



Control Number: 49421



Item Number: 582

Addendum StartPage: 0

2019 JUN 19 11:04

APPLICATION OF CENTERPOINT  
ENERGY HOUSTON ELECTRIC, LLC  
FOR AUTHORITY TO CHANGE  
RATES

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BEFORE THE STATE OFFICE  
OF  
ADMINISTRATIVE HEARINGS

**COST ALLOCATION AND RATE DESIGN**

**CROSS-REBUTTAL TESTIMONY OF  
KIT PEVOTO  
ON BEHALF OF  
CITY OF HOUSTON  
AND  
HOUSTON COALITION OF CITIES**

**June 19, 2019**

582

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## **ATTACHMENTS**

ATTACHMENT COH-KP-1 CROSS

**CROSS-REBUTTAL TESTIMONY  
OF  
KIT PEVOTO**

**I. WITNESS IDENTIFICATION AND QUALIFICATIONS**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Kit Pevoto. My business address is 13436 Athens Trail, Austin, Texas 78737.

**Q. On whose behalf are you testifying in this proceeding?**

A. I have been retained by the City of Houston and the Houston Coalition of Cities (“COH/HCC”) as an expert witness in this proceeding.

**Q. Are you the same Kit Pevoto who previously filed direct testimony in this proceeding?**

A. Yes. I filed direct testimony in this case on June 6, 2019 on behalf of COH/HCC.

**II. PURPOSE OF CROSS-REBUTTAL TESTIMONY**

**Q. WHAT IS THE PURPOSE OF YOUR CROSS-REBUTTAL TESTIMONY?**

A. The purpose of my rebuttal testimony is to respond to testimony filed by Texas Industrial Energy Consumers (“TIEC”) witness Mr. Jeffrey Pollock and Public Utility Commission (“PUC”) Staff witness Mr. Brian Murphy. My testimony addresses the following issues:

1. Mr. Pollock’s proposal for allocating the municipal franchise fees among rate classes;
2. Mr. Murphy’s proposal for allocating the Texas Margin Tax expense between the transmission function and distribution function;
3. Mr. Murphy’s proposal for allocating the amounts of credit included in the UEDIT Rider between the transmission function and distribution functions; and
4. Mr. Murphy’s recommendation to reject CEHE’s proposed change in its Street Lighting Tariff to make the Light-Emitting Diode (“LED”) lights as the standard lights for the Lighting Services.

1       **III.    TIEC’S PROPOSED ALLCOATION OF MUNICIPAL FRANCHISE FEES**

2       **Q.     Please Summarize TIEC’s proposed class allocation of municipal franchise fees.**

3       A.     TIEC witness Mr. Pollock proposes to use an allocation methodology based on each city’s  
4             kilowatt hour (kWh) sales weighted by the municipal franchise fee rate for that city to  
5             allocate municipal franchise fees among the rate classes. In his proposal, Mr. Pollock,  
6             developed an allocator for each city by multiplying the class’ in-city kWh sales for that  
7             city by the city’s municipal franchise fee rate. He uses the allocators specifically developed  
8             for each city to assign municipal franchisee fees among rate classes for each city.

9       **Q.     Do you agree with Mr. Pollock’s proposed allocation of the municipal franchise fees?**

10      A.     No. TIEC’s proposed methodology is not consistent with the methodology previously  
11             approved by this Commission in CEHE’s prior cases and in other transmission and  
12             distribution (“T&D”) utilities’ rate cases. In addition, TIEC’s proposed methodology is  
13             not consistent with the standard ratemaking practice to allocate costs and set rates based on  
14             average system costs.

15      **Q.     How is TIEC’s proposal not consistent with Commission’s practice and precedent?**

16      A.     As admitted in Mr. Pollock’s direct testimony, in the past eighteen years, the Commission  
17             has consistently approved the “direct” method to allocate municipal franchise fees, which  
18             allocates the fees based on kWh sales to customer classes for customers residing within  
19             cities, when establishing transmission and distribution rates in ERCOT. TIEC’s proposal  
20             is a modification to the direct methodology and, therefore, is a significant deviation from  
21             past Commission practice and precedent. TIEC provides no compelling reasons to  
22             overturn this long-established Commission approved methodology.

