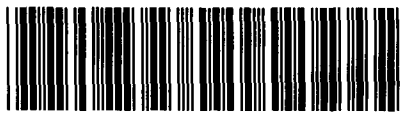

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SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	§ § § §	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

Direct Testimony and Exhibits

of

JEFFRY POLLOCK

On Behalf of

Texas Industrial Energy Consumers

June 6, 2019

J. POLLOCK
INCORPORATED

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SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	§ § § §	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

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AFFIDAVIT OF JEFFRY POLLOCK

State of Missouri)
) **SS**
County of St. Louis)

Jeffry Pollock, being first duly sworn, on his oath states:

1 My name is Jeffry Pollock. I am President of J. Pollock, Incorporated, 12647 Olive Blvd., Suite 585, St. Louis, Missouri 63141. We have been retained by Texas Industrial Energy Consumers to testify in this proceeding on its behalf;

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony, Exhibits and Appendices A through C, which have been prepared in written form for introduction into evidence in SOAH Docket No. 473-19-3864 and Public Utility Commission of Texas Docket No. 49421; and,

3. I hereby swear and affirm that my answers contained in the testimony are true and correct.

Jeffry Pollock

Subscribed and sworn to before me this 6th day of June 2019.

KITTY TURNER
Notary Public - Notary Seal
State of Missouri
Commissioned for Lincoln County
My Commission Expires: April 25, 2023
Commission Number: 15390610

Kitty Turner, Notary Public
Commission #: 15390610

My Commission expires on April 25, 2023.

GLOSSARY OF ACRONYMS

Term	Definition
4CP	Four Coincident Peak
AEP	American Electric Power
AMI	Automated Metering Infrastructure
CenterPoint	CenterPoint Energy Houston Electric, LLC
CCOSS	Class Cost-of-Service Study
DSC	Distribution System Charge
DSP	Distribution Service Provider
ERCOT	Electric Reliability Council of Texas
kW	Kilowatt
kWh	Kilowatt-Hour
kVA	Kilovolt-Ampere
MW	Megawatt
MFF	Municipal Franchise Fees
NCP	Non Coincident Peak
Oncor	Oncor Electric Delivery
PUC	Public Utility Commission of Texas
Reliant	Reliant Energy
REP	Retail Electric Provider
Sharyland	Sharyland Utilities, L.P.
TIEC	Texas Industrial Energy Consumers
TCOS	Transmission Cost of Service
TCRF	Transmission Cost Recovery Factor
TDU	Transmission and Distribution Utility
TNMP	Texas-New Mexico Power
TSC	Transmission System Charge
TSP	Transmission Service Provider
UCOS	Unbundled Cost of Service

DIRECT TESTIMONY OF JEFFRY POLLOCK

1. INTRODUCTION, QUALIFICATIONS AND SUMMARY

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Jeffry Pollock; 12655 Olive Blvd., Suite 335, St. Louis, MO 63141.

Q WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?

A I am an energy advisor and President of J. Pollock, Incorporated.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I have a Bachelor of Science Degree in Electrical Engineering and a Master's in Business Administration from Washington University. Since graduation in 1975, I have been engaged in a variety of consulting assignments, including energy procurement and regulatory matters in both the United States and several Canadian provinces. This includes participating in regulatory proceedings involving CenterPoint Energy Houston Electric (CenterPoint) and its predecessors, Houston Lighting & Power Company and Reliant Energy (Reliant). More details are provided in **Appendix A** to this testimony. A partial list of my appearances is provided in **Appendix B** to this testimony.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of Texas Industrial Energy Consumers (TIEC). TIEC members purchase delivery service from retail electric providers (REPs) under CenterPoint's Transmission Service tariff.

Q WHAT ISSUES ARE YOU ADDRESSING IN YOUR TESTIMONY?

A I am addressing the following cost allocation and rate design issues:

- The derivation of the four coincident peak (4CP) demand allocation factors used to allocate wholesale transmission costs and design the updated Transmission Cost Recovery Factor (TCRF);
- The allocation of municipal franchise fees (MFF);
- The design of the Transmission Service rate;
- The design of the TCRF; and
- Transmission Service Facility Extensions.

The fact that I am not addressing other issues should not be interpreted as an endorsement of CenterPoint's proposals.

Q ARE YOU SPONSORING ANY EXHIBITS SUPPORTING YOUR TESTIMONY?

A Yes. I am sponsoring **Exhibits JP-1** through **JP-9**. These exhibits were either prepared by me or under my direction.

Summary

Q PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A My findings and recommendations are as follows:

- **Class Cost-of-Service Study (CCOSS).** With two notable exceptions, CenterPoint's CCOSS generally comports with accepted practices.
  - The first flaw is that CenterPoint allocates wholesale transmission costs using each customer class's demands coincident with ***CenterPoint's*** peak summer 4CP demands, rather than the class demands coincident with the ***ERCOT*** 4CP. In CenterPoint's last rate case and in every other contested rate case thereafter, the Commission has approved allocating wholesale transmission costs using the actual demands coincident with the ERCOT 4CPs rather than an individual utility's 4CPs. This allocation matches the way wholesale transmission costs are assigned to CenterPoint, and therefore reflects cost-causation.

- The second flaw is that MFF should be allocated to retail delivery classes using in-city kilowatt-hour (kWh) sales, weighted to reflect the different MFF rates charged by the various cities in CenterPoint's service area. Weighting in-city kWh sales by the specific MFF rates properly reflects cost-causation because different cities charge different MFF rates, and the proportion of class kWh sales varies widely between each city. This will ensure that customers located in cities that charge below-average MFF rates are not subsidized by customers located in cities that charge above-average MFF rates.

- **The TCRF should not be "zeroed out."** CenterPoint is proposing to reset its TCRF to zero and recover all test-year pro-forma wholesale transmission costs in base rates through the Transmission System Charge (TSC) for each delivery rate class.
  - This proposal should be rejected because it would ignore load growth; that is, load growth allows CenterPoint to recover incremental TSC revenues, but these additional revenues would be ignored in setting CenterPoint's future TCRF charges. These incremental TSC revenues can offset higher wholesale transmission costs. Hence, CenterPoint's proposal would allow it to over-recover wholesale transmission costs. It is not in the public interest to allow a utility to over-recover wholesale transmission costs.
  - CenterPoint's proposal is also contrary to the current TCRFs of Oncor Electric Delivery (Oncor) and Texas-New Mexico Power Company (TNMP), which have set their respective TSCs to zero and recover the entirety of their wholesale transmission costs in the TCRF. This same practice is being proposed by American Electric Power (AEP) in its pending rate case.

- **Transmission Service Rate Design.** CenterPoint is proposing to retain the current design of the Transmission Service rate. This includes the practice of billing the TSC, Distribution System Charge (DSC), and MFF charges on a 4CP kilovolt-ampere (kVA) basis. Although different in design from other utilities, the current 4CP kVA charges are a long-standing practice and changing this practice solely to conform with other utility rate designs would be disruptive.

- **Facility Extension Policy.** CenterPoint's proposed Transmission Voltage Facilities Extension policy would require a transmission customer to make an Upfront Payment to pay for the Transmission Voltage System facilities constructed by CenterPoint that are required

for the customer to take transmission service. However, the amount of the Upfront Payment is based entirely on CenterPoint's estimated costs. There is no true-up between CenterPoint's estimate and the actual costs. Further, the customer that originally funded the facilities would not receive any credit if those facilities are subsequently used to serve other customers. Two changes should be made to CenterPoint's proposed Transmission Voltage Facilities Extension policy:

- First, a transmission customer should pay only the actual costs incurred by CenterPoint. Thus, the customer should receive a credit if the actual cost is less than CenterPoint's cost estimate, and vice versa.
- Second, if the same facilities are subsequently used, either in whole or in part, to serve other customers, CenterPoint should allocate a portion of the original customer's Upfront Payment to the new customers and, thus, refund this portion to the customer that originally funded the facilities.

2. CLASS COST-OF-SERVICE STUDY

Q WHAT IS A CLASS COST-OF-SERVICE STUDY?

A A CCOSS is an analysis used to determine each class's responsibility for the utility's costs. Thus, it determines whether the revenues a class generates cover the utility's cost of serving that class. A CCOSS separates the utility's total costs into portions incurred on behalf of the various customer groups. Most of a utility's costs are incurred to jointly serve many customers. For purposes of rate design and revenue allocation, customers are grouped into homogeneous classes according to their usage patterns and service characteristics. The procedures used in a CCOSS are described in more detail in **Appendix C.**

Q HAVE YOU REVIEWED THE CLASS COST-OF-SERVICE STUDY FILED BY CENTERPOINT IN THIS PROCEEDING?

A Yes.

Q DOES CENTERPOINT'S CLASS COST-OF-SERVICE STUDY GENERALLY COMPORT WITH ACCEPTED INDUSTRY PRACTICES?

A Yes. CenterPoint's CCOSS recognizes the different types of costs as well as the different ways electricity is used by various customers.

Q ARE THERE FLAWS WITH CENTERPOINT'S COST-OF-SERVICE STUDY?

A Yes. CenterPoint is proposing to reset the 4CP allocation factors used in the TCRF. However, in developing the 4CP allocation factors, CenterPoint proposes to use the unadjusted demands coincident with its own system peaks during the summer months

at the meter.[1] This is inconsistent with 16 T.A.C. § 25.192, which requires that wholesale transmission costs be allocated using the demands coincident with the ERCOT system summer peaks (*i.e.*, ERCOT 4CP). Further, the Commission has previously approved the use of the ERCOT 4CPs in establishing the 4CP allocation factors used in the TCRF pursuant to 16 T.A.C. § 25.193, as well as CenterPoint's last rate case (Docket No. 38339) and all subsequent contested utility rate cases.

A second flaw is with the allocation of MFF. Although CenterPoint allocated MFF to all classes based on in-city kWh sales, it fails to account for the widely different MFF rates charged by the cities levying these fees and the fact that in-city kWh sales by delivery rate class are not uniformly distributed by city. Thus, a more refined allocation is clearly justified.

4CP Demand

Q WHAT IS THE 4CP METHOD?

A Generally, it refers to allocating costs to customer groups based on their share of the peak demand during the four highest "coincident peaks" on a given system. For purposes of allocating wholesale transmission costs within ERCOT, the 4CPs have been defined as the system peak demands in the months June, July, August and September.

Q IS THE 4CP METHOD REASONABLE?

A Yes. The 4CP method is a reasonable method for several reasons. The ERCOT

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[1] Errata 1 to Direct Testimony of Matthew A. Troxle at 20.

system routinely peaks in summer months, and transmission must be built to accommodate peak demand. The 4CP allocation method is also required for allocating wholesale transmission costs to distribution providers by Commission rule. Specifically, 16 T.A.C. § 25.192 provides that:

> (b) **Charges for transmission service delivered within ERCOT.** DSPs, excluding storage entities, shall incur transmission service charges pursuant to the tariffs of the TSP.
>
> (1) A TSP's transmission rate shall be calculated as its commission-approved transmission cost of service divided by the average of ERCOT coincident peak demand for the months of June, July, August and September (4CP), excluding the portion of coincident peak demand attributable to wholesale storage load. A TSP's transmission rate shall remain in effect until the commission approves a new rate. The TSP's annual rate shall be converted to a monthly rate. The monthly transmission service charge to be paid by each DSP is the product of each TSP's monthly rate as specified in its tariff and the DSP's previous year's average of the 4CP demand that is coincident with the ERCOT 4CP.

Elsewhere, the Rule states that:

> (d) **Billing units.** No later than December 1 of each year, ERCOT shall determine and file with the commission the current year's average 4CP demand for each DSP, or the DSP's agent for transmission service billing purposes, as appropriate, excluding the portion of coincident peak demand attributable to wholesale storage load. This demand shall be used to bill transmission service for the next year. The ERCOT average 4CP demand shall be the sum of the coincident peak of all of the ERCOT DSPs, excluding the portion of coincident peak demand attributable to wholesale storage load, for the four intervals coincident with ERCOT system peak for the months of June, July, August, and September, divided by four. As used in this section, a DSP's average 4CP demand is determined from the total demand, coincident with the ERCOT 4CP, of all customers connected to a DSP, including load served at transmission voltage, but excluding the load of wholesale storage entities. The measurement of the coincident peak shall be in accordance with commission-approved ERCOT protocols.

Thus, it is abundantly clear that distribution service providers (DSPs) are currently billed on an ERCOT 4CP basis.

Q HOW IS CENTERPOINT PROPOSING TO RESET THE 4CP ALLOCATION FACTORS IN THE TCRF?

A CenterPoint is proposing to use *the CenterPoint system's* 4CPs to reset the TCRF allocation factors, rather than *the ERCOT-wide* 4CPs. The proposed TCRF allocation factors are summarized in **Table 1**.

Table 1
CenterPoint Proposed
TCRF Allocation Factors[2]

Customer Class	Allocation Factor
Residential	46.65%
Secondary ≤ 10 kVA	0.88%
Secondary > 10 kVA	34.07%
Primary	3.48%
Transmission	14.92%
Total	100.00%

Q WHY ARE YOU TAKING ISSUE WITH THE 4CP ALLOCATION FACTORS USED BY CENTERPOINT IN ITS PROPOSED TCRF?

A As discussed above, 16 T.A.C. §§ 25.192 and 25.193 clearly state that CenterPoint's wholesale transmission costs will be based on the cumulative demands experienced by each of CenterPoint's delivery rate classes coincident with the ERCOT system

[2] Schedule II-I-2 Class Ratios.

peak. Because wholesale transmission costs are allocated to CenterPoint on this basis, they should also be allocated to CenterPoint's retail customer classes on the same basis. However, CenterPoint's proposed 4CP allocation factors were based upon demands coincident with ***CenterPoint's*** system peaks. As such, these factors are incorrectly calculated and their application would not comport with cost-causation or Commission rules.

Q ARE THERE ANY OTHER FLAWS WITH CENTERPOINT'S 4CP DEMANDS?

A Yes. CenterPoint's system 4CPs were calculated at the meter. In order to recognize the differences in line losses by customer class, it is necessary to loss adjust each class's metered demands to reflect the 4CP demands at the generating source.

Q HOW DO THE CENTERPOINT SYSTEM 4CPS DIFFER FROM THE APPROPRIATE ERCOT SYSTEM 4CPS?

A **Table 2** provides a comparison between the CenterPoint system peak demands and the CenterPoint demands coincident with the 2018 ERCOT system peaks. As **Table 2** illustrates, the ERCOT system monthly peak demands are generally higher than those used by CenterPoint. This can partially be attributed to transmission and distribution losses based upon the different points of measurement. The August CenterPoint peak demand, however, is higher than the August peak demand calculated by ERCOT. This indicates that these observed differences are not entirely explained by losses, and that they instead represent a distinct set of measurements.

Table 2 CenterPoint and ERCOT 2018 System Peak Demands by Month[3] (MW)					
Description	**June**	**July**	**August**	**September**	**Average 4CP Load**
CenterPoint 4CP at the Meter	16,835	17,113	17,747	16,309	17,001
ERCOT 4CP at the Source	17,026	17,810	17,667	16,893	17,349

For this reason, the peak demands used by CenterPoint cannot be simply "scaled up," nor can the allocation factors thus calculated be assumed proportionally correct. Instead, the allocation factors must be recalculated using each class's demands occurring coincident with the ERCOT peak as measured at the source.

Q HAVE YOU DEVELOPED CORRECTED 4CP ALLOCATION FACTORS USING THE APPROPRIATE PEAK DEMAND VALUES?

A Yes. **Exhibit JP-1** shows the derivation of the delivery class demands coincident with the ERCOT 4CPs. **Table 3** below compares CenterPoint's proposed and the ERCOT 4CP allocation factors.

Table 3 Comparison of 4CP Allocation Factors		
Customer Class	**CenterPoint 4CP**	**ERCOT 4CP**
Residential	46.65%	47.61%
Secondary ≤ 10 kVA	0.88%	0.83%
Secondary > 10 kVA	34.07%	34.69%

[3] Schedule II-H-1.3 at 6 and 7.

Table 3 Comparison of 4CP Allocation Factors		
Customer Class	**CenterPoint 4CP**	**ERCOT 4CP**
Primary	3.48%	3.41%
Transmission	14.92%	13.46%
Total	100.00%	100.00%

As **Table 3** demonstrates, the differences between the CenterPoint and ERCOT 4CP allocation factors are especially significant for the Transmission class.

Further, the Secondary ≤10 kVA and Transmission classes would be the most affected by resetting the 4CP allocation factors in this proceeding. This is demonstrated in **Table 4**.

Table 4 Change in 4CP Allocation Factors			
Rate Class	**Current**	**ERCOT**	**Change**
Residential	47.14%	47.61%	1.0%
Secondary ≤ 10 kVA	1.15%	0.83%	-27.8%
Secondary > 10 kVA	35.87%	34.69%	-3.3%
Primary	3.62%	3.41%	-5.8%
Transmission	12.22%	13.46%	10.1%
Sources: Exhibit JP-1 and CenterPoint's March 2019 TCRF Filing (Docket No. 48933).			

The changes range from a 28% reduction (Secondary ≤10 kVA) to a 10% increase (Transmission). Thus, resetting the 4CP allocation factors based on CenterPoint's system 4CP demands would result in cost-shifting. I will discuss cost-shifting later.

Q HOW WOULD USING THE ERCOT 4CP ALLOCATION FACTORS AFFECT THE ALLOCATION OF WHOLESALE TRANSMISSION COSTS?

A **Exhibit JP-2** shows the allocation of test-year adjusted wholesale transmission costs using the ERCOT, rather than CenterPoint, 4CP demand allocation factors. The resulting per-unit rates are also shown and summarized in **Table 5**.

Table 5
Rider TCRF Charges Based On Allocating Wholesale Transmission Costs Using The ERCOT System 4CPs

Rate Class	TCRF Charge	Unit
Residential	$0.01468	kWh
Secondary ≤ 10 kVA	$0.00850	kWh
Secondary > 10 kVA		
IDR	$4.126	4CP kVA
Non-IDR	$2.737	NCP kVA
Primary		
IDR	$3.944	4CP kVA
Non-IDR	$2.664	NCP kVA
Transmission	$4.267	4CP kVA

Source: Exhibit JP-2.

The per-unit rates are based on actual billing determinants. As discussed later, these costs should be recovered in the TCRF.

Municipal Franchise Fees

Q WHAT ARE MUNICIPAL FRANCHISE FEES?

