



STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

DE 17-136

2018-2020 NH STATEWIDE ENERGY EFFICIENCY RESOURCE PLAN

2019 Annual Update

DIRECT TESTIMONY

OF

JAMES J. CUNNINGHAM, JR.

Date: November 2, 2018

1 **I. Introduction**
2
3

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

5 A. My name is James J. Cunningham, Jr. and I am employed by the New Hampshire Public
6 Utilities Commission (Commission) as a Utility Analyst. My business address is 21
7 South Fruit Street, Suite 10, Concord, New Hampshire 03301.

8 **Q. Please summarize your educational and professional background.**

9 A. Please refer to Appendix A.

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

11 A. The purpose of my testimony is to review the calculation of lost base revenue (LBR). In
12 Order No. 26,095, the Commission approved a Settlement Agreement for the 2018-2020
13 Plan which required Eversource, Liberty (GSEC) and Unitil to modify the calculation of
14 lost revenue for year 2019:

15 *LBR from measures installed in 2019 and forward shall be calculated using the*
16 *method proposed by Staff in its November 1, 2017 testimony in this docket,*
17 *consisting of separate average distribution rates based upon the kWh and kW*
18 *components, but incorporating appropriate kW savings value.*
19

20 In accordance with the order, a Lost Revenue Working Group (LBRWG) was established
21 in January 2018 to determine the appropriate kW savings value for the Commercial and
22 Industrial (C&I) sector. The working group considered the general impact of customer
23 peak, and the general impact of demand charge ratchets. Also, the working group
24 considered LBR calculations that were based upon averages, recognizing that it is not
25 feasible to identify demand charge impacts on a customer-by-customer basis.

26 With this guidance in mind, the LBRWG met in monthly sessions during January-June
27 2018 and developed an LBR Template (template) which disaggregates the calculation of

1 LBR into two components – i.e., the kW component and the kWh component, pursuant to
2 the Commission order. A report summarizing the conclusions and recommendation of
3 the working group, *August 29, 2018 Working Group Report on LBR* was prepared. The
4 report is posted to the Commission’s website.¹

5
6 **II. Summary of the LBRWG Report for the kW component of LBR – Eversource,**
7 **Liberty and Unitil**

8
9 **Q. Please summarize the report provided by the LBRWG.**

10 A. Pursuant to the Commission’s order, the LBRWG considered the general impact of
11 customer peak load and the general impact of demand charge ratchets on the
12 disaggregated kW savings values. A major portion of the Working Group’s time focused
13 on developing a simplified one-page template to summarize the derivation of the kW
14 component, as summarized in the following Table:²

¹ Reference: http://www.puc.state.nh.us/EESE%20Board/EERS_Working_Groups.html

² Also, refer to the LBRWG Report, at page 6.

Table 1: LBR Template
Derivation of the kW Component of LBR
Eversource, Liberty and Unitil
Year 2019

<u>Line</u>	<u>Description</u>	<u>Reference</u>
1	2019 Quantity	2019 Annual Update
2	2019 Gross Annual Savings per Unit (kWh)	2019 Annual Update
3	Maximum Demand Factor	EM&V Studies, Actual Meas. Install.
4	Maximum Load Reduction per kW	Line 2 x Line 3
5	Extended Maximum Load Reduction kW	Line 1 x Line 4
6	% kW Dem. Reduction at Customer Peak	LBRWG Report, Section IV-B
7	Sub-Total, Customer Peak kW Reduction	Line 5 x Line 6
8	% Net to Gross Percentage	LBRWG Report, Section IV-C
9	Sub-Total, Customer Peak kW Reduction	Line 7 x Line 8
10	% In-Service Rate	LBRWG Report, Section IV-D
11	Sub-Total, Customer Peak kW Reduction	Line 9 x Line 10
12	% kW Realization Rate	LBRWG Report, Section IV-E
13	Sub-Total, Customer Peak kW Reduction	Line 11 x Line 12
14	Billing Adjustment to Reflect Ratchets	LBRWG Report, Section VI
15	Sub-Total, Customer Peak kW Reduction	Line 13 x Line 14
16	Retirement Adjustment	LBRWG Report, Section IV-F
17	Total Customer Peak Reduction, Full Year	Line 15 x Line 16
18	% of Annual Savings Achieved in First Yr.	LBRWG Report, Section IV-A
19	Total Cust. Peak kW Reduction, First Yr.	LBRWG Report, Section V
20	LBR ADR per kW	LBRWG Report, Section V
21	Lost Based Revenue (LBR)	Line 19 x Line 20

