

THE STATE OF NEW HAMPSHIRE
BEFORE THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION
PREPARED TESTIMONY OF CHRISTOPHER J. GOULDING
TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM)
Docket No. DE 18-089

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

2 A. My name is Christopher J. Goulding. My business address is 780 North Commercial
3 Street, Manchester, NH. I am employed by Eversource Energy Service Company as
4 the Manager of New Hampshire Revenue Requirements and in that position I provide
5 service to Public Service Company of New Hampshire d/b/a Eversource Energy
6 ("Eversource" or the "Company").

7 **Q. Have you previously testified before the Commission?**

8 A. Yes, I have.

9 **Q. What are your current responsibilities?**

10 A. I am currently responsible for the coordination and implementation of revenue
11 requirements calculations for Eversource, as well as the filings associated with
12 Eversource's Energy Service ("ES") rate, Stranded Cost Recovery Charge ("SCRC"),
13 Transmission Cost Adjustment Mechanism ("TCAM"), and Distribution rates.

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

15 A. My testimony supports Eversource's TCAM filing for rates effective August 1, 2018.
16 The testimony and supporting attachments present the actual reconciliation period

1 through May 2018 for transmission costs in this TCAM filing as well as the proposed
2 TCAM rate for the forecast period to be effective August 1, 2018.

3 **Q. What is Eversource requesting in this filing?**

4 A. Eversource is requesting approval of a forecasted average retail transmission rate to be
5 effective August 1, 2018, for a twelve-month billing period. In addition, we are
6 requesting approval of the reconciliation of actual transmission costs and revenues for
7 the calendar year 2017. Our requests are in accordance with the Commission's
8 approval of the settlement in Docket No. DE 06-028 (Distribution Rate Case), which
9 included a provision for a transmission cost adjustment mechanism.

10 **Q. Will anyone else be providing testimony in support of this filing?**

11 A. Yes. Rhonda J. Bisson and Kenneth B. Bowes will be filing testimonies in support of
12 the proposed retail transmission rates. In her testimony, Ms. Bisson will detail the
13 rates applicable to each individual rate class. In his testimony, Mr. Bowes will be
14 providing a description of projects included in LNS rates as well as describing the
15 planning process at ISO-NE.

16 **Q. Describe the types of costs included in this TCAM filing.**

17 A. There are two different groups of costs within this TCAM filing. The first group of
18 costs consists of four cost categories of "wholesale transmission" costs. The second
19 group consists of two cost categories of "other transmission" costs.

1 The “wholesale transmission” costs are as follows:

- 2 1) Regional Network Service (RNS) costs
- 3 2) Local Network Service (LNS) costs
- 4 3) Reliability costs
- 5 4) Scheduling and Dispatch (S&D) costs.

6 All of these costs are regulated by the FERC. These costs are discussed below in more
7 detail.

8 1) RNS costs support the regional transmission infrastructure throughout New
9 England. RNS costs are charged to Eversource by ISO-NE based upon tariffs
10 approved by the FERC. RNS costs are billed to all entities in the region that have
11 RNS load responsibility, such as Eversource, based on their monthly peak load.

12 2) LNS costs encompass Eversource Energy’s local transmission costs that are not
13 included in the FERC-jurisdictional RNS tariff. These billings are also governed by
14 FERC approved tariffs, and are based on costs allocated to Eversource based on load
15 ratio share. Eversource’s load ratio share is calculated using a rolling twelve-month
16 coincident peak (12 CP).

17 3) Reliability costs include costs such as Black Start and VAR support that are related
18 to electric reliability. These reliability costs are billed to all entities in the region that
19 have RNS load responsibility, such as Eversource, based on their monthly peak load.

1 4) S&D costs are associated with services provided by ISO-NE related to scheduling,
2 system control and dispatch services. These costs are billed by ISO-NE to all entities
3 in the region that have RNS load responsibility, such as Eversource, based on their
4 monthly peak load, in accordance with the applicable FERC tariff.

