & Taxes	634	677	678	806	842	870	900	932	964
3	Project Funded Labor	-	-	-	-	-	-	-	-	-
4	<b>Department Labor</b>	<b>\$ 3,508</b>	<b>\$ 3,716</b>	<b>\$ 3,584</b>	<b>\$ 3,789</b>	<b>\$ 3,946</b>	<b>\$ 4,063</b>	<b>\$ 4,185</b>	<b>\$ 4,311</b>	<b>\$ 4,443</b>
5	Materials, Supplies & Equipment	8	5	5	4	4	4	4	4	4
6	HW/SW License & Maintenance	11	-	-	-	-	-	-	-	-
7	Outside Services	660	966	966	817	856	876	896	917	938
8	Utility, Maintenance & Facility	-	-	-	-	-	-	-	-	-
9	Employee Expenses	137	201	201	233	278	284	291	298	304
10	Insurance	-	-	-	-	-	-	-	-	-
11	Interest & Fees	-	-	-	-	-	-	-	-	-
12	Other Expenses	288	532	532	510	515	527	539	551	564
13	Management Challenge	-	(108)	-	(85)	(81)	(84)	(87)	(90)	(93)
14	<b>Department Expense</b>	<b>\$ 4,611</b>	<b>\$ 5,312</b>	<b>\$ 5,289</b>	<b>\$ 5,268</b>	<b>\$ 5,518</b>	<b>\$ 5,670</b>	<b>\$ 5,827</b>	<b>\$ 5,991</b>	<b>\$ 6,160</b>
15	Minor Capital	-	5	-	-	-	-	-	-	-
16	Common Infrastructure	-	-	-	-	-	-	-	-	-
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 4,611</b>	<b>\$ 5,317</b>	<b>\$ 5,289</b>	<b>\$ 5,268</b>	<b>\$ 5,518</b>	<b>\$ 5,670</b>	<b>\$ 5,827</b>	<b>\$ 5,991</b>	<b>\$ 6,160</b>
18										
19	<b>Revenues</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
20										
21	<b>Total Department Net Expenditures</b>	<b>\$ 4,611</b>	<b>\$ 5,317</b>	<b>\$ 5,289</b>	<b>\$ 5,268</b>	<b>\$ 5,518</b>	<b>\$ 5,670</b>	<b>\$ 5,827</b>	<b>\$ 5,991</b>	<b>\$ 6,160</b>

Schedule may not foot due to rounding.

# Budget Request: Department Net Expenditures by Office

## General Counsel

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Salaries	\$ 2,076	\$ 2,774	\$ 2,364	\$ 2,590	\$ 2,693	\$ 2,913	\$ 3,030	\$ 3,151
2	Benefits & Taxes	581	890	840	849	883	955	993	1,033
3	Project Funded Labor	(23)	-	(9)	(27)	(27)	(28)	(30)	(30)
4	<b>Department Labor</b>	<b>\$ 2,635</b>	<b>\$ 3,664</b>	<b>\$ 3,195</b>	<b>\$ 3,412</b>	<b>\$ 3,549</b>	<b>\$ 3,839</b>	<b>\$ 3,993</b>	<b>\$ 4,154</b>
5	Materials, Supplies & Equipment	2	2	2	6	3	4	4	4
6	HW/SW License & Maintenance	-	-	-	-	-	-	-	-
7	Outside Services	918	1,380	1,280	1,350	1,350	1,413	1,446	1,479
8	Utility, Maintenance & Facility	47	59	59	55	55	58	59	60
9	Employee Expenses	62	131	131	102	102	106	109	111
10	Insurance	-	-	-	-	-	-	-	-
11	Interest & Fees	-	-	-	-	-	-	-	-
12	Other Expenses	84	102	102	239	265	277	284	290
13	Management Challenge	-	(92)	-	(91)	(87)	(90)	(94)	(101)
14	<b>Department Expense</b>	<b>\$ 3,749</b>	<b>\$ 5,245</b>	<b>\$ 4,768</b>	<b>\$ 5,073</b>	<b>\$ 5,238</b>	<b>\$ 5,603</b>	<b>\$ 5,796</b>	<b>\$ 5,996</b>
15	Minor Capital	-	-	-	-	-	-	-	-
16	Common Infrastructure	-	-	-	-	-	-	-	-
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 3,749</b>	<b>\$ 5,245</b>	<b>\$ 4,768</b>	<b>\$ 5,073</b>	<b>\$ 5,238</b>	<b>\$ 5,603</b>	<b>\$ 5,796</b>	<b>\$ 5,996</b>
18									
19	<b>* Revenues</b>	<b>\$ (280)</b>	<b>\$ (270)</b>	<b>\$ (270)</b>	<b>\$ (268)</b>	<b>\$ (268)</b>	<b>\$ (281)</b>	<b>\$ (287)</b>	<b>\$ (294)</b>
20									
21	<b>Total Department Net Expenditures</b>	<b>\$ 3,469</b>	<b>\$ 4,975</b>	<b>\$ 4,498</b>	<b>\$ 4,804</b>	<b>\$ 4,970</b>	<b>\$ 5,322</b>	<b>\$ 5,508</b>	<b>\$ 5,702</b>

Schedule may not foot due to rounding.

\* Membership Dues

# Budget Request: Department Net Expenditures by Office

## Corporate Administration

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Salaries	\$ 1,686	\$ 1,830	\$ 1,487	\$ 1,479	\$ 1,538	\$ 1,664	\$ 1,730	\$ 1,799
2	Benefits & Taxes	371	573	503	480	499	540	561	584
3	Project Funded Labor	-	-	-	-	-	-	-	-
4	<b>Department Labor</b>	<b>\$ 2,057</b>	<b>\$ 2,403</b>	<b>\$ 1,990</b>	<b>\$ 1,959</b>	<b>\$ 2,037</b>	<b>\$ 2,203</b>	<b>\$ 2,291</b>	<b>\$ 2,383</b>
5	Materials, Supplies & Equipment	1	2	2	-	-	-	-	-
6	HW/SW License & Maintenance	-	-	-	-	-	-	-	-
7	Outside Services	-	-	-	25	-	-	-	30
8	Utility, Maintenance & Facility	-	-	-	-	-	-	-	-
9	Employee Expenses	82	105	105	107	107	112	115	118
10	Insurance	-	-	-	-	-	-	-	-
11	Interest & Fees	-	-	-	-	-	-	-	-
12	Other Expenses	87	7	7	32	32	34	34	35
13	Management Challenge	-	(64)	-	(52)	(49)	(51)	(55)	(58)
14	<b>Department Expense</b>	<b>\$ 2,228</b>	<b>\$ 2,454</b>	<b>\$ 2,104</b>	<b>\$ 2,071</b>	<b>\$ 2,127</b>	<b>\$ 2,296</b>	<b>\$ 2,385</b>	<b>\$ 2,508</b>
15	Minor Capital	-	-	-	-	-	-	-	-
16	Common Infrastructure	-	-	-	-	-	-	-	-
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 2,228</b>	<b>\$ 2,454</b>	<b>\$ 2,104</b>	<b>\$ 2,071</b>	<b>\$ 2,127</b>	<b>\$ 2,296</b>	<b>\$ 2,385</b>	<b>\$ 2,508</b>
18									
19	<b>Revenues</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
20									
21	<b>Total Department Net Expenditures</b>	<b>\$ 2,228</b>	<b>\$ 2,454</b>	<b>\$ 2,104</b>	<b>\$ 2,071</b>	<b>\$ 2,127</b>	<b>\$ 2,296</b>	<b>\$ 2,385</b>	<b>\$ 2,508</b>

Schedule may not foot due to rounding.

# Budget Request: Department Net Expenditures by Office Total

Line	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Salaries	\$ 80,918	\$ 88,603	\$ 86,001	\$ 90,432	\$ 94,052	\$ 101,653	\$ 105,683	\$ 109,874
2	Benefits & Taxes	24,529	28,796	28,607	29,683	30,873	33,316	34,644	36,025
3	Project Funded Labor	(9,289)	(8,885)	(9,006)	(9,904)	(9,794)	(10,407)	(11,019)	(11,019)
4	<b>Department Labor</b>	<b>\$ 96,157</b>	<b>\$ 108,514</b>	<b>\$ 105,602</b>	<b>\$ 110,212</b>	<b>\$ 115,131</b>	<b>\$ 124,563</b>	<b>\$ 129,309</b>	<b>\$ 134,881</b>
5	Materials, Supplies & Equipment	1,968	1,536	1,536	2,211	2,304	2,412	2,467	2,524
6	HW/SW License & Maintenance	21,285	22,151	21,751	22,293	21,751	22,763	23,287	23,822
7	Outside Services	10,715	10,886	11,942	15,778	14,287	14,952	15,296	15,678
8	Utility, Maintenance & Facility	9,180	10,036	9,880	10,075	10,757	11,257	11,516	11,781
9	Employee Expenses	2,062	2,767	2,767	3,564	3,630	3,714	3,887	3,976
10	Insurance	1,853	1,965	2,215	2,697	2,804	2,931	3,063	3,348
11	Interest & Fees	1,934	3,682	2,112	2,069	1,997	1,910	1,752	1,347
12	Other Expenses	2,437	2,446	2,446	2,861	2,876	2,942	3,010	3,150
13	Management Challenge	-	(3,264)	-	(3,180)	(3,010)	(3,129)	(3,384)	(3,519)
14	<b>Department Expense</b>	<b>\$ 147,592</b>	<b>\$ 160,719</b>	<b>\$ 160,251</b>	<b>\$ 168,580</b>	<b>\$ 172,528</b>	<b>\$ 184,317</b>	<b>\$ 190,125</b>	<b>\$ 196,987</b>
15	Minor Capital	783	1,889	1,428	2,384	2,105	2,153	2,203	2,305
16	Common Infrastructure	-	1,000	300	300	300	307	314	329
17	<b>Subtotal - Department Expenditures</b>	<b>\$ 148,375</b>	<b>\$ 163,608</b>	<b>\$ 161,979</b>	<b>\$ 171,264</b>	<b>\$ 174,933</b>	<b>\$ 180,461</b>	<b>\$ 192,700</b>	<b>\$ 199,621</b>
18									
19	<b>Revenues</b>	<b>\$ (5,639)</b>	<b>\$ (4,609)</b>	<b>\$ (5,911)</b>	<b>\$ (5,440)</b>	<b>\$ (5,587)</b>	<b>\$ (5,704)</b>	<b>\$ (5,946)</b>	<b>\$ (6,071)</b>
20									
21	<b>Total Department Net Expenditures</b>	<b>\$ 142,737</b>	<b>\$ 159,000</b>	<b>\$ 156,068</b>	<b>\$ 165,824</b>	<b>\$ 169,346</b>	<b>\$ 174,757</b>	<b>\$ 186,754</b>	<b>\$ 193,550</b>

Schedule may not foot due to rounding.



# Project Expenditures

## Budget Request: Project Expenditures

Project Expenditures		2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Revision Requests	\$ 2,382	\$ 4,000	\$ 3,500	\$ 4,000	\$ 4,000	\$ 4,500	\$ 4,500	\$ 5,000	\$ 5,000
2	Regulatory	1,804	2,000	1,500	2,000	2,000	2,000	3,000	3,000	3,000
3	Internal Enhancements	4,184	4,500	7,500	7,500	7,500	5,500	5,500	6,000	6,000
4	Technical Foundation - Hardware Refreshes	16,065	20,000	20,000	4,000	4,000	-	4,000	20,000	20,000
5	Technical Foundation - Software	7,370	10,000	8,000	11,000	11,000	15,000	12,000	11,000	11,000
6	<b>Project Expenditures</b>	<b>\$ 31,805</b>	<b>\$ 40,500</b>	<b>\$ 40,500</b>	<b>\$ 28,500</b>	<b>\$ 28,500</b>	<b>\$ 27,000</b>	<b>\$ 29,000</b>	<b>\$ 45,000</b>	<b>\$ 45,000</b>

Schedule may not foot due to rounding.