1 Table 1 summarizes the derivation of the kW component used by Eversource, Unitil and
 2 Liberty, effective for kW savings installed in year 2019. For convenience, Table 1
 3 provides references to the LBRWG Report where explanations for each line item in the
 4 template can be found.³

5 Although the template was referenced in the 2019 Annual Update filing, I believe it
 6 would be helpful if, going forward, this template, with values included for each line item,
 7 is provided in future filings. See attached Schedule JJC-1 for an illustration.

³ During the course of discovery in this proceeding, the utilities made corrections to the values in the filing. Staff is still in process of reviewing these corrections; and, the utilities have indicated that they plan to incorporate the corrections in an updated filing.

1 **Q. Please continue with your summary of the template shown in Table 1.**

2 The LBRWG provided calculations for 2019 and 2020, with a disaggregation of kWh and
3 kW savings, as specified in the Settlement Agreement approved in Order No. 26,095.

4 The LBRWG developed a template to summarize the calculation of kW savings values
5 for planning purposes as follows:

- 6 • It begins with kWh savings authorized by the Commission (template, line 1-2)
- 7 • Then, the template converts kWh savings to maximum kW load reduction based
8 on a metric referred to as the maximum demand factor (MDF) (template, line 3-5)
- 9 • The maximum load reduction is then converted to load reduction at peak
10 (template, line 5-6)
- 11 • Then, kW load reduction at customer peak is adjusted for the following: % Net to
12 Gross , % In-Service, % kW Realization Rate, Billing Adjustment to Reflect
13 Ratchets, % Retirement Adjustment and % Annual Savings Achieved in First
14 Year (template line 8-19)
- 15 • Finally, the remaining kW hours are multiplied by the lost base revenue average
16 distribution rate per kW (LBR ADR) to calculate LBR dollars (template, line 20-
17 21).

18 Please refer to the LBRWG report for further information about these calculations.

19 **Q. What are the benefits of utilizing the template developed by the LBRWG?**

20 A. The benefits of using the template are as follows:

- 21 • Template uses metrics that are transparent – e.g., uses kWh in the plan as a
22 starting point; and measure lives that are in the Plan for determining retirement
23 adjustments.

- 1 • Template is administratively expedient – e.g., highlights key information in a one-
2 page template and avoids searching for data in computer models and spreadsheets.
- 3 • Template makes limited use of certain, simplifying assumptions where
4 appropriate – e.g., uses “half year convention” uniformly across all three utilities
5 (i.e., for planning purposes, uses 50 percent of the annualized target kWh energy
6 and kW demand savings for program year 2019 in the first year (2019) and 100
7 percent are assumed to be achieved in subsequent years).
- 8 • Template utilizes readily available information – e.g., template uses information
9 from existing EM&V studies for savings assumptions; and, it uses Commission
10 approved tariffs for average distribution rates.

11 **Q. The Settlement Agreement approved by the Commission in Order No. 26,095 noted**
12 **that that the Settling Parties agreed that lost base revenue (LBR) calculations are**
13 **based upon averages and that it is not feasible to identify the impacts with precision,**
14 **and further agree that it is not feasible to track demand charge impacts on a**
15 **customer-by-customer basis. Please explain how the template addresses these**
16 **points.**

17 A. The template focuses on higher level data for the most part and avoids the use of
18 customer-by-customer analysis. For instance, the template starts with overall annual
19 gross kWh savings and utilizes maximum demand factors (MDF) to convert overall
20 annual kWh savings to connected load kW savings. In addition the template uses
21 coincident factors to convert total connected load kW savings to customer peak kW

1 savings.⁴ Also, the template adjusts kW savings for other factors based on averages –
2 e.g., adjustments provided by evaluation and monitoring and verification (EM&V)
3 studies for percent in-service rates and percent kW realization rates.