A MFF are taxes levied by municipalities based on the amount of electricity sold within their municipal boundaries. They are also referred to as street rental taxes. The MFF

charged to CenterPoint are based on ordinances passed by the elected representatives of the cities in which CenterPoint makes retail sales. Different cities have enacted different levels of MFF on in-city kWh sales ranging from as low as 0.149¢ to as high as 0.927¢ per kWh. The current MFF rates by city are shown in **Exhibit JP-3**.

Q DOES THIS COMMISSION HAVE A CONSISTENT POLICY REGARDING THE ALLOCATION OF MUNICIPAL FRANCHISE FEES?

A Yes. The Commission's current policy was adopted in the unbundled cost-of-service (UCOS) cases in 2001 and has been affirmed in all delivery rate cases since. Under this policy, MFF costs are allocated based on the classes within the assessing municipality's boundaries. This approach is referred to as the "Direct" method of allocation.

Although Commission policy varied widely prior to the UCOS cases (some utilities were allowed to recover MFF separately from in-city customers and others allocated MFF relative to total revenues), the Commission has consistently approved the Direct method of allocation in cases over the past 18 years. This issue was litigated in both the Reliant (now CenterPoint Energy) and TXU Electric Company (now Oncor) UCOS cases. Specifically, the Commission's Orders in the two cases included the following identical findings:

> The LGRT legislation requires the tax be based on the number of kWh delivered within the municipal boundaries in order to maintain sufficient revenue levels for the cities. To meet this revenue

requirement, LGRT should be allocated using a direct allocation and employing the energy allocator.[4]

This same Direct method of allocating MFF was also adopted in Docket Nos. 28840, 33309 and 35717.

Q HOW IS CENTERPOINT PROPOSING TO ALLOCATE MFF IN THIS PROCEEDING?

A CenterPoint is proposing to allocate MFF to all retail customer classes on in-city kWh sales. This is shown in **Exhibit JP-4**.

Q DOES CENTERPOINT'S PROPOSED MFF ALLOCATION ACCURATELY REFLECT COST-CAUSATION?

A No. Although CenterPoint is proposing to use the Direct method, the application is flawed because it fails to recognize that:

- Different cities within CenterPoint's service territory levy different MFF rates (*i.e.,* **Exhibit JP-3**); and
- The proportion of kWh sales by delivery rate class is not uniform by city; that is, for each city some classes have a larger share of in-city kWh sales than others (*i.e.,* **Exhibit JP-5**).

Q WHY IS IT IMPORTANT TO RECOGNIZE THE DIFFERENT MFF RATES BY CITY?

A CenterPoint's proposed allocation would charge all customers 0.318¢ per kWh, which is the weighted average of all MFF rates in the CenterPoint service area. However,

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[4] *Application of TXU Electric Company for Approval of Unbundled Cost of Service Rate Pursuant to PURA § 39.201 and Public Utility Commission Substantive Rule § 25.344, Docket No. 22350*, Order at FoF No. 156 (Oct. 4, 2001); *Application of Reliant Energy for Approval of Unbundled Cost of Service Rate Pursuant to PURA § 39.201 and Public Utility Commission Substantive Rule § 25.344*, Docket No. 22355, Order at FoF No. 222A (Oct. 4, 2001). Note: the term LGRT, or local gross receipts tax, was used synonymously with MFF.

different cities charge different MFF rates. For example, the MFF rate for the City of Houston is 0.337¢ per kWh (**Exhibit JP-3**, line 31) while the corresponding MFF rate for Mont Belvieu is 0.193¢ per kWh (**Exhibit JP-3**, line 51). Although CenterPoint pays the City of Mont Belvieu 0.193¢ per kWh sold within the city, its citizens would be charged 0.318¢ under CenterPoint's proposed MFF expense allocation. Thus, ignoring the different MFF rates by each city (as CenterPoint proposes) would result in customers located in cities like Mont Belvieu (that charge below-average MFF rates) being subsidized by customers in those cities that charge above-average MFF rates, such as the City of Houston.

Q ARE THERE ALSO SIGNIFICANT DIFFERENCES IN THE PROPORTION OF KWH SALES BY RATE CLASS WITHIN THE MAJOR CITIES?

A Yes. The proportion of kWh sales by class by city is shown in **Exhibit JP-5**. As can be seen, there is a wide variation in the proportion of sales by rate class by city. For example, within the City of Houston (line 31), 33.6% and 56.1% of kWh sales are to Residential (column 1) and Secondary (columns 2 and 3) Service customers, respectively, while only 4.0% of the kWh sales are to Transmission Service customers (column 5). By contrast, within the City of Mount Belvieu (line 51), Transmission Service customers account for 93.2% of the kWh sales, while the Residential and Secondary Service classes account for only 4.9%. This demonstrates that the proportion of in-city kWh sales by class differs dramatically by city.

Q HOW SHOULD MFF EXPENSE BE ALLOCATED?

A Consistent with the ratemaking principle of cost-causation and Commission precedent, MFF should be allocated using the Direct method. However, specific recognition

should be made to the different MFF rates by city and that class sales are not uniform within each city that levies MFF. The results of this allocation are shown in **Table 6** below.

Table 6
Allocation of Municipal Franchise Fees
($000)

Delivery Rate Class	Unweighted[5]	Weighted[6]
Residential	$51,532	$53,007
Secondary ≤10 kVA	$1,885	$1,945
Secondary >10 kVA	$73,365	$75,596
Primary	$7,884	$8,198
Transmission	$17,674	$13,581
SLS Lighting	$325	$334
MLS Lighting	$116	$120
Total	$152,781	$152,871

Q HOW DID YOU DERIVE THE CORRECTED MFF BY DELIVERY RATE CLASS?

A The corrected MFF were derived by quantifying the MFF by class for each city. This analysis is shown in **Exhibit JP-6**. For each city, the MFF by class are the product of (1) the applicable MFF rate by city (as derived in **Exhibit JP-3**) and (2) the corresponding in-city kWh sales by delivery class.[7] The sum of the allocated MFF by class by city is shown on line 94.

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[5] **Exhibit JP-4** and Schedule II-I-Total.

[6] **Exhibit JP-7**.

[7] The kWh sales by delivery class by city were provided in: WP – 2018 KWH by Rate Class Franchise.

Q HOW WAS THE INFORMATION PRESENTED IN EXHIBIT JP-6 USED IN DETERMINING THE AMOUNT OF TEST-YEAR MFF BY DELIVERY RATE CLASS?

A I converted the total MFF by class by city on **Exhibit JP-6**, line 94, into percentages, which are shown on line 95. I then used these percentages to allocate CenterPoint's test-year MFF to each delivery rate class. The allocations are shown in **Exhibit JP-7**. The percentages from **Exhibit JP-6,** line 95, are shown in **Exhibit JP-7**, column 1. The allocated MFF expense (column 2) is the product of column 1 and $152,781,000, which is the test-year MFF expense as shown in **Exhibit JP-4**.

Q IS THE APPROACH OUTLINED ABOVE CONSISTENT WITH THE DIRECT METHOD, WHICH THIS COMMISSION HAS APPROVED IN PAST CASES?

A Yes. The Direct method of allocation recognizes that the level of MFF costs CenterPoint incurs is a function of only two things: (1) the tax level set by the city, and (2) the usage of customers inside the city limits. There is nothing that an outside-city customer can do to influence either element. In-city customers, however, determine the tax rate through their elected representatives, and their usage determines the amount that CenterPoint must pay to each city.

These same principles have been applied in a more refined manner as shown on **Exhibit JP-7** by directly recognizing the differences in (1) MFF rates by city and (2) the distribution of kWh sales by delivery rate class by city.

3. RATE DESIGN

Q WHAT RATE DESIGN ISSUES ARE YOU ADDRESSING?

A I am addressing the design of the Transmission Service rate, the proposed TCRF, and the policy surrounding how the 4CP allocation factors used in the TCRF should be reset in rate cases.

Transmission Service Rate

Q PLEASE DESCRIBE THE TRANSMISSION SERVICE RATE.

A The Transmission Service rate applies to customers that take delivery at 60,000 volts or higher. As discussed later in connection with the proposed Transmission Voltage Facilities Extension policy, a transmission customer would be required to pay CenterPoint an Upfront Payment for the costs to construct facilities required to interconnect the customer to CenterPoint's Transmission Voltage System. Like CenterPoint's other retail delivery rates, the monthly rate consists of Transmission and Distribution charges, Transition Charges, a Nuclear Decommissioning charge, a TCRF, and other charges or credits. There is also a credit for Competitive Metering. The Transmission and Distribution charges include a Customer Charge, Metering Charge, a TSC, and a DSC. Both the TSC and DSC are billed on a per 4CP kVA basis.

Q IS CENTERPOINT PROPOSING ANY CHANGES TO THE DESIGN OF THE TRANSMISSION SERVICE RATE?

A No. The design of the current Transmission Service rate has remained the same since retail competition commenced, on January 1, 2002. Further, even prior to retail

competition, CenterPoint billed its bundled demand charges on a per kVA basis. Thus, the current Transmission Service rate design (and kVA billing in particular) has been a long-standing practice.

Q IS THE STRUCTURE OF CENTERPOINT'S TRANSMISSION SERVICE RATE DIFFERENT FROM OTHER ERCOT UTILITIES?

A No. There are no differences in the basic structure of CenterPoint's Transmission Service rate. All utilities' Transmission Service rates in ERCOT are comprised of Transmission and Distribution charges, and further, these charges are bundled between Customer Charge, Metering Charge, TSC and DSC.

Q ARE THERE DIFFERENCES IN HOW CENTERPOINT BILLS CERTAIN COMPONENTS OF THE TRANSMISSION SERVICE RATE?

A Yes. CenterPoint bills its TSC and DSC on a per kVA basis, while other utilities bill these same charges on a kW basis. CenterPoint also bills the DSC charge on a per 4CP kVA basis, while other utilities bill the DSC on a per non-coincident peak (NCP) basis.

Q HOW IS KVA BILLING DIFFERENT FROM KW BILLING?

A KVA billing directly takes power factor into account. For example, assume that a customer has a peak demand of 10,000 kW. If the customer operates at a 100% power factor, the customer's billing demand would be 10,000 kVA. By comparison, a customer operating at an 80% power factor would have a billing demand of 12,500 kVA (10,000 kW ÷ 80% power factor).

Q DO OTHER UTILITIES CHARGE CUSTOMERS FOR POWER FACTOR?

A Yes. Other utilities account for power factor only when a customer operates at less than a 95% power factor. Specifically, the peak kW is adjusted by the ratio of 95% to the customer's actual power factor. For example, a customer with a 10,000 kW peak demand operating at an 80% power factor would be charged for 11,875 kW (10,000 kW x 95% ÷ 80%). The lower the power factor, the higher the adjustment. Though not identical to kVA billing, the impact is to allocate more cost recovery to customers that operate at lower power factors.

Q IS IT MORE COSTLY TO PROVIDE DELIVERY SERVICE TO CUSTOMERS THAT OPERATE AT LOWER POWER FACTORS?

A Yes. Customers operating at low power factors use more line and transformation capacity than customers operating at high power factors. Hence, it is reasonable to require customers that operate at lower power factors to pay higher TSCs and DSCs.

Q IS CENTERPOINT'S TRANSMISSION SERVICE RATE DESIGN CONTRARY TO ACCEPTED PRACTICE?

A No. The Commission approved CenterPoint's Transmission Service rate design. Prior to approving CenterPoint's rate design, the Commission issued Order No. 40 in Docket No. 22344, which established a uniform rate design for all ERCOT utilities.[8] The objectives of the Commission's uniform rate design were not only to achieve cost-

[8] *Generic Issues Associated with Applications for Approval of Unbundled Cost of Service Rate Pursuant to PURA §39.201 and Public Utility Commission Substantive Rule § 25.344*, Docket No. 22344. Order No. 40, Interim Order Establishing Generic Customer Classification and Rate Design (Nov. 22, 2000).

causation, simplicity, and equity to customers within the given rate classes, but also to ensure a more vibrant competitive electric market because the uniformity would facilitate entry by new competitors.[9] As previously stated, the structure of CenterPoint's Transmission Service rate is consistent with other utilities.

Q DO YOU AGREE WITH CENTERPOINT'S PROPOSAL TO RETAIN THE CURRENT DESIGN OF THE TRANSMISSION SERVICE RATE?

A Yes. The current Transmission Service rate design has been in effect for nearly two decades. To my knowledge, the fact that CenterPoint uses per 4CP kVA for billing TSC and DSC has not impaired competition. Thus, there is no policy reason to change how CenterPoint bills its TSC and DSC. To do so would result in significant disruption, which is not characteristic of a just and reasonable rate design.

Q HOW IS CENTERPOINT PROPOSING TO DESIGN THE TSC?

A CenterPoint is proposing to set the TSC to recover 100% of the test-year wholesale transmission costs established in this proceeding. Accordingly, the proposed TCRF would be set to zero. As discussed later, all test-year pro-forma wholesale transmission costs should be recovered in the TCRF, and all TSCs should be set to zero.

TCRF

Q WHAT CHANGES IS CENTERPOINT MAKING TO THE TCRF?

A CenterPoint is proposing two changes. First, the 4CP allocation factors would be

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[9] *Id.* at 5.

reset. As previously stated, CenterPoint is proposing to reset the 4CP allocation factors based on each class's contribution to the ***CenterPoint*** system 4CP. However, as previously discussed, this proposal is contrary to cost-causation and this Commission's own policy, which allocates transmission costs to DSPs based on each class's actual contribution to the ERCOT 4CPs.

Second, CenterPoint is also proposing to set the TCRF charges to zero. All test-year pro-forma wholesale transmission costs would be recovered in the TSCs within each of the retail delivery rates. The TCRF would recover only the variances between the total wholesale transmission costs actually incurred by CenterPoint and the costs incurred when the new base rates are set. As discussed later, CenterPoint's proposal would allow it to over-recover wholesale transmission costs because the TCRF formula ignores changes in TSC revenues due to load growth. Accordingly, CenterPoint's proposal should be rejected. To prevent over-recovery, all wholesale transmission costs should be recovered in the TCRF, and the TSCs should be set to zero.

Q PLEASE DESCRIBE THE TCRF.

A The TCRF is a mechanism designed pursuant to 16 T.A.C. § 25.193 that allows CenterPoint to recover changes in wholesale transmission costs above the level of such costs that are already being recovered in the TSC. Thus, the combination of the TSC and TCRF provides the revenues necessary to recover all wholesale transmission costs allocated to CenterPoint. The TCRF formula is as follows:

$$\frac{\{[\sum_{i=1}^{N}(NWTRi * NLi) - \sum_{i=1}^{N}(BWTRi * NLi] * \frac{1}{2} * ALLOC\} + ADJ}{BD}$$

Where:	NWTRi is the new wholesale transmission rate of a TSP, approved by the commission by order or pursuant to commission rules, since the DSP's last rate case;
	BWTRi is the base wholesale transmission rate of the TSP represented in the NWTRi, used to develop the retail transmission charges of the DSP in the DSP's last rate case;
	NLi is the DSP's individual 4CP load component of the total ERCOT 4CP load information used to develop the NWTRi;
Where:	$ADJ = \sum_{p=1}^{6} \{ EXP_p - REV_p - ADJP\,1_p - ADJP\,2_p)\}$ ADJ = adjustment to Rate Class TCRF; EXP_p = transmission expenses not included in base rates for period p; REV_p = TCRF revenue for period p; $ADJP1_p$ = 1/6th of ADJ calculated in the previous TCRF update for the periods 5 and 6; $ADJP2_p$ = 1/6th of ADJ calculated in second previous TCRF update for the periods 1 through 4;
	ALLOC is the class allocator approved by the commission to allocate the transmission revenue requirement among classes in the DSP's last rate case, unless otherwise ordered by the commission; and,
	BD is each class's billing determinant (kilowatt-hour (kWh), or kilowatt (kW), or kilovolt-ampere (kVA)) for the previous March 1 through August 31 period for the March 1 TCRF update, and for the previous September 1 through February 28 period for the September 1 TCRF update.

Q PLEASE EXPLAIN THE TCRF FORMULA.

A The TCRF formula is comprised of three parts:

- Calculate the annual wholesale transmission costs incurred by the utility (*i.e.,* NWTRi * NLi);
- Calculate the portion of the annual wholesale transmission costs incurred by the utility at the time base rates were last set (*i.e., BWTRi * NLi);* and
- Quantify past period over or under collection of TCRF-related costs (*i.e.,* ADJ).

The TCRF is updated every six months, effective in March and September of each year. This is the reason for adjusting the calculations by ½.

Further, the TCRF formula is applied on an individual delivery rate class basis. Hence, the results are multiplied by the ALLOC. The ALLOC is established in the utility's last rate case, and it remains fixed until the utility's next rate case.

Finally, the TCRF charges are based on the allocated costs divided by the actual historical billing determinants.

Q ARE THE BILLING DETERMINANTS USED TO SET A TCRF DIFFERENT FROM THE BILLING DETERMINANTS USED TO ESTABLISH THE TSC IN EACH RATE SCHEDULE?

A Yes. The billing determinants used to set the TSC are determined in the utility's last rate case using test-year data. The TCRF billing determinants are based on actual data for the six-month historical period. The latter can change when a class experiences load growth or load shrinkage or when customers migrate to a different class.

Q CAN FREEZING THE TCRF ALLOCATION FACTORS WHILE USING ACTUAL BILLING DETERMINANTS CAUSE ANY PROBLEMS IN ESTABLISHING NEW TCRF CHARGES?

A Yes. Freezing the ALLOC means that each delivery rate class is allocated the same portion of wholesale transmission until a subsequent rate case. All other things being equal, a class that experiences above-average load growth would pay lower TCRF charges, and vice versa for a class that experiences load shrinkage. On the other

hand, if ALLOC were allowed to change, the increase in billing determinants would offset the higher allocation of wholesale transmission costs.

Q DOES THE TCRF FORMULA RECOGNIZE THE REVENUES THAT ARE COLLECTED IN THE TSC?

A No. The TSC revenues are not recognized anywhere in the TCRF formula. Further, when CenterPoint calculates the ADJ to recognize past period over (or under) collections, it is evident from CenterPoint's TCRF filings that the only revenues reflected in this determination are the TCRF revenues. An excerpt from CenterPoint's March 2019 TCRF filing detailing the ADJ calculation is provided in **Exhibit JP-8**.

Q PLEASE EXPLAIN EXHIBIT JP-8.