5 The “other transmission” costs are as follows:

- 6 A) Hydro-Quebec (HQ) support costs and related revenues, and
7 B) TCAM working capital allowance return.

8 These other transmission costs were previously recovered through Eversource’s
9 distribution rates, but were transferred in total or in part to the TCAM for recovery,
10 effective July 1, 2010, as part of a negotiated “Settlement Agreement on Permanent
11 Distribution Service Rates” (“Settlement Agreement”) between Eversource, the
12 Commission Staff, and the Office of Consumer Advocate (OCA) in Docket No. DE
13 09-035 that was approved in Order No. 25,123. These costs are discussed below in
14 more detail.

15 A) Hydro-Quebec support costs are costs associated with FERC approved contractual
16 agreements between Eversource and other New England utilities to provide support
17 for transmission and terminal facilities that are used to import electricity from HQ in
18 Canada. Under these agreements, Eversource is charged its proportionate share of
19 O&M and capital costs for a thirty-year period ending in 2020.

1 Eversource's share of any revenue associated with the HQ facility was previously
2 returned to customers through the ES rate. Effective July 1, 2010, consistent with the
3 requirements of NHPUC Order No. 25,122, in the 2010 TCAM docket, Docket No.
4 DE 10-158, Eversource began returning its share of any HQ facility revenues to
5 customers as a revenue credit in the TCAM.

6 B) When the TCAM was initially approved in Docket No. DE 06-028, there was no
7 provision for a working capital allowance in the TCAM. The TCAM working capital
8 allowance continued to be included with the distribution working capital allowance.
9 As part of the Settlement Agreement, the distribution revenue requirement calculation
10 excluded working capital on transmission costs. Therefore, the TCAM includes a
11 working capital allowance. An updated lead/lag analysis has been completed for rates
12 effective August 1, 2018 based on the lead/lag study I discuss later in my testimony.

13 **Q. Please describe the overall mechanics of the TCAM as they are presented in this**
14 **filing.**

15 A. The TCAM is a mechanism that allows Eversource to fully recover defined FERC
16 and/or Commission approved transmission costs. The proposed TCAM rate is based
17 on reconciliations of historic transmission costs and forecasted future transmission
18 costs using the latest approved FERC transmission rates.

19 There are two premises that form the basis of the TCAM. First, the TCAM sets
20 transmission rates for a defined future billing period based on transmission cost
21 estimates using current budget and forecast data supported by the latest known FERC

1 approved transmission rates. This future billing period is referred to as the “forecast
2 period”. Second, the TCAM provides all available actual cost and revenue (recovery)
3 data for the eighteen-month period just prior to the forecast period. This eighteen-
4 month period is referred to as the “reconciliation period”. In this filing, the
5 reconciliation period has been shifted to cover nineteen months to address the change
6 in the effective date of the TCAM from July 1 to August 1. Any over- or under-
7 recoveries that are incurred in the billing period are rolled into the subsequent billing
8 period as part of the next TCAM rate.

9 **Q. What is the forecast period used in this filing, and what is the nineteen- month**
10 **reconciliation period?**

11 A. The forecast period in this filing is the twelve-month period August 2018 through July
12 2019. The nineteen-month reconciliation period includes actual calendar year 2017
13 and actual January 2018 through May 2018 costs, as well as estimated costs for June
14 2018 and July 2018.

15 **Q. Do the transmission rate forecasts contained in this filing reflect the most current**
16 **FERC rates that were to be effective on June 1, 2018?**

17 A. Yes.

18 **Q. Were any new line items included in this annual TCAM rate filing?**

19 A. Yes, this annual TCAM rate filing includes Hydro Quebec Interconnection Capacity
20 Credits for the months April 2018 through July 2019. These credits were historically
21 included in the Capacity Expense/Credit portion of the Energy Service Rate. With the

1 transition from the PSNH owned generation energy service rates to the new market
2 solicitation rates effective April 1, 2018, it is appropriate to include these credits in the
3 TCAM as that is where Hydro Quebec Support Costs and Revenue Credits currently
4 are included.