## Budget Request: Project Expenditures Project Priority List Detail

Line	Project Category	Project Name	2018 Budget Range	2019 Budget Range
1	Revision Requests	2015 CMM NPRRs (NPRR484, NPRR519, NPRR620, NPRR648, NPRR660, NPRR683, NPRR702, NPRR741, NPRR743, NPRR755, NPRR760, NPRR800)	\$500k-\$700k	-
2	Revision Requests	RARF Replacement (SCR781)	\$250k-\$500k	-
3	Revision Requests	Option Cost for Outstanding CRRs (NPRR749)	\$15k-\$25k	-
4	Revision Requests	Revision Request Funding - 2018/2019	\$3M-\$4M	\$4M-\$5M

Line	Project Category	Project Name	2018 Budget Range	2019 Budget Range
5	Regulatory	Regulatory Funding - 2018/2019	\$1M-\$2M	\$1M-\$2M

## Budget Request: Project Expenditures Project Priority List Detail

Line	Project Category	Project Name	2018 Budget Range	2019 Budget Range
6	Internal Enhancements	Training Facility	\$4M-\$5M	\$4M-\$5M
7	Internal Enhancements	MP Online Data Entry - Ph 2	\$750k-\$1M	-
8	Internal Enhancements	Capital Efficiencies and Enhancements - 2018	\$500k-\$750k	-
9	Internal Enhancements	IT Change and Configuration Management Phase 2	\$400k-\$600k	-
10	Internal Enhancements	AREA - Generation	\$100k-\$150k	-
11	Internal Enhancements	Multi Station Breaker to Breaker One Lines (Planning)	\$100k-\$200k	-
12	Internal Enhancements	2017 EPS Metering Enhancements	\$50k-\$150k	-
13	Internal Enhancements	SAS Technical Architecture Redesign	\$25k-\$75k	-
14	Internal Enhancements	Standard Report for Events and Near-Miss Analysis	\$20k-\$40k	-
15	Internal Enhancements	CRR Framework Upgrade	<\$50k	-
16	Internal Enhancements	MP Online Data Entry - Ph 3	-	\$500k-\$1M
17	Internal Enhancements	Business Strategy Projects Expected to be Approved and Initiated in 2018/2019	\$2M-\$3M	\$3M-\$5M
18	Internal Enhancements	Efficiency/Enhancement Projects Expected to be Approved and Initiated in 2018/2019	\$1M-\$2M	\$1M-\$2M
19	Internal Enhancements	Cyber and Physical Security Projects Expected to be Approved and Initiated in 2018/2019	\$500k-\$1M	\$500k-\$1M

## Budget Request: Project Expenditures Project Priority List Detail

Line	Project Category	Project Name	2018 Budget Range	2019 Budget Range
20	Technical Foundation - Hardware Refreshes	DC4 App Stack Migration	\$500k-\$1.5M	-
21	Technical Foundation - Hardware Refreshes	DC4 Storage - Database Install and Migration	\$500k-\$1.5M	-
22	Technical Foundation - Hardware Refreshes	DC4 Network - Command and Control	\$250k-\$500k	-
23	Technical Foundation - Hardware Refreshes	DC4 Telecom - Control Room and Grid Ops	\$150k-\$250k	-
24	Technical Foundation - Hardware Refreshes	DC4 Program Control	\$50k-\$100k	-
25	Technical Foundation - Hardware Refreshes	Tech Foundation - Hardware Projects Expected to be Approved and Initiated in 2018/2019	\$3M-\$5M	\$3M-\$5M

Line	Project Category	Project Name	2018 Budget Range	2019 Budget Range
26	Technical Foundation - Software	Identity and Access Management	\$1M-\$3M	-
27	Technical Foundation - Software	Replace Paperfree	\$500k-\$1M	-
28	Technical Foundation - Software	REC Technology Refresh	<\$50k	-
29	Technical Foundation - Software	Tech Foundation - Software Projects Expected to be Approved and Initiated in 2018/2019	\$10M-\$15M	\$8M-\$11M

# Financial Ratios

# Budget Request: Financial Ratios

	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
<b>Debt Service Coverage Ratio</b>									
1 <b>Revenues</b>									
2 System Administration Fee Revenue	\$ 195,920	\$ 197,537	\$ 197,161	\$ 201,822	\$ 207,425	\$ 211,254	\$ 214,522	\$ 217,943	\$ 221,344
3 Reliability Organization Assessment	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
4 Other Revenue	5,639	4,609	5,911	5,440	5,587	5,704	5,824	5,946	6,071
5 <b>Total Revenues</b>	<b>\$ 215,536</b>	<b>\$ 217,145</b>	<b>\$ 217,416</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 238,889</b>	<b>\$ 242,416</b>
6 <b>Expenditures</b>									
7 Operating Expenditures (includes interest; excludes depreciation)	\$ 148,375	\$ 163,608	\$ 161,979	\$ 171,264	\$ 174,933	\$ 180,461	\$ 186,834	\$ 192,700	\$ 199,621
8 Less: Interest Expense	1,934	3,682	2,112	2,069	1,997	1,910	1,752	1,467	1,347
9 Operating Expenditures Less Interest Expense	146,440	159,927	159,867	169,195	172,935	178,551	185,082	191,233	198,274
10 Reliability Organization Assessment	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
11 <b>EBITDA</b>	<b>\$ 55,118</b>	<b>\$ 42,219</b>	<b>\$ 43,204</b>	<b>\$ 38,066</b>	<b>\$ 40,077</b>	<b>\$ 38,407</b>	<b>\$ 35,264</b>	<b>\$ 32,656</b>	<b>\$ 29,141</b>
12									
13 Interest Expense	1,934	3,682	2,112	2,069	1,997	1,910	1,752	1,467	1,347
14 Principal Payment	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
15 <b>Total Debt Service</b>	<b>\$ 5,934</b>	<b>\$ 7,682</b>	<b>\$ 6,112</b>	<b>\$ 6,069</b>	<b>\$ 5,997</b>	<b>\$ 5,910</b>	<b>\$ 5,752</b>	<b>\$ 5,467</b>	<b>\$ 5,347</b>
16									
17 <b>Debt Service Coverage Ratio (EBITDA)</b>	<b>9.29</b>	<b>5.50</b>	<b>7.07</b>	<b>6.27</b>	<b>6.68</b>	<b>6.50</b>	<b>6.13</b>	<b>5.97</b>	<b>5.45</b>

	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
<b>Liquidity Ratio</b>									
18 * Operating Expenditures (2 Month Average)	\$ 24,407	\$ 26,654	\$ 26,645	\$ 28,199	\$ 28,823	\$ 29,758	\$ 30,847	\$ 31,872	\$ 33,046
19 Debt Service (6 Month Average)	2,967	3,841	3,056	3,034	2,999	2,955	2,876	2,734	2,674
20 Project Expenditures (2 Month Average)	5,301	6,750	6,750	4,750	4,750	4,500	4,833	7,500	7,500
21 <b>Targeted Minimum Level of Liquidity</b>	<b>\$ 32,675</b>	<b>\$ 37,245</b>	<b>\$ 36,450</b>	<b>\$ 35,984</b>	<b>\$ 36,571</b>	<b>\$ 37,214</b>	<b>\$ 38,556</b>	<b>\$ 42,106</b>	<b>\$ 43,219</b>
22									
23 <b>Undrawn Borrowing Capacity</b>	<b>\$ 125,000</b>	<b>\$ 66,015</b>	<b>\$ 125,000</b>	<b>\$ 125,000</b>	<b>\$ 125,000</b>	<b>\$ 125,000</b>	<b>\$ 125,000</b>	<b>\$ 125,000</b>	<b>\$ 125,000</b>
24									
25 <b>Liquidity Ratio</b>	<b>3.83</b>	<b>1.77</b>	<b>3.43</b>	<b>3.47</b>	<b>3.42</b>	<b>3.36</b>	<b>3.24</b>	<b>2.97</b>	<b>2.89</b>

Schedule may not foot due to rounding.

\* Excludes Operating Revenues and Interest Expense

**Date:** June 6, 2017  
**To:** Board of Directors  
**From:** Judy Walsh, Finance and Audit (F&A) Committee Chair  
**Subject:** 2018-2019 Budget and Fee

**Issue for the ERCOT Board of Directors**

**ERCOT Board of Directors Meeting Date:** June 13, 2017

**Item No.:** 12.1

**Issue:**

Approval by the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) of the ERCOT 2018-2019 Biennial Budget.

**Background/History:**

**Public Utility Commission of Texas (PUCT) Substantive Rule 25.363, ERCOT Budget and Fee**

P.U.C. SUBST. R. 25.363(d) provides that the ERCOT budget (Budget) and any change in the system administration fee are subject to review and approval by the PUCT. P.U.C. SUBST. R. 25.363(d) further specifies that the review and approval of the Budget, or a proceeding to authorize and set the range for the amount of the system administration fee is not a contested case.

P.U.C. SUBST. R. 25.363(e) provides that, prior to submission of the Budget for Board approval, ERCOT shall consult with PUCT staff in connection with the development of the Budget and provide PUCT staff with information concerning budget strategies, staffing requirements, categories of expenses, capital outlays, exceptional expenses and capital items, and proposals to incur additional debt.

**ERCOT Bylaws**

Sections 4.10 (*Duties*) and 10.3 (*Budget*) of the ERCOT Bylaws require that the Board approve the Budget.

**ERCOT Board Policies and Procedures**

Section 3.3 of the Board Policies and Procedures provides as follows:

The CEO will present to the Board by October of each year when the Budget is to be approved, or at such other time as directed by the Board, a Budget to carry out the Board's directives for the following year or longer as directed by the Board. The Budget will include projections of ERCOT's overall financial performance and financing plans, and describe the services, projects, programs, and the associated revenues and expenditures for the next fiscal year. Adoption of the Budget by the Board and as approved by the PUCT authorizes the CEO to complete work plans



and make associated expenditures as provided for in accordance with the Budget.

#### F&A Committee Charter

The Duties and Responsibilities section of the Finance & Audit Committee Charter states in pertinent part:

With respect to budget oversight...

1. Annually or biennially, the Committee shall review staff's proposed budget for the following year(s).
2. The Committee shall review the staff's recommendation of the amount and type of financing needed, both revenue and debt financing, to support the proposed budget and meet the Company's liquidity needs.
3. Following the Committee's review of the above items, the Committee shall recommend to the Board, a proposed budget and associated financing plan for the following year(s).

The F&A Committee is expected to recommend to the Board whether it should approve, reject or amend the 2018-2019 Biennial Budget at its June 13, 2017 meeting.

#### Key Factors Influencing Issue:

- ERCOT requires approval of the Budget by the Board and the PUCT for funding to enable ERCOT to fulfill its statutory functions as an independent organization as required by Section 39.151(a) of the Public Utility Regulatory Act (PURA). For instance, ERCOT must have adequate funds in 2018 and 2019 to:
  - Maintain compliance with the Financial Corporate Standard and associated financial performance measures as approved by the Board;
  - Fund independent market monitoring, PURA, and North American Electric Reliability Corporation (NERC) compliance functions;
  - Staff appropriately to participate in and support full market operations;
  - Implement system improvements and required functionality to support the market;
  - Enhance and maintain the computer systems and associated services contracted for with vendors; and
  - Maintain necessary facilities to provide secure operations and house staff.
- In the first and second quarters of 2017, ERCOT staff discussed financial assumptions, methodologies, schedules and a system administration fee relating to the 2018-2019 Biennial Budget with PUCT staff designated by the PUCT Executive Director.
- ERCOT staff will present its recommended 2018-2019 Biennial Budget to the F&A Committee on June 12, 2017.
- The Budget recommended by ERCOT staff will keep the ERCOT system administration fee flat at \$0.5550 for 2018 and 2019.

**Conclusion/Recommendation:**

ERCOT staff recommends, and the F&A Committee is expected to recommend, that the Board:

- Approve the recommended 2018-2019 Biennial Budget as set forth in Attachment A, which includes \$222,261,598 and \$228,012,403 total spending authorization for operating expenses, project spending, and debt service obligations for 2018 and 2019, respectively;
- Approve the recommended ERCOT system administration fee of \$0.5550 per megawatt-hour rate for 2018-2019, which represents no increase from the current ERCOT system administration fee, as set forth in Attachment B; and
- Authorize ERCOT Legal to file the Board-approved 2018-2019 Biennial Budget for approval by the PUCT, pursuant to P.U.C. SUBST. R. 25.363(d).

**ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.**  
**BOARD OF DIRECTORS RESOLUTION**

WHEREAS, after due consideration of the alternatives, the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) deems it desirable and in the best interest of ERCOT to accept the recommendations of ERCOT staff and the Finance and Audit (F&A) Committee that the Board approve the ERCOT recommended 2018-2019 Biennial Budget (Budget), which includes operating expenses, project spending, and debt service obligations; and

WHEREAS, Sections 4.10 (*Duties*) and 10.3 (*Budget*) of the Amended and Restated Bylaws of Electric Reliability Council of Texas, Inc., approved on August 17, 2015 (Bylaws), requires that the Board approve the Budget; and

WHEREAS, ERCOT staff discussed financial assumptions, methodologies and schedules relating to the Budget in a public meeting with the F&A Committee, and consulted with the staff of the Public Utility Commission of Texas (PUCT) regarding development of the Budget; and

WHEREAS, ERCOT staff presented its recommended 2018-2019 Biennial Budget, which includes a total spending authorization of \$222,261,598 and \$228,012,403 respectively; and

WHEREAS, the Budget recommended by ERCOT staff will keep the ERCOT system administration fee flat at \$0.5550 for 2018 and 2019;

THEREFORE, BE IT RESOLVED, that the Board hereby:

- Approves the recommended 2018-2019 Biennial Budget as set forth in Attachment A, which includes \$222,261,598 and \$228,012,403 total spending authorization for operating expenses, project spending, and debt service obligations for 2018 and 2019, respectively; and
- Approves the request for the ERCOT system administration fee of \$0.5550 per megawatt-hour for 2018 and 2019 as set forth in Attachment B; and
- Authorizes ERCOT Legal to file the Board-approved 2018-2019 Biennial Budget for approval by the PUCT, pursuant to P.U.C. SUBST. R. 25.363(d).