A The wholesale transmission costs reflected in base rates are shown on line 4. The class TCRF revenues are shown on line 5. The past period over (under) collections are shown on lines 6 and 7 for adjustment periods 1 and 2 (*i.e.,* ADJP1 and ADJP2), respectively. Summing lines 5 through 7 yields the adjusted class TCRF revenues (line 8). The current month over (under) recovery (line 9) is the difference between line 4 (wholesale transmission costs reflected in base rates) and line 8 (adjusted class TCRF revenues). The TSC revenues — which were designed to recover test-year wholesale transmission costs incurred when rates were last set — are not recognized in calculating the ADJ factor in the TCRF formula. Thus, if the TSC revenues actually recovered are higher than the corresponding test-year TSC revenues, the utility will over-recover wholesale transmission costs.

Q WOULD LOAD GROWTH, LOAD SHRINKAGE, OR CUSTOMER MIGRATION ALSO AFFECT THE REVENUES RECOVERED IN THE TSC?

A Yes. Load growth will result in higher TSC revenues. The higher the load grows, the higher the TSC revenues the utility will collect. By contrast, a class that loses load would generate lower TSC revenues. However, if the load loss is the result of customers who migrate to a different delivery rate class, it would result in a shift in TSC revenues that would also not be reflected in the TCRF.

Q WOULD CENTERPOINT'S PROPOSAL TO COLLECT ALL WHOLESALE TRANSMISSION COSTS IN THE TSC BE IN THE PUBLIC INTEREST?

A No. CenterPoint's proposal to collect all wholesale transmission costs in the TSC would allow it to over-recover these costs by not accounting for changes in TSC revenues when the TCRF is adjusted. This outcome would not be in the public interest.

Q HAS THE RECOVERY OF WHOLESALE TRANSMISSION COSTS IN BASE RATES ALLOWED CENTERPOINT TO OVER-RECOVER ITS ACTUAL COSTS?

A Yes. **Exhibit JP-9** quantifies the total wholesale transmission revenues collected through the TSC and the TCRF and the total wholesale transmission costs incurred by CenterPoint during the test year. As previously stated, wholesale transmission costs are partially recovered in the TSC, and the TCRF recovers those costs that are not recovered in the TSC. Thus, the sum of the test-year TSC and TCRF revenues should equal the test-year wholesale transmission costs. Consistent with 16 T.A.C. § 25.193, the revenues are based on actual (unadjusted) test-year billing determinants (column 1).

As can be seen, CenterPoint recovered $950.6 million of TSC and TCRF revenues (line 9), but it incurred $898.7 million of wholesale transmission costs (line 10). Accordingly, recovering wholesale transmission costs in base rates, load growth since CenterPoint's last rate case, and the current design of the TCRF (which ignores TSC revenues) has allowed CenterPoint to over-recover $51.9 million of revenues during the test year (line 11).

Q DO YOU AGREE WITH CENTERPOINT'S PROPOSAL TO ZERO OUT THE TCRF?

A No. As previously discussed, the TCRF formula ignores the revenues collected from the various TSCs in CenterPoint's retail delivery rates. Thus, it ignores the incremental revenues generated from the TSCs in calculating the ADJ portion of the TCRF due to load growth that occurred since CenterPoint's last rate case. The analysis in **Exhibit JP-9**, thus, confirms that recovering a portion of wholesale transmission costs in the TSCs has allowed CenterPoint to over-recover these costs.

For this reason, the Commission should reject CenterPoint's proposal to zero out the TCRF and recover all test-year pro-forma wholesale transmission costs through the TSCs.

Q WHAT DO YOU RECOMMEND?

A All wholesale transmission costs should be collected in the TCRF. The TSCs should be set to zero.

Q HOW DO OTHER ERCOT UTILITIES RECOVER WHOLESALE TRANSMISSION COSTS?

A Oncor and TNMP recover all wholesale transmission costs in the TCRF. Their respective TSCs are zero. AEP, like CenterPoint, recovers wholesale transmission

costs in both the TSCs and TCRF. However, in AEP's pending rate case (Docket No. 49494), AEP is proposing to recover all wholesale transmission costs in the TCRF and reset the TSCs to zero.[10]

Policy For Resetting the 4CP Allocation Factors

Q ARE THERE ANY POLICY ISSUES SURROUNDING HOW THE 4CP ALLOCATION FACTORS ARE RESET IN A RATE CASE?

A Yes. CenterPoint's last rate case was Docket No. 38339. The case was filed on June 30, 2010; the Commission issued an Order on May 12, 2011; and new delivery rates became effective for service on or after September 1, 2011.[11] This means that current delivery rates, including the TCRF allocation factors, will have been in effect for almost eight years.

In the almost nine years since CenterPoint's last rate case was filed, the TCRF allocations for each class have become stale. In addition, TCRF rates for each retail class have become distorted because, as previously explained, the TCRF formula fixes each class's allocation factor, but uses *current billing determinants* to set the charge. Irrationally, if a class is growing, its TCRF rates may continuously *decrease* since a fixed percentage of transmission costs is being spread over a growing amount

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[10] *Application of AEP Texas, Inc. for Authority to Change Rates*, Docket No. 49494, Petition and Statement of Intent to Change Rates, at 3 (May 1, 2019). See also *Direct Testimony of Jennifer L. Jackson* at 20-21, 41.

[11] *Application of CenterPoint Electric Delivery Company, LLC, for Authority to Change Rates*, Docket No. 38339, Order on Rehearing (Jun. 23, 2011). See also, *Tariff Filing of CenterPoint Energy Houston Electric, LLC in Compliance with the Order on Rehearing in Docket No. 38339*, Docket No. 39591 (Jul. 13, 2011).

of usage/customers. Conversely, if a class shrinks, its TCRF rates would go *up*, as a fixed percentage of costs must be recovered from a smaller amount of usage/customers.

Q CAN RESETTING THE 4CP ALLOCATION FACTORS RESULT IN ANY UNINTENDED CONSEQUENCES?

A Yes. Immediately resetting the 4CP allocation factors can result in extreme rate shock. This is illustrated in **Table 7**. The illustration assumes that a utility serves two rate classes: Class A and Class B. **Table 7A** shows the results from the utility's last rate case.

Table 7A
Impact of Load Growth
In Determining TCRF Charges
Last Rate Case

Description	Total	Class A	Class B
4CP	1,000	500	500
4CP Allocator	100.000%	50.000%	50.000%
Cost	$4,000	$2,000	$2,000
Billing Determinants		500	500
TCRF		$4.00	$4.00

Both Class A and Class B had identical 4CPs (500 kW), and the utility incurred $4,000 of wholesale transmission costs last rate case. Thus, each class was responsible for $2,000 of costs. Dividing the allocated costs by the billing determinants (500 kW) resulted in TCRF charges of $4.00 for both classes.

Nine years later, Class B doubled in size, and the utility was incurring $6,000 of wholesale transmission costs. Because the TCRF Rule uses the 4CP allocation factors from the last rate case, both Class A and Class B are allocated an equal portion

of these costs, or $3,000 each. ***However***, Class B has doubled to 1,000 kW of load. The effect of these changed circumstances is shown in **Table 7B**.

Table 7B
Rate Case + 8 Years; Class B Doubles in Size

Description	Total	Class A	Class B
4CP Allocator From Last Rate Case	100.000%	50.000%	50.000%
Cost	$6,000	$3,000	$3,000
Billing Determinants		500	1,000
TCRF		$6.00	$3.00

Thus, the resulting TCRF charges would be $6.00 for Class A ($3,000 ÷ 500 kW) and $3.00 for Class B ($3,000 ÷ 1,000 kW). In other words, even though wholesale transmission costs increased, Class B's TCRF rates went *down* because its allocation remained fixed and the class usage grew.

Subsequently, the utility files a rate case. **Table 7C** shows the impact of resetting the 4CP allocators assuming going-forward costs of $8,000. This changes the allocation factors from 50%/50% to 33%/67%, respectively for Class A and Class B.

Table 7C
Reset 4CP in Current Rate Case

Description	Total	Class A	Class B
4CP	1,500	500	1,000
4CP Allocator	100.000%	33.333%	66.667%
Cost	$8,000	$2,667	$5,333
Billing Determinants		500	1,000
TCRF		$5.33	$5.33
Percent Increase		-11%	78%

The resulting TCRF charges would be $5.33 for both classes. However, this represents an 11% reduction for Class A and a 78% increase for Class B.

Absent moderation, Class B would suffer severe rate shock.

Q DO THESE CIRCUMSTANCES APPLY TO CENTERPOINT?

A Yes, to some degree this phenomenon has occurred in all of the recent ERCOT Transmission and Distribution Utility (TDU) rate cases. **Table 8** shows the impact under CenterPoint's proposed 4CP allocation factors.

Table 8
Change in 4CP Allocation Factors

Rate Class	Current	CenterPoint Proposed	Change
Residential	47.14%	46.65%	-1.0%
Secondary ≤ 10 kVA	1.15%	0.88%	-23.5%
Secondary > 10 kVA	35.87%	34.07%	-5.0%
Primary	3.62%	3.48%	-3.9%
Transmission	12.22%	14.92%	22.1%

Sources: Schedule II-H-1.3 and CenterPoint's March 2019 TCRF Filing (Docket No. 48933).

As demonstrated in **Table 8** the cost-shifts would range from negative 23.5% to 22.1%. These shifts are extreme and would result in rate shock.

Q WHY IS COST-SHIFTING OCCURRING?

A The cost-shifting can be attributed to (1) the almost nine years that have passed since CenterPoint's last rate case and (2) the Commission's TCRF Rule, which updates the

billing determinants used for transmission cost recovery but does ***not*** correspondingly update class allocation factors between base rate cases.[12]

Q HAS THE COMMISSION PREVIOUSLY CHANGED A UTILITY'S TCRF ALLOCATION FACTORS OUTSIDE OF A RATE CASE?

A Yes. However, this occurred only once since the revised TCRF Rule was adopted (in October 2010). The one occurrence was in Docket No. 44620 involving Sharyland Utilities. L.P. (Sharyland). The Commission approved changing the 4CP allocation factors because of significant changes in loads for some of Sharyland's rate classes.[13]

However, the Commission has not uniformly addressed this problem for other utilities with rate classes that have experienced disparate load growth. In the recent TNMP rate case, the Commission approved a stipulation that moved the TCRF allocators to cost in two installments rather than one.[14] This will continue to be a problem for all ERCOT TDUs whenever classes grow at different rates and should be uniformly addressed.

Q HOW CAN RATE SHOCK BE AVOIDED?

A Rate shock can be avoided by moderating the changes in the 4CP allocation factors. Adopting moderated 4CP allocation factors would appropriately temper what could

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[12] 16 T.A.C. § 25.193.

[13] *Application of Sharyland Utilities, L.P. to Revise its TCRF Class Allocation Factors and Request for Good Cause Exception from P.U.C. Subst. R. 25.193(c)*, Docket No. 44620, Order at 3-4 (Oct. 15, 2015).

[14] *Application of Texas-New Mexico Power Company to Change Rates*, Docket No. 48401, Order at FoF Nos. 85-89 (Dec. 20, 2018).

otherwise be massive cost-shifts resulting in very large delivery rate increases. These large increases are solely attributable to 16 T.A.C. § 25.193.

Q WOULD MODERATING THE INCREASES IN THE 4CPS BE CONTRARY TO THE COMMISSION'S POLICY OF SETTING DELIVERY RATES AT COST?

A No. The Commission's policy has always been to move rates closer to cost to the extent possible. However, there are unique problems created by the flaw in the current TCRF Rule when substantial time has elapsed between base rate cases. Classes should generally be moved to cost, but the rate shock in this case is caused ***solely*** by the operation of the Commission's TCRF Rule with the significant passage of time and the substantial load growth that certain customer classes have experienced. Thus, the issue is ripe for further consideration.

Even if the Commission were to approve moderation in this proceeding, this situation would be temporary because under recent changes to PURA, CenterPoint will have to file another rate case within four years. In that rate case the 4CP allocation factors would then be fully reset.

Q SHOULD THE COMMISSION TAKE ANY OTHER ACTION TO PREVENT THIS ISSUE FROM ARISING IN FUTURE RATE CASES?

A Yes. The Commission should reopen 16 T.A.C. § 25.193 to implement a more dynamic 4CP allocation formula. Alternatively, the Commission should consider adjusting future TCRF charges by an equal percentage until the 4CP allocation factors have been updated. This will avoid TCRF rates continuously decreasing for growing classes and then causing rate shock when they are reset.

Q WAS A PROPOSAL TO PERIODICALLY ADJUST THE 4CP ALLOCATION FACTORS RAISED AND REJECTED IN THE TCRF RULEMAKING?

A Yes. In Project No. 37909, when the Commission adopted the current version of 16 T.A.C. § 25.193, TIEC specifically requested to have the allocation factors updated in the TCRF updates to prevent the ***exact issue*** that has arisen in this proceeding and other recent TDU rate cases. TIEC noted the concern that if certain rate classes grow faster than others, freezing the allocation factors from the last rate case could result in large swings in TCRF charges in a future rate case because the existing TCRF rates do not reflect the portion of the wholesale transmission costs that each rate class is currently causing. As TIEC explained,

> ...the class allocator used for the TCRF formula should be amended to reflect the appropriate class allocations at the time of the TCRF update. This is necessary because some classes may grow much faster than others, which may result in classes paying more than their share of transmission charges if the class allocators are not updated.[15]

These circumstances have indeed occurred, and they are causing severe changes in delivery rates for some rate classes.

Q WHY DID THE COMMISSION REJECT TIEC'S PROPOSAL?

A In the Order adopting the current version of T.A.C. § 25.193, the Commission stated:

> As stated by the commission previously, DSPs essentially serve as billing and collection agents for passed-through TCRF costs and, under the commission's current rules, have no ability to avoid such costs or address and manage the regulatory lag that exists with respect to these costs. Therefore, the load growth adjustment advocated by TIEC would

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[15] *Rulemaking Proceeding to Amend PUC Subst. R. 25.193, Relating to Distribution Service Provider Transmission Cost Recovery Factors (TCRF),* Project No. 37909, Texas Industrial Energy Consumers' Comments on the Proposal for Publication at 5-6 (May 17, 2010).

> be inappropriate. In addition, changes to the class allocations would be inappropriate in a TCRF proceeding. ***As stated by the Joint DSPs, TIEC's proposal would require DSPs to calculate new allocation factors that would require the use of load research data that has not previously been reviewed by the commission, and consideration of these issues in a TCRF update could result in a contentious and time-consuming proceeding.***[16] (Emphasis added)

Q ARE THESE CONCERNS STILL VALID?

A No. The utilities have fully deployed advanced metering infrastructure (AMI). Thus, it should be not only possible but relatively easy to calculate each rate class's 4CP demand on an annual basis. This would avoid the concerns that the Commission expressed in Project No. 37909 that updating the TCRF allocation factors would make TCRF proceedings more contentious or more time-consuming.

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[16] *Id., Order Adopting Amendment to § 25.193 as Approved at the September 29, 2010 Open Meeting* at 18 (Oct. 5, 2010).

4. TRANSMISSION SERVICE FACILITY EXTENSIONS

Q WHAT DOES CENTERPOINT REQUIRE OF RETAIL CUSTOMERS THAT IT DETERMINES MUST RECEIVE DELIVERY SERVICE FROM THE TRANSMISSION VOLTAGE SYSTEM?

A Section 2.4 of CenterPoint's Construction Services Policy applies to the provision of delivery service from the transmission voltage system. The policy states:

> A Retail Customer whose load is of such magnitude or of such unusual characteristics that it cannot otherwise be economically served from Company's distribution system, as determined by Company, must receive electric service from the Company's high-voltage transmission system. ***The Retail Customer is responsible for all extension costs and providing all substation equipment, in accordance with the Company's specifications, both initially and from time to time thereafter, whenever changes in the Company's transmission system (including the transmission system's monitoring and protection devices) require such changes in the substation in order to maintain its compatibility with the Company's transmission system.*** The Retail Customer will comply with Company's operating standards. (Emphasis added)

Thus, a Transmission Service customer must pay for the entirety of the costs incurred by CenterPoint to extend its transmission voltage facilities. This is in contrast to a distribution service customer that would pay for the costs in excess of a standard allowance and, in some cases, might pay no additional costs for a facility extension.

Q IS CENTERPOINT PROPOSING ANY CHANGES TO THIS POLICY?

A No. CenterPoint is proposing to rename the policy "Transmission Service Facility Extensions." The new policy would appear in Section 2.3 of the tariff. Other than updating the specific language, CenterPoint's current policy (that requires a Transmission Service customer to pay for the entirety of the costs incurred by

CenterPoint to extend its transmission voltage facilities) would remain essentially unchanged.

Q HOW IS THE COST OF THE FACILITIES EXTENSION FOR A TRANSMISSION SERVICE CUSTOMER DETERMINED?

A The customer is required to enter into a Facilities Extension Agreement for Transmission Voltage Facilities (proposed Tariff Section 6.3.1.2). Under this Agreement, the customer must fund construction of (and agree to operate and maintain) a retail customer-owned substation to be constructed by CenterPoint. Also, the customer may enter into a Utility Construction Services Study Agreement (proposed Tariff Section 6.3.4.7) to determine the scope of any required construction services and a Utility Construction Services Agreement to formalize installing or extending the Transmission Voltage System to the customer's facility.

Q ARE THERE ANY COSTS INVOLVED WITH THESE STUDIES?

A Yes. The customer is responsible for making a Customer Upfront Payment to cover the cost of the Construction Services described in the Utility Construction Services Agreement. The Agreement states:

> 3. Customer Upfront Payment. ***Customer agrees to pay the cost of the Construction Services described in this Agreement. CenterPoint Energy estimates the cost of the Construction Services to be $_____ (the "Estimated Amount"). Customer shall pay the Estimated Amount to CenterPoint Energy prior to CenterPoint Energy's commencement of the Construction Services. CenterPoint Energy may revise the Estimated Amount at any time after receiving payment thereof based on Good Utility Practice, and Customer shall pay the revised Estimated Amount prior to CenterPoint Energy's commencement or continued***

> ***performance of the Construction Services.*** Customer's payment of the Estimated Amount is non-refundable.[17] (Emphasis added)

Because the Agreement must be signed prior to CenterPoint commencing construction, the customer has no opportunity to determine the reasonableness of CenterPoint's original cost estimate and any subsequent revisions. CenterPoint's Transmission Voltage Facility Extensions policy does allow the customer, at customer's expense, to audit the books and records of the company to verify the actual costs incurred by the company on the Project. However, such audit rights would expire one year after the project completion date.

