

Public Service Company of New Hampshire  
d/b/a Eversource Energy  
Docket No. DE 19-057  
Testimony of Edward A. Davis  
May 28, 2019

**STATE OF NEW HAMPSHIRE**  
**BEFORE THE**  
**NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

**DOCKET NO. DE 19-057**  
**REQUEST FOR PERMANENT RATES**

**DIRECT TESTIMONY OF**  
**EDWARD A. DAVIS**

*Rates and Tariff Changes*

**On behalf of Public Service Company of New Hampshire**  
**d/b/a Eversource Energy**

**May 28, 2019**

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**BEFORE THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

**DIRECT TESTIMONY OF**  
**EDWARD A. DAVIS**

**PETITION OF PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**  
**d/b/a EVERSOURCE ENERGY**  
**REQUEST FOR PERMANENT RATES**

**May 28, 2019**

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1 **I. INTRODUCTION**

2 **Q. Please state your name, position and business address.**

3 A. My name is Edward A. Davis. I am employed by Eversource Energy Service Company as  
4 the Director of Rates. In this position, I provide support to Public Service Company of  
5 New Hampshire, d/b/a Eversource Energy (“PSNH” or the “Company”). My business  
6 address is 107 Selden Street, Berlin, Connecticut.

7 **Q. What are your principal responsibilities in this position?**

8 A. As the Director of Rates, I am responsible for activities related to rate design, cost of service  
9 and rates administration for all electric and gas subsidiaries of Eversource Energy,  
10 including PSNH.

1 **Q. Please describe your educational and professional background.**

2 A. I hold a Bachelor of Science degree in Electrical Engineering from University of Hartford  
3 and a Master of Business Administration degree from the University of Connecticut.

4 I joined Northeast Utilities in 1979 and have held various positions in the areas of consumer  
5 economics, engineering and operations, wholesale and retail marketing and rate design,  
6 regulation and administration. Attachment EAD-10 (Perm) provides further information  
7 on my professional background and experience.

8 **Q. Have you testified previously before the New Hampshire Public Utilities Commission**  
9 **or other regulatory bodies?**

10 A. Yes. I have testified before the New Hampshire Public Utilities Commission  
11 (“Commission”) on behalf of PSNH, and at the state utility commissions in Connecticut  
12 and Massachusetts on behalf of other Eversource Energy companies on rate related matters.

13 **II. SCOPE AND PURPOSE**

14 **Q. What is the purpose of your testimony?**

15 A. The purpose of my testimony is to present the Company’s requested changes to base  
16 distribution rates; new revenue adjustment mechanisms; and corresponding tariff changes,  
17 consistent with the revenue requirements proposals presented in the revenue requirements  
18 testimony of Company witnesses Eric H. Chung and Troy M. Dixon. Details and timing  
19 for implementation of these rates and mechanisms are discussed in Messrs. Chung and  
20 Dixon’s revenue requirements testimony.

1 In support of the Company's rate proposals I will discuss the following:

- 2 • The determination of class distribution revenue requirements to incorporate the  
3 proposed distribution revenue changes into base rates;
- 4 • The design of proposed rates by rate class, and corresponding bill impacts;
- 5 • Revisions to certain rate classes, including outdoor lighting, and the introduction of  
6 new LED street light service;
- 7 • Introduction of a new Distribution Recovery Adjustment Mechanism ("DRAM")  
8 and changes to other rate mechanisms; and
- 9 • Proposed updates and amendments to the Company's tariff.

10 **Q. Please describe the exhibits being included with this testimony.**

11 A. The following is a brief description of the attachments included with my testimony in  
12 support for the requested proposed rate changes.

<b>Attachment Designation</b>	<b>Purpose/Description</b>
Attachment EAD-1 (Perm)	Clean Tariffs
Attachment EAD-2 (Perm)	Marked Tariffs – reflecting proposed updates and changes to the Company’s rates, terms and conditions of service
Attachment EAD-3 (Perm)	Summary of Proposed Changes – summarizes the proposed changes to the terms and conditions and delivery service schedules in Attachments EAD-1 and EAD-2
Attachment EAD-4 (Perm)	Report of Proposed Changes
Attachment EAD-5 (Perm)	Revenue Allocation and RORs – provides a summary of the proposed revenue allocation and rates of return by rate class
Attachment EAD-6 (Perm)	Comparison of Current and Proposed Rates
Attachment EAD-7 (Perm)	Development of Proposed Distribution Rates and Revenue by Rate Class
Attachment EAD-8 (Perm)	Outdoor Lighting – includes support for updated outdoor lighting rates for Rates OL and EOL
Attachment EAD-9 (Perm)	Typical Bill Comparisons
Attachment EAD-10(Perm)	Professional Background and Experience

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**Q. Please provide a summary of the rate changes proposed in this filing.**

A. The Company has designed proposed rates to recover a distribution revenue increase of \$69.9 million, consistent with the overall permanent revenue requirement. On a total bill basis, this represents an average increase of approximately 4.7 percent relative to current rates. The amount of this increase varies among rate classes, depending on the level of revenue under current rates compared to the revenue required to support the revenue allocated to each rate class. Class level summaries and details of the proposed increase and changes to rates for each rate class are presented in Attachments EAD-4 through EAD-8. The bill impacts at various levels of usage within each class are show in Attachment EAD-9.