1 **Q. What other concerns do you have regarding TIEC's proposal?**

2 A. My other concern is that TIEC's proposed allocation contradicts the standard ratemaking  
3 practice in Texas that allocates costs and sets rates based on average costs across the  
4 system. TIEC's proposed allocation based on each city's franchise fee rate is in essence  
5 an attempt to allocate costs and set rates based on geographic locations. In CEHE's cost  
6 of service allocation studies, many costs vary by location, such as costs associated with  
7 land and rights for facilities or property taxes that vary based on the locations, but these  
8 costs are still allocated among rate classes on a system average basis. Therefore, TIEC's  
9 proposed allocation of franchise fees is inconsistent with this standard ratemaking practice  
10 in Texas.

11 **Q. What would be the impact of TIEC's proposal compared to CEHE's proposal?**

12 A. On Page 16 of Mr. Pollock's direct testimony, Table 6 shows a comparison of the allocation  
13 of the municipal franchise fees between CEHE's and TIEC's proposals. The table shows  
14 that TIEC's proposal would shift about \$4 million of the fees from the transmission rate  
15 class to all of the other rate classes. It would additionally assign \$1.5 million municipal  
16 franchise fees to the Residential class. TIEC's proposal benefits only customers taking  
17 the distribution service at the transmission voltage level.

18 **Q. What other observations do you have regarding TIEC's proposed allocation**  
19 **methodology?**

20 A. This proposal represents a clear attempt by TIEC's members (mainly transmission class  
21 consumers) to avoid paying any expenses associated with Municipal Franchise Fees. This  
22 is contrary to this Commission's findings that all customers benefit from the cities' efforts  
23 in regulating and permitting electric utilities such as CenterPoint to utilize their streets and  
24 rights of way to transmit and distribute electricity. The Commission in Docket No. 38339

(CenterPoint's last base rate electric case) rejected a very similar proposal from TIEC. In recommending adoption of a methodology identical to the one proposed by CEHE in this case, the ALJ in the Proposal for Decision (PFD) in Docket No. 38339 recognized that:

The Commission in past cases has allocated customer franchise fees to the customer classes based on in-city kWh sales and collected the fees from all customers within the customer class, which is consistent with prior findings that franchise fees confer a system-wide benefit, and is consistent with the Company's methodology used in this case.<sup>1</sup>

The Commission adopted the ALJ's recommendation on this issue and, in Finding of Fact 179, stated:

CenterPoint's allocation of municipal franchise fees to the customer classes based upon in-city kilowatt-hour (kWh) sales and collection of the fees from all customers within the customer class is reasonable and consistent with the Commission precedent.<sup>2</sup>

TIEC's approach is inconsistent with this Commission precedent and should be rejected.

#### **IV. STAFF'S PROPOSED FUNCTIONALIZATION OF TEXAS MARGIN TAX EXPENSES**

**Q. What is Staff's proposed functionalization of the Texas Margin Tax Expense?**

A. Staff proposed to assign a 13.3% of the Texas Margin Tax expenses to the Transmission Service Function and the remaining 86.7% to the Distribution Service function (including distribution, metering, and customer services)<sup>3</sup>. CEHE assigns 41.3% and 58.7% of the margin tax expense to the Transmission function and Distribution function, respectively.

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<sup>1</sup> Docket No. 38339; Application of CenterPoint Energy Houston Electric, LLC for Authority to Change Rates; Proposal for Decision at page 156.

<sup>2</sup> Finding of Facts 179 on page 34 of 47 of Order on Rehearing in Docket No. 38339.

<sup>3</sup> Staff's proposed percentages are determined based on Staff's recommended cost of service.