Q DOES CENTERPOINT'S TRANSMISSION SERVICE FACILITY EXTENSIONS POLICY RAISE ANY CONCERNS?

A Yes. First, notwithstanding the customer's audit rights, there is no tariff provision that requires CenterPoint to refund any of the Upfront Payment if its actual construction costs is less than CenterPoint's estimated costs. A customer should have to pay for the actual construction costs, no more and no less.

Second, CenterPoint's Policy does not address the circumstance when customer-funded facilities are subsequently used to serve other customers.

Q DO OTHER UTILITY LINE EXTENSION POLICIES ADDRESS THE CIRCUMSTANCE WHEN A CUSTOMER-FUNDED FACILITY IS USED TO SERVE OTHER CUSTOMERS?

A Yes. Under the circumstance where a customer-funded facility is used to serve other

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[17] Direct Testimony of Matthew A. Troxle, Exhibit MAT-9 at 358 (Sheet No. A.1, page 9 of 11).

customers within a few years, a utility may charge a portion of the customer's Upfront Payment to the new customer(s) and to refund that amount to the customer that provided the project funding. For example, Entergy Texas Inc. (ETI) provides the following in Section II(B)(6) of its Electric Extension Policy:

> If the Company is reimbursed more than $10,000,000 (including all applicable tax gross-up costs) by a Customer per Section II Paragraph (B)(1) above, and more large commercial or industrial customers are served by the New Facilities within a four-year period following Construction as defined in Section II Paragraph (B)(1) above, then the initial Customer that reimbursed the Company shall be entitled to receive a prorated refund of the reimbursement for common facilities (a) when additional large commercial or industrial customers execute an agreement for electric service within the four-year period following Construction as defined in Section II Paragraph (B)(1), and, (b) upon fulfillment of the refund process described in Section II Paragraph (B)(7) below. The Company will collect the full amount identified in Section II Paragraph (B)(1) above from the initial Customer.[18]

Q WHAT DO YOU RECOMMEND?

A The Commission should require CenterPoint to make two changes to its Transmission Service Facility Extensions policy. First, CenterPoint should be required to refund any Upfront Payment in excess of the actual cost of a Transmission Voltage extension. Second, CenterPoint should be required to provide a further refund in the event that the facilities originally funded by the customer are subsequently used to serve other customers irrespective of the completion date. No customer should have to subsidize the facilities that are used to serve other customers, particularly in this instance when a Transmission Service customer is obligated to pay the entirety of the costs of receiving delivery service at a transmission voltage. Requiring a partial refund of the Upfront Payment would help to provide a more balanced policy.

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[18] Entergy Texas, Inc., Section IV Rules and Regulations, Sheet No. 18B, Extension Policy (Eff. Date Oct. 17, 2018).

5. CONCLUSION

Q WHAT FINDINGS SHOULD THE COMMISSION MAKE BASED ON YOUR DIRECT TESTIMONY?

A The Commission should make the following findings:

- Reject CenterPoint's proposed 4CP allocation factors and reset the 4CP allocation factors based on each class's actual demand coincident with the ERCOT 4CPs during the test year.
- Apply the Direct method of allocating MFF on a city-by-city basis to recognize the widely varying MFF rates established by each city, thereby eliminating MFF cross-subsidies between cities.
- Retain the status quo on the design of the Transmission Service rate.
- Set the TSC of each delivery rate schedule to zero.
- Collect all pro-forma test-year wholesale transmission costs in the TCRF.
- Apply moderation in resetting the 4CPs when necessary to avoid rate shock due to the flaws in the existing Commission rule.
- Reopen 16 T.A.C. § 25.193 to allow for periodic changes in the 4CP allocation factors.
- Revise CenterPoint's proposed Transmission Service Facility Extensions policy by requiring CenterPoint to refund any Upfront Payment in excess of the actual cost of a Transmission Voltage extension and to provide a further refund in the event that the facilities originally funded by the customer are subsequently used to serve other customers irrespective of the completion date.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes.

APPENDIX A
Qualifications of Jeffry Pollock

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Jeffry Pollock. My business mailing address is 12647 Olive Blvd., Suite 585, St. Louis, Missouri 63141.

Q WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?

A I am an energy advisor and President of J. Pollock, Incorporated.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I have a Bachelor of Science Degree in Electrical Engineering and a Master's Degree in Business Administration from Washington University. I have also completed a Utility Finance and Accounting course.

Upon graduation in June 1975, I joined Drazen-Brubaker & Associates, Inc. (DBA). DBA was incorporated in 1972 assuming the utility rate and economic consulting activities of Drazen Associates, Inc., active since 1937. From April 1995 to November 2004, I was a managing principal at Brubaker & Associates (BAI).

During my career, I have been engaged in a wide range of consulting assignments including energy and regulatory matters in both the United States and several Canadian provinces. This includes preparing financial and economic studies of investor-owned, cooperative and municipal utilities on revenue requirements, cost of service and rate design, conducting site evaluations, advising clients on electric restructuring issues, assisting clients to procure and manage electricity in both competitive and regulated markets, developing and issuing requests for proposals

(RFPs), evaluating RFP responses and contract negotiation and developing and presenting seminars on electricity issues.

I have worked on various projects in over 20 states and several Canadian provinces, and have testified before the Federal Energy Regulatory Commission, the Ontario Energy Board, and the state regulatory commissions of Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New Mexico, New York, Ohio, Pennsylvania, South Carolina, Texas, Virginia, Washington, and Wyoming. I have also appeared before the City of Austin Electric Utility Commission, the Board of Public Utilities of Kansas City, Kansas, the Board of Directors of the South Carolina Public Service Authority (a.k.a. Santee Cooper), the Bonneville Power Administration, Travis County (Texas) District Court, and the U.S. Federal District Court.

Q PLEASE DESCRIBE J. POLLOCK, INCORPORATED.

A J.Pollock assists clients to procure and manage energy in both regulated and competitive markets. The J.Pollock team also advises clients on energy and regulatory issues. Our clients include commercial, industrial and institutional energy consumers. J.Pollock is a registered Class I aggregator in the State of Texas.

Testimony Filed in Regulatory Proceedings
by Jeffry Pollock

UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	48973	Direct	TX	Prudence of Solar PPAs, Imputed Capacity, treatment of margins from Off-System Sales	5/21/2019
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	20322	Rebuttal	MI	Classification of Distribution Mains, Allocation of Working Gas in Storage and Storage	4/29/2019
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	20322	Direct	MI	Class Cost-of-Service Study, Transportation Rate Design	4/5/2019
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	49042	Cross-Rebuttal	TX	Transmsision Cost Recovery Factor	3/21/2019
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	49057	Direct	TX	Transmsision Cost Recovery Factor	3/18/2019
DUKE ENERGY PROGRESS, LLC	Nucor Steel - South Carolina	2018-318-E	Direct	SC	Class Cost-of-Service Study, Class Revenue Allocation, LGS Rate Design, Depreciation Expense	3/4/2019
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc	18-037	Settlement	AR	Testimony in Support of Settlement	3/1/2019
ENERGY+ INC	Toyota Motor Manufacturing Canada	EB-2018-0028	Updated Evidence	ON	Class Cost-of-Service Study, Distribution and Standby Distribution Rate Design	2/15/2019
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	18-037	Direct	AR	Solar Energy Purchase Option Tariff	2/4/2019
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	48847	Direct	TX	Fuel Factor Formulas	1/11/2019
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc	18-037	Direct	AR	Solar Energy Purchase Option Tariff	1/10/2019
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	20165	Direct	MI	Integrated Resources Plan, Projected Rate Impact, Risk Assessment, Early Retirement of Coal Units; Financial Compensation Mechanism	10/15/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	20134	Rebuttal	MI	Class Cost-of-Service Study, Average Historical Profile, Distribution Cost Classification and Allocation, Rate Design	10/1/2018
ENERGY+ INC	Toyota Motor Manufacturing Canada	EB-2018-0028	Initial Evidence	ON	Class Cost-of-Service Study, Distribution and Standby Distribution Rate Design	9/27/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	20134	Direct	MI	Investment Recovery Mechanism, Litigation surcharge, Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	9/10/2018
KANSAS GAS AND ELECTRIC COMPANY	Occidental Chemical Corporation	18-KG&E-303-CON	Rebuttal	KS	Benefits of the Interruptible Load Provided in the Special Contract	8/29/2018
TEXAS-NEW MEXICO POWER COMPANY	Texas Industrial Energy Consumers	48401	Cross-Rebuttal	TX	4CP Moderation Adjustment	8/28/2018

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	48371	Cross-Rebuttal	TX	Class Cost-of-Service Study, Schedule FERC	8/16/2018
TEXAS-NEW MEXICO POWER COMPANY	Texas Industrial Energy Consumers	48401	Direct	TX	Tax Cuts and Jobs Act, Rider TCRF, 4CP Moderation Adjustment	8/13/2018
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2018-3000164	Surrebuttal	PA	Post Test-Year Adjustment, Tax Cuts and Jobs Act, Class Cost-of-Service Study, Distribution System Improvement Charge	8/8/2018
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	48371	Direct	TX	Revenue Requirements, Tax Cuts and Jobs Act, Riders	8/1/2018
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	48371	Direct	TX	Class Cost-of-Service Study, Firm, Interruptible and Standby Rate Design	8/1/2018
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2018-3000164	Rebuttal	PA	Class Cost-of-Service Study, Class Revenue Allocation	7/24/2018
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	48233	Cross-Rebuttal	TX	Allocation of TCJA reduction	7/19/2018
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	48233	Direct	TX	Allocation of TCJA reduction	7/5/2018
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2018-3000164	Direct	PA	Post Test-Year Adjustment, Tax Cuts and Jobs Act, Class Cost-of-Service Study, Class Revenue Allocation	6/26/2018
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	47527	Cross-Rebuttal	TX	Class Cost-of-Service Study, Revenue Allocation	5/22/2018
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	17-00255-UT	Rebuttal	NM	Class Cost-of-Service Study, Revenue Allocation	5/2/2018
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	17-041	Stipulation	AR	Support of Stipulation	4/27/2018
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	47527	Direct	TX	Present Base Revenues Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	4/25/2018
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	47527	Direct	TX	Tax Cuts and Jobs Act, SPP Transmission and Wheeling Costs, Depreciation Rate, LLPPAs, Imputed Capacity, Off-System Sales Margins	4/25/2018
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	17-00255-UT	Direct	NM	Class Cost-of-Service Study; Revenue Requirements, Revenue Allocation	4/13/2018
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	17-041	Surrebuttal	AR	Certificate of Convenience and Necessity	4/6/2018

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA POWER COMPANY AND WEST PENN POWER COMPANY	MEIUG, PICA and WPPII	2017-2637855 2017-2637857 2017-2637858 2017-2637866	Rebuttal	PA	Recovery of NITS Charges	3/22/2018
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	46936	2nd Supplemental Direct	TX	Support of Stipulation	3/2/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	18424	Direct	MI	Class Cost of Service	2/28/2018
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc	17-041	Direct	AR	Certificate of Convenience and Necessity	2/23/2018
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	47553	Direct	TX	Off-System Sales Margins, Renewable Energy Credits	2/20/2018
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	47461	2nd Supplemental Direct	TX	Certificate of Convenience and Necessity	2/7/2018
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	47461	Supplemental Direct	TX	Certificate of Convenience and Necessity	1/4/2018
CENTRAL HUDSON GAS & ELECTRIC	Multiple Intervenors	17-E-0459/G-0460	Rebuttal	NY	Electric and Gas Embedded Class Cost of Service, Class Revenue Allocation, Gas Rate Design; Revenue Decoupling Mechanism	12/18/2017
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	17-00044-UT	Supplemental Direct	NM	Support of Unanimous Comprehensive Stipulation	12/11/2017
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	47461	Direct	TX	Certificate of Convenience and Necessity	12/4/2017
CENTRAL HUDSON GAS & ELECTRIC	Multiple Intervenors	17-E-0459/G-0460	Direct	NY	Electric and Gas Embedded Class Cost of Service, Class Revenue Allocation, Customer Charges, Revenue Decoupling Mechanism, Carbon Program and EAM	11/21/2017
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	17-00044-UT	Direct	NM	Certificate of Convenience and Necessity	10/24/2017
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	46936	Cross-Rebuttal	TX	Certificate of Convenience and Necessity	10/23/2017
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	46936	Supplemental Direct	TX	Certificate of Convenience and Necessity	10/6/2017
KENTUCKY POWER COMPANY	Kentucky League of Cities	2017-00179	Direct	KY	Class Cost-of-Service Study; Class Revenue Allocation	10/3/2017
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	46936	Direct	TX	Certificate of Convenience and Necessity	10/2/2017
NIAGARA MOHAWK POWER CORP	Multiple Intervenors	17-E-0238 / 17-G-0239	Rebuttal	NY	Electric/Gas Embedded Class Cost of Service, Class Revenue Allocation, Electric/Gas Rate Design	9/15/2017

Appendix B

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	18322	Rebuttal	MI	Class Cost-of-Service Study, Rate Design	9/7/2017
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Water Large Users Group	R-2017-2595853	Rebuttal	PA	Rate Design	8/31/2017
NIAGARA MOHAWK POWER CORP	Multiple Intervenors	17-E-0238 / 17-G-0239	Direct	NY	Electric/Gas Embedded Class Cost of Service, Class Revenue Allocation, Electric/Gas Rate Design, Electric/Gas Rate Modifiers, AMI Cost Allocation	8/25/2017
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	18322	Direct	MI	Revenue Requirement, Class Cost-of-Service Study, Rate Design	8/10/2017
FLORIDA POWER & LIGHT COMPANY, DUKE ENERGY FLORIDA, LLC, AND TAMPA ELECTRIC COMPANY	Florida Industrial Power Users Group	170057	Direct	FL	Fuel Hedging Practices	8/10/2017
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	46449	Cross-Rebuttal	TX	Class Revenue Allocation and Rate Design	5/19/2017
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	46449	Direct	TX	Revenue Requirement, Class Cost-of-Service Study, Class Revenue Allocation and Rate Design	4/25/2017
KENTUCKY UTILITIES COMPANY	Kentucky League of Cities	2016-00370	Supplemental Direct	KY	Class Cost-of-Service Study, Class Revenue Allocation	4/14/2017
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	46416	Direct	TX	Certificate of Convenience and Necessity - Montgomery County Power Station	3/31/2017
SHARYLAND UTILITIES, L.P	Texas Industrial Energy Consumers	45414	Cross-Rebuttal	TX	Cost Allocation Issues, Class Revenue Allocation	3/16/2017
ENTERGY LOUISIANA, LLC	Occidental Chemical Corporation	U-34283	Direct*	LA	Approval to Construct Lake Charles Power Station	3/13/2017
LOUISVILLE GAS AND ELECTRIC COMPANY	Louisville/Jefferson Metro Government	2016-00371	Direct	KY	Revenue Requirement Issues, Class Cost-of-Service Study Electric/Gas; Class Revenue Allocation Electric/Gas	3/3/2017
KENTUCKY UTILITIES COMPANY	Kentucky League of Cities	2016-00370	Direct	KY	Revenue Requirement Issues, Class Cost-of-Service Study; Class Revenue Allocation	3/3/2017
SHARYLAND UTILITIES, L.P	Texas Industrial Energy Consumers	45414	Direct	TX	Class Cost-of-Service Study; Class Revenue Allocation, Rate Design, TCRF Allocation Factors, McAllen Division Deferrals	2/28/2017
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	46025	Direct	TX	Long-Term Purchased Power Agreements	12/12/2016

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	15-826	Surrebuttal	MN	Settlement, Cost-of-Service Study, Class Revenue Allocation, Interruptible Rates, Renew-A-Source	10/18/2016
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	15-826	Rebutal	MN	Class Cost-of-Service Study, Class Revenue Allocation	9/23/2016
VICTORY ELECTRIC COOPERATION ASSOCIATION, INC	Western Kansas Industrial Electric Consumers	16-VICE-494-TAR	Surrebuttal	KS	Formula-Based Rate Plan	9/22/2016
NATIONAL FUEL GAS DISTRIBUTION CORPORATION	Multiple Intervenors	16-G-0257	Rebuttal	NY	Embedded Class Cost of Service, Class Revenue Allocation, Rate Design	9/16/2016
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	45524	Cross-Rebuttal	TX	Class Cost-of-Service Study;	9/7/2016
METROPOLITAN EDISON COMPANY; PENNSYLVANIA ELECTRIC COMPANY AND WEST PENN POWER	MEIUG, PICA and WPPII	2016-2537349 2016-2537352 2016-2537359	Surrebuttal	PA	Post-Test Year Sales Adjustment; Class Cost-of-Service Study; Class Revenue Allocation; Rate Design	8/31/2016
VICTORY ELECTRIC COOPERATION ASSOCIATION, INC	Western Kansas Industrial Electric Consumers	16-VICE-494-TAR	Direct	KS	Formula-Based Rate Plan	8/30/2016
WESTERN COOPERATIVE ELECTRIC ASSOCIATION, INC	Western Kansas Industrial Electric Consumers	16-WSTE-496-TAR	Direct	KS	Formula-Based Rate Plan and Debt Service Payments	8/30/2016
NATIONAL FUEL GAS DISTRIBUTION CORPORATION	Multiple Intervenors	16-G-0257	Direct	NY	Embedded Class Cost of Service, Class Revenue Allocation, Rate Design	8/26/2016
METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY AND WEST PENN POWER	MEIUG, PICA and WPPII	2016-2537349 2016-2537352 2016-2537359	Rebuttal	PA	Class Cost-of-Service; Class Revenue Allocation	8/17/2016
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	45524	Direct	TX	Revenue Requirement, Class Cost-of-Service, Revenue Allocation; Rate Design	8/16/2016
METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY AND WEST PENN POWER	MEIUG, PICA and WPPII	2016-2537349 2016-2537352 2016-2537359	Direct	PA	Post-Test Year Sales Adjustment, Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	7/22/2016
FLORIDA POWER & LIGHT COMPANY	Florida Industrial Power Users Group	160021	Direct	FL	Multi-Year Rate Plan, Construction Work in Progress, Cost of Capital, Class Revenue Allocation, Class Cost-of-Service Study, Rate Design	7/7/2016
CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Gas Consumers, Inc	15-098-U	Supplemental	AR	Support for Settlement Stipulation	7/1/2016
MIDAMERICAN ENERGY COMPANY	Tech Customers	RPU-2016-0001	Direct	IA	Application of Advanced Ratemaking Principles to Wind XI	6/21/2016