4 **Q. You pointed out at the start of your testimony that the LBRWG considered the**
5 **general impact of demand charge ratchets. Please explain how demand charge**
6 **ratchets were considered by the LBRWG.**

7 A. The LBRWG Report considered ratchet analyses provided by each utility (ref. Appendix
8 B). The ratchet analyses were generally uniform across all three utilities (Eversource,
9 Liberty and Unitil). The following is a summary of the analysis, using Eversource data
10 as an illustration. First, the analysis reflects only the relevant C&I rate class which
11 contains a ratchet provision, specifically the LG rate class. Second, the analysis
12 considers a group of customers who were billed under a ratchet demand for one month or
13 more in the past 12 months, which included a group of 106 customers. Finally, the
14 analysis considers only those customers who had energy efficiency installed over the past
15 12 months, which pertained to only 2 customers. The results of this analysis indicated
16 that for the 12-month period ending February 2018, the ratio between ratchet demand and
17 metered demand was immaterial – i.e., ratchet demand impact was 0.0002 or percent 0.02
18 percent higher than metered demand. A similar analysis was performed by Liberty which
19 yielded a ratchet demand impact of 6 percent, and for Unitil, a ratchet demand impact of
20 5 percent. However, Liberty and Unitil identified potential anomalies in the data

⁴ For more information about the derivation of MDF and coincident factors, please refer to the LBRWG Report, Section IV.

1 indicating that it was difficult to assume that these percentages pertained specifically to
2 ratchet impacts.⁵

3 **Q. Does the template include any adjustments for ratchet impacts?**

4 A. No. After consideration of the uniform analyses by the utilities, there appears to be zero
5 to little impact from ratchets for Eversource. With respect to Liberty and Unitil, the
6 uniform analysis indicates that the ratchet impact might be higher; however, there was
7 not sufficient confidence that ratchet impacts were necessarily attributable to 2019 energy
8 efficiency installations. Therefore, the template used to calculate kW savings for 2019
9 does not incorporate any adjustments for ratchets.

10 However, going forward, when the utilities submit their final reports for 2019 LBR, it
11 would be helpful if the utilities could update the uniform analysis developed by the
12 LBRWG to ensure that ratchet impacts, if any, are reflected in the calculation of final kW
13 savings used for purposes of calculating lost base revenues.⁶

14 **Q. What are the proposed average distribution rates (ADR) per kW that are used in
15 the calculation of LBR for year 2019 for Eversource, Liberty and Unitil?**

16 A. The proposed ADR per kW are shown in the filing as follows: Eversource: \$6.42 per kW
17 (Bates 85); Liberty: \$7.77 per kW (Bates 118); Unitil: \$9.11 per kW (Bates 174).

18 These ADRs reflect the new methodology, effective for 2019, whereby the ADR for the
19 two components (kW component and kWh component) are disaggregated and calculated
20 separately.

21 **Q. Does the filing provide detail support for calculation of the kW component?**

⁵ For more information about the ratchet analyses provided by the utilities, please refer to the LBRWG Report, Section VI.

⁶ Final report of 2019 lost base revenues will be filed in June 2020.

1 A. The filing provides support in the form of references to pages in the LBRWG report
2 (Bates 42) and provides a summary of the proposed LBR amounts for Eversource (Bates
3 81-82), Liberty (Bates 115-116) and Unitil (Bates 169-170). Also, testimony is provided
4 explaining the development of LBR (at Bates 263). However, the filing does not provide
5 detail support for the calculations of the kW component. In discovery, the utilities
6 provided this information; however, these details are too voluminous to incorporate in
7 this testimony. Instead, my testimony includes a summary of these details in attached
8 Schedule JJC-1, using Eversource data to illustrate.
9 It would be helpful if, in the future, this summary-level information is included in the
10 filing.

11 **Q. Do you have any other comments?**

12 A. Yes. With respect to Liberty (GSEC), the Company indicates it will be filing a rate case
13 in 2019 with a test year of 2018; and, cumulative savings will reset during the test year.
14 Therefore, Liberty (GSEC) is proposing LBR for calendar year 2019 only.⁷
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16 **III. Comments on the kWh Component of LBR**

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18 **Q. Please comment on the kWh comment and include the average distribution rates
19 (ADR) for the kWh component.**

20 A. Effective in 2019, with the disaggregation of the kW and kWh components, it is
21 necessary to re-calculate the separate ADRs for each component in order to calculate
22 LBR. The proposed ADR per kWh are shown in the filing as follows:
23 Eversource, (Bates 85): Residential \$0.04025 per kWh and C&I \$0.01177 per kWh

⁷ Source: DR Staff 3-6.