CEHE uses a total revenue allocation methodology to allocate the Texas Margin Tax expenses. Staff's proposal is determined based on a modified revenue allocator.

**Q. Please describe CEHE's proposed total revenue allocator and Staff's modified revenue allocator for functionalizing the Texas Margin Tax Expenses.**

**A.** The following table compares the total revenue allocator used by CEHE and the modified revenue allocator proposed by Staff:

| Table (1) Texas Margin Tax Allocation Factor (\$in millions)                     |               |     |                |     |
|--|---------------|-----|----------------|-----|
|  | CEHE Proposal |     | Staff Proposal |     |
|  | \$            | %   | \$             | %   |
| Transmission Service Function  |               |     |                |     |
| ERCOT Payments   | 546.7         |     |                |     |
| CEHE Trans. Rev. Reg.  | 395.8         |     | 395.8          |     |
| Subtotal   | 942.5         | 41% | 395.8          | 15% |
| Distribution Functions   |               |     |                |     |
| DCOS   | 1,339.6       |     | 1,339.6        |     |
| ERCOT Payments   |               |     | 546.7          |     |
| CEHE Trans. Rev. Reg.  |               |     | 395.8          |     |
| Subtotal   | 1,339.6       | 59% | 2,282.1        | 85% |
| Total Revenues   | 2,282.1       |     | 2,677.9        |     |
| The calculation is based on CEHE's proposed COS and is for illustration purpose. |               |     |                |     |

CEHE's proposed allocation is determined based on the revenues that would be collected from its retail customers for taking the transmission service and distribution service, respectively. As seen from this table, CEHE's proposed methodology reflects a total \$942.5 million as the total transmission revenues paid by CEHE customers for taking transmission delivery. The \$942.5 million ("Total ERCOT Transmission Payments") consists of a total revenue requirement of \$395 million for CEHE's owned transmission facilities and a total of \$546.7 for payments from CEHE customers to other transmission owners in the system wide ERCOT transmission system. CEHE's proposed allocator also

1 includes a total of \$1.333 billion revenue paid by CEHE customers for taking the  
2 distribution delivery service.

3 Staff's proposal reflects a \$395.9 total revenue requirement of CEHE's owned  
4 transmission facilities for the transmission function. For the distribution functions, Staff  
5 includes the \$1.333 billion revenues for the distribution delivery service and the total  
6 \$942.5 million transmission revenues paid by CEHE customers for taking transmission  
7 delivery. Therefore, in determining the distribution function, Staff erroneously includes  
8 both transmission and distribution revenues.

9 **Q. How is the Texas Margin Tax determined?**

10 A. The Texas margin tax is computed for most taxable entities, at 0.75% of the taxable entity's  
11 margin that has been apportioned to Texas. A taxable entity's taxable margin is the lowest  
12 amount computed using the following four calculation methods<sup>4</sup>:

- 13 (1) Revenues less cost of goods sold;  
14 (2) Revenues less compensation;  
15 (3) Revenues times seventy percent (70%); or  
16 (4) Revenues less \$1 million.

17 Therefore, the Texas margin tax is determined based on revenues.

18 **Q. Why do CEHE retail customers pay a total \$942.5 million as the total transmission**  
19 **revenues for taking transmission delivery ("Total ERCOT Transmission Payment")?**

20 A. It is because, while CEHE retail customers are taking transmission service from CEHE,  
21 they are paying to a system wide ERCOT transmission system, a part of which is CEHE's  
22 transmission system. As a result, in addition to CEHE's transmission cost of service, they  
23 are paying for other transmission utilities' costs in ERCOT too. Therefore, the total of

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<sup>4</sup> From Page 34 of 47 in CEHE witness Charles W. Pringle.