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	15-826	Direct	MN	Class Cost-of-Service Study, Class Revenue Allocation, Multi-Year Rate Plan, Rate Design	6/14/2016
CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Gas Consumers, Inc	15-098-U	Surrebuttal	AR	Incentive Compensation, Class Cost-of-Service Study, Class Revenue Allocation, LCS-1 Rate Design	6/7/2016
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	15-00296-UT	Direct	NM	Support of Stipulation	5/13/2016
CHEYENNE LIGHT, FUEL AND POWER COMPANY	Dyno Nobel, Inc and HollyFrontier Cheyenne Refining LLC	20003-146-ET-15	Cross	WY	Large Power Contract Service Tariff	4/15/2016
CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Gas Consumers, Inc	15-098-U	Direct	AR	Incentive Compensation, Class Cost-of-Service Study, Class Revenue Allocation, Act 725, Formula Rate Plan	4/14/2016
CHEYENNE LIGHT, FUEL AND POWER COMPANY	Dyno Nobel, Inc. and HollyFrontier Cheyenne Refining LLC	20003-146-ET-15	Direct	WY	Large Power Contract Service Tariff	3/18/2016
ENTERGY LOUISIANA, LLC, ENTERGY GULF STATES LOUISIANA, L L C , AND ENTERGY LOUISIANA POWER, LLC	Occidental Chemical Corporation	U-33770	Cross-Answering	LA	Approval to Construct St Charles Power Station	2/26/2016
NORTHERN INDIANA PUBLIC SERVICE COMPANY	NLMK-Indiana	44688	Cross-Answering	IN	Cost-of-Service Study, Rider 775	2/16/2016
ENTERGY LOUISIANA, LLC, ENTERGY GULF STATES LOUISIANA, L L C., AND ENTERGY LOUISIANA POWER, LLC	Occidental Chemical Corporation	U-33770	Direct	LA	Approval to Construct St. Charles Power Station	1/21/2016
EL PASO ELECTRIC COMPANY	Freeport-McMoRan Copper & Gold, Inc	44941	Cross-Rebuttal	TX	Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	1/15/2016
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc.	15-015	Supplemental	AR	Support for Settlement Stipulation	12/31/2015
EL PASO ELECTRIC COMPANY	Freeport-McMoRan Copper & Gold, Inc	44941	Direct	TX	Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	12/11/2015
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	15-015	Surrebuttal	AR	Post-Test-Year Additions, Class Cost-of-Service Study, Class Revenue Allocation, Rate Design, Riders, Formula Rate Plan	11/24/2015
MID-KANSAS ELECTRIC COMPANY, LLC, PRAIRIE LAND ELECTRIC COOPERATIVE, INC , SOUTHERN PIONEER ELECTRIC COMPANY, THE VICTORY ELECTRIC COOPERATIVE ASSOCIATION, INC , AND WESTERN COOPERATIVE ELECTRIC ASSOCIATION, INC	Western Kansas Industrial Electric Consumers	16-MKEE-023	Direct	KS	Formula Rate Plan for Distribution Utility	11/17/2015
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	45084	Direct	TX	Transmission Cost Recovery Factor Revenue Increase	11/17/2015

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
GEORGIA POWER COMPANY	Georgia Industrial Group and Georgia Assocation of Manufacturers	39638	Direct	GA	Natural Gas Price Assumptions, IFR Mechanism, Seasonal FCR-24 Rates, Imputed Capacity	11/4/2015
NEW YORK STATE ELECTRIC & GAS CORPORATION and ROCHESTER GAS AND ELECTRIC CORPORATION	Multiple Intervenors	15-E-0283 15-G-0284 15-E-0285 15-G-0286	Rebuttal	NY	Electric and Gas Embedded Class Cost-of-Service Studies, Class Revenue Allocation	10/13/2015
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	15-015	Direct	AR	Post-Test-Year Additions, Class Cost-of-Service Study, Class Revenue Allocation, Rate Design, Riders, Formula Rate Plan	9/29/2015
NEW YORK STATE ELECTRIC & GAS CORPORATION and ROCHESTER GAS AND ELECTRIC CORPORATION	Multiple Intervenors	15-E-0283 15-G-0284 15-E-0285 15-G-0286	Direct	NY	Electric and Gas Embedded Class Cost-of-Service Studies, Class Revenue Allocation, Electric Rate Design	9/15/2015
SHARYLAND UTILITIES	Texas Industrial Energy Consumers	44620	Cross-Rebuttal	TX	Transmission Cost Recovery Factor Class Allocation Factors	9/8/2015
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc	14-118	Surrebuttal	AR	Proposed Acquisition of Union Power Station Power Block 2 and Cost Recovery	8/21/2015
SHARYLAND UTILITIES	Texas Industrial Energy Consumers	44620	Direct	TX	Transmission Cost Recovery Factor Class Allocation Factors	8/7/2015
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2015-2468981	Surrebuttal	PA	Class Cost-of-Service, Capacity Reservation Rider	8/4/2015
WESTAR ENERGY INC and KANSAS GAS & ELECTRIC CO	Occidental Chemical Corporation	15-WSEE-115-RTS	Cross-Answering	KS	Class Cost-of-Service Study, Revenue Allocation	7/22/2015
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2015-2468981	Rebuttal	PA	Class Cost-of-Service, Class Revenue Allocation, Rate Design, Capacity Reservation Rider, Revenue Decoupling	7/21/2015
SOUTHWEST ERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	15-00083	Direct	NM	Long-Term Purchased Power Agreements	7/10/2015
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	15-014	Surrebuttal	AR	Solar Power Purchase Agreement	7/10/2015
WESTAR ENERGY INC and KANSAS GAS & ELECTRIC CO	Occidental Chemical Corporation	15-WSEE-115-RTS	Direct	KS	Class Cost-of-Service and Electric Distrbution Grid Resiliency Program	7/9/2015
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	43958	Supplemental Direct	TX	Certificate of Need for Union Power Station Power Block 1	7/7/2015
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	14-118	Direct	AR	Proposed Acquisition of Union Power Station Power Block 2 and Cost Recovery	7/2/2015

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2015-2468981	Direct	PA	Class Cost-of-Service, Class Revenue Allocation, Rate Design, Capacity Reservation Rider	6/23/2015
ENTERGY ARKANSAS, INC	Arkansas Electric Energy Consumers, Inc	15-014-U	Direct	AR	Solar Power Purchase Agreement	6/19/2015
FLORIDA POWER & LIGHT COMPANY	Florida Industrial Power Users Group	150075	Direct	FL	Cedar Bay Power Purchase Agreement	6/8/2015
SOUTHWEST ERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	43695	Cross-Rebuttal	TX	Class Cost of Service Study, Class Revenue Allocation	6/8/2015
FLORIDA POWER AND LIGHT COMPANY, DUKE ENERGY FLORIDA, GULF POWER COMPANY, TAMPA ELECTRIC COMPANY	Florida Industrial Power Users Group	140226	Surrebuttal	FL	Opt-Out Provision	5/20/2015
SOUTHWEST ERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	43695	Direct	TX	Post-Test Year Adjustments, Weather Normalization	5/15/2015
SOUTHWEST ERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	43695	Direct	TX	Class Cost of Service Study, Class Revenue Allocation	5/15/2015
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	43958	Direct	TX	Certificate of Need for Union Power Station Power Block 1	4/29/2015
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	42370	Cross-Rebuttal	TX	Allocation and recovery of Municipal Rate Case Expenses and the proposed Rate-Case-Expense Surcharge Tariff	1/27/2015
WEST PENN POWER COMPANY	West Penn Power Industrial Intervenors	2014-2428742	Surrebuttal	PA	Class Cost-of-Service Study, Class Revenue Allocation, Large Commercial and Industrial Rate Design, Storm Damage Charge Rider	1/6/2015
PENNSYLVANIA ELECTRIC COMPANY	Penelec Industrial Customer Alliance	2014-2428743	Surrebuttal	PA	Class Cost-of-Service Study, Class Revenue Allocation, Large Commercial and Industrial Rate Design, Storm Damage Charge Rider	1/6/2015
METROPOLITAN EDISON COMPANY	Med-Ed Industrial Users Group	2014-2428745	Surrebuttal	PA	Class Cost-of-Service Study; Class Revenue Allocation, Large Commercial and Industrial Rate Design; Storm Damage Charge Rider	1/6/2015
WEST PENN POWER COMPANY	West Penn Power Industrial Intervenors	2014-2428742	Rebuttal	PA	Class Cost-of-Service Study, Class Revenue Allocation, Large Commercial and Industrial Rate Design, Storm Damage Charge Rider	12/18/2014
PENNSYLVANIA ELECTRIC COMPANY	Penelec Industrial Customer Alliance	2014-2428743	Rebuttal	PA	Class Cost-of-Service Study, Class Revenue Allocation, Large Commercial and Industrial Rate Design, Storm Damage Charge Rider	12/18/2014

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
METROPOLITAN EDISON COMPANY	Med-Ed Industrial Users Group	2014-2428745	Rebuttal	PA	Class Cost-of-Service Study, Class Revenue Allocation, Large Commercial and Industrial Rate Design, Storm Damage Charge Rider	12/18/2014
PUBLIC SERVICE COMPANY OF COLORADO	Colorado Healthcare Electric Coordinating Council	14AL-0660E	Cross	CO	Clean Air Clean Jobs Act Rider, Transmission Cost Adjustment	12/17/2014
WEST PENN POWER COMPANY	West Penn Power Industrial Intervenors	2014-2428742	Direct	PA	Class Cost-of-Service Study, Class Revenue Allocation, Rate Design, Partial Services Rider, Storm Damage Rider	11/24/2014
PENNSYLVANIA ELECTRIC COMPANY	Penelec Industrial Customer Alliance	2014-2428743	Direct	PA	Class Cost-of-Service Study, Class Revenue Allocation, Rate Design, Partial Services Rider, Storm Damage Rider	11/24/2014
METROPOLITAN EDISON COMPANY	Med-Ed Industrial Users Group	2014-2428745	Direct	PA	Class Cost-of-Service Study, Class Revenue Allocation, Rate Design, Partial Services Rider; Storm Damage Rider	11/24/2014
CENTRAL HUDSON GAS & ELECTRIC	Multiple Intervenors	14-E-0318 / 14-G-0319	Direct	NY	Class Cost-of-Service Study, Class Revenue Allocation (Electric)	11/21/2014
PUBLIC SERVICE COMPANY OF COLORADO	Colorado Healthcare Electric Coordinating Council	14AL-0660E	Direct	CO	Clean Air Clean Jobs Act Rider, Electric Commodity Adjustment Incentive Mechanism	11/7/2014
FLORIDA POWER AND LIGHT COMPANY	Florida Industrial Power Users Group	140001-E	Direct	FL	Cost-Effectiveness and Policy Issues Surrounding the Investment in Working Gas Production Facilities	9/22/2014
ROCKY MOUNTAIN POWER	Wyoming Industrial Energy Consumers	20000-446-ER14	Surrebuttal	WY	Class Cost-of-Service, Rule 12 (Line Extension Policy)	9/19/2014
INDIANA MICHIGAN POWER COMPANY	I&M Industrial Group	44511	Direct	IN	Clean Energy Solar Pilot Project, Solar Power Rider and Green Power Rider	9/17/2014
ROCKY MOUNTAIN POWER	Wyoming Industrial Energy Consumers	20000-446-ER14	Cross	WY	Class Cost-of-Service Study, Rule 12 Line Extension	9/5/2014
VARIOUS UTILITIES	Florida Industrial Power Users Group	140002-EI	Direct	FL	Energy Efficiency Cost Recovery Opt-Out Provision	9/5/2014
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	E-002/GR-13-868	Surrebuttal	MN	Nuclear Depreciation Expense, Monticello EPU/LCM Project, Class Cost-of-Service Study, Class Revenue Allocation, Fuel Clause Rider Reform, Rate Design	8/4/2014

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
ROCKY MOUNTAIN POWER	Wyoming Industrial Energy Consumers	20000-446-ER14	Direct	WY	Class Cost-of-Service Study, Rule 12 Line Extension	7/25/2014
DUKE ENERGY FLORIDA	NRG Florida, LP	140111 and 140110	Direct	FL	Cost-Effectiveness of Proposed Self Build Generating Projects	7/14/2014
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	E-002/GR-13-868	Rebuttal	MN	Class Cost-of-Service Study, Class Revenue Allocation	7/7/2014
PPL ELECTRIC UTILITIES CORPORATION	PP&L Industrial Customer Alliance	2013-2398440	Rebuttal	PA	Energy Efficiency Cost Recovery	7/1/2014
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	E-002/GR-13-868	Direct	MN	Revenue Requirements, Fuel Clause Rider, Class Cost-of-Service Study, Rate Design and Revenue Allocation	6/5/2014
PPL ELECTRIC UTILITIES CORPORATION	PP&L Industrial Customer Alliance	2013-2398440	Direct	PA	Energy Efficiency Cost Recovery	5/23/2014
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	42042	Direct	TX	Transmission Cost Recovery Factor	4/24/2014
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	41791	Cross	TX	Class Cost-of-Service Study and Rate Design	1/31/2014
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	41791	Direct	TX	Revenue Requirements, Fuel Reconciliation, Cost Allocation Issues, Rate Design Issues	1/10/2014
DUQUESNE LIGHT COMPANY	Duquesne Industrial Intervenors	R-2013-2372129	Supplemental Surrebuttal	PA	Class Cost-of-Sevice Study	12/13/2013
DUQUESNE LIGHT COMPANY	Duquesne Industrial Intervenors	R-2013-2372129	Surrebuttal	PA	Class Cost-of-Service Study, Cash Working Capital, Miscellaneous General Expense, Uncollectable Expense, Class Revenue Allocation	12/9/2013
DUQUESNE LIGHT COMPANY	Duquesne Industrial Intervenors	R-2013-2372129	Rebuttal	PA	Rate L Transmission Service; Class Revenue Allocation	11/26/2013
ENTERGY TEXAS, INC ITC HOLDINGS CORP.	Texas Industrial Energy Consumers	41850	Direct	TX	Rate Mitigation Plan, Conditions re Transfer of Control of Ownership	11/6/2013
SHARYLAND UTILITIES	Texas Inustrial Energy Consumers and Atlas Pipeline Mid-Continent WestTex, LLC	41474	Cross-Rebuttal	TX	Customer Class Definitions, Class Revenue Allocation, Allocation of TTC costs	11/4/2013
MIDAMERICAN ENERGY COMPANY	Deere & Company	RPU-2013-0004	Surrebuttal	IA	Class Cost-of-Service Study; Class Revenue Allocation, Depreciation Surplus	11/4/2013
DUQUESNE LIGHT COMPANY	Duquesne Industrial Intervenors	R-2013-2372129	Direct	PA	Class Cost-of-Service, Class Revenue Allocations	11/1/2013
PUBLIC SERVICE ENERGY AND GAS	New Jersey Large Energy Users Coalition	EO13020155 and GO13020156	Direct	NJ	Energy Strong	10/28/2013

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GEORGIA POWER COMPANY	Georgia Industrial Group and Georgia Association of Manufacturers	36989	Direct	GA	Depreciation Expense, Alternate Rate Plan, Return on Equity, Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	10/18/2013
SHARYLAND UTILITIES	Texas Inustrial Energy Consumers and Atlas Pipeline Mid-Continent WestTex, LLC	41474	Direct	TX	Regulatory Asset Cost Recovery, Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	10/18/2013
MIDAMERICAN ENERGY COMPANY	Deere & Company	RPU-2013-0004	Rebutal	IA	Class Cost-of-Service Study	10/1/2013
FLORIDA POWER AND LIGHT COMPANY	Florida Industrial Power Users Group	130007	Direct	FL	Environmental Cost Recovery Clause	9/13/2013
MIDAMERICAN ENERGY COMPANY	Deere & Company	RPU-2013-0004	Direct	IA	Class Cost-of-Service Study, Class Revenue Allocation, Depreciation, Cost Recovery Clauses, Revenue Sharing, Revenue True-up	9/10/2013
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	12-00350-UT	Rebuttal	NM	RPS Cost Rider	9/9/2013
WESTAR ENERGY INC and KANSAS GAS & ELECTRIC CO	Occidental Chemical Corporation	13-WSEE-629-RTS	Cross-Answering	KS	Cost Allocation Methodology	9/5/2013
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	12-00350-UT	Direct	NM	Class Cost-of-Service Study	8/22/2013
WESTAR ENERGY INC and KANSAS GAS & ELECTRIC CO	Occidental Chemical Corporation	13-WSEE-629-RTS	Direct	KS	Class Revenue Allocation	8/21/2013
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	41437	Direct	TX	Avoided Cost, Standby Rate Design	8/14/2013
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-699	Direct	KS	Class Revenue Allocation	8/12/2013
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-447	Supplemental	KS	Testimony in Support of Settlement	8/9/2013
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-447	Supplemental	KS	Modification Agreement	7/24/2013
TAMPA ELECTRIC COMPANY	Florida Industrial Power Users Group	130040	Direct	FL	GSD-IS Consolidation, GSD and IS Rate Design, Class Cost-of-Service Study, Planned Outage Expense, Storm Damage Expense	7/15/2013
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-452	Supplemental	KS	Testimony in Support of Nonunanimous Settlement	6/28/2013
JERSEY CENTRAL POWER & LIGHT COMPANY	Gerdau Ameristeel Sayreville, Inc	ER12111052	Direct	NJ	Cost of Service Study for GT-230 KV Customers, AREP Rider	6/14/2013
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-447	Direct	KS	Wholesale Requirements Agreement, Process for Exemption From Regulation, Conditions Required for Public Interest Finding on CCN spin-down	5/14/2013