1 **Q. What other changes is the Company proposing in this filing?**

2 A. As described in the revenue requirements testimony of Messrs. Chung and Dixon, the  
3 Company is requesting approval of a DRAM to be applied prospectively, as part of its  
4 overall request for approval. Although no changes to other components of service are being  
5 requested in the Company's rate case filing, the Company anticipates updating  
6 transmission cost allocations and corresponding rates in a separate rate proceeding (e.g.,  
7 "TCAM"). With respect to decoupling, the currently approved mechanism recovers lost  
8 distribution revenue attributable to the Company's energy efficiency programs. The  
9 Company seeks to reset and extend the current decoupling mechanism, commensurate with  
10 changes in rates pursuant to this filing. My testimony also discusses the estimated impact  
11 of changes to rates associated with potential, future step increases, also discussed by  
12 Messrs. Chung and Dixon, but no changes to rates are being requested at this time. Further  
13 discussion of these rate mechanisms is provided in Section VI of my testimony.

14 **Q. Are there other tariff changes the Company is proposing?**

15 Yes. The Company is requesting approval to update service fees and charges under the  
16 Company's tariff to reflect actual costs to the Company. Among the changes to the tariff,  
17 the Company is proposing an update to its line extension policy. These and additional tariff  
18 changes are listed in Attachment EAD-3 (Perm) and described further in Section VIII of  
19 this testimony.

1 **III. COST OF SERVICE STUDIES**

2 **Q. Please describe the cost-of-service studies submitted in support of the Company's rate**  
3 **filing.**

4 A. As required by the Commission, the Company has submitted the results of two cost-of-  
5 service studies in support of its rate case. The first is the Allocated Cost-of-Service Study  
6 ("ACOSS"), which includes both a "per books" and a "proforma" study, and the second is  
7 a Marginal Cost-of-Service Study ("MCOSS"). These studies and discussion of their  
8 results and applications are provided in the testimonies of Amparo Nieto.

9 **Q. How did the Company utilize the cost-of-service study results when developing its**  
10 **proposed rates?**

11 A. The Company's proposed rate changes have been designed to recover the distribution  
12 revenue operating deficiency and to set distribution rates consistent with the cost of  
13 providing service to customers in each rate class, as informed by the cost studies submitted  
14 by Ms. Nieto. Accordingly, the Company developed proposed, permanent distribution  
15 rates by allocating the revenue increases and designing rates for each rate class in a manner  
16 that achieves a balance among a number of rate design objectives. The Company's  
17 proposed revenue allocation and rate design are described further in Section IV of my  
18 testimony.

1 **IV. REVENUE ALLOCATION AND RATE DESIGN**

2 **Q. Please provide an overview of the Company's rate proposal.**

3 A. The Company's rate design starts with the allocation of the Company's total distribution  
4 revenue requirement. The methodologies applied seek to provide an equitable allocation  
5 of the cost to provide service to customers in each class and reflect application of  
6 previously accepted allocated cost of service methodologies using updated customer,  
7 demands and accounting cost information. At a class level, the Company has also  
8 incorporated insights from the 2019 MCOSS conducted by Ms. Nieto. The Company has  
9 also applied results of its cost of service and street lighting cost analyses to restructure and  
10 develop revised and new street lighting rates.

11 **Q. Could you please discuss the basis upon which class distribution revenue**  
12 **requirements have been determined?**

13 A. Distribution rates for each rate class have been designed using the allocations of the total  
14 distribution revenue requirements shown in Attachment EAD-5 (Perm). The Company  
15 relied primarily on the fully allocated, total class revenue requirements from the ACOSS  
16 conducted by Ms. Nieto to allocate revenue requirements to each rate class, with  
17 modifications to avoid unacceptable bill impacts. The Company reviewed the earned  
18 return in comparison to the required rates of return for each class and developed allocations  
19 of revenue requirements which generally moved the rate of return for each class closer to  
20 the required level. In doing so, the Company sought to strike a balance among several key  
21 principles of rate making. A primary goal was to set a revenue requirement for each class  
22 consistent with the principles of cost causation and each class' respective cost of service.

1 Secondly, while the cost of service analyses informed the extent of current revenue  
2 deficiency or excess for each class, the Company considered the impact on overall  
3 customer bills in moving the class revenue requirement closer to cost of service. The  
4 Company has applied differing degrees of gradualism with respect to the target level of  
5 revenue requirement by class and resulting overall impact on customer bills.