1       \$942.5 million consists of a \$395.8 million total revenue requirement for CEHE's owned  
2       transmission facilities and a total of \$546.7 in payments from CEHE customers to other  
3       transmission owners in the system wide ERCOT transmission system. In essence, on  
4       behalf of all of the owners in the system wide ERCOT transmission system, CEHE collects  
5       from its retail customers the total transmission revenues that CEHE retail customers are  
6       responsible for in taking the transmission service from a system wide ERCOT transmission  
7       system.

8       **Q. Do you agree with Staff's proposed functionalization of the margins tax expenses?**

9       A. No. Staff's proposal, as presented by Mr. Murphy, is not consistent with cost causation  
10      principles or with the Commission's precedent.

11      **Q. Please explain why Staff's proposal is not consistent with cost causation principle?**

12      A. It is because Mr. Murphy's proposal does not correctly reflect the revenues that must be  
13      paid by retail customers for each delivery service function and should not be used as the  
14      basis to allocate costs among the transmission and distribution delivery functions to  
15      determine the Texas margin taxes that are calculated based on the revenue requirements  
16      collected for each delivery service function. As discussed earlier in this testimony, the total  
17      revenue requirement for the transmission service function should include the Total ERCOT  
18      Transmission Payments (CEHE-owned transmission revenue requirement and its payments  
19      to other transmission owners in the system wide ERCOT transmission system). The  
20      distribution service function should only include CEHE's revenue requirement for its  
21      distribution system. However, in Staff's modified revenue allocator, the revenues assigned  
22      to the transmission service function only includes a portion of the total transmission service  
23      revenue that is supposed to be collected from CEHE's retail customers: the \$395.9 total  
24      revenue requirement of CEHE's owned transmission facilities. The revenues assigned to

1 the distribution service function include not only the \$1.333 billion total distribution  
2 revenue requirement but also the \$942.5 million Total ERCOT Transmission Payment.  
3 Therefore, Staff's revenue assignment for each delivery service function based on its  
4 modified revenue allocator does not track the actual revenues that would be collected from  
5 retail customers for each delivery service function. In fact, it grossly overstates the  
6 distribution revenue requirement.

7 **Q. Please explain why you think CEHE's proposal is more consistent with cost causation**  
8 **principles.**

9 A. I believe that CEHE's proposed allocator reflects the correct revenue requirement for each  
10 delivery service function: the revenues for the transmission function consists of the Total  
11 ERCOT Transmission Payments while the distribution service function is only assigned  
12 the distribution revenue requirement. Therefore, CEHE's proposed methodology for  
13 allocating Texas margin taxes better reflects cost causation principles.

14 **Q. Was CEHE's proposed total revenue allocator approved by the Commission in**  
15 **CEHE's last rate case (Docket No. 38339) for allocating Texas margin tax among**  
16 **different service functions?**

17 A. Yes, it was. I have not seen any evidence to support a change to the methodology that was  
18 approved by the Commission for allocating Texas margin tax expenses in this case.

19 **V. STAFF'S PROPOSED FUNCTIONALIZATION OF THE UEDIT RIDER**

20 **Q. What is Staff's proposed functionalization of the amount of credits to be returned to**  
21 **customers through the UEDIT rider?**

22 A. Staff proposed to assign about 25% of the annual UEDIT credit to the transmission function  
23 and 75% to the distribution functions (including metering and customer service functions).  
24 CEHE proposed assigning 100% of the UEDIT credit to the distribution functions.

25 **Q. Do you agree with Staff's proposal for allocating a portion of the UEDIT credit to the**  
26 **transmission function?**

1 A. No. As discussed in the testimony of Gulf Coast Cities Coalition (“GCCC”) witness Mr.  
2 Lane Kollen, the credit included in the UEDIT is related to distribution and, therefore,  
3 should be entirely assigned to the distribution function.