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-452	Cross	KS	Formula Rate Plan for Distribution Utility	5/10/2013
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	13-MKEE-452	Direct	KS	Formula Rate Plan for Distribution Utility	5/3/2013
ENTERGY TEXAS, INC ITC HOLDINGS CORP	Texas Industrial Energy Consumers	41223	Direct	TX	Public Interest of Proposed Divestiture of ETI's Transmission Business to an ITC Holdings Subsidiary	4/30/2013
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	12-961	Surrebuttal	MN	Depreciation, Used and Useful, Cost Allocation, Revenue Allocation	4/12/2013
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	12-961	Rebuttal	MN	Class Revenue Allocation	3/25/2013
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	12-961	Direct	MN	Depreciation, Used and Useful, Property Tax, Cost Allocation, Revenue Allocation, Competitive Rate & Property Tax Riders	2/28/2013
ENTERGY TEXAS, INC.	Texas Industrial Energy Consumers	38951	Second Supplemental Rebuttal	TX	Competitive Generation Service Tariff	2/1/2013
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	38951	Second Supplemental Direct	TX	Competitive Generation Service Tariff	1/11/2013
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	40443	Cross Rebuttal	TX	Cost Allocation and Rate Design	1/10/2013
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	40443	Direct	TX	Application of the Turk Plant Cost-Cap, Revenue Requirements, Class Cost-of-Service Study, Class Revenue Allocation, Industrial Rate Design	12/10/2012
FLORIDA POWER AND LIGHT COMPANY	Florida Industrial Power Users Group	120015	Corrected Supplemental Rebuttal	FL	Support for Non-Unanimous Settlement	11/13/2012
FLORIDA POWER AND LIGHT COMPANY	Florida Industrial Power Users Group	120015	Corrected Supplemental Direct	FL	Support for Non-Unanimous Settlement	11/13/2012
NIAGARA MOHAWK POWER CORP	Multiple Intervenors	12-E-0201/12-G-0202	Rebuttal	NY	Electric and Gas Class Cost-of-Service Studies	9/25/2012
NIAGARA MOHAWK POWER CORP	Multiple Intervenors	12-E-0201/12-G-0202	Direct	NY	Electric and Gas Class Cost-of-Service Study; Revenue Allocation; Rate Design; Historic Demand	8/31/2012
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	12-MKEE-650-TAR	Direct	KS	Transmission Formula Rate Plan	7/31/2012
WESTAR ENERGY INC and KANSAS GAS & ELECTRIC CO	Occidental Chemical Corporation	12-WSEE-651-TAR	Direct	KS	TDC Tariff	7/30/2012
FLORIDA POWER AND LIGHT COMPANY	Florida Industrial Power Users Group	120015	Direct	FL	Class Cost-of-Service Study, Revenue Allocation, and Rate Design	7/2/2012
LONE STAR TRANSMISSION, LLC	Texas Industrial Energy Consumers	40020	Direct	TX	Revenue Requirement, Rider AVT	6/21/2012

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	39896	Cross	TX	Class Cost-of-Service Study, Revenue Allocation, and Rate Design	4/13/2012
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	39896	Direct	TX	Revenue Requirements, Class Cost-of-Service Study, Revenue Allocation, and Rate Design	3/27/2012
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	38951	Supplemental Rebuttal	TX	Competitive Generation Service Issues	2/24/2012
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	38951	Supplemental Direct	TX	Competitive Generation Service Issues	2/10/2012
AEP TEXAS CENTRAL COMPANY	Texas Industrial Energy Consumers	39722	Direct	TX	Carrying Charge Rate Applicable to the Additional True-Up Balance and Tax Balances	11/4/2011
GULF POWER COMPANY	Florida Industrial Power Users Group	110138-EI	Direct	FL	Cost Allocation and Storm Reserve	10/14/2011
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Texas Industrial Energy Consumers	39504	Direct	TX	Carrying Charge Rate Applicable to the Additional True-Up Balance and Taxes	9/12/2011
AEP TEXAS NORTH COMPANY	Texas Industrial Energy Consumers	39361	Cross-Rebuttal	TX	Energy Efficiency Cost Recovery Factor	8/10/2011
AEP TEXAS CENTRAL COMPANY	Texas Industrial Energy Consumers	39360	Cross-Rebuttal	TX	Energy Efficiency Cost Recovery Factor	8/10/2011
ONCOR ELECTRIC DELIVERY COMPANY, LLC	Texas Industrial Energy Consumers	39375	Direct	TX	Energy Efficiency Cost Recovery Factor	8/2/2011
ALABAMA POWER COMPANY	Alabama Industrial Energy Consumers	31653	Direct	AL	Renewable Purchased Power Agreement	7/28/2011
AEP TEXAS NORTH COMPANY	Texas Industrial Energy Consumers	39361	Direct	TX	Energy Efficiency Cost Recovery Factor	7/26/2011
AEP TEXAS CENTRAL COMPANY	Texas Industrial Energy Consumers	36360	Direct	TX	Energy Efficiency Cost Recovery Factor	7/20/2011
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	39366	Direct	TX	Energy Efficiency Cost Recovery Factor	7/19/2011
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Texas Industrial Energy Consumers	39363	Direct	TX	Energy Efficiency Cost Recovery Factor	7/15/2011
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	E002/GR-10-971	Surrebuttal	MN	Depreciation; Non-Asset Margin Sharing, Step-In Increase; Class Cost-of-Service Study, Class Revenue Allocation, Rate Design	5/26/2011
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	E002/GR-10-971	Rebuttal	MN	Classification of Wind Investment	5/4/2011

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	E002/GR-10-971	Direct	MN	Surplus Depreciation Reserve, Incentive Compensation, Non-Asset Trading Margin Sharing, Cost Allocation, Class Revenue Allocation, Rate Design	4/5/2011
ROCKY MOUNTAIN POWER	Wyoming Industrial Energy Consumers	20000-381-EA-10	Direct	WY	2010 Protocols	2/11/2011
TEXAS-NEW MEXICO POWER COMPANY	Texas Industrial Energy Consumers	38480	Direct	TX	Cost Allocation, TCRF	11/8/2010
GEORGIA POWER COMPANY	Georgia Industrial Group/Georgia Traditional Manufacturers Group	31958	Direct	GA	Alternate Rate Plan, Return on Equity, Riders, Cost-of-Service Study, Revenue Allocation, Economic Development	10/22/2010
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Texas Industrial Energy Consumers	38339	Cross-Rebuttal	TX	Cost Allocation, Class Revenue Allocation	9/24/2010
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Texas Industrial Energy Consumers	38339	Direct	TX	Pension Expense, Surplus Depreciation Reserve, Cost Allocation, Rate Design, Riders	9/10/2010
NIAGARA MOHAWK POWER CORP	Multiple Intervenors	10-E-0050	Rebuttal	NY	Multi-Year Rate Plan, Cost Allocation, Revenue Allocation, Reconciliation Mechanisms, Rate Design	8/6/2010
NIAGARA MOHAWK POWER CORP	Multiple Intervenors	10-E-0050	Direct	NY	Multi-Year Rate Plan, Cost Allocation, Revenue Allocation, Reconciliation Mechanisms, Rate Design	7/14/2010
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	37744	Cross Rebuttal	TX	Cost Allocation, Revenue Allocation, CGS Rate Design, Interruptible Service	6/30/2010
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	37744	Direct	TX	Class Cost of Service Study, Revenue Allocation, Rate Design, Competitive Generation Services, Line Extension Policy	6/9/2010
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	37482	Cross Rebuttal	TX	Allocation of Purchased Power Capacity Costs	2/3/2010
GEORGIA POWER COMPANY	Georgia Industrial Group/Georgia Traditional Manufacturers Group	28945	Direct	GA	Fuel Cost Recovery	1/29/2010
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	37482	Direct	TX	Purchased Power Capacity Cost Factor	1/22/2010
VIRGINIA ELECTRIC AND POWER COMPANY	MeadWestvaco Corporation	PUE-2009-00081	Direct	VA	Allocation of DSM Costs	1/13/2010
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	37580	Direct	TX	Fuel refund	12/4/2009
VIRGINIA ELECTRIC AND POWER COMPANY	MeadWestvaco Corporation	PUE-2009-00019	Direct	VA	Standby rate design, dynamic pricing	11/9/2009
VIRGINIA ELECTRIC AND POWER COMPANY	MWV	PUE-2009-00019	Direct	VA	Base Rate Case	11/9/2009

Appendix B

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	37135	Direct	TX	Transmission cost recovery factor	10/22/2009
MID-KANSAS ELECTRIC COMPANY, LLC	Western Kansas Industrial Electric Consumers	09-MKEE-969-RTS	Direct	KS	Revenue requirements, TIER, rate design	10/19/2009
VARIOUS UTILITIES	Florida Industrial Power Users Group	090002-EG	Direct	FL	Interruptible Credits	10/2/2009
ONCOR ELECTRIC DELIVERY COMPANY	Texas Industrial Energy Consumers	36958	Cross Rebuttal	TX	2010 Energy efficiency cost recovery factor	8/18/2009
PROGRESS ENERGY FLORIDA	Florida Industrial Power Users Group	90079	Direct	FL	Cost-of-service study, revenue allocation, rate design, depreciation expense, capital structure	8/10/2009
CENTERPOINT	Texas Industrial Energy Consumers	36918	Cross Rebuttal	TX	Allocation of System Restoration Costs	7/17/2009
FLORIDA POWER AND LIGHT COMPANY	Florida Industrial Power Users Group	080677	Direct	FL	Depreciation; class revenue allocation; rate design, cost allocation, and capital structure	7/16/2009
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	36956	Direct	TX	Approval to revise energy efficiency cost recovery factor	7/16/2009
VARIOUS UTILITIES	Florida Industrial Power Users Group	VARIOUS DOCKETS	Direct	FL	Conservation goals	7/6/2009
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	36931	Direct	TX	System restoration costs under Senate Bill 769	6/30/2009
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	36966	Direct	TX	Authority to revise fixed fuel factors	6/18/2009
TEXAS-NEW MEXICO POWER COMPANY	Texas Industrial Energy Consumers	36025	Cross-Rebuttal	TX	Cost allocatiion, revenue allocation and rate design	6/10/2009
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	08-1065	Surrebuttal	MN	Cost allocation, revenue allocation, rate design	5/27/2009
TEXAS-NEW MEXICO POWER COMPANY	Texas Industrial Energy Consumers	36025	Direct	TX	Cost allocation, revenue allocation, rate design	5/27/2009
VIRGINIA ELECTRIC AND POWER COMPANY	MeadWestvaco Corporation	PUE-2009-00018	Direct	VA	Transmission cost allocation and rate design	5/20/2009
NORTHERN INDIANA PUBLIC SERVICE COMPANY	Beta Steel Corporation	43526	Direct	IN	Cost allocation and rate design	5/8/2009
ENTERGY SERVICES, INC	Texas Industrial Energy Consumers	ER008-1056	Rebuttal	FERC	Rough Production Cost Equalization payments	5/7/2009
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	08-1065	Rebuttal	MN	Class revenue allocation and the classification of renewable energy costs	5/5/2009
NORTHERN STATES POWER COMPANY	Xcel Large Industrials	08-1065	Direct	MN	Cost-of-service study, class revenue allocation, and rate design	4/7/2009
ENTERGY SERVICES, INC	Texas Industrial Energy Consumers	ER08-1056	Answer	FERC	Rough Production Cost Equalization payments	3/6/2009

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
ROCKY MOUNTAIN POWER	Wyoming Industrial Energy Consumers	20000-333-ER-08	Direct	WY	Cost of service study, revenue allocation, inverted rates, revenue requirements	1/30/2009
ENTERGY SERVICES	Texas Industrial Energy Consumers	ER08-1056	Direct	FERC	Entergy's proposal seeking Commission approval to allocate Rough Production Cost Equalization payments	1/9/2009
ONCOR ELECTRIC DELIVERY COMPANY & TEXAS ENERGY FUTURE HOLDINGS LTD	Texas Industrial Energy Consumers	35717	Cross Rebuttal	TX	Retail transformation, cost allocation, demand ratchet waivers, transmission cost allocation factor	12/24/2008
GEORGIA POWER COMPANY	Georgia Industrial Group and Georgia Traditional Manufacturers Association	27800	Direct	GA	Cash Return on CWIP associated with the Plant Vogtle Expansion	12/19/2008
TAMPA ELECTRIC COMPANY	The Florida Industrial Power Users Group and Mosaic Company	080317-EI	Direct	FL	Revenue Requirements, retail class cost of service study, class revenue allocation, firm and non firm rate design and the Transmission Base Rate Adjustment	11/26/2008
ONCOR ELECTRIC DELIVERY COMPANY & TEXAS ENERGY FUTURE HOLDINGS LTD	Texas Industrial Energy Consumers	35717	Direct	TX	Revenue Requirement, class cost of service study, class revenue allocation and rate design	11/26/2008
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	35763	Supplemental Direct	TX	Recovery of Energy Efficiency Costs	11/6/2008
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	35763	Cross-Rebuttal	TX	Cost Allocation, Demand Ratchet, Renewable Energy Certificates (REC)	10/28/2008
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	35763	Direct	TX	Revenue Requirements, Fuel Reconciliation Revenue Allocation, Cost-of-Service and Rate Design Issues	10/13/2008
ALABAMA POWER COMPANY	Alabama Industrial Energy Consumers	18148	Direct	AL	Energy Cost Recovery Rate (WITHDRAWN)	9/16/2008
ENTERGY TEXAS, INC	Texas Industrial Energy Consumers	35269	Direct	TX	Allocation of rough production costs equalization payments	7/9/2008
ENTERGY GULF STATES UTILITIES, TEXAS	Texas Industrial Energy Consumers	34800	Direct	TX	Non-Unanimous Stipulation	6/11/2008
TEXAS PUC STAFF	Texas Industrial Energy Consumers	33672	Supplemental Rebuttal	TX	Transmission Optimization and Ancillary Services Studies	6/3/2008
TEXAS PUC STAFF	Texas Industrial Energy Consumers	33672	Supplemental Direct	TX	Transmission Optimization and Ancillary Services Studies	5/23/2008
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	33891	Supplemental Cross Rebuttal	TX	Certificate of Convenience and Necessity	5/21/2008
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	33891	Supplemental Direct	TX	Certificate of Convenience and Necessity	5/8/2008

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UTILITY	ON BEHALF OF	DOCKET	TYPE	STATE / PROVINCE	SUBJECT	DATE
ENTERGY GULF STATES UTILITES, TEXAS	Texas Industrial Energy Consumers	34800	Cross-Rebuttal	TX	Cost Allocation and Rate Design and Competitive Generation Service	4/18/2008
GEORGIA POWER COMPANY	Georgia Industrial Group/Georgia Traditional Manufacturers Group	26794	Direct	GA	Fuel Cost Recovery	4/15/2008
TEXAS-NEW MEXICO POWER COMPANY	Texas Industrial Energy Consumers	35038	Rebuttal	TX	Over $5 Billion Compliance Filing	4/14/2008
ENTERGY GULF STATES UTILITES, TEXAS	Texas Industrial Energy Consumers	34800	Direct	TX	Eligible Fuel Expense	4/11/2008
ENTERGY GULF STATES UTILITES, TEXAS	Texas Industrial Energy Consumers	34800	Direct	TX	Competitve Generation Service Tariff	4/11/2008
ENTERGY GULF STATES UTILITES, TEXAS	Texas Industrial Energy Consumers	34800	Direct	TX	Revenue Requirements	4/11/2008
ENTERGY GULF STATES UTILITES, TEXAS	Texas Industrial Energy Consumers	34800	Direct	TX	Cost of Service study, revenue allocation, design of firm, interruptible and standby service tariffs, interconnection costs	4/11/2008
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	07-00319-UT	Rebuttal	NM	Revenue requirements, cost of service study, rate design	3/28/2008
AEP TEXAS CENTRAL COMPANY	Texas Industrial Energy Consumers	35105	Direct	TX	Over $5 Billion Compliance Filing	3/24/2008
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Texas Industrial Energy Consumers	32902	Direct	TX	Over $5 Billion Compliance Filing	3/20/2008
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd	07-00319-UT	Direct	NM	Revenue requirements, cost of service study (COS), rate design	3/7/2008

APPENDIX C

Procedures for Conducting A Class Cost-of-Service Study

Q WHAT PROCEDURES ARE USED IN A COST-OF-SERVICE STUDY?

A The basic procedure for conducting a class cost-of-service study is fairly simple. First, we identify the different types of costs (functionalization), determine their primary causative factors (classification), and then apportion each item of cost among the various rate classes (allocation). Adding up the individual pieces gives the total cost for each class.

Identifying the utility's different levels of operation is a process referred to as functionalization. The utility's investments and expenses are separated into transmission, distribution, and other functions. To a large extent, this is done in accordance with the Uniform System of Accounts developed by the Federal Energy Regulatory Commission (FERC).

Once costs have been functionalized, the next step is to identify the primary causative factor (or factors). This step is referred to as classification. Costs are classified as demand-related or customer-related. Demand (or capacity) related costs vary with peak demand, which is measured in kilowatts (or kW). This includes transmission, and some distribution investment and related fixed operation and maintenance (O&M) expenses. As explained later, peak demand determines the amount of capacity needed for reliable service. Customer-related costs vary directly with the number of customers and include expenses such as meters, service drops, billing, and customer service.

Each functionalized and classified cost must then be allocated to the various customer classes. This is accomplished by developing allocation factors that reflect

the percentage of the total cost that should be paid by each class. The allocation factors should reflect cost-causation; that is, the degree to which each class caused the utility to incur the cost.

Q WHAT KEY PRINCIPLES ARE RECOGNIZED IN A CLASS COST-OF-SERVICE STUDY?

A A properly conducted class cost-of-service study recognizes two key cost-causation principles. First, customers are served at different delivery voltages. This affects the amount of investment the utility must make to deliver electricity to the meter. Not all customers take service at the same delivery voltage. As explained later, the utility incurs different costs to provide service at each of the various delivery voltages.

Second, since cost-causation is also related to how electricity is used, both the timing and rate of energy consumption (*i.e.*, demand) are critical. Because electricity cannot be stored for any significant time period, a utility must construct the required transmission and distribution facilities to meet the maximum projected demand.

Q WHAT FACTORS CAUSE THE PER-UNIT COSTS TO DIFFER AMONG CUSTOMER CLASSES?

A Factors that affect the per-unit cost include whether a customer's usage is constant or fluctuating (load factor), whether the utility must invest in transformers and distribution systems to provide the electricity at lower voltage levels, and the amount of electricity that a customer uses. In general, delivery service to industrial customers is less costly on a per-unit basis because they:

- Operate at higher load factors;
- Take service at higher delivery voltages; and
- Use more electricity per customer.

This explains why some customers pay lower average delivery rates than others.