**CORPORATE SECRETARY'S CERTIFICATE**

I, Vickie G. Leady, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its June 13, 2017 meeting, the ERCOT Board passed a motion approving the above Resolution by \_\_\_\_\_.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of June, 2017.

\_\_\_\_\_  
Vickie G. Leady  
Assistant Corporate Secretary

**Attachment A**  
**Fiscal Years 2018-2019 Budget: Management Recommended Fee (\$0.555)**  
**(\$ in Thousands)**

<b>Sources and Uses</b>		<b>2016 Actual</b>	<b>2017 Budget</b>	<b>2017 Forecast</b>	<b>2018 Request</b>	<b>2019 Request</b>	<b>2020 Projection</b>	<b>2021 Projection</b>	<b>2022 Projection</b>	<b>2023 Projection</b>
1	System Administration Fee Revenues	\$ 195,920	\$ 197,537	\$ 197,161	\$ 201,822	\$ 207,425	\$ 211,254	\$ 214,522	\$ 217,943	\$ 221,344
2	Reliability Organization Assessment	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
3	Other Revenues	5,639	4,609	5,911	5,440	5,587	5,704	5,824	5,946	6,071
4	Decrease in Working Capital	-	5,963	3,407	-	-	-	-	17,811	21,206
5	<b>Total Sources</b>	<b>\$ 215,536</b>	<b>\$ 223,108</b>	<b>\$ 220,824</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 256,700</b>	<b>\$ 263,621</b>
6										
7	Department Expenditures	\$ 148,375	\$ 163,608	\$ 161,979	\$ 171,264	\$ 174,933	\$ 180,461	\$ 186,834	\$ 192,700	\$ 199,621
8	Project Expenditures	31,805	40,500	40,500	28,500	28,500	27,000	29,000	45,000	45,000
9	Reliability Organization Assessment	13,977	15,000	14,345	15,000	15,000	15,000	15,000	15,000	15,000
10	Repayment of Long Term Debt	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
11	Increase in Working Capital	17,380	-	-	3,498	5,580	5,497	512	-	-
12	<b>Total Uses</b>	<b>\$ 215,536</b>	<b>\$ 223,108</b>	<b>\$ 220,824</b>	<b>\$ 222,262</b>	<b>\$ 228,012</b>	<b>\$ 231,958</b>	<b>\$ 235,346</b>	<b>\$ 256,700</b>	<b>\$ 263,621</b>

Schedule may not foot due to rounding.

**Attachment B**

**Fiscal Years 2018-2019 Budget: Management Recommended Fee (\$0.555)**

(\$ in Thousands except per GWH Amounts)

	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
<b>System Administration Fee Revenue Requirement</b>									
1	Department Net Expenditures	\$ 142,736	\$ 159,000	\$ 156,068	\$ 165,824	\$ 169,346	\$ 181,010	\$ 186,754	\$ 193,550
2	Project Expenditures	31,805	40,500	40,500	28,500	28,500	29,000	45,000	45,000
3	<b>Total Net Expenditures</b>	<b>\$ 174,541</b>	<b>\$ 199,500</b>	<b>\$ 196,568</b>	<b>\$ 194,324</b>	<b>\$ 197,846</b>	<b>\$ 210,010</b>	<b>\$ 231,754</b>	<b>\$ 238,550</b>
4									
5	Long Term Debt	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
6	Change in Working Capital	17,380	(5,963)	(3,407)	3,498	5,580	512	(17,811)	(21,206)
7	<b>Change in Debt &amp; Working Capital</b>	<b>\$ 21,380</b>	<b>\$ (1,963)</b>	<b>\$ 593</b>	<b>\$ 7,498</b>	<b>\$ 9,580</b>	<b>\$ 4,512</b>	<b>\$ (13,811)</b>	<b>\$ (17,206)</b>
8									
9	<b>System Administration Fee Requirement</b>	<b>\$ 195,920</b>	<b>\$ 197,537</b>	<b>\$ 197,161</b>	<b>\$ 201,822</b>	<b>\$ 207,425</b>	<b>\$ 214,522</b>	<b>\$ 217,943</b>	<b>\$ 221,344</b>
10	Energy Consumption (GWH)	353,009	355,922	355,245	363,643	373,739	380,637	392,690	398,818
11	<b>System Administration Fee Rate</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>	<b>\$ 0.5550</b>

	2016 Actual	2017 Budget	2017 Forecast	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
<b>Debt &amp; Working Capital</b>									
12	Debt & Working Capital Balance at End of Year	\$ 99,525	\$ 101,488	\$ 98,933	\$ 91,435	\$ 81,855	\$ 72,358	\$ 67,846	\$ 98,863
13	Yearly Change in Debt & Working Capital	\$ (21,380)	\$ 1,963	\$ (593)	\$ (7,498)	\$ (9,580)	\$ (9,497)	\$ (4,512)	\$ 13,811
14	Cumulative Change in Debt & Working Capital			\$ (593)	\$ (8,090)	\$ (17,670)	\$ (27,167)	\$ (31,679)	\$ (662)
15	Interest Expense	\$ 1,934	\$ 3,682	\$ 2,112	\$ 2,069	\$ 1,997	\$ 1,910	\$ 1,752	\$ 1,347

Schedule may not foot due to rounding.

Attachment C

Statement of ERCOT CEO Summarizing the  
2018/2019 Biennial Budget

**PROJECT NO. 38533**

**PUC REVIEW OF ERCOT BUDGET            §            PUBLIC UTILITY COMMISSION**  
**§**  
**§    OF TEXAS**

**STATEMENT OF ERCOT CHIEF EXECUTIVE OFFICER SUMMARIZING  
ERCOT's 2018/2019 BIENNIAL BUDGET**

**Introduction**

Electric Reliability Council of Texas, Inc. (ERCOT) presents a 2018/2019 biennial budget that contemplates maintaining ERCOT's current System Administration Fee (Fee) (*i.e.*, ERCOT's primary funding source) at \$0.555 per MWh for years 2018 and 2019.

The following information is presented for the Commission's consideration, in a format modeled on the "Administrator's Statement" utilized by Texas state agencies in their Legislative Appropriations Requests. In addition to this statement, ERCOT has filed with the Commission the supporting documentation required by Commission rules or otherwise requested by Commission staff. ERCOT management and its Board of Directors are gratified that the development of the Board-approved 2018/2019 biennial budget was the result of a productive collaboration with Commission staff.

ERCOT is prepared to provide additional information at the Commission's request.

**ERCOT Overview**

ERCOT manages the flow of electric power to approximately 24 million Texas customers, representing approximately 90 percent of the state's electric load. As the independent system operator (ISO) for the region, ERCOT schedules power on an electric grid that connects more than 46,500 circuit miles of transmission lines and more than 570+ generation units. ERCOT also performs financial settlement for the competitive wholesale bulk-power market and administers retail switching for 7 million premises in competitive choice areas.



ERCOT is a membership-based, Texas non-profit corporation, operating as a tax-exempt organization under §501(c)(4) of the Internal Revenue Code. ERCOT's core duties are delineated in Section 39.151 of the Texas Public Utility Regulatory Act (PURA). As the "independent organization" designated to serve as the ISO for the ERCOT power region, ERCOT is responsible for ensuring:

1. Access to the transmission and distribution systems for all buyers and sellers of electricity on nondiscriminatory terms;
2. The reliability and adequacy of the regional electrical network;
3. That information relating to a customer's choice of retail electric provider is conveyed in a timely manner to the persons who need that information; and
4. That electricity production and delivery are accurately accounted for among the generators and wholesale buyers and sellers in the region.<sup>1</sup>

ERCOT's actions in furtherance of its statutory mission are subject to the oversight and review of the Commission. In addition, ERCOT is responsible for ensuring compliance with federal electric reliability standards, pursuant to the Federal Power Act. For federal reliability standards, ERCOT is accountable to the Texas Reliability Entity (TRE), the North American Electric Reliability Corporation (NERC), and the Federal Energy Regulatory Commission (FERC).

ERCOT is governed by a Board of Directors (Board), the composition of which is mandated by statute,<sup>2</sup> as is the Commission's oversight role.<sup>3</sup> The members of ERCOT's Board and the dates of their terms are identified in the schedules as Workpaper 1 in Attachment D, ERCOT 2018/2019 Biennial Budget Schedules and Workpapers. The identification of ERCOT's Board members is as of the date of this filing. However, the annual election of directors representing market segments, and the expiration of terms and seating of unaffiliated directors, will result in some new Board members serving in 2018 and 2019.

<sup>1</sup> PURA § 39.151(a)(1)-(4).

<sup>2</sup> See PURA § 39.151(g).

<sup>3</sup> See PURA § 39.151(c)-(f). The Commission's oversight of ERCOT is further detailed in Chapter 25, Subchapter O, Division 2 (Independent Organizations) of the 16 Tex. Admin. Code (TAC), and in 16 TAC § 22.251 – 22.252 of the P.U.C. Procedural Rules.

## High-Level Overview: ERCOT's Proposed 2018/2019 Biennial Budget

### Spending Authorization

ERCOT's proposed 2018/2019 biennial budget authorizes total spending for operating expenses, project spending, and debt service in the amounts of \$222.3 million for 2018, and \$228.0 million for 2019.

As documented in the materials filed with this application, ERCOT management and staff are dedicated to running efficient operations. In recent years, ERCOT has increased its efforts to actively manage vendor relationships, drive costs down through competitive processes, and carefully examine every hiring decision.

ERCOT is also responsible for budgeting to fund the operations of the NERC Electric Reliability Organization (ERO). Funding for NERC/ERO operations is a pass-through fee that is not used to fund ERCOT operations. A total of \$30.0 million of ERCOT's proposed 2018/2019 biennial budget will be used to fund the NERC/ERO for 2018 and 2019.

### Revenue Sources

ERCOT's proposed 2018/2019 biennial budget includes Fee requirements of \$201.8 million in 2018, and \$207.4 million in 2019. The proposed budget allows ERCOT to continue to maintain the Fee at \$0.555 MWh in 2018/2019. The Board and ERCOT management are acutely aware that the consumers of Texas fund ERCOT, and that ERCOT must remain focused on running a lean but effective organization that not only meets, but exceeds the performance expectations of those ERCOT serves.

The Commission's rules<sup>4</sup> permit the Board to approve user fees for specific services provided by ERCOT to Market Participants and the public. These user fees are included in the ERCOT Fee Schedule that is maintained along with the ERCOT Protocols. While user fees do not recover a large portion of ERCOT's revenue requirement (user fees are expected to generate \$4.2 million in 2018 and \$4.3 million in 2019), ERCOT regularly reviews user fees to ensure the recovery of appropriate costs. ERCOT may recommend other user fee changes to the Board while the 2018/2019 ERCOT biennial budget is in effect, but management is not aware of specific new fees or their revenues at this time.

ERCOT's proposed 2018/2019 biennial budget includes interest income of \$1.3 million in both 2018 and 2019.

<sup>4</sup> See 16 TAC § 25.363(f).

<b><u>Sources and Uses Summary Table</u></b>		
	<b>2018 Board Approved Amount <u>(\$ in millions)</u></b>	<b>2019 Board Approved Amount <u>(\$ in millions)</u></b>
<b><u>Sources</u></b>		
System Administration Fee Revenues	\$201.8	\$207.4
Reliability Organization Assessment	15.0	15.0
Other Revenues	<u>5.5</u>	<u>5.6</u>
<b>Total Sources</b>	<b>\$222.3</b>	<b>\$228.0</b>
<b><u>Uses</u></b>		
Department Expenditures	\$171.3	\$174.9
Project Expenditures	28.5	28.5
Reliability Organization Assessment	15.0	15.0
Repayment of Long Term Debt	4.0	4.0
Increase in Working Capital	<u>3.5</u>	<u>5.6</u>
<b>Total Uses</b>	<b>\$222.3</b>	<b>\$228.0</b>

### **Mission and Driving Forces**

ERCOT's mission and driving forces are detailed in its 2014 - 2018 Strategic Plan, which is included in ERCOT's proposed 2018/2019 biennial budget submission as Attachment E, ERCOT 2014 – 2018 Strategic Plan.

