



# Resolution – Approval to Adjust Transmission Cost of Service (TCOS) Rate

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# Transmission Costs and Member Rate

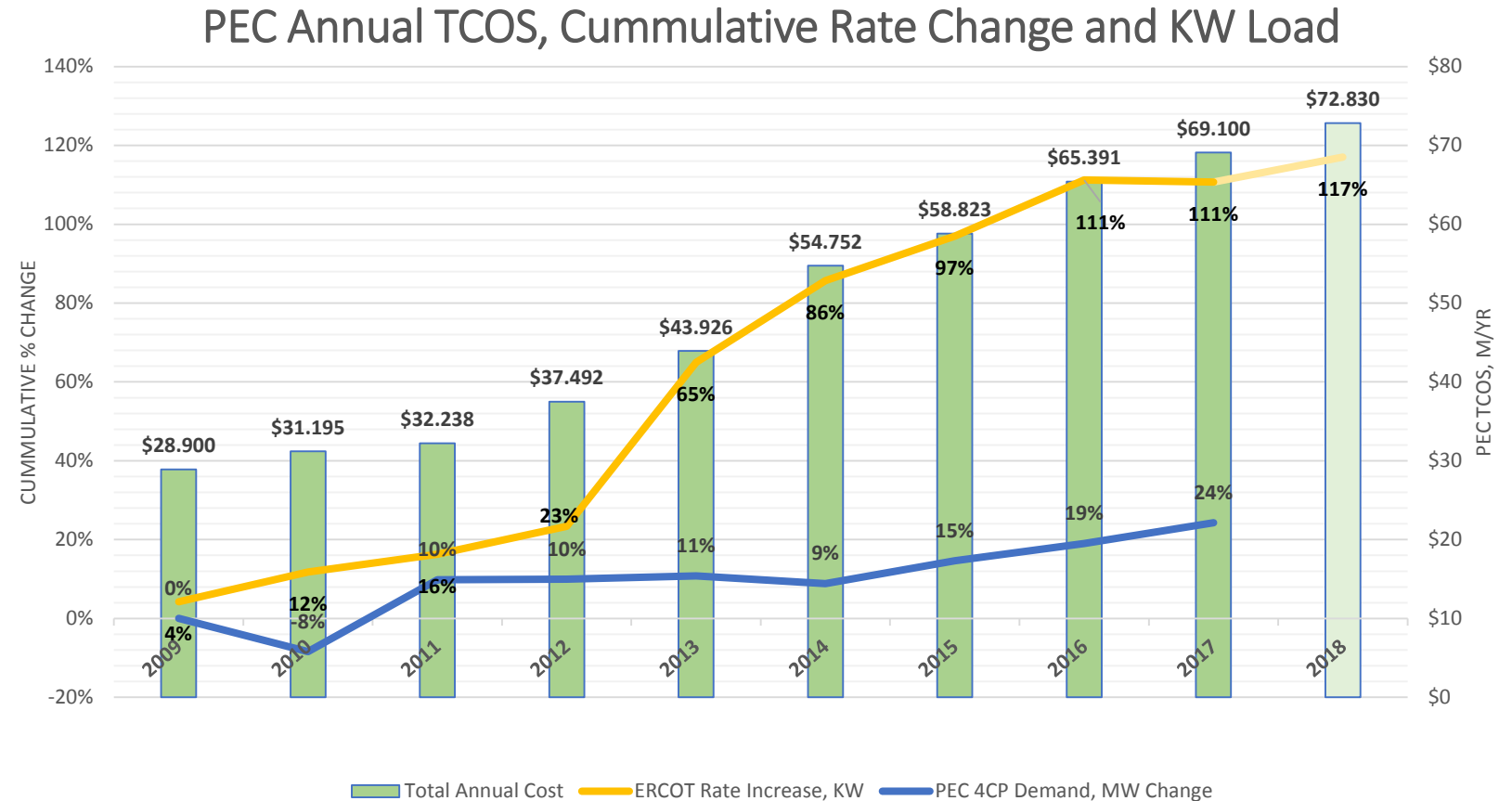
- Since January 2009, the statewide Transmission Cost of Service (TCOS) rate has increased over 111%
- PEC's Summer Coincident Peak (4CP) increased to 1,361 MW in 2017 from 1,303 MW in 2016
- Statewide TCOS rates are collectively expected to increase an additional 3% or more in 2018
- PEC total TCOS charges in 2018 are estimated to be \$72.8 million and is a direct pass through to Members
- A PEC TCOS Member rate increase of \$0.00098 per kWh is needed to recover the increased cost of transmission charges estimated for 2018
- The revised rate of \$0.01256 per kWh will be effective March 1, 2018