5 **Q. What then, is Eversource proposing as its annual TCAM rate in this filing?**

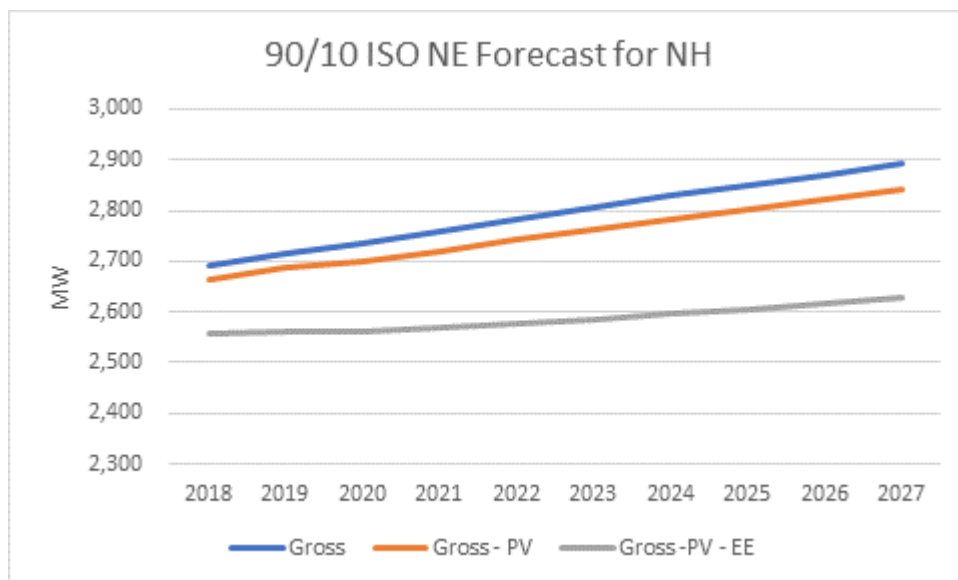
6 A. Eversource is proposing a forecasted average TCAM rate of 1.864 cents/kWh as
7 compared to the current average rate of 2.318 cents/kWh. The decrease in the average
8 TCAM rate is driven primarily by an increase in the forecasted over recovery of
9 (\$15.7M), the inclusion of Hydro Quebec Interconnection Capacity Credits of
10 (\$11.9M), decreased RNS costs of (\$3.7M), decreased LNS costs of (\$1.7M),
11 decreased return on working capital of (\$1.6M) and decreased other costs of (\$0.8M).

12 **Q. In Order No. 26,031 (June 28, 2017) in Docket No. DE 17-081, the Commission**
13 **noted that there have been changes in the RNS rates as a result of changes in**
14 **peak demand throughout New England. In that order, the Commission noted**
15 **that as other states in the region reduce their share of peak load relative to the**
16 **total, New Hampshire's share of the peak, and allocation of costs, increases. The**
17 **Commission stated that it expected the Company to explain its efforts to reduce**
18 **peak demand in New Hampshire in future TCAM filings. What efforts has**
19 **Eversource made to address peak demand in New Hampshire?**

20 A. As the Company described during the hearing in Docket No. DE 17-081, energy
21 efficiency programs reduce consumption of energy (kWh), and costs, for customers

1 across New Hampshire. The efficiency measures that reduce kWh often also reduce
2 electric demand (kW) at the ISO-NE, distribution and customer level during peak
3 periods. The Eversource NH 3-Year Energy Efficiency Plan includes estimates of kW
4 savings for 2018-2020 during ISO-NE summer and winter peak hours. The efficiency
5 measures installed in 2018 are estimated to achieve 7.7 MW in summer peak demand
6 reduction and 10 MW in winter peak demand reduction. The measures installed in
7 2019 and 2020 are estimated, respectively, to achieve 9.8 MW and 12.7 MW of
8 summer peak reduction and 12 MW and 15 MW of winter peak reduction. As with the
9 kWh savings, the demand savings will persist over the lifetime of the measures
10 installed.