### **Budget Drivers for 2018/2019**

In its presentations to the ERCOT Board, and in its consultation meetings with Commission staff, ERCOT has identified three Budget request drivers for 2018/2019 as follows:

1. Maintain consistency with the approved 2016-2017 Budget;
2. Incorporate key initiatives; and
3. Comply with the Board's debt strategy.

#### **Consistency with Approved 2016-2017 Biennial Budget**

ERCOT has prioritized maintaining consistency with the approved 2016-2017 Biennial Budget as one of its three budget drivers. To maintain this consistency with the 2016-2017 Biennial Budget, ERCOT will maintain the current System Administration Fee of \$0.555 per MWh. In addition, ERCOT will continue budgeting with a multi-year planning horizon in which ERCOT incorporates known items in out years (*e.g.*, major information technology refreshes), accounts for the cost of inflation (such as labor at 4 percent, non-labor at 2.3 percent, and load growth at less than 2 percent), maintains the headcount of 749 full-time equivalent (FTE) employees consistent with the previously approved 2016-2017 Biennial Budget, and continues to use debt and working capital to keep the System Administration Fee consistent across years.

### Incorporation of Key Initiatives

As another budget driver, ERCOT has incorporated key initiatives, including addressing the changing resource mix, improving training, and maintaining complex hardware and software systems. To address the changing resource mix, ERCOT continues to develop new tools and changes its operating practices to minimize risks associated with the changing mix and works with stakeholders to identify and implement protocol and guide changes to deliver grid reliability and support the success of the competitive market. ERCOT will improve training by enhancing its capability to provide effective training to ERCOT staff and market participants to support region-wide grid reliability by making new investments in ERCOT's operator training facilities. To maintain its complex hardware and software systems, ERCOT will manage the technological sophistication required by a modern electric grid, update software and hardware systems for changes in ERCOT's market rules and reliability requirements, and periodically replace hardware systems.

### Compliance with the Board's Debt Strategy

The final of ERCOT's budget drivers is its need to comply with the Board's debt strategy. In order to maintain compliance with this strategy, ERCOT will maintain or improve ERCOT's long-term financial integrity by continuing to decrease outstanding debt. ERCOT will maintain stable, fair and predictable fees by using debt matching appropriately. In addition, ERCOT will provide lowest cost to System Administration Fee-payers by using the lowest cost debt that is available and appropriate.

As an ongoing effort to maintain the current fee level, ERCOT management continues to seek areas of opportunity to improve operational efficiency. ERCOT management has improved operational efficiency through a variety of efficiency initiatives, such as, grid information enhancement, system consolidation, automated testing, and fast-path projects. ERCOT continues to enable grid and market operations teams to develop their own analytical and situational awareness tools, with no risk to production systems or extensive projects requiring significant staff time. In addition, ERCOT continues to automate several information technology testing processes and reduce staff time used on manual processes. By way of example, a recent emergency patch took three days to implement rather than the more typical two to three weeks, due to the implementation of automated technology testing processes. ERCOT continues to streamline its processes for low-risk, low-cost projects, thereby reducing complexity and staff time and delivering to the market and other users faster. To date in 2017, 22 processes for these low-risk, low-cost projects have been streamlined and have delivered improved efficiencies. ERCOT management will actively continue to seek these types of opportunities for improved operational efficiency throughout the 2018-2019 budget years.

## **Conclusion**

ERCOT will provide additional information, as requested, to facilitate the Commission's review of ERCOT's 2018/2019 biennial budget and Fee submission. ERCOT respectfully requests that the review process conclude by year-end 2017 to allow ERCOT to implement the proposed 2018/2019 biennial budget and Fee beginning January 1, 2018.

Bill Magness  
ERCOT President & Chief Executive Officer

Attachment D

ERCOT 2018/2019 Biennial Budget Schedules and Workpapers

**Electric Reliability Council of Texas, Inc. (ERCOT)  
Fiscal Year 2018-2019 Budget Request  
Schedule I: Method of Finance (\$ in Thousands)**

Line	Method of Finance	2016 Actual	2017 Budget	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
		\$	\$	\$	\$	\$	\$	\$	\$
		%	%	%	%	%	%	%	%
1	System Administration Fee Revenues	\$ 195,920	\$ 197,537	\$ 201,822	\$ 207,425	\$ 211,254	\$ 214,522	\$ 217,943	\$ 221,344
		90.9%	88.5%	90.8%	91.0%	91.1%	91.2%	91.2%	84.9%
2	Reliability Organization Assessment Fee	13,977	15,000	15,000	15,000	15,000	15,000	15,000	15,000
		6.5%	6.7%	6.7%	6.6%	6.5%	6.4%	5.8%	5.7%
3	Decrease in Working Capital	-	5,963	-	-	-	-	17,811	21,206
		0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	6.9%	8.0%
4	Other Revenues								
5	Private Wide-Area Network Fee	3,707	3,172	2,811	2,959	3,027	3,096	3,167	3,240
		1.7%	1.4%	1.3%	1.3%	1.3%	1.3%	1.2%	1.2%
6	Interest Income	564	-	1,300	1,300	1,318	1,337	1,356	1,376
		0.3%	0.0%	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%
7	Generation Interconnection Study Fee	699	600	495	495	506	518	530	542
		0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
8	Operations Training Seminar	228	300	300	300	307	314	321	329
		0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	Membership Dues	280	270	268	268	275	281	287	294
		0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
10	Blackstart Training	114	225	225	225	230	235	241	246
		0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Market Participant Registration Fees	46	42	40	40	41	42	43	44
		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	Sub-Total Other Revenues	\$ 5,639	\$ 4,609	\$ 5,440	\$ 5,587	\$ 5,704	\$ 5,824	\$ 5,946	\$ 6,071
		2.6%	2.1%	2.4%	2.5%	2.5%	2.5%	2.3%	2.3%
13									
14	Total - ERCOT	\$ 215,536	\$ 223,108	\$ 222,262	\$ 228,012	\$ 231,958	\$ 235,346	\$ 256,700	\$ 263,621
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Schedule may not foot due to rounding.

**Electric Reliability Council of Texas, Inc. (ERCOT)  
Fiscal Year 2018-2019 Budget Request**

**Schedule 2: Summary by Object of Expense (\$ in Thousands except Headcounts)**

Line	Object of Expense	2016 Actual	2017 Budget	2018 Request	2019 Request	2020 Projection	2021 Projection	2022 Projection	2023 Projection
1	Salaries & Wages	\$ 72,524	\$ 78,169	\$ 79,361	\$ 83,139	\$ 86,300	\$ 90,065	\$ 93,520	\$ 97,593
2	Other Personnel Costs	23,372	26,542	27,551	28,842	29,839	31,112	32,276	33,645
3	Professional Fees & Services	10,382	10,566	15,163	13,645	13,959	14,280	14,609	14,975
4	Fuels & Lubricants	33	53	40	40	41	42	43	44
5	Consumable Supplies	153	227	224	232	237	243	249	254
6	Utilities	5,790	5,613	5,637	5,939	6,075	6,215	6,358	6,504
7	Travel	963	1,414	1,772	1,807	1,849	1,891	1,935	1,979
8	Rent - Building	757	857	912	954	976	999	1,022	1,045
9	Rent - Machine & Other	115	124	142	144	148	151	154	158
10	Debt Service	5,635	7,322	5,649	5,577	5,480	5,312	5,017	4,887
11	Other Operating Expenses	10,249	11,361	13,240	13,814	14,187	14,572	14,969	15,378
12	HW/SW Maintenance & Licenses	21,619	22,471	22,908	22,393	22,908	23,435	23,974	24,525
13	Reliability Organization Assessment	13,977	15,000	15,000	15,000	15,000	15,000	15,000	15,000
14	Capital Expenditures	32,587	43,389	31,184	30,905	29,460	31,517	47,575	47,634
15	Sub-Total Objects of Expense	\$ 198,156	\$ 223,108	\$ 218,764	\$ 222,433	\$ 226,461	\$ 234,834	\$ 256,700	\$ 263,621
16									
17	Increase in Working Capital	17,380	-	3,498	5,580	5,497	512	-	-
18									
19	Total - ERCOT	\$ 215,536	\$ 223,108	\$ 222,262	\$ 228,012	\$ 231,958	\$ 235,346	\$ 256,700	\$ 263,621
20									
21	Headcount	713	749	749	749	749	749	749	749

Schedule may not foot due to rounding.

**Note:**  
Certain prior year amounts have been reclassified for consistency with the current presentation. These reclassifications had no effect on the reported results of operations.



**Electric Reliability Council of Texas, Inc. (ERCOT)  
Fiscal Year 2018-2019 Budget Request**

**Schedule 3: Summary by Object of Expense-Exception Requests (\$ in Thousands except per MWh Amounts)**

Line	Object of Expense	2016 Actual	2017 Budget	2018 Baseline Budget	Exceptional Request #1		Exceptional Request #2		Exceptional Request #3		Exceptional Request #4		Exceptional Request #5	
					Dollars	Fee Impact	Dollars	Fee Impact	Dollars	Fee Impact	Dollars	Fee Impact	Dollars	Fee Impact
1	Salaries & Wages	\$ 72,524	\$ 78,169	\$ 78,169	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,192	\$ 0.0033	\$ -	\$ -
2	Other Personnel Costs	23,372	26,542	26,542	-	-	-	-	-	-	989	0.0027	-	-
3	Professional Fees & Services	10,382	10,566	10,566	1,279	0.0035	68	0.0002	3,331	0.0092	(80)	(0.0002)	-	-
4	Fuels & Lubricants	33	53	53	-	-	-	-	-	-	(13)	-	-	-
5	Consumable Supplies	153	227	227	-	-	-	-	-	-	(3)	-	-	-
6	Utilities	5,790	5,613	5,613	-	-	-	-	(279)	(0.0008)	304	0.0008	-	-
7	Travel	963	1,414	1,414	-	-	358	0.0010	-	-	-	-	-	-
8	Rent - Building	757	857	857	-	-	-	-	-	-	54	0.0001	-	-
9	Rent - Machine & Other	115	124	124	-	-	-	-	-	-	18	-	-	-
10	Debt Service	5,635	7,322	7,322	-	-	-	-	-	-	(1,673)	(0.0046)	-	-
11	Other Operating Expenses	10,249	11,361	11,361	15	-	618	0.0017	687	0.0019	559	0.0015	-	-
12	HW/SW Maintenance & Licenses	21,619	22,471	22,471	-	-	-	-	437	0.0012	-	-	-	-
13	Reliability Organization Assessment	13,977	15,000	15,000	-	-	-	-	-	-	-	-	-	-
14	Capital Expenditures	32,587	43,389	43,389	-	-	5,000	0.0137	-	-	-	-	(17,205)	(0.0473)
15	Total - ERCOT	\$ 198,156	\$ 223,108	\$ 223,108	\$ 1,294	\$ 0.0036	\$ 6,044	\$ 0.0166	\$ 4,176	\$ -0.0115	\$ 1,347	\$ 0.0037	\$ (17,205)	\$ (0.0473)

Schedule may not foot due to rounding.

- 2018 Exceptional Request #1:  
This \$1,294K request is primarily to fund the development of new tools and change operating practices to minimize risks associated with the changing resource mix.

- 2018 Exceptional Request #2:  
This \$6,044K is necessary to enhance effective training to ERCOT staff and Market Participants.

- 2018 Exceptional Request #3:  
This \$4,176K is required to maintain the technological sophistication of a modern electric grid, update software and hardware systems for changes in market rules and reliability requirements, and normal hardware replacement.

- 2018 Exceptional Request #4:  
This \$1,347K is needed for normal inflationary increases for labor and other operating expenses. These normal increases are offset by realized reductions such as interest expense.

- 2018 Exceptional Request #5:  
There is a \$17,205K decrease for capital expenditures, primarily due to the cyclical nature of Tech Hardware Refreshes which are required to replace obsolete, aging infrastructure.