4 **Q. If the Commission were to determine that a portion of UEDIT should be assigned to**  
5 **the Transmission Function, would you agree with Staff’s proposed methodology to**  
6 **determine the allocation of the UEDIT credit among the transmission function and**  
7 **the distribution function?**

8 A. No. Staff’s proposed methodology is arbitrary and Staff has not provided sufficient  
9 evidence to justify that the methodology is appropriate to be used to allocate a portion of  
10 the UEDIT to the transmission function. Staff takes the data from two different  
11 proceedings to develop the allocation ratio between the transmission function and the  
12 distribution functions. However, Staff fails to demonstrate that the two amounts of UEDIT  
13 refunds from these two proceedings are directly related and can be used together to form a  
14 reasonable base for allocating the UEDIT credit in this case between the transmission and  
15 distribution functions

16 In Docket No. 48065 (*Application of CenterPoint Energy Houston Electric, LLC*  
17 *To Revise Its Wholesale Transmission RATES*), a \$5.1 million annual refund of unprotected  
18 transmission plant related EDIT was approved by the Commission. Staff uses this \$5.1  
19 million to represent the portion for the transmission function. Staff also uses the \$15.7  
20 million refund for the unprotected transmission plant related EDIT from Docket No. 48226  
21 (*Application of CenterPoint Energy Houston Electric, LLC To Amend Its Distribution Cost*  
22 *Recovery Factor*) to represent the distribution function portion of Staff’s proposed  
23 allocator. The following table shows the development of Staff’s proposed allocator for  
24 UEDIT:

| Table (2) Staff UEDIT Allocator |                                |       |
|---------------------------------|--------------------------------|-------|
|                                 | UEDIT<br>Credit(\$<br>Million) | %     |
| Transmission (D 48065)          | 5.1                            | 24.5% |
| Distribution (D 48226)          | 15.7                           | 75.5% |
|                                 | 20.8                           |       |

Therefore, even if a portion of the UEDIT were found to be transmission-related, Staff's proposed methodology is not a reasonable method of determining the correct assignment between the transmission and distribution functions.

**VI. STAFF'S RECOMMENDATION TO REJECT CEHE'S PROPOSED CHANGE FOR LIGHTING SERVICES**

**Q. Please Summarize CEHE's Proposed Change in Serving Its Lighting Services.**

A. CEHE proposes to make LED luminaries the new street light standard lamp type for its lighting services. CEHE will install LED lighting in place of the other non-LED lamps types under its normal replacement cycle. In her direct testimony, CEHE witness Ms. Julianne P. Sugarek testifies that the recent advances in LED technology, declining LED prices, energy savings due to LED's more efficient lighting technology, and the potential reduction in customer energy bills make the LED lights a more attractive alternative relative to the existing street lighting options. In its response to PUC Third Set of Requests For Information ("RFI") Question No. PUC03-08<sup>5</sup>, CEHE also explains its proposal to make LED as the standard lamp type. The response states that CEHE's decision resulted from the successful LED pilot program that was initiated by the City of Houston. In this response, CEHE also states that its proposal to make LED the standard lamp is driven by

<sup>5</sup> See Attachment COH-KP-1 CROSS

1 LED efficiency technology advancements, declining purchase cost of LED, lower  
2 operation and maintenance ("O&M") cost, and higher customer demand.

3 **Q. What is PUC Staff's recommendation relative to CEHE's proposal to make LED the**  
4 **standard lamp type for Lighting Services?**

5 A. PUCT Staff witness Mr. Murphy recommends CEHE's proposal to make LED the standard  
6 lamp type for Lighting Services be rejected. Mr. Murphy believes that CEHE's proposal  
7 eliminates customer choice. He also testifies that it is unclear to him that the financial  
8 impacts of the proposal on lighting customers justify the change. He, therefore, concludes  
9 that the proposal is highly undesirable based on his opinion of an uncertain financial impact  
10 on customers.