For example, the difference in the losses incurred to deliver electricity at the various delivery voltages is a reason why the per-unit energy cost to serve is not the same for all customers. More losses occur to deliver electricity at distribution voltage (either primary or secondary) than at transmission voltage, which is generally the level at which most industrial customers take service. This means that the cost per kWh is lower for a transmission customer than a distribution customer. The cost to deliver a kWh at primary distribution, though higher than the per-unit cost at transmission, is lower than the delivered cost at secondary distribution.

In addition to lower losses, transmission customers do not use the distribution system. Instead, transmission customers construct and own their own distribution systems. Thus, distribution system costs are not allocated to transmission level customers who do not use that system. Distribution customers, by contrast, require substantial investments in these lower voltage facilities to provide service. For example, customers taking service directly from a transmission substation have paid for their own primary delivery costs and should not be allocated any primary distribution costs. Secondary distribution customers require more investment than do primary distribution customers. This results in a different cost to serve each type of customer.

Two other cost drivers are efficiency and size. These drivers are important because most fixed costs are allocated on either a demand or customer basis.

Efficiency can be measured in terms of load factor. Load factor is the ratio of average demand (*i.e.*, energy usage divided by the number of hours in the period) to peak demand. A customer that operates at a high load factor is more efficient than a

lower load factor customer because it requires less capacity for the same amount of energy. For example, assume that two customers purchase the same amount of energy, but one customer has an 80% load factor and the other has a 40% load factor. The 40% load factor customers would have twice the peak demand of the 80% load factor customers, and the utility would therefore require twice as much capacity to serve the 40% load factor customer as the 80% load factor. Said differently, the fixed costs to serve a high load factor customer are spread over more kWh usage than for a low load factor customer.

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Derivation of the TCRF Allocation Factors
Test Year Ended December 31, 2018

Line	Month	Total	Residential (RS)	Secondary Voltage Small (SVS-Non IDR)	Secondary Voltage Small (SVS-IDR)	Secondary Voltage Large (SVL-Non IDR)	Secondary Voltage Large (SVL-IDR)
		(1)	(2)	(3)	(4)	(5)	(6)
Unadjusted Coincident Peak Demand at the Time of the ERCOT Peak @ Source							
1	**January**	13,687.04	6,208.03	148.24	0.01	2,868.58	1,747.64
2	**February**	12,065.60	4,377.80	131.06	0.02	2,635.29	1,963.37
3	**March**	12,156.32	4,256.12	106.19	0.01	2,669.01	2,053.45
4	**April**	12,807.72	4,862.88	111.53	0.01	2,656.14	1,973.65
5	**May**	17,444.14	8,074.72	138.74	0.01	3,482.17	2,388.89
6	**June**	**17,026.22**	**8,197.93**	**141.51**	**0.01**	**3,571.16**	**2,313.05**
7	**July**	**17,810.96**	**8,652.68**	**146.18**	**0.01**	**3,662.99**	**2,332.73**
8	**August**	**17,666.91**	**8,411.54**	**146.58**	**0.01**	**3,702.51**	**2,419.12**
9	**September**	**16,893.51**	**7,777.78**	**145.10**	**0.01**	**3,634.35**	**2,435.49**
10	**October**	15,793.04	6,779.88	137.71	0.01	3,350.50	2,331.08
11	**November**	12,395.30	4,814.77	129.50	0.01	2,664.91	1,920.17
12	**December**	11,402.33	3,937.59	118.16	0.01	2,427.71	1,896.84
13	**Annual**	177,149.09	76,351.74	1,600.50	0.14	37,325.32	25,775.47
4CP Allocation Factors							
14	4CP at ERCOT Peak	**69,397.60**	**33,039.94**	**579.37**	**0.05**	**14,571.01**	**9,500.38**
15	4CP Allocation Factors	100.000%	47.610%	0.835%	0.000%	20.996%	13.690%

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Derivation of the TCRF Allocation Factors
Test Year Ended December 31, 2018

Line	Month	Primary Voltage Service (PVS-Non IDR)	Primary Voltage Service (PVS-IDR)	Transmission Voltage Service (TVS)	Miscellaneous Lighting Service (MLS)	Street Lighting Service (SLS)
		(7)	(8)	(9)	(10)	(11)
Unadjusted Coincident Peak Demand at the Time of the ERCOT Peak @ Source						
1	**January**	49.51	400.60	2,264.42	-	-
2	**February**	44.72	495.31	2,418.02	-	-
3	**March**	38.17	516.15	2,517.22	-	-
4	**April**	39.83	511.71	2,651.97	-	-
5	**May**	50.79	573.72	2,735.10	-	-
6	**June**	**51.01**	**548.96**	**2,202.58**	-	-
7	**July**	**54.02**	**545.68**	**2,416.66**	-	-
8	**August**	**54.41**	**508.57**	**2,424.16**	-	-
9	**September**	**53.76**	**549.68**	**2,297.34**	-	-
10	**October**	48.61	553.51	2,591.75	-	-
11	**November**	48.10	468.82	2,349.02	-	-
12	**December**	40.62	447.50	2,533.91	-	-
13	**Annual**	573.55	6,120.22	29,402.14	-	-
4CP Allocation Factors						
14	4CP at ERCOT Peak	**213.20**	**2,152.90**	**9,340.74**	**-**	**-**
15	4CP Allocation Factors	0.307%	3.102%	13.460%	0.000%	0.000%

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Revised TCOS Allocation and TCRF Charge
Test Year Ended December 31, 2018

Line	Rate Class	CEHE Share of ERCOT TCOS	ERCOT 4CP Allocators	Class TCOS	Billing Determinants*	TCRF Charge	Charge Type (KW, kWh)
		(1)	(2)	(3)	(4)	(5)	(6)
1	Residential	$942,402,945	47.61%	$448,674,623	30,568,694,098	$0.01468	kWh
2	Secondary <=10 KVA	$942,402,945	0.83%	$7,868,377	925,816,188	$0.00850	kWh
3	Secondary >10 KVA	$942,402,945	34.69%	$326,883,820			
4	IDR		39.46%	$129,003,585	31,267,565	$4.126	4CP kVA
5	Non-IDR		60.54%	$197,880,235	72,294,862	$2.737	NCP kVA
6	Primary	$942,402,945	3.41%	$32,131,056			
7	IDR		91.37%	$29,358,455	7,443,879	$3.944	4CP kVA
8	Non-IDR		8.63%	$2,772,601	1,040,920	$2.664	NCP kVA
9	Transmission	$942,402,945	13.46%	$126,845,069	29,729,170	$4.267	4CP kVA
10	Lighting - SLS	$942,402,945	0.00%	$0	197,624,517	$0.00000	kWh
11	Lighting - MLS	$942,402,945	0.00%	$0	49,990,351	$0.00000	kWh
12	Total	$942,402,945	100.00%	$942,402,945			

Source Unadjusted Billing Determinants, Schedule H-I-J CA (IV-J-5 Billing Determinants).

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Current MFF Rates by City
Test Year Ended December 31, 2018

Line	City	MFF Rate (¢/kWh)
		(1)
1	Alvin	0.160¢
2	Arcola	0.332¢
3	Bayou Vista	0.363¢
4	Baytown	0.313¢
5	Beach City	0.337¢
6	Beasley	0.358¢
7	Bellaire	0.325¢
8	Bonney Village	0.366¢
9	Brazos	0.329¢
10	Brookshire	0.338¢
11	Brookside Village	0.354¢
12	Bunker Hill	0.354¢
13	Clear Lake Shores	0.539¢
14	Clute	0.323¢
15	Cove	0.361¢
16	Danbury	0.355¢
17	Deer Park	0.301¢
18	Dickinson	0.166¢
19	East Bernard	0.248¢
20	El Lago	0.320¢
21	Fairchilds	0.377¢
22	Freeport	0.321¢
23	Friendswood	0.156¢
24	Fulshear	0.336¢
25	Galena Park	0.289¢
26	Galveston	0.297¢
27	Hedwig Village	0.331¢
28	Hilcrest Village	0.602¢
29	Hilshire Village	0.400¢
30	Hitchcock	0.337¢
31	Houston	0.337¢
32	Humble	0.293¢
33	Hunter Creek	0.348¢
34	Iowa Colony	0.347¢
35	Jacinto City	0.304¢

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Current MFF Rates by City
Test Year Ended December 31, 2018

Line	City	MFF Rate (¢/kWh)
		(1)
36	Jamaica Beach	0.359¢
37	Jersey Village	0.318¢
38	Jones Creek	0.368¢
39	Katy	0.309¢
40	Kemah	0.287¢
41	Kendleton	0.438¢
42	La Marque	0.150¢
43	Laporte	0.312¢
44	Lake Jackson	0.323¢
45	League City	0.149¢
46	Liverpool	0.547¢
47	Magnolia	0.301¢
48	Manvel	0.306¢
49	Meadows Place	0.378¢
50	Missouri City	0.315¢
51	Mont Belvieu	0.193¢
52	Morgan's Point	0.927¢
53	Nassau Bay	0.354¢
54	Needville	0.375¢
55	Oak Ridge North	0.294¢
56	Old River Winfree	0.366¢
57	Orchard	0.396¢
58	Oyster Creek	0.219¢
59	Pasadena	0.315¢
60	Pattison	0.350¢
61	Pearland	0.312¢
62	Pine Island	0.511¢
63	Piney Point Village	0.357¢
64	Pleak	0.361¢
65	Prairie View	0.365¢
66	Quintana	0.402¢
67	Richmond	0.291¢
68	Richwood	0.365¢
69	Rosenberg	0.300¢
70	San Felipe	0.337¢

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Current MFF Rates by City
Test Year Ended December 31, 2018

Line	City	MFF Rate (¢/kWh)
		(1)
71	Sandy Point	0.379¢
72	Santa Fe	0.343¢
73	Seabrook	0.310¢
74	Sealy	0.280¢
75	Shoreacres	0.336¢
76	Simonton	0.393¢
77	South Houston	0.326¢
78	Southside Place	0.487¢
79	Spring Valley	0.347¢
80	Stafford	0.312¢
81	Stagecoach	0.566¢
82	Sugar Land	0.286¢
83	Surfside Beach	0.355¢
84	Taylor Lake Village	0.339¢
85	Thompsons	0.426¢
86	Tiki Island	0.341¢
87	Tomball	0.276¢
88	Waller	0.318¢
89	Wallis	0.390¢
90	Webster	0.298¢
91	West University Place	0.364¢
92	Weston Lakes	0.323¢
93	Wharton	0.287¢
94	**Weighted Average Rate**	**0.318¢**
95	**Maximum Rate**	**0.927¢**
96	**Minimum Rate**	**0.149¢**
97	**Average Rate**	**0.344¢**

Source: TIEC 1-4, WP II-E-2 Adj 4.1, WP - 2018 KWH by Rate Class Franchise.

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Proposed MFF Allocation by Delivery Rate Class
Test Year Ended December 31, 2018
Dollar Amounts in ($000)

Line	Delivery Rate Class	Inside City kWh Sales	Percent of Total	Allocated MFF Expense
		(1)	(2)	(3)
1	Residential	16,196,177	33.73%	$51,532
2	Secondary Volt. =<10kva	592,309	1.23%	$1,885
3	Secondary Volt. >10kva	23,058,174	48.02%	$73,365
4	Primary Voltage	2,477,952	5.16%	$7,884
5	Transmission Voltage	5,554,806	11.57%	$17,674
6	SLS Lighting	102,274	0.21%	$325
7	MLS Lighting	36,409	0.08%	$116
8	Total	48,018,102	100.00%	$152,781

Source: WP-Franchise, Schedule II-I-Total.

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Percent of kWh by City by Delivery Rate Class

Test Year Ended December 31, 2018

Line	City	Residential	Sec Volt. =<10kva	Sec Volt. >10kva	Primary Voltage	Transmission Voltage	SLS Lighting	MLS Lighting
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Alvin	58.1%	1.9%	39.9%	0.0%	0.0%	0.0%	0.1%
2	Arcola	57.3%	2.1%	40.3%	0.0%	0.0%	0.0%	0.3%
3	Bayou Vista	91.7%	0.9%	7.2%	0.0%	0.0%	0.2%	0.0%
4	Baytown	47.3%	1.6%	43.1%	5.7%	1.8%	0.4%	0.1%
5	Beach City	93.4%	1.5%	4.6%	0.2%	0.0%	0.1%	0.1%
6	Beasley	45.5%	1.2%	52.8%	0.0%	0.0%	0.4%	0.1%
7	Bellaire	51.3%	0.6%	47.8%	0.0%	0.0%	0.2%	0.1%
8	Bonney Village	39.3%	3.4%	56.0%	0.0%	0.0%	0.9%	0.4%
9	Brazos	79.3%	0.5%	18.2%	1.7%	0.0%	0.0%	0.1%
10	Brookshire	45.0%	1.9%	49.2%	3.0%	0.0%	0.6%	0.2%
11	Brookside Village	77.1%	2.3%	19.7%	0.0%	0.0%	0.9%	0.1%
12	Bunker Hill	85.5%	0.5%	13.9%	0.0%	0.0%	0.1%	0.0%
13	Clear Lake Shores	43.4%	1.2%	44.2%	11.0%	0.0%	0.1%	0.1%
14	Clute	47.0%	1.9%	48.6%	2.0%	0.0%	0.3%	0.2%
15	Cove	39.3%	1.7%	58.9%	0.0%	0.0%	0.0%	0.1%
16	Danbury	72.0%	1.5%	25.6%	0.0%	0.0%	0.5%	0.4%
17	Deer Park	47.1%	1.1%	45.5%	2.2%	3.6%	0.4%	0.1%
18	Dickinson	95.9%	1.3%	2.8%	0.0%	0.0%	0.0%	0.0%
19	East Bernard	44.5%	1.0%	49.6%	4.4%	0.0%	0.3%	0.1%
20	El Lago	76.8%	1.4%	21.7%	0.0%	0.0%	0.0%	0.1%
21	Fairchilds	66.9%	0.8%	32.2%	0.0%	0.0%	0.0%	0.2%
22	Freeport	38.3%	1.3%	30.5%	21.0%	8.7%	0.1%	0.1%
23	Friendswood	73.8%	1.2%	24.9%	0.0%	0.0%	0.0%	0.0%
24	Fulshear	44.5%	1.3%	15.8%	37.5%	0.0%	0.8%	0.0%
25	Galena Park	17.6%	0.5%	13.4%	7.7%	60.7%	0.1%	0.0%
26	Galveston	36.2%	1.2%	53.1%	9.3%	0.0%	0.1%	0.1%
27	Hedwig Village	25.9%	1.1%	72.8%	0.0%	0.0%	0.1%	0.1%
28	Hilcrest Village	97.0%	0.4%	2.2%	0.0%	0.0%	0.4%	0.1%
29	Hilshire Village	82.8%	0.7%	16.0%	0.0%	0.0%	0.3%	0.1%
30	Hitchcock	63.5%	2.2%	31.7%	1.9%	0.0%	0.6%	0.1%
31	Houston	33.6%	1.4%	54.7%	6.0%	4.0%	0.2%	0.1%
32	Humble	20.9%	1.6%	75.4%	1.5%	0.0%	0.5%	0.1%

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Percent of kWh by City by Delivery Rate Class

Test Year Ended December 31, 2018

Line	City	Residential	Sec Volt. =<10kva	Sec Volt. >10kva	Primary Voltage	Transmission Voltage	SLS Lighting	MLS Lighting
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
33	Hunter Creek	87.2%	0.5%	6.9%	5.1%	0.0%	0.3%	0.0%
34	Iowa Colony	66.8%	1.9%	31.1%	0.0%	0.0%	0.0%	0.1%
35	Jacinto City	26.0%	1.1%	26.9%	0.0%	45.8%	0.1%	0.1%
36	Jamaica Beach	89.9%	0.7%	9.3%	0.0%	0.0%	0.1%	0.0%
37	Jersey Village	47.7%	1.4%	50.4%	0.0%	0.0%	0.5%	0.0%
38	Jones Creek	77.2%	1.1%	21.4%	0.0%	0.0%	0.1%	0.2%
39	Katy	33.9%	1.2%	61.3%	3.1%	0.0%	0.5%	0.0%
40	Kemah	26.4%	2.9%	66.9%	3.1%	0.0%	0.5%	0.1%
41	Kendleton	74.8%	4.0%	20.1%	0.0%	0.0%	0.8%	0.3%
42	La Marque	66.9%	0.7%	32.1%	0.1%	0.0%	0.0%	0.2%
43	Laporte	26.1%	0.6%	21.5%	4.2%	47.4%	0.2%	0.0%
44	Lake Jackson	46.7%	1.0%	51.7%	0.3%	0.0%	0.3%	0.0%
45	League City	78.0%	1.9%	19.7%	0.4%	0.0%	0.0%	0.0%
46	Liverpool	78.1%	2.6%	15.0%	0.0%	0.0%	4.3%	0.0%
47	Magnolia	28.0%	1.9%	69.5%	0.0%	0.0%	0.4%	0.2%
48	Manvel	55.8%	1.5%	36.7%	5.9%	0.0%	0.0%	0.1%
49	Meadows Place	55.6%	0.9%	42.9%	0.0%	0.0%	0.4%	0.2%
50	Missouri City	55.0%	1.1%	42.3%	1.6%	0.0%	0.0%	0.0%
51	Mont Belvieu	1.3%	0.1%	3.6%	1.8%	93.2%	0.0%	0.0%
52	Morgan's Point	11.9%	0.6%	32.3%	54.9%	0.0%	0.1%	0.3%
53	Nassau Bay	33.9%	1.0%	54.3%	10.6%	0.0%	0.1%	0.0%
54	Needville	61.1%	1.4%	36.7%	0.0%	0.0%	0.5%	0.3%
55	Oak Ridge North	35.6%	1.7%	62.6%	0.0%	0.0%	0.0%	0.0%
56	Old River Winfree	81.7%	1.7%	15.8%	0.0%	0.0%	0.4%	0.4%
57	Orchard	64.6%	1.3%	32.3%	0.7%	0.0%	1.0%	0.2%
58	Oyster Creek	2.0%	0.1%	1.9%	0.1%	95.9%	0.0%	0.0%
59	Pasadena	41.2%	1.4%	42.3%	7.6%	7.3%	0.1%	0.1%
60	Pattison	33.9%	0.5%	65.4%	0.0%	0.0%	0.0%	0.1%
61	Pearland	55.3%	1.4%	41.8%	1.4%	0.0%	0.0%	0.0%
62	Pine Island	32.1%	0.6%	35.0%	32.2%	0.0%	0.0%	0.1%
63	Piney Point Village	74.9%	0.5%	24.5%	0.0%	0.0%	0.1%	0.0%
64	Pleak	74.1%	1.9%	22.8%	0.0%	0.0%	0.9%	0.3%