2017 Budgeted System Administration Fee Rate	\$ 0.5550
Exception Requests (Included Above)	0.0119
Higher Energy Consumption (7,721 GWhs)	0.0118
Increase of Other Revenues (\$831K)	0.0023
Change in Working Capital (\$2,465K)	(0.0260)
2018 Requested System Administration Fee Rate	\$ 0.5550

**Electric Reliability Council of Texas, Inc. (ERCOT)**  
**Fiscal Year 2018-2019 Budget Request**  
**Workpaper 1: 2017 Board Of Directors**

Line	Role	Board Member	Board Member Type	Term
1	Director, Board Chair	Craven Crowell	Unaffiliated (Independent) Director	Term 1: 01/01/2012-12/31/2014 Term 2: 01/01/2015 - 12/31/2017 Term 3: Pending PUCT Approval - 01/01/2018-12/31/2020
2	Director, Vice Chair	Judy Walsh	Unaffiliated (Independent) Director	Term 1: 01/01/2012-12/31/2014 Term 2: 01/01/2015 - 12/31/2017 Term 3: Pending PUCT Approval - 01/01/2018-12/31/2020
3	Director	Peter Cramton	Unaffiliated (Independent) Director	Term 1: 08/17/2015 - 08/16/2018 Term 2: Eligible for two additional terms Term 3 (final):
4	Director	Karl Pfirrmann	Unaffiliated (Independent) Director	Term 1: 01/01/2012-12/31/2014 Term 2: 01/01/2015 - 12/31/2017 Term 3: Pending PUCT Approval - 01/01/2018-12/31/2020
5	Director	Vacant	Unaffiliated (Independent) Director	Previously held by Jorge Bermudez until resignation on October 4, 2016; Currently seeking a replacement for this position.
6	Director	Vacant	Public Utility Commission of Texas Chair ( <i>Ex Officio</i> , Non-Voting Director)	Previously held by Donna Nelson through May 15, 2017; Waiting for new Chair to be appointed.
7	Director	Bill Magness	ERCOT Chief Executive Officer ( <i>Ex Officio</i> , Voting Director)	
8	Director	Tonya Baer	The Public Counsel (Office of Public Utility Counsel) - Consumer Segment - Residential and Small Commercial ( <i>Ex Officio</i> , Voting Director)	
9	Director	Jack Durland	Consumer Segment - Industrial	
10	Director	Nick Fehrenbach	Consumer Segment - Large Commercial	
11	Director	Clifton Karnei	Cooperative Segment	
12	Director	Randy Jones	Independent Generator Segment	
13	Director	Keith Emery	Independent Power Marketer Segment	
14	Director	John Werner	Independent Retail Electric Provider (REP) Segment	
15	Director	Wade Smith	Investor-Owned Utility Segment	
16	Director	Carolyn Shellman	Municipal Segment	
17	Segment Alternate	Jennifer Richie	Consumer Segment - Commercial	
18	Segment Alternate	Sam Harper	Consumer Segment - Industrial	
19	Segment Alternate	Mike Kezar	Cooperative Segment	
20	Segment Alternate	Kevin Gresham	Independent Generator Segment	
21	Segment Alternate	Seth Cochran	Independent Power Marketer Segment	
22	Segment Alternate	Kenny Mercado	Investor-Owned Utility Segment	
23	Segment Alternate	Rick Bluntzer	Independent REP	
24	Segment Alternate	Vacant	Municipal Segment	Previously held by Phil Williams through July 11, 2017; Waiting for new Segment Alternate to be elected

Note:  
Unaffiliated Directors are selected by the Nominating Committee of the Board, elected by the ERCOT Corporate Members and approved by the PUCT for a term of three years, subject to a term limit of two three-year renewals (for a maximum of nine years of service). For renewals, each Unaffiliated Director must be re-elected and re-approved for each subsequent three-year term. Market Segment Directors and Segment Alternates, as applicable, are elected by their respective Market Segments for a term of one year (that is, for service of January 1 through December 31 each year). The Bylaws do not prescribe any term limits; however, some Market Segments have their own internal guidelines for limits on terms of service. *Ex Officio* Directors serve by virtue of their office and maintain their positions on the Board so long as they continue to hold their respective positions outside of the Board.

**Electric Reliability Council of Texas, Inc. (ERCOT)**  
**Fiscal Year 2018-2019 Budget Request**  
**Workpaper 2: Object of Expense Mapping - ABEST to ERCOT**

Line	ABEST Object	ABEST Object Description	ERCOT Spend Category	ERCOT Account Summary
1	1001	Salaries & Wages	Payroll - Salaries & Wages	Salaries
2	1001	Salaries & Wages	Overtime Pay	Salaries
3	1001	Salaries & Wages	Vacation Liability	Salaries
4	75% to 1001 <sup>(1)</sup> 25% to 1002 <sup>(1)</sup>	Salaries & Wages Other Personnel Costs	Contra Labor for Projects	Project Funded Labor
5	75% to 1001 <sup>(1)</sup> 25% to 1002 <sup>(1)</sup>	Salaries & Wages Other Personnel Costs	Management Challenge	N/A
6	1002	Other Personnel Costs	Bonus (Referral, Sign On)	Salaries
7	1002	Other Personnel Costs	Award	Salaries
8	1002	Other Personnel Costs	Severance Pay	Salaries
9	1002	Other Personnel Costs	Service Anniversary Awards	Salaries
10	1002	Other Personnel Costs	Gift Cards/Prizes	Salaries
11	1002	Other Personnel Costs	Health & Wellness Expense	Benefits & Taxes
12	1002	Other Personnel Costs	Health Insurance	Benefits & Taxes
13	1002	Other Personnel Costs	Dental Insurance	Benefits & Taxes
14	1002	Other Personnel Costs	Short-Term Disability	Benefits & Taxes
15	1002	Other Personnel Costs	Long-Term Care	Benefits & Taxes
16	1002	Other Personnel Costs	Life Premiums	Benefits & Taxes
17	1002	Other Personnel Costs	Health Savings Account - Employer Cost	Benefits & Taxes
18	1002	Other Personnel Costs	401K Match	Benefits & Taxes
19	1002	Other Personnel Costs	Roth IRA Match	Benefits & Taxes
20	1002	Other Personnel Costs	Pension Contributions	Benefits & Taxes
21	1002	Other Personnel Costs	Payroll Taxes - Social Security	Benefits & Taxes
22	1002	Other Personnel Costs	Payroll Taxes - Medicare	Benefits & Taxes
23	1002	Other Personnel Costs	Payroll Taxes - SUI	Benefits & Taxes
24	1002	Other Personnel Costs	Payroll Taxes - Federal	Benefits & Taxes
25	1002	Other Personnel Costs	PBO Service Cost	Benefits & Taxes
26	1002	Other Personnel Costs	PBO Interest Cost	Benefits & Taxes
27	1002	Other Personnel Costs	Reward/Recognition-NonMonetary	Other Expenses
28	2001	Professional Fees & Services	Professional Services	Outside Services
29	2001	Professional Fees & Services	Professional Services - Training	Outside Services
30	2001	Professional Fees & Services	Immigration Services	Outside Services
31	2001	Professional Fees & Services	External Staffing	Outside Services
32	2001	Professional Fees & Services	Legal Services	Outside Services
33	2001	Professional Fees & Services	Board Retainer	Outside Services
34	2001	Professional Fees & Services	Board Non-Taxable Expenses	Outside Services
35	2001	Professional Fees & Services	Audit Services	Outside Services
36	2001	Professional Fees & Services	Market Monitoring Services	Outside Services
37	2001	Professional Fees & Services	Professional Services - Research/Studies	Outside Services
38	2002	Fuels & Lubricants	Fuel Oil	Utility, Maintenance & Facility
39	2003	Consumable Supplies	Office Supplies	Materials, Supplies & Equipment
40	2003	Consumable Supplies	Janitorial Supplies	Materials, Supplies & Equipment
41	2004	Utilities	Electricity	Utility, Maintenance & Facility
42	2004	Utilities	Water/Gas/Sewer/Trash	Utility, Maintenance & Facility
43	2004	Utilities	Telephone - Local	Utility, Maintenance & Facility
44	2004	Utilities	Telephone - Long Distance	Utility, Maintenance & Facility
45	2004	Utilities	Internet Service	Utility, Maintenance & Facility
46	2004	Utilities	Conferencing	Utility, Maintenance & Facility
47	2004	Utilities	Wide Area Network (WAN) Reimbursable Costs	Utility, Maintenance & Facility
48	2004	Utilities	Data Center Connectivity	Utility, Maintenance & Facility
49	2004	Utilities	Cellular Phone	Employee Expenses
50	2004	Utilities	Remote System Access	Employee Expenses
51	2004	Utilities	Wireless PC Card	Employee Expenses
52	2005	Travel	Mileage Reimbursement	Employee Expenses
53	2005	Travel	Business Meals	Employee Expenses
54	2005	Travel	Personal Meals	Employee Expenses
55	2005	Travel	Car Rental	Employee Expenses
56	2005	Travel	Airfare	Employee Expenses
57	2005	Travel	Lodging	Employee Expenses
58	2005	Travel	Ground Transportation	Employee Expenses
59	2005	Travel	Gasoline	Employee Expenses
60	2005	Travel	Parking	Employee Expenses

Notes:  
(1) The contra credit accounts for project funded labor are allocated at 75% to the 1001-Salaries & Wages ABEST object and 25% to the 1002-Other Personnel Costs ABEST object.  
(2) These expenses do not clearly correlate to ABEST objects; therefore, ERCOT has assigned pseudo ABEST object numbers in the allocation model to assist with reporting of the expenses.

**Electric Reliability Council of Texas, Inc. (ERCOT)**  
**Fiscal Year 2018-2019 Budget Request**  
**Workpaper 2: Object of Expense Mapping - ABEST to ERCOT**

Line	ABEST Object	ABEST Object Description	ERCOT Spend Category	ERCOT Account Summary
61	2006	Rent - Building	Office Rent	Utility, Maintenance & Facility
62	2006	Rent - Building	Storage Rental	Utility, Maintenance & Facility
63	2007	Rent - Machine & Other	Equipment Rental	Materials, Supplies & Equipment
64	2007	Rent - Machine & Other	Miscellaneous Rental	Utility, Maintenance & Facility
65	2008	Debt Service	Debt Principal	Debt Service
66	2008	Debt Service	Fees & Interest Expense	Interest & Fees
67	2009	Other Operating Expenses	Bank Fees	Interest & Fees
68	2009	Other Operating Expenses	Relocation Benefit	Salaries
69	2009	Other Operating Expenses	Equipment Maintenance	Materials, Supplies & Equipment
70	2009	Other Operating Expenses	Vehicle Maintenance	Materials, Supplies & Equipment
71	2009	Other Operating Expenses	Frame Relay	Materials, Supplies & Equipment
72	2009	Other Operating Expenses	Equipment & Tools	Materials, Supplies & Equipment
73	2009	Other Operating Expenses	Property Tax	Utility, Maintenance & Facility
74	2009	Other Operating Expenses	Building Maintenance	Utility, Maintenance & Facility
75	2009	Other Operating Expenses	Building Systems Maintenance	Utility, Maintenance & Facility
76	2009	Other Operating Expenses	Grounds Maintenance	Utility, Maintenance & Facility
77	2009	Other Operating Expenses	Custodial Service	Utility, Maintenance & Facility
78	2009	Other Operating Expenses	Miscellaneous Facility Services	Utility, Maintenance & Facility
79	2009	Other Operating Expenses	Insurance Premiums	Insurance
80	2009	Other Operating Expenses	Professional Dues	Employee Expenses
81	2009	Other Operating Expenses	Registration Fees	Employee Expenses
82	2009	Other Operating Expenses	College Education Reimbursement	Employee Expenses
83	2009	Other Operating Expenses	Company Dues	Other Expenses
84	2009	Other Operating Expenses	Publications	Other Expenses
85	2009	Other Operating Expenses	Subscriptions - Training	Other Expenses
86	2009	Other Operating Expenses	Subscriptions - Data Services	Other Expenses
87	2009	Other Operating Expenses	Corporate Events	Other Expenses
88	2009	Other Operating Expenses	Market Meetings	Other Expenses
89	2009	Other Operating Expenses	Moving Expenses	Other Expenses
90	2009	Other Operating Expenses	Job Posting	Other Expenses
91	2009	Other Operating Expenses	Recruiting Expense	Other Expenses
92	2009	Other Operating Expenses	Employment Screening	Other Expenses
93	2009	Other Operating Expenses	Temp-to-Hire Fees	Other Expenses
94	2009	Other Operating Expenses	Postage & Shipping	Other Expenses
95	2009	Other Operating Expenses	Printing & Copying Services	Other Expenses
96	2009	Other Operating Expenses	Tax - Sales, Excise & Use	Other Expenses
97	2009	Other Operating Expenses	Black Start Training	Other Expenses
98	2009	Other Operating Expenses	Operator Training Seminar	Other Expenses
99	2009	Other Operating Expenses	Legal Claims & Settlements	Other Expenses
100	2009	Other Operating Expenses	Media	Other Expenses
101	2009	Other Operating Expenses	Late Fee Payment	Other Expenses
102	2009	Other Operating Expenses	Write Off Adjustments	Other Expenses
103	2009	Other Operating Expenses	Miscellaneous Expense	Other Expenses
104	2010	HW/SW Maintenance & Licenses	Information Technology Hardware	HW/SW License & Maintenance
105	2010	HW/SW Maintenance & Licenses	Software License Perpetual	HW/SW License & Maintenance
106	2010	HW/SW Maintenance & Licenses	Software License Renewable	HW/SW License & Maintenance
107	2010	HW/SW Maintenance & Licenses	Software Maintenance	HW/SW License & Maintenance
108	2010	HW/SW Maintenance & Licenses	Hardware Support & Maintenance	HW/SW License & Maintenance
109	2010	HW/SW Maintenance & Licenses	Hardware Services	HW/SW License & Maintenance
110	2010	HW/SW Maintenance & Licenses	Software Services	HW/SW License & Maintenance
111	2010	HW/SW Maintenance & Licenses	Software as a Service (SAAS)	HW/SW License & Maintenance
112	2011	Reliability Organization Assessment	ERO Assessment	Other Expenses
113	5000	Capital Expenditures	Capital Expenditures	Capital Expenditures
114	5000	Capital Expenditures	Minor Capital Expenditures	Minor Capital
115	5000	Capital Expenditures	Common Infrastructure Expenditures	Common Infrastructure

Notes:

(1) The contra credit accounts for project funded labor are allocated at 75% to the 1001-Salaries & Wages ABEST object and 25% to the 1002-Other Personnel Costs ABEST object.