**Rising statewide Transmission Costs and PEC's Summer Peak 4CP Demand (kW) require that PEC increase the PEC TCOS Member rate from \$0.01158 to \$0.01256 per kWh**



# PEC Transmission Cost of Service (TCOS) History

- Since January 2009, the ERCOT TCOS rate has increased over 111%, a total cost increase to PEC and its Members of \$40.2 million
- 2018 estimated ERCOT TCOS rate increase of 3%
- 2018 estimated TCOS of \$72.8 million



# Summer 2017 PEC & ERCOT 4CP Results

	2016 Avg.	June	July	Aug.	Sept.	Average
Date and Time	-	June 23 16:45	July 28 17:00	Aug 16 17:00	Sep 20 16:45	-
ERCOT Peak (MWs)	67,763	67,695	69,629	68,028	63,740	67,273
<b>PEC Peak (MWs)*</b>	<b>1,306</b>	<b>1,424</b>	<b>1,418</b>	<b>1,348</b>	<b>1,257</b>	<b>1,361</b>
PEC Peak of ERCOT Peak (%)	1.93%	2.10%	2.04%	1.98%	1.97%	2.02%
<b>PEC 4CP Peak Demand Mitigation Measures</b>						
<b>Active and Deemed Reductions (MWs)</b>	<b>21.5</b>	<b>25.6</b>	<b>24.9</b>	<b>28.3</b>	<b>22.6</b>	<b>25.35</b>
PEC Adjusted Peak of ERCOT Peak (%)	1.95%	2.14%	2.07%	2.02%	2.01%	2.06%
Peak Demand Reduction (%)	1.62%	1.77%	1.73%	2.06%	1.77%	1.83%

- PEC's 4CP increased to 1,361 MW from 1,306 MW in 2016
- PEC's share of ERCOT 4CP increased to 2.02% from 1.93% in 2016
- PEC directed Demand Response increased to 25.35 MW from 21.5 MW in 2016
- Estimated savings of 2017 4CP Demand Response is \$1.4 Million

# 2018 PEC Transmission Cost of Service Budget and Revenue Requirements

## Key Inputs and Assumptions

- PEC 4CP 1,361 MW, final value will be determined by the PUCT in December 2017
- 3% Annual statewide TCOS Rate Change, actual rate charged is subject to rate filings at the PUCT throughout the year

## 2017 TCOS Current State

- Total PEC cost actual and forecast: \$69.1 MM
- Nov 2017 statewide TCOS rate: \$4.39/kW-Mo
- 2016 PEC 4CP demand: 1,306 MW

## 2018 TCOS Budget

- Total PEC estimated cost \$72.8 MM
- Eff. annual statewide TCOS rate \$4.46/kW-Mo
- 2017 PEC 4CP demand 1,361 MW

## Current PEC TCOS Retail Rate: \$0.01158 per kWh

- Estimated rate required: \$0.01256 per kWh
- Difference of \$0.00098 per kWh





# Transmission Cost of Service (TCOS) Member Rate

- TCOS is NOT an internal PEC cost. TCOS are a direct pass-through cost to our Members
- PEC's current tariff is based on consumption (kWh), while at the wholesale level transmission costs are 4CP demand based (kW)
- Since June 2016, TCOS charges are passed directly to Members through the PEC TCOS rate, currently \$0.01158 per kWh
- To recover 2018 estimated TCOS, PEC staff proposes a rate increase to \$0.01256 per kWh