6 The detailed evaluation of class earned returns and revenue requirements, and the  
7 determination of class revenue allocations upon which rates have been designed, are  
8 provided in Attachment EAD-5 (Perm). The Company determined that the proposed rate  
9 levels by class represent a more equitable and fair allocation of distribution revenue  
10 requirements among rate classes as compared with the status quo. As a long-term goal, the  
11 Company strives to continue to move each class toward its respective cost of service, while  
12 monitoring changes in cost responsibility that should be reflected in determination of such  
13 future revenue requirements.

14 **Q. Please provide an overall summary of the Company's proposed rates.**

15 A. The following Table 1 provides an overall summary of proposed changes to rates for each  
16 major customer class. Additional information supporting this summary is provided in  
17 Attachment EAD-4 (Perm), entitled "Report of Proposed Rate Changes." This report  
18 fulfills the requirement of Puc Rule 1604.02(a)(2) and 1608.02(c)(9) and provides a high-  
19 level summary of changes to both distribution and overall rates proposed by the Company,  
20 as well as additional information about current rates and revenue for other components of  
21 service. Please note, current rates are those in effect at the time of this filing.

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**Table 1: Summary of Proposed Rate Changes (\$000)**

Rate Class	Current Revenue	Proposed Revenue	Change	Percent Change
Residential Rate R	\$659,913	\$708,241	\$48,328	7.3%
General Service Rate G	322,934	336,804	13,870	4.3%
Primary General Service Rate GV	297,686	303,776	6,090	2.0%
Large General Service Rate LG	203,600	207,263	3,663	1.8%
Outdoor Lighting (OL/EOL)	11,456	9,420	(2,036)	-17.8%
Total	\$1,495,589	\$1,565,504	\$69,915	4.7%

9 **Q. What is the basis upon which proposed rates have been developed?**

10 A. Evaluation of the marginal cost to serve customers, in combination with the allocation of  
11 revenue requirements to customer classes, has been considered in the design of rates for  
12 each rate class. The current and proposed revenues for all components of service are  
13 provided for each rate class in Attachment EAD-5 (Perm). A summary of the current and  
14 proposed rates is provided in Attachment EAD-6 (Perm). More detailed calculations of  
15 current and proposed revenue and the calculation of rates provided in Attachment EAD-7  
16 (Perm).

17 In designing rates, the Company has maintained the current rate structures of each rate  
18 class, in terms of rate components and time of use periods where they exist, with the  
19 exception of outdoor lighting. The Company recognizes that current structures for  
20 distribution rates are mainly the result of the process of unbundling rates and changes to  
21 rates determined through a number of overall rate changes which may not result in entirely

1 cost-reflective rate structures for all customer classes. The decision to maintain current  
2 rate structures at this time is based on ensuring customer understanding and acceptability.  
3 Customers have become familiar with current rate structures, and it is important to assure  
4 that any further changes to rates are understandable and that reflect an appropriate level of  
5 continuity and gradualism. These considerations are measured and evaluated in several  
6 ways, including with respect to the setting of specific charges within each rate, and the  
7 impact on customer bills both at a class level and among customers within a class.

8 The Company has worked to strike a balance among these considerations and objectives in  
9 its rate proposal. The Company also considered and where opportunities arose, applied  
10 recommendations from the MCOSS, noting where first steps could now be taken with an  
11 eye toward additional changes in pricing and potential, future potential applications  
12 including structural changes as a long-term objective. In most rate classes, a move toward  
13 more efficient pricing has been made setting the proposed customer charge. In addition,  
14 for outdoor lighting, the Company has restructured rates to better align them with the cost  
15 of providing service and keeping in mind current and expected change in the mix of lights.  
16 The proposed new design provides a uniform platform upon which to reset rates for current  
17 offerings under both Rate OL and EOL, and to support the deployment of new LED  
18 offerings and the operation of control technologies going forward.

19 **Q. Please discuss the Company's proposal for changes to rates in each of its rate classes.**

20 **A.** The following is a summary of the requested changes in rates for each rate class:

1        Rate R Power & Light:

2        Rate R was earning a Rate of Return (“ROR”) significantly less than the average. Thus,  
3        the Company determined it was appropriate to allocate, within bounds, a higher than  
4        average increase to Rate R, moving approximately half way toward the class required  
5        return.

6        Rate R contains two billing elements over which the revenue increase can be allocated –  
7        the Customer Charge and the volumetric rate per kWh. The Company is proposing the  
8        Customer charge be moved closer to the marginal customer cost by setting it at the level  
9        of \$13.89 per month, as proposed in the Temporary filing. The balance of the residential  
10       distribution rate increase and revenues beyond those recovered through the new customer  
11       charge will be contained in the per kWh charge. The bill impacts to Rate R customers is  
12       shown in Attachment EAD-9 (Perm) These represent the incremental increase from  
13       Temporary to Permanent rates. Relative to current rates, the average total impact to Rate  
14       R customers is 7.4 percent.