(2) These expenses do not clearly correlate to ABEST objects; therefore, ERCOT has assigned pseudo ABEST object numbers in the allocation model to assist with reporting of the expenses.

Attachment E

ERCOT 2014 – 2018 Strategic Plan



# Strategic Plan

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2014-2018 • November 2013



Taylor  
2705 West Lake Drive  
Taylor, Texas 76574  
T: 512.248.3000  
F: 512.248.3095

Austin  
7620 Metro Center Drive  
Austin, Texas 78744  
T: 512.225.7000  
F: 512.225.7020

During the latter half of 2013, the ERCOT Board of Directors, with the support of ERCOT staff, have crafted a strategy to help guide the organization through the challenges and opportunities ahead.

Within this document is a framework for ERCOT's next steps in maintaining operational reliability, flexible market design, data transparency and access, and committee strategic alignment. With a consistent focus on these key priorities — or strategic pillars — ERCOT staff and stakeholders will be better equipped to incorporate evolving technologies, innovative thinking and a shared vision successfully into day-to-day operations and planning efforts.

ERCOT's mission to the millions of consumers who rely on a reliable grid and world-class competitive electric market requires clear direction and a shared vision. That vision starts with the board and carries through to stakeholder committees, the CEO and executives, and ultimately to hundreds of front-line employees and Market Participants who will help implement this plan.

As technologies evolve, ERCOT must be nimble and creative while remaining focused on its core priorities. This strategic plan is a large step in that direction, and I thank everyone who has participated in this process.

Our vision is not only to keep the lights on in Texas, but also to ensure that ERCOT is making the most of new resources and ideas to prepare for the grid and electric market of the future.

Sincerely,

**Craven Crowell,**  
Chairman, Board of Directors



## A note from the Chair



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<i>Data Transparency &amp; Access</i>	
<i>Committee Strategic Alignment</i>	



# Introduction and Vision

**ERCOT's Vision: Lead with independent insight on the future of electricity reliability, markets and technology in Texas in order to facilitate grid and market change for the benefit of all stakeholders.**

Texas is a unique energy marketplace and electricity grid that requires unique solutions to meet the challenges faced from regulatory, stakeholder and technical perspectives.

In developing this strategic plan, ERCOT considered three key requirements:

- First, the plan must fully assimilate the best knowledge and experience of those that lead and advise ERCOT today with best practices that have been used outside Texas. This assimilation of Texas concepts and needs with externally tested concepts will lead to the uniquely Texan approach to key challenges faced in the coming five years.
- Second, the plan must be anchored in achievable goals that will garner stakeholder and regulatory acceptance.
- Third, the plan must recognize that, while the future is uncertain, there are trends and forecasts that must be examined and leveraged to guide the process.

Further, future conditions must be viewed in combination with deep industry knowledge of the technologies that may be brought to bear in Texas in response to conditions as they emerge. ERCOT faces unique issues over the coming years. From addressing resource adequacy to fully developing and integrating demand response potential, the next chapter for ERCOT represents a significant step forward in the development of the market and fulfillment of its obligations as the Independent System Operator.

Within this framework, ERCOT has enhanced its process for strategic planning to include active facilitation of input from the Board of Directors and the stakeholder community in the early stages of the process. This enhanced approach recognizes that ERCOT and the strategy set by the Board cover not just the goals and activities of the ERCOT staff, but also the activities of the stakeholder committees that are so important to the entity's effectiveness.

In the course of this process, a number of overarching themes emerged to guide the development of this next strategic plan.

- The first theme is that ERCOT has and must remain focused on its core mission of transmission network reliability in operations and planning and the operation of open access and efficient electricity markets. While for some this has come to be an assumed state of affairs, it is clear that this remains THE key mission of the organization that should be recognized in the forward-looking strategy of the organization.
- The next theme that emerged is the value of ERCOT serving as a conduit for actionable information today and even more so into the future. As the world moves toward digitization of the electricity grid and new capabilities and services emerge, ERCOT's role in facilitating efficient markets and grid reliability will rely far more on understanding data and information with respect to emerging trends' potential impacts.
- Finally, as is the case with the staff of ERCOT, the need for an efficient and strategically aligned stakeholder committee community and process represents a lynchpin for ERCOT's ability to effectively serve its role as an ISO. As a key contributor to the development of ERCOT, the stakeholder committees represent a core organizational resource that must work in lockstep with the ERCOT staff to achieve the Board's vision for ERCOT in this time of limited resources and profound industry changes.

All of these themes represent a recognition that changes will come more quickly in the future and the ability to nimbly adapt and respond to that change represents the necessary attributes ERCOT must embed in its strategic approach to all its duties.

*These themes led to the development of four strategic “pillars” that represent the central strategic direction called for in this plan.*

ERCOT's strategic plan establishes a framework to create and maintain value for its employees, members, stakeholders and the Texas electric industry as a whole.

In this context, the process has led to the development of a plan that rests on four main strategic “pillars” representing the major areas of focus guiding the organization into the future. These pillars are Operational Reliability, Flexible Market Design, Data Transparency and Access, and Committee Strategic Alignment. Each pillar gives direction for cross-organizational focus that shapes how each part of the enterprise should approach its own core responsibilities and how those responsibilities tie to the broader goals. This strategic plan describes key organizational initiatives developed to pursue the overall strategic themes. Through a holistic approach to pursuing the organizational strategy, ERCOT will be better positioned to meet the key imperatives in the future.

This approach is flexible enough to adapt to the shifting nature of the public environment where ERCOT must operate, yet sets a path with specific actions ERCOT will pursue over the next few years. These actions will not only prepare ERCOT to handle the extreme scenarios that may occur in the future, but will keep ERCOT firmly focused on reliably and efficiently providing for the electricity needs of most of Texas.

*In this spirit, ERCOT commits to the following key strategies over the planning period:*

## ERCOT Strategic Pillars

### Operational Reliability

Anticipate and communicate potential reliability issues through improved enterprisewide planning processes, probability scenario analyses and grid impact evaluations.

### Flexible Market Design

Work to anticipate changes in market dynamics and systems and respond effectively to changes in market rules and processes that are directed toward maintaining a highly reliable grid and open access to ERCOT markets.

### Data Transparency and Access

Continue to evolve ERCOT's role as a data and information gateway for electricity markets in Texas, recognizing its unique role and the value created for consumers and stakeholders of relevant, quality and timely market and technical intelligence.

### Committee Strategic Alignment

Further evolve the stakeholder committee process to improve strategic alignment of processes and outcomes, including the use of strategic alignment and efficiency goals and measures.







# ERCOT's Mission

Serve the public by ensuring a reliable grid, efficient electricity markets, open access and retail choice.

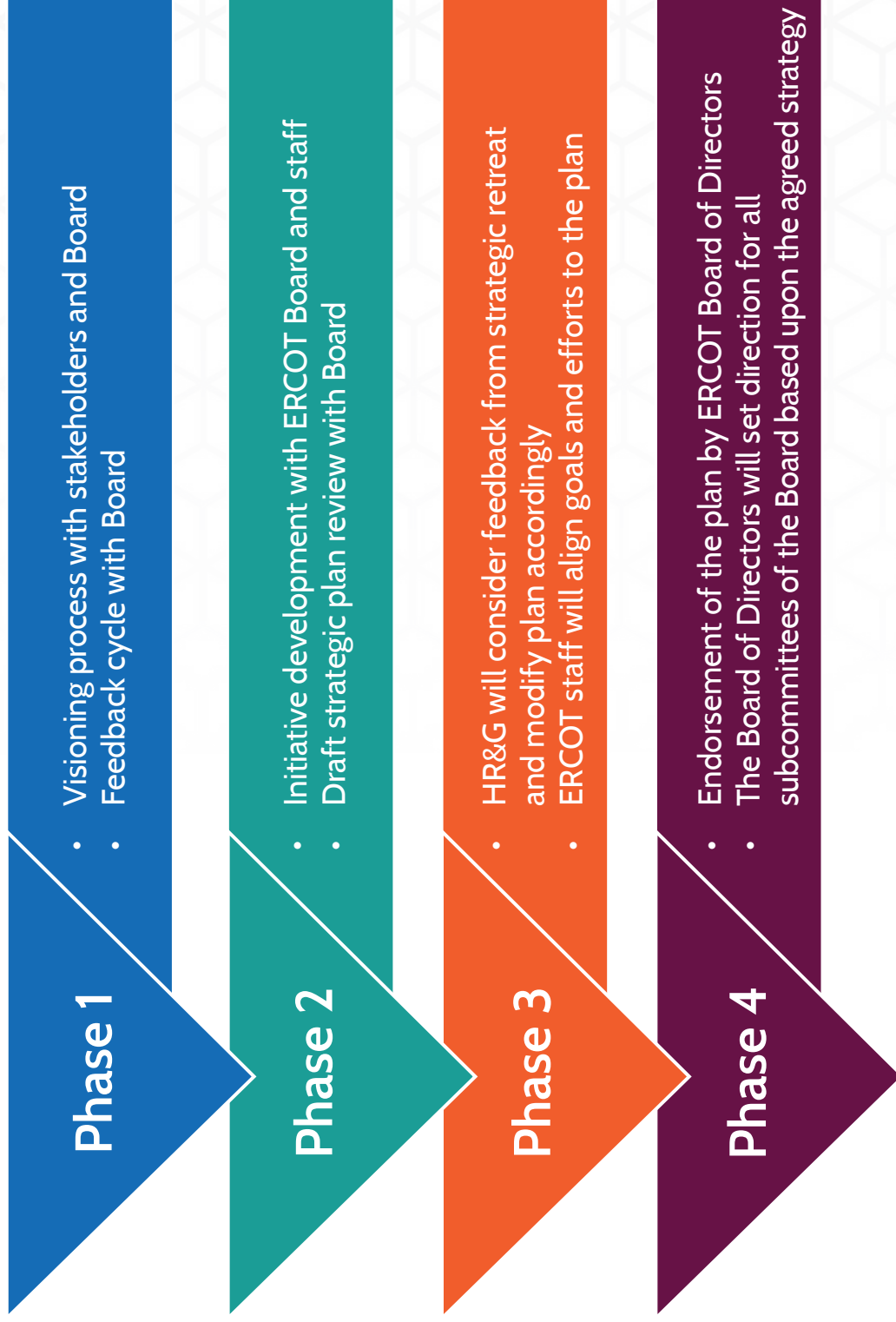
ERCOT manages the flow of electric power to approximately 23 million Texas customers — representing 85 percent of the state's electric load and 75 percent of the Texas land area. As the Independent System Operator for the region, ERCOT schedules power on an electric grid that connects 40,530 miles of transmission line and more than 550 generation units. ERCOT also manages financial settlement for the competitive wholesale bulk-power market and administers customer switching for 6.7 million premises in competitive choice areas.