<u>Residential Esaver Rate, Cost for 1,000 kWh</u>				
Member Charges:	Current TCOS rate	Proposed TCOS rate	Difference	
Service availability	\$ 20.00	\$ 20.00	\$	-
Delivery	\$ 27.12	\$ 27.12	\$	-
TCOS	\$ 11.58	\$ 12.56	\$	0.98
Fixed Base Power Cost	\$ 60.50	\$ 60.50	\$	-
PCA	\$ (14.00)	\$ (14.00)	\$	-
<b>Total</b>	<b>\$ 105.20</b>	<b>\$ 106.18</b>	<b>\$</b>	<b>0.98</b>

# PEC's TCOS Mitigation Measures

- PEC pursues cost effective measures to help reduce PEC's 4CP
- 2017 Summer activities resulted in approximately 25.4 MWs of 4CP reduction
  - Conservation Voltage Reduction – 13.05 MW
    - *Additional improvements will require additional capital investment*
  - Member Owned Solar – 5.5 MWs (estimated)
    - *Steady growth of member owned systems continues to contribute savings*
  - Residential and Commercial Energy Efficiency Rebate Program – 6.7 MWs (estimated)
    - *While not geared directly toward demand reduction, EE does provide some demand savings*
  - Introduction of Time of Use Rate
  - Power Rush Hour Member Communications
- 2018 and beyond
  - Continuous improvement of existing programs and member communication
  - Cooperative solar program will likely contribute 8-10 MWs of 4CP savings in 2018 4CP
  - New commercial 4CP rebate or rate option can drive new 4CP reductions
  - New demand response and distributed generation initiative can produce 4CP savings
  - Changes to TCOS rate (from kWh to kW based) giving Members ability to save on TCOS