11 ISO-NE has recognized the impact of these energy efficiency measures on its peak
12 demand forecast for NH, as shown in the below chart:



¹ Graphical representation of the 90/10 data contained in the Final 2018 CELT Forecast:

1 As is the case in New Hampshire, the vast majority of demand savings from energy
2 efficiency programs in the region are achieved as a secondary benefit of the measures
3 designed to generate kWh savings. However, New Hampshire efficiency programs are
4 also reviewing a number of demand reduction demonstrations currently taking place in
5 Massachusetts and other states in the region that focus more specifically on achieving
6 peak demand reductions. Leveraging this demonstration work done elsewhere will
7 help to ensure that we understand the potential market and have good information on
8 cost effectiveness to inform future decisions about new program elements in New
9 Hampshire.

10 **Q. Did Eversource conduct a lead/lag study for the TCAM as required in Order No.**
11 **25,912, dated June 28, 2016, in Docket No. DE 16-566?**

12 A. Yes, Eversource conducted a lead/lag study for the TCAM and provided that analysis
13 as Attachment CJG-2. The results of the lead/lag analysis were applied effective
14 August 1, 2018. This lead/lag study is substantially the same as the one provided in
15 Docket No. DE 17-081, subject to the refinements I will describe later.

16 **Q. How is cash working capital estimated through a lead-lag study?**

17 A. A lead/lag study identifies the amount of time it typically takes for the Company to
18 collect revenue from customers, as well as the amount of time the Company takes to

ISO-NE, States, Load Zones, and Subareas, page 24, available here: https://www.iso-ne.com/static-assets/documents/2018/04/a2_new_england_energy_efficiency_pv_and_load_forecast_update.pdf.

1 make payment for applicable operating costs. The difference between those two
2 numbers is used as the basis to estimate cash working capital requirements.

3 **Q. Please define the terms “revenue lag days” and “expense lead days.”**

4 A. Revenue lag is the time, measured in days, between delivery of a service to Eversource
5 customers and the receipt by Eversource of the payment for such service. Similarly,
6 expense lead is the time, again measured in days, between the performance of a service
7 on behalf of Eversource by a vendor or employee and payment for such service by
8 Eversource. Since base rates are based on revenue and expenses booked on an accrual
9 basis, the revenue lag results in a need for capital while the expense lead offsets this
10 need to the extent the Company is typically not required to reimburse its vendors until
11 after a service is provided.

12 **Q. Please describe the lead/lag study completed for the TCAM provided as**
13 **Attachment CJG-2.**

14 A. The Lead/Lag Study consists of 9 pages of calculations and supporting schedules to
15 separately calculate lag days for the RNS expenses, S&D expenses, LNS expenses,
16 reliability expenses and HQ expenses. As can be seen on page 2 of Attachment CJG-2,
17 the Lead/Lag Study produced a (20.0) day net lag for RNS and S&D expenses, a 5.8
18 day net lag for LNS expense, a (20.1) day net lag for reliability expenses, and a 43.6
19 day net lag for HQ expenses.

1 **Q. How is the retail revenue lag computed?**

2 A. The retail revenue lag consists of a “meter reading or service lag,” “collection lag” and
3 a “billing lag.” The sum of the days associated with these three lag components is the
4 total retail revenue lag experienced by Eversource. See Attachment CJG-2, Page 3 of
5 9.

6 **Q. What lag does the Lead/Lag Study reveal for the component "meter reading or
7 service lag?"**

8 A. The Lead/Lag Study reveals 15.2 days. This lag was obtained by dividing the number
9 of billing days in the test year by 12 months and then in half to arrive at the midpoint of
10 the monthly service periods.