*As the Independent System Operator for the region, ERCOT will continue to succeed in its mission to:*

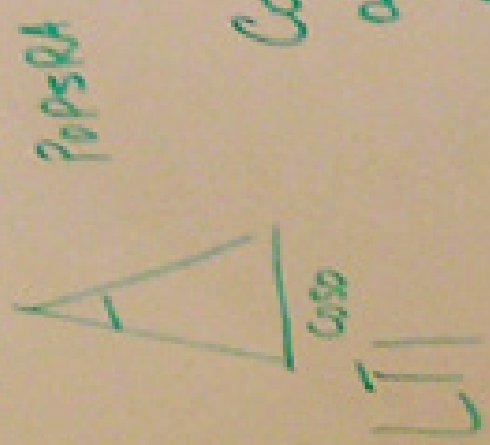
- Manage the grid in a manner that maintains a high level of reliability.
- Manage the wholesale and retail electric markets effectively.
- Meet the requirements for compliance with risk-based reliability standards, cyber security requirements, and Protocol and Operating Guides.
- Develop and maintain productive external relationships through proactive, effective and comprehensive communications.
- Attract, develop and retain a highly skilled work force.

# Strategic Planning Process

The enhanced strategic planning process utilized for this plan is built upon prior efforts. Among the more substantial changes are the uses of external consulting facilitation, earlier inclusion of Board and stakeholder input as well as tighter alignment with implementation business plans. As shown in the graphic, the major steps provide additional mechanisms for exploring the potential influence and impacts that must be addressed in the plan.



STRUCTURE FRAMEWORK



Coupling of the ERM to ORM

log time

2) (S) (R) (P) (S) (R) (A)

Full ERM

next

41

# Strategic Drivers

*The strategic planning process began with development of key trends and questions for use in a stakeholder and Board facilitation process. The purpose of this process was to ensure the diversity of stakeholder views was utilized in the development of the strategic plan.*

*Those key trends facing ERCOT:*

## **Resource adequacy**

ERCOT plays a key role by providing assessments of future peak demand and commensurate peak available resource volume needed to maintain long-term reliability of the electric grid. Further, ERCOT markets are viewed as a key source of price signals for the value of energy and ancillary services during peak periods. Given its mandate and responsibility, ERCOT must work to anticipate and respond rapidly to changes in market dynamics, rules and processes that are directed toward ensuring resource adequacy with commensurate increased capacity and/or flexible demand resources.

## **Trends / Changes in fuel prices and installed resource costs**

Both the cost to operate and reliability of the ERCOT managed grid will be greatly affected by the cost of fuels such as natural gas (used by most power generators in the ERCOT region). The ability to understand the potential impact of price shifts and major disruptions on both the future cost and reliability can greatly enhance ERCOT's ability to raise awareness and prepare to respond when called upon to address such impacts.

## **Single fuel dependency**

With a high dependency on natural gas, the risk of curtailments or reductions in pipeline capacity present potential impacts to the continued reliability of the grid. In addition, technological advances in alternate resources and the speed of their adoption and integration will continue to impact ERCOT's fuel mix diversity.

## **Gas / Electric market coordination issues**

Increased coordination between natural gas and power industry short- and medium-term planning, with regard to data and information sharing, can improve ERCOT's position to better anticipate potential gas curtailments during extreme load conditions. It may also allow for more economically efficient choices by Market Participants about the use of resources that are exposed to prices across both natural gas and electricity markets.

## **Increased need for flexible resources**

The electric industry is experiencing a shift toward a greater reliance on intermittent supply resources. In addition, consumers are moving toward less predictable load patterns resulting from their own adoption of intermittent technology. To continue to maintain a high level of reliability, ERCOT recognizes the need to analyze the potential positive impacts of further integration of flexible resources into the ERCOT region to provide system operators the necessary tools to manage the balance between supply and demand in a cost-effective and reliable manner.



## **Regulatory impacts**

Proposed regulatory standards and their implementation timelines can impact resource adequacy and reserve margins. Potential changes to market rules, changes to NERC event analysis requirements, new NERC requirements, and support of PUC, Protocol and Operating Guide enforcement all require close coordination between ERCOT and state and national regulators.

### **“Downstream” distribution technology change**

ERCOT’s focus on Smart Grid initiatives, such as advanced metering and increased demand response technology, will benefit Texas consumers by giving them increased control over their electric use and boost overall reliability. Understanding and integrating emerging broad categories of distributed energy resource technologies also represent a potentially significant shift in how the grid must be managed and planned.

### **“Upstream” transmission and generation technology change**

Technological change in wholesale supply and transmission systems represents potential paradigm shifts regarding how networks are managed. These shifts may include cost-effective system storage, greater use of synchrophasor measurement of real-time grid status and even advanced topology control (line switching). ERCOT will need the ability to manage its grid while taking advantage of such technological advances where there are enhancements to reliability and it is cost effective.

### **Impact of water on resource adequacy**

Drought is not an uncommon climate characteristic for the state of Texas. The drought that Texas is currently facing is affecting power generators in the ERCOT region, as decreasing water levels continue to put generation availability at risk.

### **Continuing growth of renewables penetration**

With the growth of renewables in the ERCOT region comes the challenge of maintaining system frequency within acceptable limits. As a Balancing Authority (BA), ERCOT has a primary role to continuously balance demand and supply to maintain scheduled frequency. Currently, the ERCOT region is not synchronously connected with any of its neighboring interconnections, and any required frequency response has to come from available resources within the region. Greater penetration of intermittent resources can potentially displace conventional generation from an economic perspective, and ERCOT may face more challenges in real-time operations with the increased integration of intermittent renewable resources. This issue is intrinsically linked with potential advances in the use or need for flexible resources.

### **New and uncertain resource technologies**

A variety of new resource types are entering the marketplace. To ensure appropriate integration of these new resources, ERCOT, in cooperation with the PUC and Market Participants, may design and execute clearly defined pilot programs to explore the capabilities and behaviors of various emerging technologies. Utilizing the data collected through pilot programs, stakeholders in the ERCOT region will be better positioned to develop market rules to integrate new technology.

### **Cyber security**

The ongoing evaluation of cyber threats requires ERCOT to continually reassess and upgrade its cyber security defenses and risk-management capabilities. Potential national cyber security legislation and the determination of which federal agency ultimately has jurisdiction regarding the development and implementation of new security standards will impact ERCOT.





# Strategy and Supporting Initiatives

## Operational Reliability

Anticipate and communicate potential reliability issues through improved enterprisewide planning processes, probability scenario analyses and grid impact evaluations.

It has become increasingly clear that the rate of change and the volatility and diversity of market factors driving ERCOT operations has increased substantially and is expected to continue to grow in unexpected ways. Recognizing this trend and the potential implications that new resource technologies, business models and cost structures could have on Market Participants and ERCOT operations, combined with the interactive effects of multiple drivers simultaneously occurring makes advance planning and anticipation more critical than ever to ensure ERCOT provides the market stability and surety sought.

To this end, ERCOT will pursue the following key strategic initiatives:

1. Evolve ERCOT culture to include active examination of potential future change influences and impacts, including more active scenario planning throughout the enterprise.
2. Maintain reliability by examining potential impacts of changing technologies.
3. Continually assess the planning processes within ERCOT to optimize efficiency and ensure a broad range of potential data sources are considered for inclusion in analysis.
4. Invest in resources to enable ERCOT to provide bench strength as well as skills in emerging energy technologies, systems and market constructs.
5. Continuously and dynamically adjust ERCOT's activities to anticipate trends and provide "unbiased" and "independent" advice to stakeholders regarding major trends.
6. Develop strategic tracking from a variety of different sources to anticipate trends to increase reliability awareness.
7. Promote the process and develop internal expertise to identify, analyze and discern the probability of occurrence of scenarios that could impact system reliability or market dynamics.



## Flexible Market Design

Work to anticipate changes in market dynamics and systems and respond effectively to changes in market rules and processes that are directed toward maintaining a highly reliable grid and open access to ERCOT markets.

ERCOT has demonstrated tremendous strength in establishing its current reliable market operations, effective commercial operations, and transmission network and planning functions. However, it is clear that continued external developments and the desire to develop a highly flexible and responsive infrastructure at ERCOT require a reassessment of current capabilities, processes and underlying capabilities in order to remain effective in the face of this changing environment. Additionally, ERCOT continues to be committed to a highly cost-conscious business environment capable of consistently delivering required reliability.

Therefore, ERCOT will pursue the following key initiatives:

1. As a means to ensure flexibility in approach to key structural change issues, continue to forge stronger coordination among markets, operations and planning groups.
2. Promote culture that fosters innovation, flexibility and collaboration with stakeholders and across business divisions while enhancing existing change management processes to more fully integrate with market operations and planning.
3. Explore the capabilities and behaviors of various emerging technologies to inform policymakers and stakeholders and ensure appropriate integration and utilization of resources available to the market.
4. Enhance the IT Roadmap to anticipate change, map current and future projects, and create more flexible, efficient and effective system changes.
5. Recognize need to remain cost effective in time of change while still seeking to create a more flexible, efficient and effective system environment.

# Data Transparency and Access

Continue to evolve ERCOT's role as a data and information gateway for electricity markets in Texas, recognizing its unique role and the value created for consumers and stakeholders of relevant, quality and timely market and technical intelligence.

As a highly trusted market operator, ERCOT has a unique role in providing market information in a timely and readily accessible manner. Additionally, ERCOT has an important role in providing appropriate access to Market Participants across all stakeholder segments, with a particular focus on providing information in relevant and actionable formats.

To this end, ERCOT will pursue the following initiatives:

1. Proactively serve as a catalyst and venue for Market Participants to gain enhanced access to available information.
2. Evaluate overall organizational, business and technical capabilities to position ERCOT to be even more flexible and responsive to market conditions.
3. Proactively assess and understand the evolving Market Participant needs, operations and capabilities to exchange and act on ERCOT-provided data.





# Committee Strategic Alignment

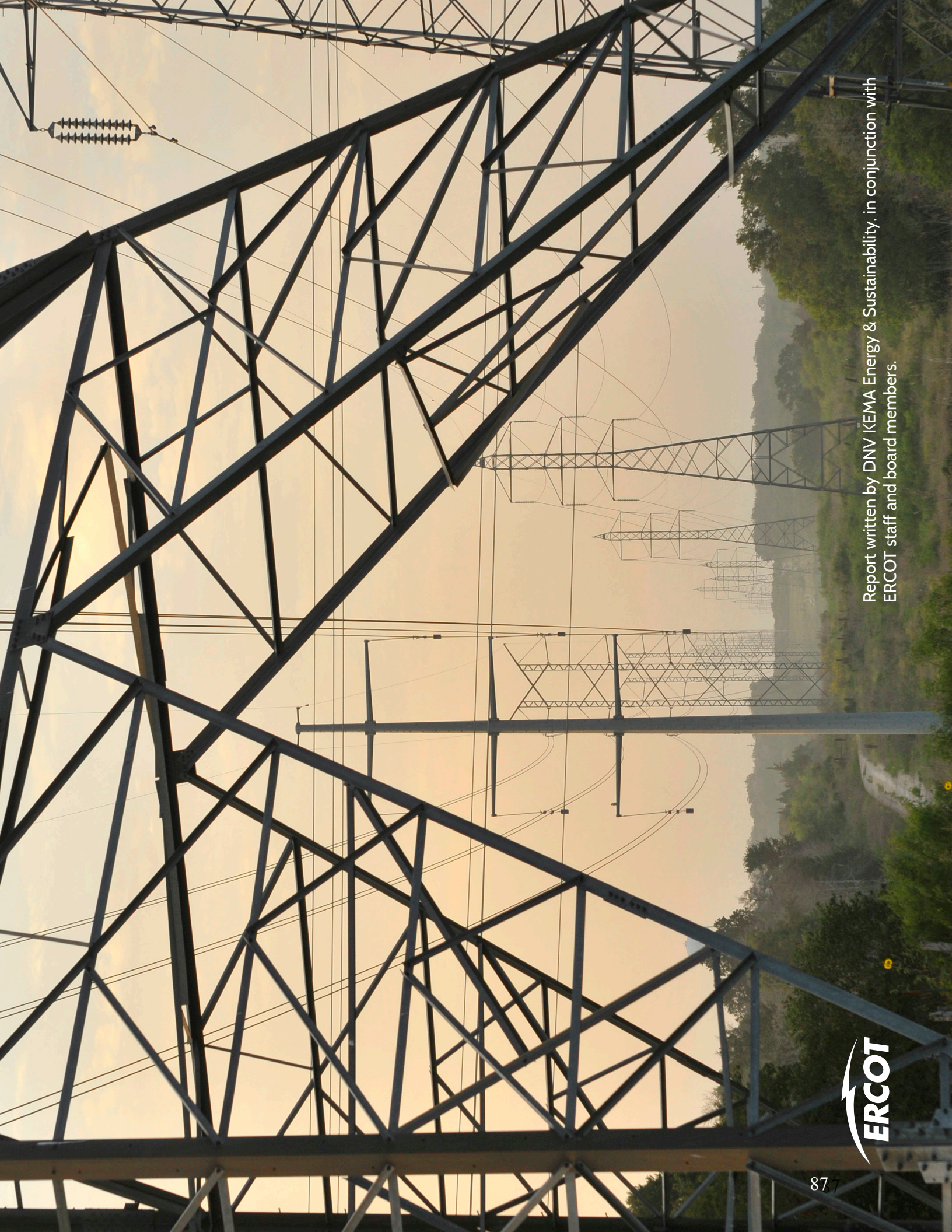
Further evolve the stakeholder committee process to improve strategic alignment of processes and outcomes including the use of strategic alignment and efficiency goals and measures.