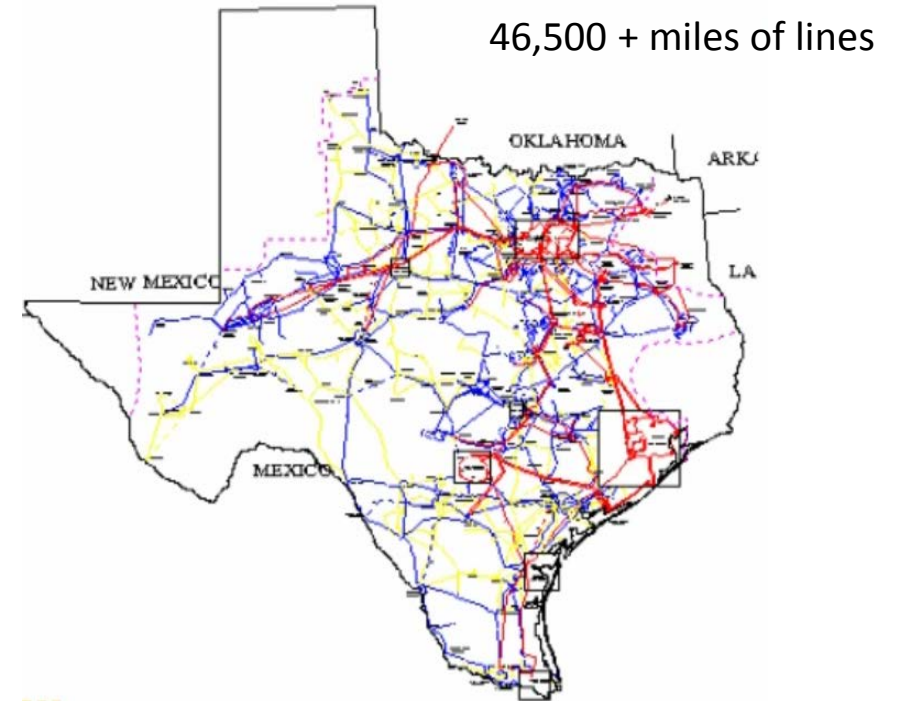


# Additional Information on the Following Slides



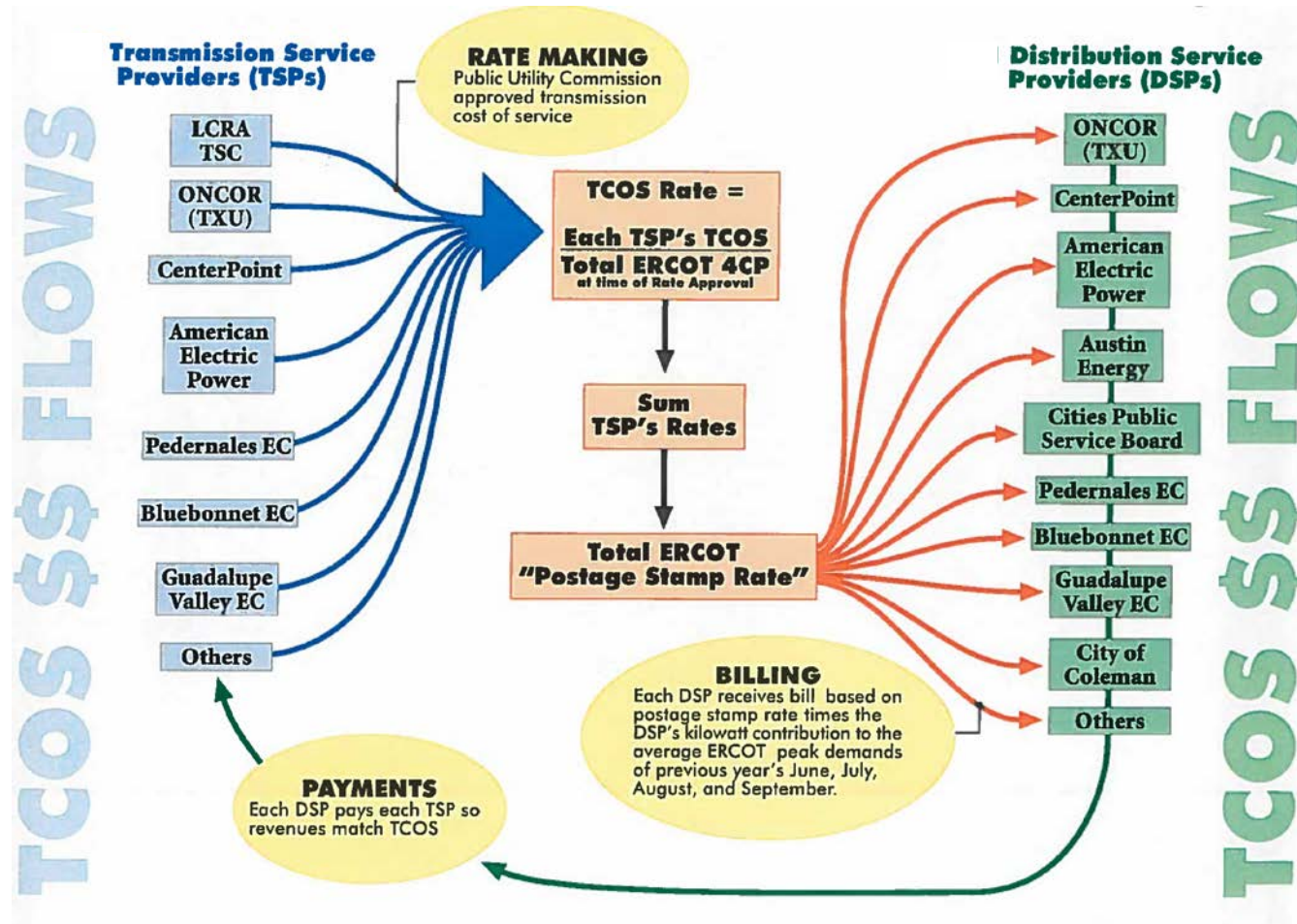
# ERCOT Transmission Infrastructure and Costs

- Estimated annual statewide transmission cost for 2017 is \$3.5 Billion.
- In 2016, \$2.1 billion in new transmission development added to the ERCOT region.
- 1,448 circuit miles of transmission improvements completed by market participants in 2016.
- 1,266 circuit miles of transmission planned with \$5.6 billion under development over the next five years.
- Transmission build-out in Competitive Renewable Energy Zones (CREZ), starting in 2008, has added nearly 7 billion dollars to TCOS