11 **Q. Does CEHE's proposal eliminate customer choices?**

12 A. No, it simply changes which lighting type is the standard or default.

13 **Q. Please explain.**

14 A. CEHE's proposal merely promotes the most cost effective, desirable and energy efficient  
15 choices for the Lighting Service. CEHE's proposal provides better choices for its  
16 customers. In its response to RFI Question PUC03-08, CEHE explains the deteriorating  
17 conditions resulting from serving customers using its current standard lamp, high pressure  
18 sodium ("HPS"). These conditions and inefficiencies are making these traditional lamp  
19 types less attractive for serving customers. These lamps are less efficient. Their O&M  
20 costs are expected to continue to increase due to bulb replacement approximately every  
21 five years. In addition, there has been significant declines in the number of HPS suppliers,  
22 resulting in higher capital replacement costs.

23 **Q. Do you believe that CEHE's proposal would have negative financial impacts on**  
24 **customers?**

A. No, I do not. The experience with LED street light that the City of Houston has had since CEHE began replacing all of its 177,000 non-LED street lights with LED lights, as part of a LED pilot program starting 2015, refutes the notion of any negative financial impacts. Because the LED lamps are more energy efficient, the City of Houston estimates that its lighting usage will be reduced by 70 million kWh annually and, therefore, projects that it will experience an estimated \$28 million in savings on electricity bills over the next 10 years<sup>6</sup>. In addition, as indicated by CEHE in its testimony and responses to RFIs, the declining purchase cost of LED and low operation and maintenance (“O&M”) costs will certainly continue to provide more financial benefits to customers.

**Q. Have you compared the TD costs between the non-LED lighting and the LED lights in this case?**

A. Yes. The following table shows a comparison of CEHE’s proposed TD rates between the non-LED lighting and its corresponding LED replacement<sup>7</sup>:

| Table (3)-Comparison of Non LED vs LED conversion TD rates & kWh Usage |        |          |          |          |          |          |               |               |
|--|--------|----------|----------|----------|----------|----------|---------------|---------------|
| Lamp Type  | Lumen  | Sched. A | Sched. B | Sched. C | Sched. D | Sched. E | kWh per light | kWh Reduced % |
| 75% Conversion   |        |          |          |          |          |          |               |               |
| HPS  | 9,500  | \$4.13   | \$18.59  | N/A      | \$12.90  | \$11.48  | 38            |               |
| LED  | 4,800  | \$3.94   | \$18.39  | N/A      | \$12.73  | \$11.59  | 17            | -55%          |
| 10% Conversion   |        |          |          |          |          |          |               |               |
| HPS  | 15,000 | \$4.15   | \$18.64  | \$10.20  | \$12.92  | \$11.50  | 58            |               |
| LED  | 7,900  | \$4.39   | \$18.84  | \$10.73  | \$13.18  | \$12.03  | 32            | -45%          |
| 14% Conversion   |        |          |          |          |          |          |               |               |
| HPS  | 28,000 | \$4.27   | \$18.77  | \$10.33  | \$13.04  | \$11.62  | 106           |               |
| LED  | 10,850 | \$4.79   | \$19.24  | \$22.27  | \$13.58  | \$12.44  | 38            | -64%          |

<sup>6</sup> From CEHE’s response to PUC’s third set of RFIs Question No. PUC03-09.

<sup>7</sup> From CEHE’s responses to PUC’s third set of RFIs Question No. PUC03-09 and COH’s 9<sup>th</sup> set of RFIs Question No. COH09-12.

1 The first group of lamp comparison is for 75% of the conversion. As can be seen in the  
2 table, the TD rates for the LED lights are slightly lower than the non-LED lights that were  
3 replaced. More importantly, this table shows that complete conversion will provide more  
4 than 50% of energy savings, that will certainly result in more than 50% on customers'  
5 electricity costs.