15       Rate R OTOD

16       The allocation of revenue requirement to this class follows that of Rate R. The Company  
17       increased the Customer Charge to be set at the levels filed in the Temporary case, which  
18       was \$32.25 per month. This level is very close to the marginal customer plus marginal  
19       distribution facility cost identified in the MCOSS, and thereby provides more efficient  
20       pricing for this component of service, as noted by Ms. Nieto in her direct testimony. The  
21       balance of the Distribution rate increase will be contained in the on-peak and off-peak per

1 kWh charges. To maintain consistency with current rates, the Company kept the current  
2 price differential between on-peak and off-peak rates and maintained the current TOD  
3 period in taking the incremental change from temporary to permanent rates. The bill impact  
4 to Rate R OTOD customers is shown in Attachment EAD-9 (Perm). Relative to current  
5 rates, the average impact to Rate R OTOD customers is 7.8 percent.

### 6 Water Heating

7 To set the revenue requirement of water heating rates, the Company applied a greater than  
8 average increase consistent with residential limits, reflecting the ACOS result. In this case,  
9 the Company has combined Controlled and Uncontrolled Water Heating service and is  
10 phasing in rate changes for controlled water heating customers moving to uncontrolled  
11 service. As described in Docket No. DE 14-203, the Company has replaced older meters  
12 and no longer control water heaters. In its November 12, 2014 secretarial letter in Docket  
13 DE 14-203, the Commission noted that the Company would review water heating along  
14 with Load Control Service (“LCS”) in the next rate case.

15 In this rate case, the Company proposes to set the Customer Charge for water heating rates  
16 at the temporary rate level for Uncontrolled Water Heating of \$4.89 per month. Since  
17 controlled water heating no longer exists, the Company proposes to migrate Controlled  
18 Water Heating customers to Uncontrolled Water Heating service. Since the change in rate  
19 all at once would result in a significant increase, the Company proposes to phase in rate  
20 changes in two steps, by first maintaining service to these customers under the Controlled  
21 Water Heating schedule but move their per kWh rate halfway to that of Uncontrolled Water

1 Heating pursuant to this Permanent rate proposal. Such customers will then be moved to  
2 service under Uncontrolled Water Heating schedule and rates thereunder as of July 1, 2021  
3 (i.e., one year after permanent rates are anticipated to become effective, as approved by the  
4 Commission.). This rate proposal applies to both Rate R and Rate G customers who receive  
5 Controlled Water Heating service. The Temporary to Permanent bill impacts are included  
6 in Attachment EAD-9. The overall bill impact to an uncontrolled water heating customer  
7 is an increase of approximately 6 percent. For a controlled water heating customer there is  
8 an overall decrease of approximately 1.5 percent.

9 Load Control Service (“LCS”)

10 The Company has applied a greater than average rate change percentage to LCS customers,  
11 reflecting again the result of the ACOSS, which identifies this class contributing with a  
12 return on allocated rate base significantly below the overall ROR.

13 LCS Radio Controlled:

14 For the Radio-controlled option under LCS, the Company proposes to increase the  
15 Customer Charge from \$9.11 to \$11.30 per month and adjust the per kWh charge  
16 using a comparable percentage increase. Recognizing that this rate was developed  
17 for applications to customers with older technologies (i.e., under the “heat smart”  
18 program) that remain in service today, the Company proposes to close this rate to  
19 new applicants while continuing to operate this program under updated rates, for  
20 customers who continue to receive this service.

1           LCS - All Other Options:

2           Pursuant to the discussion of Rate R Water Heating, above, and the Company's  
3           review of LCS service, the Company proposes to set rates consistent with the  
4           Controlled Water Heating proposal (served under both Rate R and Rate G) under  
5           the LCS 8, 10 and 11-hour service offerings. Complete bill impacts resulting from  
6           these changes are provided in Attachment EAD-9 (Perm), pp. 6-9 (Rate R) and pp.  
7           15-18 (Rate G).

8           Rate G - General Service

9           Rate G P&L:

10          The Company allocated the proposed revenue requirement increase at a class level in a  
11          manner that reduced this class' overall ROR, recognizing that it currently offers a ROR  
12          well above the system average. Application of the bounds in setting residential, water  
13          heating and LCS rates resulted in "residual" revenue requirements, which were allocated  
14          to Rates G, GV, LG and B. See Attachment EAD-5, page 2. To move rates closer to the  
15          required revenue requirement within Rate G P&L, moderate increase in the Customer  
16          Charges have been made for both the single and three-phase customers, bringing those  
17          rates toward the level of marginal customer cost as per the MCOSS. In doing so the  
18          Company maintained the current single-phase vs. three-phase customer charge  
19          relationship, which is comparable to the relationship of both the marginal customer and  
20          facilities components of cost for the single and three-phase customers, respectively. An  
21          adjustment has also been made to the current demand charge to recover the additional

1 customer and demand related costs. Bill impacts associated with these changes, for various  
2 usage levels, are provided in Attachment EAD-9 (Perm), pages 10 and 11. The overall  
3 increase from current rates is approximately 4.3 percent on a total bill basis.