ERCOT Transmission System

# PEC's share of Transmission Costs in ERCOT



- The rates that PEC pays for TCOS service are set by the Public Utility Commission of Texas (PUCT)
- 4CP: PEC's transmission costs are partly based on how much electricity our members use during four 15-minute peak events: periods of high use during June, July, August and September, usually occurring between 2 and 6 p.m.
- PEC Annual TCOS calculation:

$$\frac{\text{PEC 4CP, KW} \times \text{TCOS Rate, \$/KW/Mo}}{\text{PEC TCOS, \$}}$$

Source: LCRA

# 4CP and Transmission Costs in ERCOT

- The Four Coincident Peaks in ERCOT are the highest-Load 15-minute settlement intervals in each of the four summer months (June, July, August, September)
- These intervals are the basis of various Transmission & Distribution (T&D) charges for the ERCOT Load
- Each Transmission Service Provider (TSP) calculates its expenses, which are added to region-wide Transmission Cost of Service (TCOS)
  - Investor-owned TSP charges are subject to PUC approval and may be adjusted up to twice a year
  - Non Opt-In Entities (NOIEs) charges are approved by the respective governing body
- TSPs recover these costs by billing Distribution Service Providers (DSP) based on the DSP's prior year 4CP Load Ratio Share
  - This is known as 'postage stamp' cost allocation
- DSPs recover these costs by billing customers (NOIEs) or billing customers' REPs (investor-owned DSPs)