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Percent of kWh by City by Delivery Rate Class

Test Year Ended December 31, 2018

Line	City	Residential	Sec Volt. =<10kva	Sec Volt. >10kva	Primary Voltage	Transmission Voltage	SLS Lighting	MLS Lighting
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
65	Prairie View	82.0%	3.9%	12.5%	0.0%	0.0%	0.0%	1.6%
66	Quintana	3.0%	0.1%	29.1%	0.0%	67.6%	0.1%	0.0%
67	Richmond	35.4%	1.2%	50.7%	12.2%	0.0%	0.4%	0.1%
68	Richwood	79.6%	2.3%	17.7%	0.0%	0.0%	0.3%	0.1%
69	Rosenberg	43.8%	1.6%	49.3%	4.7%	0.0%	0.6%	0.1%
70	San Felipe	48.9%	3.2%	47.2%	0.0%	0.0%	0.4%	0.3%
71	Sandy Point	12.0%	0.3%	3.1%	84.6%	0.0%	0.0%	0.0%
72	Santa Fe	70.0%	1.5%	28.3%	0.0%	0.0%	0.1%	0.1%
73	Seabrook	66.9%	1.8%	30.8%	0.0%	0.0%	0.4%	0.1%
74	Sealy	32.1%	1.3%	55.2%	10.9%	0.0%	0.4%	0.1%
75	Shoreacres	82.6%	1.5%	9.2%	6.7%	0.0%	0.0%	0.0%
76	Simonton	66.6%	1.8%	31.1%	0.0%	0.0%	0.3%	0.2%
77	South Houston	42.7%	2.8%	53.5%	0.8%	0.0%	0.1%	0.1%
78	Southside Place	63.4%	0.9%	34.9%	0.0%	0.0%	0.6%	0.1%
79	Spring Valley	55.3%	0.7%	43.5%	0.0%	0.0%	0.5%	0.0%
80	Stafford	19.1%	1.1%	64.0%	0.2%	15.3%	0.3%	0.1%
81	Stagecoach	97.3%	1.0%	1.2%	0.0%	0.0%	0.4%	0.1%
82	Sugar Land	35.7%	0.9%	60.3%	2.6%	0.0%	0.5%	0.0%
83	Surfside Beach	69.3%	1.4%	28.9%	0.0%	0.0%	0.2%	0.1%
84	Taylor Lake Village	95.1%	1.1%	3.8%	0.0%	0.0%	0.0%	0.1%
85	Thompsons	25.0%	2.2%	1.1%	17.6%	52.8%	1.2%	0.1%
86	Tiki Island	92.3%	0.9%	6.3%	0.0%	0.0%	0.5%	0.0%
87	Tomball	24.9%	1.7%	71.5%	1.6%	0.0%	0.2%	0.1%
88	Waller	35.9%	1.8%	62.0%	0.0%	0.0%	0.2%	0.1%
89	Wallis	67.4%	2.9%	28.5%	0.0%	0.0%	1.1%	0.2%
90	Webster	16.9%	1.5%	74.7%	1.7%	4.8%	0.3%	0.1%
91	West University Place	78.8%	0.6%	20.1%	0.0%	0.0%	0.5%	0.0%
92	Weston Lakes	93.3%	0.4%	6.3%	0.0%	0.0%	0.0%	0.0%
93	Wharton	23.3%	0.9%	30.8%	2.5%	41.9%	0.4%	0.1%

Source: WP - 2018 KWH by Rate Class Franchise.

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Derivation of MFF Allocation Factors

Test Year Ended December 31, 2018

		Inside City MFF Revenue							
Line	City	Residential	Sec Volt. =<10kva	Sec Volt. >10kva	Primary Voltage	Transmission Voltage	SLS Lighting	MLS Lighting	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Alvin	$13,651	$436	$9,359	$0	$0	$0	$35	$23,481
2	Arcola	$30,255	$1,132	$21,261	$0	$0	$0	$156	$52,804
3	Bayou Vista	$54,948	$536	$4,286	$0	$0	$132	$27	$59,931
4	Baytown	$1,257,444	$41,258	$1,146,975	$150,792	$47,468	$11,723	$2,627	$2,658,287
5	Beach City	$87,204	$1,404	$4,330	$198	$0	$134	$132	$93,402
6	Beasley	$12,055	$326	$13,996	$0	$0	$107	$16	$26,499
7	Bellaire	$428,034	$4,977	$399,131	$0	$0	$2,014	$596	$834,753
8	Bonney Village	$6,037	$521	$8,602	$0	$0	$142	$66	$15,368
9	Brazos	$16,553	$107	$3,807	$364	$0	$8	$22	$20,862
10	Brookshire	$80,007	$3,333	$87,437	$5,310	$0	$1,153	$398	$177,639
11	Brookside Village	$30,784	$920	$7,853	$0	$0	$344	$33	$39,934
12	Bunker Hill	$157,634	$922	$25,638	$0	$0	$164	$66	$184,424
13	Clear Lake Shores	$52,664	$1,510	$53,627	$13,373	$0	$91	$67	$121,332
14	Clute	$184,111	$7,550	$190,399	$7,980	$0	$1,107	$698	$391,844
15	Cove	$16,555	$719	$24,801	$0	$0	$0	$25	$42,100
16	Danbury	$35,548	$748	$12,645	$0	$0	$250	$194	$49,385
17	Deer Park	$560,185	$12,963	$541,438	$26,706	$42,734	$5,199	$765	$1,189,990
18	Dickinson	$12,941	$180	$373	$0	$0	$0	$6	$13,500
19	East Bernard	$36,984	$795	$41,243	$3,696	$0	$276	$101	$83,095
20	El Lago	$62,798	$1,136	$17,764	$0	$0	$0	$71	$81,769
21	Fairchilds	$19,279	$216	$9,278	$0	$0	$0	$54	$28,827
22	Freeport	$189,352	$6,329	$150,530	$103,580	$43,174	$545	$468	$493,978
23	Friendswood	$102,808	$1,732	$34,672	$0	$0	$0	$27	$139,239
24	Fulshear	$213,724	$6,102	$75,935	$180,050	$0	$3,941	$97	$479,849
25	Galena Park	$114,459	$3,178	$87,015	$50,183	$394,099	$367	$259	$649,560
26	Galveston	$1,143,136	$36,811	$1,678,434	$293,099	$0	$4,651	$4,215	$3,160,347
27	Hedwig Village	$66,269	$2,914	$186,460	$0	$0	$202	$328	$256,173
28	Hilcrest Village	$21,859	$84	$487	$0	$0	$92	$20	$22,542
29	Hilshire Village	$30,112	$263	$5,830	$0	$0	$121	$32	$36,359
30	Hitchcock	$149,101	$5,155	$74,401	$4,490	$0	$1,476	$295	$234,918
31	Houston	$34,119,157	$1,404,816	$55,519,230	$6,075,468	$4,055,778	$214,231	$87,784	$101,476,464
32	Humble	$223,519	$17,078	$805,951	$15,831	$0	$5,317	$1,121	$1,068,816
33	Hunter Creek	$213,871	$1,201	$16,876	$12,569	$0	$728	$3	$245,247
34	Iowa Colony	$45,795	$1,310	$21,338	$0	$0	$0	$92	$68,535
35	Jacinto City	$109,139	$4,726	$112,791	$0	$192,344	$345	$230	$419,575
36	Jamaica Beach	$62,370	$509	$6,425	$0	$0	$94	$10	$69,409
37	Jersey Village	$173,169	$4,992	$183,169	$0	$0	$1,663	$143	$363,136
38	Jones Creek	$45,966	$685	$12,739	$0	$0	$52	$118	$59,560
39	Katy	$334,497	$12,265	$604,018	$30,087	$0	$4,445	$409	$985,721
40	Kemah	$40,727	$4,522	$103,340	$4,742	$0	$835	$195	$154,361
41	Kendleton	$14,219	$765	$3,819	$0	$0	$159	$48	$19,009
42	La Marque	$17,193	$190	$8,241	$16	$0	$0	$46	$25,686
43	Laporte	$627,787	$14,483	$517,298	$100,454	$1,138,849	$4,665	$1,185	$2,404,721
44	Lake Jackson	$538,780	$11,837	$596,165	$3,123	$0	$2,955	$372	$1,153,231
45	League City	$74,285	$1,797	$18,782	$370	$0	$0	$39	$95,273
46	Liverpool	$19,463	$654	$3,737	$0	$0	$1,072	$10	$24,935
47	Magnolia	$40,764	$2,810	$101,316	$0	$0	$564	$233	$145,687
48	Manvel	$159,782	$4,369	$105,220	$16,919	$0	$0	$187	$286,478
49	Meadows Place	$94,345	$1,519	$72,678	$0	$0	$712	$344	$169,598
50	Missouri City	$1,301,286	$25,055	$999,508	$37,611	$0	$0	$747	$2,364,207

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Derivation of MFF Allocation Factors

Test Year Ended December 31, 2018

Line	City	Inside City MFF Revenue							
		Residential	Sec Volt. =<10kva	Sec Volt. >10kva	Primary Voltage	Transmission Voltage	SLS Lighting	MLS Lighting	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
51	Mont Belvieu	$82,896	$3,175	$225,247	$115,645	$5,905,566	$1,378	$421	$6,334,328
52	Morgan's Point	$29,081	$1,557	$78,912	$134,241	$0	$219	$634	$244,645
53	Nassau Bay	$109,915	$3,377	$175,956	$34,368	$0	$466	$9	$324,091
54	Needville	$60,990	$1,425	$36,605	$0	$0	$519	$282	$99,820
55	Oak Ridge North	$23,454	$1,144	$41,191	$0	$0	$0	$19	$65,808
56	Old River Winfree	$36,917	$786	$7,142	$0	$0	$181	$176	$45,202
57	Orchard	$8,502	$166	$4,251	$86	$0	$130	$21	$13,156
58	Oyster Creek	$18,168	$620	$17,160	$942	$872,929	$66	$98	$909,983
59	Pasadena	$2,062,338	$68,044	$2,114,992	$380,936	$367,102	$6,774	$4,299	$5,004,484
60	Pattison	$12,699	$203	$24,484	$0	$0	$0	$54	$37,440
61	Pearland	$1,947,879	$48,458	$1,472,417	$49,791	$0	$0	$760	$3,519,305
62	Pine Island	$9,579	$164	$10,436	$9,611	$0	$0	$24	$29,815
63	Piney Point Village	$204,153	$1,425	$66,711	$0	$0	$202	$15	$272,507
64	Pleak	$26,923	$704	$8,266	$0	$0	$337	$101	$36,330
65	Prairie View	$3,250	$156	$494	$0	$0	$0	$63	$3,963
66	Quintana	$1,622	$61	$15,560	$0	$36,155	$53	$6	$53,457
67	Richmond	$153,539	$5,073	$219,827	$53,095	$0	$1,887	$377	$433,798
68	Richwood	$94,773	$2,762	$21,040	$0	$0	$377	$150	$119,102
69	Rosenberg	$519,950	$18,867	$584,961	$55,418	$0	$7,114	$1,299	$1,187,609
70	San Felipe	$17,973	$1,171	$17,373	$0	$0	$146	$107	$36,771
71	Sandy Point	$5,126	$108	$1,349	$36,250	$0	$3	$19	$42,854
72	Santa Fe	$307,390	$6,468	$124,126	$0	$0	$591	$515	$439,089
73	Seabrook	$286,753	$7,758	$131,778	$0	$0	$1,826	$328	$428,443
74	Sealy	$99,961	$4,174	$171,903	$33,957	$0	$1,265	$374	$311,633
75	Shoreacres	$40,142	$710	$4,474	$3,265	$0	$0	$9	$48,600
76	Simonton	$22,016	$581	$10,297	$0	$0	$105	$78	$33,077
77	South Houston	$194,851	$12,722	$244,489	$3,817	$0	$592	$332	$456,804
78	Southside Place	$64,189	$958	$35,307	$0	$0	$614	$114	$101,182
79	Spring Valley	$113,806	$1,341	$89,656	$0	$0	$1,008	$62	$205,873
80	Stafford	$265,773	$15,152	$890,885	$2,670	$212,387	$3,681	$833	$1,391,380
81	Stagecoach	$33,299	$350	$398	$0	$0	$143	$46	$34,236
82	Sugar Land	$1,402,333	$33,649	$2,365,519	$102,050	$0	$21,129	$628	$3,925,307
83	Surfside Beach	$48,327	$969	$20,176	$0	$0	$123	$99	$69,693
84	Taylor Lake Village	$99,925	$1,114	$3,985	$0	$0	$0	$63	$105,087
85	Thompsons	$6,676	$586	$294	$4,715	$14,136	$309	$38	$26,754
86	Tiki Island	$70,232	$703	$4,802	$0	$0	$395	$0	$76,131
87	Tomball	$185,259	$12,653	$532,244	$12,076	$0	$1,605	$583	$744,421
88	Waller	$47,599	$2,386	$82,195	$0	$0	$320	$152	$132,651
89	Wallis	$30,169	$1,300	$12,764	$0	$0	$473	$68	$44,775
90	Webster	$168,157	$14,695	$741,978	$17,222	$47,890	$2,577	$820	$993,340
91	West University Place	$440,839	$3,339	$112,497	$0	$0	$2,957	$131	$559,763
92	Weston Lakes	$104,560	$461	$7,021	$0	$0	$0	$0	$112,042
93	Wharton	$119,329	$4,573	$157,921	$12,998	$214,793	$2,009	$741	$512,365
94	Total	$53,023,913	$1,945,926	$75,619,734	$8,200,165	$13,585,404	$333,652	$120,159	$152,828,951
95	**Percent of Total**	**34.69%**	**1.27%**	**49.48%**	**5.37%**	**8.89%**	**0.22%**	**0.08%**	**100.00%**

Source TIEC 1-4, WP II-E-2 Adj 4.1, WP - 2018 KWH by Rate Class Franchise

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
Revised MFF Allocation by Delivery Rate Class
Test Year Ended December 31, 2018
Dollar Amounts in ($000)

Line	Delivery Rate Class	Percent of Total	Allocated MFF Expense
		(1)	(2)
1	Residential	34.69%	$53,007
2	Secondary Volt. =<10kva	1.27%	$1,945
3	Secondary Volt. >10kva	49.48%	$75,596
4	Primary Voltage	5.37%	$8,198
5	Transmission Voltage	8.89%	$13,581
6	SLS Lighting	0.22%	$334
7	MLS Lighting	0.08%	$120
8	Total	100.00%	$152,781

Source: (1) Exhibit JP-6.
(2) Column 1 x $152.781 million.

CenterPoint Energy LLC
Semi-Annual TCRF Total Adjustment Calculation for March 2019
Total All Classes

Line	Description	May	Jun	Jul	Aug	Sept	Oct	Total
1	Period (p)	1	2	3	4	5	6	
2	TCRF Expense Not In Base (Attachment A Page 3 of 4)	$34,569,456.50	$34,806,973.98	$34,269,470.87	$33,029,384.67	$34,211,022.80	$36,671,640.56	$207,557,949.19
3	Class Allocation Factor	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
4	Class TCRF Not In Base (Ln 2 * Ln 3)	$34,569,456.50	$34,806,973.98	$34,269,470.87	$33,029,384.67	$34,211,022.80	$36,671,640.56	$207,557,949.19
5	Class TCRF Revenue (Attachment A Page 4 of 4)	$31,279,586.20	$35,797,740.73	$36,079,320.07	$41,548,388.27	$43,978,198.23	$44,933,973.27	$235,617,206.77
6	ADJP1	$0.00	$0.00	$0.00	$0.00	$3,651,406.68	$3,651,406.68	$7,302,813.36
7	ADJP2	($3,849,200.43)	($3,849,200.43)	($3,849,200.43)	($3,849,200.43)	$0.00	$0.00	($15,396,801.72)
8	Adjusted Class TCRF Revenue (Ln 8 = Ln 5 - Ln 6 - Ln 7)	$35,128,786.63	$39,646,941.16	$41,928,520.50	$45,397,588.70	$40,326,791.55	$41,282,566.59	$243,711,195.13
9	Under/(Over) Recovery (Ln 4 - Ln 8)	($559,330.13)	($4,839,967.18)	($7,659,049.63)	($12,368,204.03)	($6,115,768.95)	($4,610,926.03)	($36,153,245.95)
10	Cumulative Under/(Over) Recovery	($559,330.13)	($5,399,297.31)	($13,058,346.94)	($25,426,550.97)	($31,542,319.92)	($36,153,245.95)	

ADJP1 = 1/6th of (over)/under recovery from previous TCRF update true-up periods 5 & 6
ADJP2 = 1/6th of (over)/under recovery from second previous TCRF update true-up periods 1 through 4

	Total	1/6th	TCRF Filing Update Period
ADJP1	$21,908,440.07	$3,651,406.68	September 2018
ADJP2	-$23,095,202.58	-$3,849,200.43	March 2018

ADJP1 Filename: CNP TCRF Rate Update 9-01-2018.xlsx	$ 21,908,440.07	Checked
ADJP2 Filename: CNP TCRF Rate Update 3-01-2018 Amended (47820).xlsx	$ (23,095,202.58)	Checked

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Wholesale Transmission Cost Over-Recovery
From the Increase in Transmission System Charges Due To Load Growth

Test Year Ended December 31, 2018

Line	Delivery Rate Class	Transmission System Charge Revenues	TCRF Revenues
		(1)	(2)
1	Residential	$257,962,303	$210,095,971
2	Secondary <=10 Kva	$4,107,302	$5,049,446
	Secondary > 10 Kva		
3	NON-IDR	$102,371,259	$93,774,196
4	IDR	$66,188,483	$63,240,470
	Primary		
5	NON-IDR	$1,759,453	$1,252,382
6	IDR	$15,389,841	$14,721,042
7	Transmission	$61,200,839	$53,561,083
8	Total	$508,979,480	$441,694,592
9	TSC and TCRF Revenues		$950,674,072
10	Wholesale Transmission Costs		$898,733,677
11	**Over-Recovery**		**$51,940,396**

Source: CNP TCRF Rate Update - Mar 2019.
CNP TCRF Rate Update - Sep 2018.
Schedule H-I-J CA (III-H-4.1.1).
WP - Schedule H.
2018 TCOS Matrix.