4 Rate G TOD:

5 Current customer charges for this rate class are already closer to the marginal customer  
6 cost of service than for Rate G P&L and have been moderately moved closer to cost of  
7 service by including a share of the marginal transformer cost as estimated in the MCOSS  
8 for this customer class, and utilizing the current single-phase to three-phase relationship.  
9 The three-phase customer charge should be increased further toward full marginal  
10 customer plus facility cost of service under this rate structure in the future. The Company  
11 retained the current per kWh rates and time of day differential as proposed in the  
12 Temporary filing under this docket and adjusted the Load Charge accordingly. Please see  
13 Attachment EAD-9 (Perm), pages 19 and 20, for customer bill impacts. The overall  
14 increase from current rates is approximately 8.5 percent.

15 Water Heating

16 Rates and service for Rate G water heating customers (both uncontrolled and controlled)  
17 are the same as for Rate R customers. Please refer to the Water Heating for Rate R  
18 customers for details on both rate changes and the phased change in rates for Rate G  
19 Controlled Water heating customers. Bill impacts for Rate G water heating customers are  
20 provided in Attachment EAD-9 (Perm), pp. 12-13.

1        Space Heating

2        The current unitized ROR for Space Heating customers is 2.34 times above the system  
3        average earned ROR. In order to move Rate G closer to the average ROR, the Company  
4        assigned an increase to Space Heating less than the average rate increase. The resulting  
5        allocation resulted in a unitized ROR of 1.64 which is significantly less than the current  
6        index.

7        Space Heating includes two components which can be used to recover the additional  
8        revenue requirement allocated to this class. The Company is proposing that the Customer  
9        Charge be set at the level from the Temporary case of \$3.26 per month. The remaining  
10       increase will be through the per kWh charge which is shown in Attachment EAD-6  
11       (Perm)with the bill impacts from Temporary to Permanent rates contained in Attachment  
12       EAD-9 (Perm). The overall allocation to Space Heating resulted in an increase of  
13       approximately 3.6 percent on a total bill basis.

14       Primary General Service – Rate GV

15       Because the current Rate GV earned ROR is above average, the Company applied less than  
16       the average percent increase to the Rate GV class in order to move the class ROR closer to  
17       the system average. The Company then increased the customer charge, moving moderately  
18       toward the marginal customer cost level, and increased the demand charge accordingly, to  
19       achieve the targeted distribution revenue requirement. While the Company retained the  
20       kWh structure, a future rate design consideration could include simplifying rates by  
21       combining blocks. Rate GV customer bill impacts are provided in Attachment EAD-9,

1 page 22. The overall impact on a total class basis is approximately 2 percent over current  
2 rates.

3 Large General Service – Rate LG

4 The current earned ROR index for Rate LG is 2.41. The Company has applied a less than  
5 average revenue increase to lower the overall ROR for Rate LG. Similar to Rate GV, the  
6 company applied a moderate increase to the customer charge to move closer to the  
7 corresponding marginal cost and increased the demand charge to attain the design revenue  
8 requirement while maintaining per kWh rates at current levels. Resulting bill impacts are  
9 provided in Attachment EAD-9 (Perm), page 23. The overall impact to Rate LG is  
10 approximately 1.9 percent.

11 Backup and Supplemental Service – Rate B

12 Rate B customer usage can vary significantly. Based on test year performance, the earned  
13 ROR for this class is significantly higher than average. Accordingly, the Company has  
14 allocated revenue increase to the class to achieve a ROR that moves closer to the system  
15 average level. The customer charge has been set at \$374.12 per month, and distribution  
16 demand charges have been set to achieve the required revenue requirement. The current  
17 rate structure where a contract demand is applied, has been retained. Supplemental service  
18 required for Rate B customers continues to be provided pursuant to rates under Rate GV  
19 or Rate LG, as appropriate. The overall increase to Rate B over current rates is  
20 approximately 3.5 percent.

1        Outdoor Lighting – Rate OL and Rate EOL

2        The Company has reviewed the current rates and cost of service for outdoor lighting, and  
3        redesigned rates in accordance with the cost of service and changes in the mix of lights  
4        served under Rate OEL and Rate OL. This design also provided a basis for introducing  
5        new energy efficient lighting (i.e., LED) options discussed herein.