6 **Q. Do you believe that CEHE's proposal benefits customers and, therefore, should be**  
7 **desirable for customers?**

8 A. Yes, I do. The LED replacement program was initiated by the City of Houston, and the  
9 pilot program was very successful. More than 95% of City of Houston's street lighting is  
10 provided by LED lights, which provides more than 60% kWh usage savings. In addition,  
11 the high quality of white lights allow for better visibility for the streets and more  
12 comfortable visions for human eyes, and are also environmentally-friendly. In addition to  
13 the positive financial and environmental impacts, the installation of LED lightings  
14 improves street safety. In fact, having witnessed the success in City of Houston, nearly 50  
15 other municipalities and subdivisions have now volunteered to participate in the LED  
16 replacement programs. Today, almost half of CEHE's Street Lights have been replaced  
17 with a LED. The following table is a summary of the LED replacement for these  
18 municipalities and subdivisions<sup>8</sup>:

| Table (4) total street lights |         |     |
|-------------------------------|---------|-----|
|                               | total   | %   |
| LED                           | 220,846 | 48% |
| Non LED                       | 242,998 | 52% |
| total                         | 463,844 |     |

<sup>8</sup> From COH02-05 Attachment 1 to CEHE response to COH 2<sup>nd</sup> set of RFIs Question No. COH02-05.

1           As can be seen from this table, 48% of CEHE's street lights have been replaced  
2           with LED lighting over a four years period. This result is accomplished largely due to  
3           customers' interest and demand.

4   **Q. What is your conclusion regarding Staff's conclusions and recommendations**  
5   **regarding CEHE's proposal to make LED the standard lamp type for the lighting**  
6   **services?**

7   A. I conclude that Staff's analysis regarding the appropriateness, financial benefits and  
8           desirability of CEHE's proposal to make LEDs the standard lamp type is erroneous and  
9           should be rejected. CEHE's proposal should be adopted, because it provides better  
10          customer choices, greater energy efficiency and increased financial benefits. CEHE's  
11          existing LED replacement programs were initiated by customers and have since attracted  
12          even greater customer attention. Therefore, CEHE's proposal is desirable by customers.

13  
14   **VII. CONCLUSION**

15   **Q. Does this conclude your cross-rebuttal testimony?**

16   A. Yes.

**CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC**  
**2019 CEHE RATE CASE**  
**DOCKET 49421-SOAH DOCKET NO. 473-19-3864**  
**PUBLIC UTILITY COMMISSION OF TEXAS**  
**REQUEST NO.: PUC03-08**

**QUESTION:**

**LED lighting proposal**

With respect to the Company's proposed changes to its lighting tariffs to mandate LED lamp types for replacements and new installations, please identify the different alternatives the Company considered with respect to lamp types and customer discretion in developing its proposal. Please separately discuss the alternative lamp types and policies considered with respect to replacements and new installations.

**ANSWER:**

The proposal to establish light emitting diode ("LED") as the standard lamp type evolved from the successful LED pilot program that was initiated by the City of Houston ("COH") in 2009. In May 2009, COH approached CenterPoint Houston to create an LED pilot program to explore LED lighting and its benefits, in a subdivision in the South Houston Service Area. In 2014, City of Houston passed an ordinance approving street light conversion to LED in the City of Houston. Since then, other surrounding municipalities, cities, and subdivisions have requested and entered into agreements with CenterPoint Houston to convert its non-LED street lights to LED. Because the switch to LED technology specifically has been driven by customer interest and demand, the Company has not considered other alternatives with respect to lamp types in its current proposal.

The policy supporting use of LED is driven by LED efficiency technology advancements, declining purchase cost of LED, and lower O&M cost, and higher customer demand, which make LED street lights a more reasonable standard compared to the current standard lamp type. The Company's current standard lamp, high pressure sodium ("HPS") luminaires, are less efficient, O&M costs are expected to continue to increase due to bulb replacement approximately every five years; and significant declines in the number of HPS suppliers are resulting in higher capital replacement costs. Also see the Company's response to PUC 03-09 and 03-10.

**SPONSOR (PREPARER):**

Matthew Troxle/Julienne Sugarek (Matthew Troxle, Julienne Sugarek)

**RESPONSIVE DOCUMENTS:**

None