ERCOT as an enterprise encompasses not just bricks, mortar, computer systems, supporting infrastructure and ERCOT staff, but also a robust and crucial stakeholder committee process that functions as an integral part of the enterprise operations. With both limited resources and substantial industry change in the offing, ensuring organizational and strategic alignment of this resource represent a key requirement for ERCOT's ability to serve its role as the Independent System Operator. Solidifying and effectively leveraging the stakeholder committees represents a key strategic opportunity for the organization to improve its effectiveness. As changes will come more quickly in the future, the ability to nimbly adapt and respond to that change in a cost-effective manner represents the necessary attributes ERCOT must embed in its strategic approach to all its duties. Full strategic alignment of the stakeholder committee processes and outcomes is crucial to successfully navigating an uncertain future.

To this end, ERCOT will pursue the following initiatives:

1. In light of limited resources available to manage market evolution, ensure strategic alignment of processes within and outcomes from the committees through clearly defined goals and metrics for committees ensuring linkages to the strategic plan.
2. Establish clear linkages between the ERCOT staff and the committee process, including formalizing roles for the ERCOT staff in the committee process.
3. Establish Board-level mechanisms for reviewing process effectiveness at achieving strategic goals throughout the enterprise, including in the stakeholder committees.
  - a. Enhanced cost-benefit analysis process
  - b. Clear budgeting alignment and linkages to strategic plan
  - c. Effective categorization of rule change requests to identify strategic importance
    - i. Addressing current operational issues
    - ii. Meeting strategic goals (tied to the plan or as directed by the Board of Directors)
    - iii. Market efficiencies
    - iv. Administrative
    - v. Regulatory requirements





Report written by DNV KEMA Energy & Sustainability, in conjunction with ERCOT staff and board members.





Attachment F

ERCOT Report on Performance Measures





# 2016 Key Performance Indicator (KPI) Review

# 2016 Key Performance Indicator (KPI) Summary

We serve the public by ensuring a reliable grid, efficient electricity markets, open access and retail choice.

	YTD - 2016			Q4 - 2016			Q3 - 2016			Q2 - 2016			Q1 - 2016			
	Stretch	Target	Below	Stretch	Target	Below	Stretch	Target	Below	Stretch	Target	Below	Stretch	Target	Below	
<b>RELIABLE GRID</b>																
Grid Security Management / Real-Time System Control / Scheduling & Dispatch																
Outage Coordination / Planning																
Forecasting	50%		50%							50%		50%				
Compliance Monitoring & Reporting	67%		33%	67%	33%	33%				67%		67%				
IT Application Services	66%		17%	50%	33%	17%	50%	17%	33%	67%		67%				
<b>EFFICIENT ELECTRICITY MARKETS</b>																
Bidding, Scheduling and Pricing																
Settlement & Billing	50%		50%	50%		50%	50%		50%	50%		50%				
Market Credit																
Market Information																
IT Application Services																
<b>OPEN ACCESS &amp; RETAIL CHOICE</b>																
Customer Switching / Registry																
Market Information																
IT Application Services							50%		50%							
<b>OTHER SUPPORT &amp; MANAGEMENT FUNCTIONS</b>																
Finance																
Security																

Total number of KPIs tracked:	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
% meeting Stretch:	67%	67%	67%	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%
% meeting Target:	23%	23%	23%	23%	23%	23%	30%	30%	37%	37%	37%	37%	37%	27%	27%	27%
% below Target:	10%	10%	10%	10%	10%	10%	7%	7%	0%	0%	0%	0%	0%	3%	3%	3%

KPI	Executive	Capability	Compliance Monitoring & Reporting	KPI Description	Target	Stretch	2016 YTD				2016 Q1			
							2016 YTD	2016 Q4	2016 Q3	2016 Q2	2016 Q1			
RC 7	Day, Betty	Compliance Monitoring & Reporting	Achieve compliance with ERCOT Protocols	No significant violations of ERCOT Protocols	N/A	N/A	Filed three Protocol violations with PUCT.	Filed one Protocol violation with the PUCT.	No significant violations of ERCOT Protocols.	No significant violations of ERCOT Protocols.	Filed two Protocol violations with PUCT.			
RC 11	Dreyer, Jerry	IT Application Services	Security Constrained Economic Dispatch (SCED) Availability	Security Constrained Economic Dispatch (SCED) Availability	99.9%	99.95%	99.98%	99.94%	99.89%	99.85%	100%	100%	100%	
RC 12	Dreyer, Jerry	IT Application Services	Dispatch (SCED): number of unplanned outages greater than 30 consecutive minutes (per quarter)	Dispatch (SCED): number of unplanned outages greater than 30 consecutive minutes (per quarter)	Zero	N/A	3	1	2	Zero	Zero	Zero	Zero	
EM 4	Ogelman, Kenan	Settlement & Billing	Perform accurate settlements as measured by the percent of Operating Day and operating month settlement that does not require a correction as a result of an error in the settlement and billing systems or processes.	Perform accurate settlements as measured by the percent of Operating Day and operating month settlement that does not require a correction as a result of an error in the settlement and billing systems or processes.	98%	99.9%	96.02%	97.95%	96.44%	96.19%	98.19%	98.19%	100%	

# Appendix

# Q4-2016 KPI Detail – Reliable Grid

KPI ID	KPI Description	2016 YTD				Q1	
		2016 Target Performance	2016 Stretch Performance		Q2		
	Grid Security Management / Real-Time System Control / Scheduling & Dispatch	Q3	Q4	Q1	Q2	Q3	
RG 1	Control Performance Standard 1 (CPS1) frequency control performance (rolling 12 month CPS1 score).	> 140	> 150	CPS1 Score of 176.62% (end of December 2016)	CPS1 Score of 176.75% (end of September 2016)	CPS1 Score of 176.09% (end of June 2016)	CPS1 Score of 175.53% (end of March 2016)
RG 2	Interconnection Reliability Operating Limit (IROL) exceedance limitations.	None longer than 20 minutes	None longer than 10 minutes	No exceedances	No exceedances	No exceedances	No exceedances
Outage Coordination / Planning							
RG 3	Outage Coordination performance: requests approved or denied within timeline and with mitigation plans developed if required.	97%	99%	99.5%	99.4%	99.4%	99.6%
Forecasting							
RG 4	Operations Load Forecast performance - Mean Average Percent Error (MAPE): monthly average day ahead load forecasts used for DRUC/MAPE.	All less than 4.0%	All less than 3.5%	Highest MAPE was 3.86% (May)	Highest MAPE was 2.22% (August)	Highest MAPE was 3.86% (May)	Highest MAPE was 3.22% (January)
RG 5	Wind forecast performance - MAPE based on installed wind capacity: monthly average day ahead wind forecasts used for DRUC/MAPE.	All less than 15%	All less than 10%	Less than or equal to 6.90%	October-4.01 %, November-5.27 % and December- 5.32 %	July-5.81 %, August-5.80 % and September- 5.10 %	Jan-6.03%, Feb-5.67% and Mar-6.90%
Compliance Monitoring & Reporting							
RG 6	Achieve compliance with NERC/FERC Standards	No significant violations found in a NERC Compliance Audit	N/A	No significant violations found in a NERC Compliance Audit.	No significant violations found in a NERC Compliance Audit.	No significant violations found in a NERC Compliance Audit.	No significant violations found in a NERC Compliance Audit.
RG 7	Achieve compliance with ERCOT Protocols	No significant violations of ERCOT Protocols	N/A	Filed three Protocol violations with PUCT	No significant violations of ERCOT Protocols.	No significant violations of ERCOT Protocols.	Filed two Protocol violations with PUCT.
RG 8	Achieve compliance with SSAE16 controls	No exceptions found in an SSAE16 audit	N/A	No exceptions found in an SSAE16 audit	No exceptions found in an SSAE16 audit	No exceptions found in an SSAE16 audit	No exceptions found in an SSAE16 audit
IT Application Services							
RG 9	Energy Management System Tier 1 Aggregate Availability	All Tier 1 systems meet or exceed defined SIAs (99.90%)	N/A	99.99%	100%	100%	100%
RG 10	Energy Management System Tier 2 Aggregate Availability	Achieve 99% availability for 10 of 11 Tier 2 systems	Achieve 99% availability for all Tier 2 systems	99.99%	100%	99.97%	100%
RG 11	Security Constrained Economic Dispatch (SCED) Availability	99.9%	99.95%	99.96%	99.94%	99.89%	100%
RG 12	Security Constrained Economic Dispatch (SCED): number of unplanned outages greater than 30 consecutive minutes (per quarter)	Zero	N/A	3	1	2	Zero
RG 13	Outage Scheduler Availability	99%	99.5%	100%	100%	100%	100%
RG 14	Network Model Management System (NMMS) Availability.	99%	99.5%	100%	100%	100%	100%

# Q4-2016 KPI Detail – Efficient Electricity Markets

KPI ID	KPI Description	2016 Target Performance				2016 YTD				Q4	Q3	Q2	Q1
Bidding, Scheduling and Pricing													
EM 1	DAM quality of solution as measured with price corrections: percent of hourly prices requiring DAM price correction.	1-3 % of time	< 1 % of time	0.001%	0.00%	0.00%	0.004%	0.00%	0.00%	0.00%	0.004%	0.00%	0.00%
EM 2	SCED solution is solved and posted: percent of 15-minute Settlement Interval prices where price corrections are performed.	0.5% -- 1%	< 0.5%	0.049%	0.022%	0.147%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.03%
Settlement & Billing													
EM 3	Achieve timely settlements, per Protocol defined timelines.	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
EM 4	Perform accurate settlements as measured by the percent of Operating Day and operating month settlement that does not require a correction as a result of an error in the settlement and billing systems or	98%	99.9%	96.62%	97.95%	90.44%	98.19%	90.44%	98.19%	98.19%	98.19%	100%	100%
Market Credit													
EM 5	Credit reports are correct and posted in a timely manner.	98%	100%	100.00%	100.00%	100.00%	99.95%	100.00%	100.00%	100.00%	99.95%	99.99%	99.99%
Market Information													
EM 6	Wholesale extracts available per Protocol timelines	98%	99%	99.93%	99.94%	99.90%	99.89%	99.94%	99.90%	99.90%	99.89%	99.97%	99.97%
IT Application Services													
EM 7	Congestion Revenue Rights (CRR) Availability	99%	99.5%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
EM 8	Market Management System Aggregate Availability	99%	99.5%	99.96%	99.94%	99.89%	100%	99.94%	99.89%	99.89%	100%	100%	100%

# Q4-2016 KPI Detail – Open Access & Retail Choice

KPI ID	KPI Description	2016 Target Performance				2016 YTD				Q1
Customer Switching / Registry										Q2
OARC 1	Conduct retail transaction processing per Protocol timelines	98%	99%	99.97%	99.98%	99.95%	99.99%	99.96%	99.99%	99.96%
OARC 2	End use customer switch notifications processed per PUCT rules	99%	100%	100%	100%	100%	100%	100%	100%	100%
Market Information										
OARC 3	Retail extracts available per Protocol timelines	98%	99%	99.89%	100%	100%	99.57%	100%	99.57%	100%
IT Application Services										
OARC 4	Retail Processing Availability - Bus. Hours	99.5%	99.7%	99.88%	100%	99.51%	100%	100%	100%	100%
OARC 5	Market Information System (MIS) Availability	99%	99.5%	99.90%	99.88%	99.91%	99.88%	99.91%	99.88%	99.91%

# Q4-2016 KPI Detail – Other Support & Management Functions

KPI ID		KPI Description		2016 Target Performance					2016 YTD					2016 Stretch Performance					Q1	Q2	Q3	Q4
Finance		OSM 1		Manage spending to be equal to or less than the board-approved expenditure budget for 2016.	Between 0 -- 5% favorable variance	N/A	10.1% Favorable	2.8% Favorable	10.4% Favorable	8.5% Favorable	18.9% Favorable											
Security		OSM 2		Maintain ERCOT ISO's security posture against cyber security threats as defined in the Security Incident Response Plan	Zero externally reportable cyber security incidents	N/A	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.	Zero reportable cyber security incidents.		
		OSM 3		Maintain ERCOT ISO's security posture against physical security threats as defined in the Security Incident Response Plan	Zero externally reportable physical security incidents	N/A	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.	Zero reportable physical security incidents.		