6        Attachment EAD-8 (Perm) provides the work papers for development of proposed outdoor  
7        lighting rates. The total revenue requirement is \$1.507 million for Rate EOL and \$4.047  
8        million for Rate OL, as shown on page 1. The cost of service associated with these amounts  
9        have been functionally unbundled in order to develop proposed rates. The total revenue  
10       resulting from application of proposed rates to all lights served under Rate EOL and Rate  
11       OL matches this total revenue requirement, as shown on pages 4 and 5 of the attachment,  
12       respectively.

13       To design proposed rates, the Company first functionally unbundled revenue requirements  
14       into four components: (1) demand-related system costs; (2) customer-related system costs;  
15       (3) street lighting operation and maintenance costs; and (4) street lighting equipment costs.  
16       Unit costs were then developed for the demand, customer and O&M categories, as shown  
17       on page 1 of the attachment. A unit system demand rate of \$0.01058 per watt was derived  
18       based on Rate EOL cost of service responsibility and utilized for Rate OL for consistency  
19       between rates. (see lines 31-34). A unit customer rate of \$1.65 per fixture was derived by  
20       dividing total number of fixtures into total customer revenue requirement (see lines 36-39).  
21       Separate O&M unit rates were developed for non-LED and LED lights. As shown on pages

1           2 and 3, the Company develop a proposed monthly unit charge of \$2.77 per fixture for non-  
2           LED lights and \$0.28 per fixture for LED lights.

3           The unit customer, demand and O&M rates and charges allow the Company to apply a  
4           uniform methodology for setting outdoor lighting rates under both Rate EOL and OL,  
5           independent of the rates and charges for recovery of street lighting equipment costs for  
6           lighting served under Rate OL.

7           Under Rate EOL, a proposed, fixed monthly rate has been developed for each High-  
8           Pressure Sodium and Metal Halide light, by applying the unit customer, demand and O&M  
9           rates for each of these lights. See the Monthly Rate column on page 4. For example, the  
10          monthly rate for an 89-Watt Metal Halide light is \$5.36 per fixture. This rate is determined  
11          by summing the customer, demand and O&M charges, where the demand charge is  
12          calculated by multiplying the unit demand rate by the connected demand (the respective  
13          charges are \$1.65, \$0.94 and \$2.77 in this example). For LED lights served under Rate  
14          EOL, the same methodology, using the O&M for LED lights, applies. The charges for  
15          LED service are shown on page 4 (these are presented in aggregate and reflect charges for  
16          numerous LED fixtures with varying wattages served under Rate EOL).

17          When developing rates for Rate OL customers, the costs for the street lighting equipment,  
18          along with the customer, demand and O&M components, is included in the rate charged  
19          for each type of light. The total revenue requirement for street lighting equipment served  
20          under Rate OL is \$2.6 million (see page 1, line 49). The monthly charge for each light  
21          served under Rate OL is provided in the Monthly Rate column of page 5. The charge for

1 each light is comprised of the customer, demand and O&M charges, determined in the  
2 same manner as for Rate EOL lights. The equipment charge for each light represents the  
3 unit rate of the revenue requirement for street lighting equipment associated with that light,  
4 as shown in the Equipment column of page 5. Thus, for a nominal 89-Watt, Metal Halide  
5 light served under Rate OL, the total Monthly Rate of \$14.82 is comprised of the \$1.65  
6 customer, \$0.94 demand, \$2.77 O&M and \$9.46 equipment components.

7 The Company's proposed rate design provides a uniform methodology for calculating the  
8 monthly rate for existing lights using rates that have been set on the basis of current cost  
9 of service. This design also supports the introduction of new LED street light offerings  
10 under Rate OL by adding a rate for the equipment cost of a specific LED light to the base  
11 customer, demand and O&M rate components. Using this methodology, the company has  
12 developed six new standard LED lighting options under Rate OL. Detailed rate  
13 development is provided on page 5 of the attachment (see lines 35-41). Supporting  
14 calculations of the equipment component for each of these LED lights is shown on page 6.

15 **Q. To what extent do proposed outdoor lighting rates align with the costs of providing**  
16 **service?**

17 A. Proposed distribution rates result in a total revenue of \$1,507,325 for Rate EOL and  
18 \$4,047,414 for Rate OL. These amounts equal the total revenue requirement allocated to  
19 these classes, which are at cost of service with a unitized ROR of 1.0. See Attachment  
20 EAD-5 (Perm).