# Summer 2017 PEC & ERCOT 4CP Preliminary Results

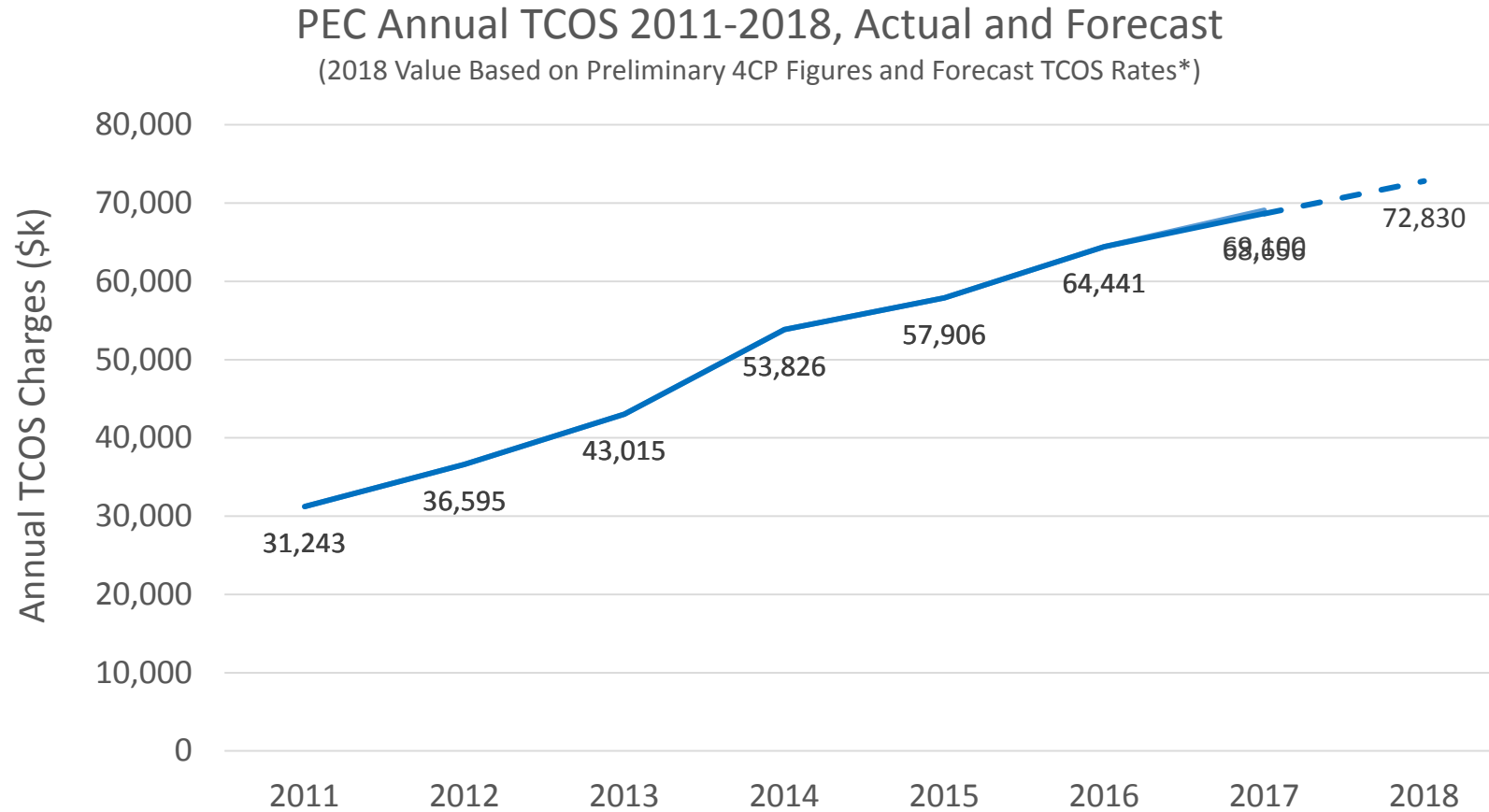
	2011	2012	2013	2014	2015	2016	2017	2018*
<b>PEC 4CP Peak (MW)</b>	<b>1,097</b>	<b>1,221</b>	<b>1,238</b>	<b>1,214</b>	<b>1,192</b>	<b>1,255</b>	<b>1,306</b>	<b>1,361</b>
Percent Change (%)		11.30%	1.39%	-1.94%	-1.81%	5.29%	4.06%	4.21%
<b>ERCOT 4CP Peak (MW)</b>	<b>61,369</b>	<b>64,992</b>	<b>66,014</b>	<b>65,250</b>	<b>63,681</b>	<b>66,036</b>	<b>67,763</b>	<b>67,273</b>
Percent Change (%)		5.90%	1.57%	-1.16%	-2.40%	3.70%	2.62%	-0.72%
<b>PEC % of ERCOT Peak</b>	<b>1.79%</b>	<b>1.88%</b>	<b>1.88%</b>	<b>1.86%</b>	<b>1.87%</b>	<b>1.90%</b>	<b>1.93%</b>	<b>2.02%</b>
Percent Change (%)		5.00%	0.00%	-1.10%	0.50%	1.60%	1.60%	4.8%
<b>ERCOT TCOS Rate** (\$/kW-Yr.)</b>	<b>28.49</b>	<b>29.97</b>	<b>34.74</b>	<b>44.34</b>	<b>48.56</b>	<b>51.31</b>	<b>52.64</b>	<b>53.51</b>
Percent Change (%)		5.19%	15.92%	27.63%	9.52%	5.66%	2.59%	1.65%
<b>PEC Annual TCOS</b>	<b>\$ 31,243</b>	<b>\$ 36,595</b>	<b>\$ 43,015</b>	<b>\$ 53,826</b>	<b>\$ 57,906</b>	<b>\$ 64,441</b>	<b>\$ 68,656</b>	<b>\$ 72,827</b>
Percent Change (%)		17.13%	17.54%	25.13%	7.58%	11.29%	6.54%	6.08%

\*Based on values determined by ERCOT and to be approved by the Public Utility Commission of Texas (PUCT) in December 2017

\*\* Estimated rate for 2017 and 2018. Rate subject to change on a month-to-month basis according to the Public Utility Commission of Texas (PUCT)



# PEC Transmission Cost of Service (TCOS) with 2018 Preliminary Results



- 2018 PEC TCOS Charges are forecast to be \$72,830,000
  - An increase of 6.1%
- TCOS rate recovered at cost from members with TCOS rate \$0.01158 per kWh
- Increase in TCOS charges for 2018 will require a member rate adjustment of \$0.00097 per kWh to \$0.01260 per kWh to recover expected costs

\*2018 Based on 4CP measurements determined by ERCOT and to be approved by the Public Utility Commission of Texas (PUCT) in December 2017. Forward looking TCOS rates are subject to change on a month-to-month basis according to the Public Utility Commission of Texas (PUCT)



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