11 **Q. How was the “collection lag” calculated and what was the result?**

12 A. The “collection lag” for TCAM totaled 27.3 days. This lag reflects the time delay
13 between the mailing of customer bills and the receipt of the billed revenues from
14 customers. The 27.3 days lag was arrived at by a thorough examination of TCAM
15 accounts receivable balances using the accounts receivable turnover method. End of
16 month balances were utilized as the measure of customer accounts receivable.
17 Attachment CJG-2, Page 4 details monthly balances for the majority of the accounts
18 receivable accounts. Attachment CJG-2, Page 3 calculated the average daily revenue
19 amount by dividing total revenue by 365 days. The resulting Collection Lag is derived

1 by dividing the average daily accounts receivable balance by the average daily revenue
2 amount to arrive at the Collection lag of 27.3 days.

3 **Q. How did you arrive at the 1.00 day “billing lag”?**

4 A. Nearly all of the Company’s customers are billed the evening after the meters are read.
5 Therefore, I have included a 1.00 day billing lag. I have not made an exception for large
6 customers which may require additional time to process.

7 **Q. Is the total retail revenue lag computed from these separate lag calculations?**

8 A. Yes. The total retail revenue lag of 43.5 days is computed by adding the number of days
9 associated with each of the three retail revenue lag components. See, Attachment CJG-
10 2, Page 3. This total number of lag days represents the amount of time between the
11 recorded delivery of service to retail customers and the receipt of the related revenues
12 from retail customers.

13 **Q. Please explain how the RNS, S&D, LNS, Reliability and HQ expenses lead/lag**
14 **period is determined.**

15 A. The monthly payments were reviewed and the lead days were calculated based on the
16 actual payment date of the payments. Once the lead days for each category were
17 determined, the lead days were summarized and dollar weighted according to 2017
18 actual annual amounts to arrive at the lead days. These calculations are shown in

1 Attachment CJG-2, pages 5 through 9.

2 **Q. Would you summarize the Company's proposal regarding Cash Working Capital?**

3 A. Based on the results of the lead-lag analysis of Eversource TCAM Cash Working
4 Capital, the Company identified an RNS and S&D working capital component of
5 (20.0) days, or (5.49) percent, a LNS working capital component of 5.8 days, or 1.60
6 percent, a Reliability working capital component of (20.1) days, or (5.50) percent
7 and a HQ working capital component of 43.6 days, or 11.95 percent. Application of
8 these values results in a total forecasted cash working capital allowance of (\$7.909)
9 million and a forecasted return on working capital of (\$0.744) million for the
10 forecasted period of August 2018 through July 2019.

11 **Q. How were the results from the Lead/Lag Study proposed in Docket DE 17-081**
12 **included in this TCAM filing?**

13 A. In Docket DE 17-081, in its June 16, 2017 TCAM filing, Eversource submitted
14 Attachment CJG-2, along with testimony, to outline the results of its Lead/Lag Study.
15 Subsequent to the filing, Eversource had discussions with Commission Staff, about
16 some potential refinements to the payment dates. The updated results have been
17 reflected in the revised Lead/Lag Study provided as Attachment CJG-3. The results of
18 this Lead Lag Study, which have been utilized in this filing for the months July 2017
19 through July 2018, are submitted in this filing as Attachment CJG-3. The revisions
20 made to this Lead/Lag Study are included in the following table.

	As Originally Filed Docket DE 17-081 Attachment CJG-2		As Revised Docket DE 18-089 Attachment CJG-3	
	Days	%	Days	%
Regional Network Service	14.8	4.05	-19.9	-5.44
Scheduling and Dispatch	14.8	4.05	-19.9	-5.44
Local Network Service	11.1	3.03	6.4	1.74
Reliability	14.4	3.94	-20.3	-5.55

1 Application of these revisions resulted in the following:

	As Originally Filed Docket DE 17-081 Attachment CJG-2	As Revised Docket DE 18-089 Attachment CJG-3
July 2017 - June 2018 Working Capital Allowance	\$7,458	(\$7,643)
July 2017 - June 2018 Return on Working Capital	\$818	(\$783)

2 **Q. Does Eversource require Commission approval of this rate by a specific date?**

3 A. Yes, Eversource is requesting final approval of the proposed TCAM rate change by
4 July 27, 2018 to allow for the implementation of an August 1, 2018 change in rates.

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

6 A. Yes, it does.