1 Liberty, (Bates 118): Residential \$0.04349 per kWh and C&I \$0.00872 per kWh

2 Unitil (Bates 174): Residential \$0.03537 per kWh and C&I \$0.00024

3 **Q. Does the filing provide an overall amount of LBR that includes both components,**
4 **i.e., the kWh component and the kW component for year 2019?**

5 A. Yes. The proposed amount for LBR for year 2019 (both kWh and kW components) are
6 summarized in the filing: (Eversource, Bates 81-82), Liberty (Bates 115-116) and Unitil
7 (Bates 169-170) and testimony (starting at Bates 263).⁸

8 **Q. What are the proposed 2019 LBR amounts for Eversource, Liberty and Unitil ?**

9

10 A. The proposed 2019 LBR amounts are as follows:

11 Eversource (Bates 81-82) \$4,741,259

12 Liberty (Bates 115-116) \$99,073

13 Unitil (Bates 169-170) \$612,601

14 The calculation of the above amounts reflects the prior combined methodology for 2017-
15 2018 and the new disaggregated methodology for 2019; and, the calculation of these LBR
16 amounts are cumulative - i.e., the amount includes lost revenue associated with energy
17 efficiency programs installed in 2017, 2018 and 2019.⁹

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19 **IV. Gas Utilities – EnergyNorth and Northern**

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21 **Q. What are the proposed amounts for 2019 LBR for Energy North and Northern?**

⁸ As noted earlier, during the course of discovery, corrections were made to the values in the filing. The utilities stated that they will incorporate the corrections in an update (ref. Staff 2-36, Staff 3-6 and Staff 2-54).

⁹ Reference LBRWG Report, Section VII.

1 A. For EnergyNorth, the proposed LBR amount for 2019 is \$33,557. The proposed amount
2 for the residential sector is \$19,663 and the proposed amount for the C&I sector is
3 \$13,894.¹⁰

4 For Northern, the proposed LBR amount for 2019 is \$66,994. The proposed amount for
5 the residential sector is \$11,273 and the proposed amount for the C&I sector is \$55,721.¹¹

6 **Q. The Commission recently approved a decoupling mechanism for EnergyNorth.
7 How does the filing of LBR in this instant case incorporate the impact of
8 decoupling?**

9 A. The Commission recently approved a decoupling mechanism for Energy North; and, as a
10 result, the LBR mechanism ended. According to Order No. 26,122 (p. 44-45) (Docket
11 DG 17-048), the Commission required that Energy North cease collecting lost revenue
12 effective November 1, 2018.

13 **Q. Why is Energy North proposing LBR amounts in 2019 if the Commission ordered a
14 cessation of the LBR mechanism effective November 1, 2018?**

15 A. The amount proposed pertains to prior period balances as of October 31, 2018, with
16 interest applied.¹² For the residential sector, the prior period ending balance at October
17 31, 2018, with interest applied, is \$19,663. For C&I programs, the prior period ending
18 balance at October 31, 2018, with interest applied, is \$13,894.

19

20 **V. Recommendations**

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¹⁰ Reference Filing (Bates 218).

¹¹ Reference Filing (Bates 259). As noted earlier, during the course of discovery, corrections were made to the values in the filing. Northern stated that it will incorporate the corrections in an update (reference Staff 2-36).

¹² Reference Filing (Bates 219 and 262).

1 **Q. Please summarize your conclusions and recommendations.**

2 A. I have three recommendations:

3 (1) As noted in my testimony, certain corrections were identified during the course of
4 discovery. I support the utilities plan to file updated pages reflecting these corrections as
5 soon as possible.

6 (2) I recommend that, going forward, the utilities provide a template that summarizes the
7 calculation of the kW component of the LBR in future filings. An illustration of this
8 template is provided in attached Schedule JJC-1.

9 (3) I recommend that the utilities provide an update to their analysis of ratchets when the
10 utilities file their 2019 final LBR Report in June 2020. These updates will ensure that
11 estimated impacts for ratchets are reflected, if appropriate, in final LBR reports filed with
12 the Commission. LBR amounts from these final reports result in actual payments to the
13 utilities, and recoveries from ratepayers; thus, it's important to ensure that rigorous
14 calculations of LBR amounts are included for purposes of final reporting

15 **Q. Does that complete your testimony?**

16 A. Yes.

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