1 **Q. Do the Company's proposed outdoor lighting rate changes comply with the**  
2 **Commission's Order and terms of the Settlement Agreement in 2014 regarding**  
3 **changes in LED rates?**

4 A. Yes. The terms of the July 1, 2014 Settlement Agreement and under Order No. 25,701  
5 (Aug 4, 2014) in Docket 13-248 stipulate that the Company "...will hold any LED rate to  
6 a change no greater than the overall authorized distribution rate increase." In the  
7 Temporary rate request submitted by the Company in this docket on April 26, 2019, an  
8 overall average, uniform 9.4 percent increase was applied to distribution rates in every rate  
9 class, including those for LED street lights served under Rate EOL. The revenue  
10 requirement upon which outdoor lighting rates have been set in this request for Permanent  
11 rate changes is lower than at current rate levels, and result in a proposed decrease in rates,  
12 relative to current rates. Changes to LED lighting rates in both the Temporary and the  
13 Permanent filings comport with the rate change requirements of that settlement agreement  
14 and order.

15 Complete calculations of current versus proposed revenue along with bill impacts by light  
16 and at a class level, for both Rate EOL and Rate OL, are provided in Attachment EAD-9  
17 (Perm), pages 1 through 6.

18 **V. CUSTOMER BILL IMPACTS**

19 **Q. Please summarize the rate changes and bill impacts associated with the Company's**  
20 **proposal.**

21 A. Attachment EAD-4 contains the "Report of Proposed Rate Changes" as required by Puc  
22 1604.02(a)(2). Page 1 of this report shows for each rate class of service the annual revenue  
23 under current rates and proposed rates and the change in revenue and percentage change in

1 revenue the Company is requesting. As shown, the proposed change in distribution rates  
2 results in an overall increase in total retail billed revenue of 4.7 percent. Pages 2 through  
3 5 of this report provide the supporting calculations of the annual revenue amounts under  
4 current rates, proposed rates, and the change in revenue and percentage change in revenue  
5 by rate class. Along with Attachment EAD-4, Attachment EAD-6 meets the additional  
6 requirements under PUC 1608.02(c)(9).

7 **Q. Please describe the bill impact for a residential customer?**

8 A. Table 2 below summarizes the monthly bill impact for a residential customer using 600  
9 kilowatt-hours per month. Under the Company's proposal, an average residential customer  
10 who consumes 600 kilowatt-hours of electricity per month will see an increase to their  
11 current monthly bill of \$5.45, or 4.36 percent.

12 **Table 2: Bill Impacts**

	<u>Current</u>	<u>Proposed</u>	<u>\$ Change</u>	<u>% Change</u>
14 600	\$125.13	\$130.58	\$5.45	4.36%

15 **VI. RATE MECHANISMS**

16 **Q. Please describe how the Company plans to allocate and recover the revenue**  
17 **requirements related to the DRAM to each rate class.**

18 A. The Company proposes that the rate for the DRAM be developed based on the allocations  
19 of distribution revenue ultimately approved by the Commission in this case. The allocation  
20 of DRAM revenue requirements to each rate class would set the basis for rate design within  
21 that class. Given the nature of the costs, the Company proposes that the rate for recovery

1 of the allocated DRAM revenue requirement for each class be designed in accordance with  
2 the rate most predominantly associated with the recovery of demand-related costs. Thus,  
3 the rate design would be a based on a cents per kWh for Rate R, and a dollar per kVA rate  
4 for Rate LG.

5 **Q. Please explain the approval the Company is requesting in this case related to DRAM.**

6 A. In this rate case, the Company is requesting approval of the components of the DRAM  
7 described in detail in Messrs. Chung and Dixon's testimony and of tariff provisions that  
8 allow this methodology to be applied to allocations of DRAM revenue requirements and  
9 design of rates in each rate class. The Company will annually submit a request for setting  
10 DRAM rates for effect on July 1 of a given year, pursuant to processes set forth in Messrs.  
11 Chung and Dixon's testimony. The proposed tariff language is included in Attachment  
12 EAD-1 (Temp) and EAD-2 (Temp), Section 33. The Company proposes to identify this  
13 new charge as a separate line item on customer's bills, and designated "Distribution  
14 Adjustment Charge".

15 **Q. Please describe any other rate mechanisms the Company is including in its proposals**  
16 **this case.**

17 A. Regarding decoupling, the Company plans to continue its current decoupling mechanism to  
18 address prospective sales and revenue impacts of both energy efficiency and distributed  
19 generation. This form of decoupling aligns with the goal of ensuring there is no disincentive  
20 to support energy efficiency or distributed generation. The current mechanism allows the  
21 Company to recover lost revenue calculated based on reduced volumetric (kWh) and

1 demand (kW) revenue, from incremental energy efficiency savings measures, pursuant to  
2 methods established in Docket Nos. DE 15-137 and DE 17-136. Methodologies for  
3 determination and recovery of lost revenue associated with sales displaced due to distributed  
4 generation was addressed pursuant to Docket DE 16-576. The Company would apply these  
5 forms of decoupling and submit rates for the recovery of lost revenue through these  
6 mechanisms, subject to Commission review and approval. Based on the Company's request  
7 for base rate changes in this proceeding, this mechanism would apply to prospective lost  
8 base distribution revenue and continue until and only if replaced with another mechanism.  
9 Thus, LBR associated with energy efficiency measures installed through test year,  
10 December 31, 2018 would be set to zero, pursuant to the timing of permanent rate  
11 implementation.

12 **Q. How does the Company propose to recover any lost based revenues?**

13 A. Currently, the Company recovers the lost base revenue for energy efficiency measures  
14 through the System Benefits Charge and proposes no changes to that recovery in this case.  
15 Lost base revenue for installation of distributed resources would be determined for  
16 installations occurring after the test year, and calculated in accordance with the  
17 methodology established pursuant to DE 16-576. Recovery would occur through the  
18 company's proposed DRAM, or other mechanism as determined by the Commission.

1 **Q. Are there are any other rate mechanisms the Company proposed to implement or**  
2 **revise in this proceeding?**

3 A. No. Rates for all other services the Company provides will continue to be addressed within  
4 their respective rate making proceedings. The Company plans to address any changes to  
5 cost allocation and rates for transmission service in a future transmission rate filing.

6 **VII. TIMING AND IMPLEMENTATION OF RATE CHANGES**

7 **Q. Please discuss the timing of proposed rate changes.**

8 A. The Company's request for a Permanent rate change is predicated on a July 1, 2019  
9 effective date. While a procedural schedule has not yet been determined, at this time the  
10 Company anticipates review and approval by the Commission would be completed during  
11 2020 and has assumed that a change to base rates pursuant to this Permanent rate request  
12 (i.e., a change between Temporary and Permanent rates, as approved by the Commission)  
13 would be implemented for bills rendered on or after July 1, 2020. Under this timeframe,  
14 there would also be an element of "recoupment" that reflects the revenue associated with  
15 the difference between Temporary and Permanent rates during the period July 1, 2019 and  
16 July 1, 2020. The recoupment will also be included in base rates beginning on this same  
17 date (i.e., July 1, 2020), and will continue at a level and for a duration determined by the  
18 Commission. The Company has also requested annual "step" adjustments to base rates,  
19 which will be reflected as a change to base distribution rates on July 1 each year, starting  
20 in 2020.

1 **Q. Please describe timing and impact of the DRAM and step adjustments.**

2 A. The Company is proposing the DRAM to be effective annually on July 1 with the first  
3 change occurring July 1, 2020.

4 The step adjustments will have the same timing as the DRAM. As proposed, the step  
5 adjustments will occur annually on July 1, commencing on July 1, 2020 and continuing  
6 through June 30, 2024. The step adjustments are described further in the testimony of  
7 Messrs. Chung and Dixon. Based on the estimated revenue requirements included in their  
8 testimony, the annual incremental revenue requirement and the corresponding, total  
9 company average bill impact in each year of both the step adjustments and DRAM are  
10 shown in Table 3. These amounts are in addition to the Permanent rate increase provided  
11 in Table 1.

12 **Table 3: Total Estimated Impact of DRAM and Step Increases**

Description	Investment Year 1 (\$M)	Investment Year 2 (\$M)	Investment Year 3 (\$M)	Investment Year 4 (\$M)
Step Adjustment	14.9	20.8	13.5	15.6
DRAM Components				
GTEP	4.5	7.9	7.3	6.2
EDIT Credit	-7.6			
Total Incremental Revenue Requirement	11.8	28.7	20.8	21.8
Average Bill Impact	0.8 %	1.8 %	1.3 %	1.3 %

13

1 **VIII. TARIFF UPDATES**

2 **Q. Is the Company seeking approval of other rate and tariff changes in this proceeding?**

3 A. Yes. The Company proposes to update certain provisions in its rate schedules, and to  
4 amend a number of provisions, including its service charges and Terms & Conditions  
5 (“T&Cs”) for Delivery Service and Electric Service Providers. These proposed updates  
6 and amendments are shown in Attachment EAD-3 (Temp).

7 The proposed amendments to the T&Cs for Electric Service Providers includes clarifying  
8 language, elimination of certain sections and proposed new definitions and charges related  
9 to load pulse output service and off-cycle meter reading.

10 The proposed amendments to the T&C’s for Delivery Service include removal of certain  
11 language, new service offering for customers receiving default energy service, updated  
12 charges for meter diversion and a change to the line extension policy to implement the  
13 Commission’s order No. 25,926 (July 26, 2016) in Docket No. IR 14-190.

14 In addition to the proposed changes to the T&Cs, Section IV describes the proposed  
15 changes to the pricing and the combination of controlled and uncontrolled water heating,  
16 closing Radio Controlled LCS service and Rate LCS 8 hour and 10/11-hour rates closing  
17 to new customers. All Tariff changes are summarized in Attachment EAD-3 (Perm).

18 **Q. Does this conclude your testimony?**

19 A. Yes, it does.