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

PREPARED JOINT TESTIMONY OF ERICA L. MENARD AND JAMES E. MATHEWS

TRANSMISSION COST ADJUSTMENT MECHANISM (TCAM)

Docket No. DE 21-109

Q. Please state your names, business addresses and your present positions.

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

My name is James E. Mathews. My business address is 107 Selden Street, Berlin, CT. I am employed by Eversource Energy Service Company as the Manager of Rates and Revenue Requirements, Transmission and in that position, I provide service to the Eversource Energy affiliated companies in Connecticut, Massachusetts and New Hampshire, including the Company.

Q. Have you previously testified before the Commission?

A. Ms. Menard: Yes, I have.

A. Mr. Mathews: Yes, I have.

Q. What are your current responsibilities?

A. Ms. Menard: I am currently responsible for the coordination and implementation of revenue requirements calculations for Eversource, as well as the filings associated with Eversource's Energy Service ("ES") rate, Stranded Cost Recovery Charge ("SCRC"), Transmission Cost Adjustment Mechanism ("TCAM"), Regulatory Reconciliation Adjustment mechanism ("RRA"), and Distribution Rates.

Mr. Mathews: I am currently responsible for coordination and implementation of transmission rate and revenue requirement calculations for Eversource. I also have responsibility related to transmission rate filings before Eversource's affiliated companies' three state utility commissions, as well as the Federal Energy Regulatory Commission ("FERC").

Q. What is the purpose of your joint testimony?

A. Ms. Menard: My testimony supports Eversource's TCAM filing for rates effective August 1, 2021. The testimony and supporting attachments present the reconciliation through May 2021 for transmission costs as well as the proposed TCAM rate for the forecast period to be effective August 1, 2021.

Mr. Mathews: My testimony is to support and describe the year-to-year change in LNS and RNS rates.

Q. What is Eversource requesting in this filing?

A. Eversource is requesting approval of a forecasted average retail transmission rate to be effective August 1, 2021, for a twelve-month billing period. In addition, approval of the over- or under-recoveries resulting from the reconciliation of actual transmission costs and revenues as compared to forecasted transmission costs and revenues used in the previous rate filing is being requested. These requests are in accordance with the Commission's approval of the settlement in Docket No. DE 06-028 (Distribution Rate Case), which included a provision for a transmission cost adjustment mechanism.

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

A. Yes. Jennifer A. Ullram and David J. Burnham are each filing testimony in support of the proposed retail transmission rates. In her testimony, Ms. Ullram will detail the rates applicable to each individual rate class. In his testimony, Mr. Burnham will be providing a description of projects included in LNS rates as well as describing the planning process at ISO-NE.

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

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

The "wholesale transmission" costs are as follows:

1) Regional Network Service (RNS) costs

2) Local Network Service (LNS) costs

3) Reliability costs

4) Scheduling and Dispatch (S&D) costs.

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

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

2) LNS costs encompass Eversource's local transmission costs that are not included in the FERC-jurisdictional RNS tariff. These billings are also governed by FERC approved tariffs and are based on costs allocated to Eversource based on load ratio share[1]. Eversource's load ratio share is calculated using a rolling twelve-month coincident peak (12 CP).

3) Reliability costs include costs such as Black Start and VAR support that are related to electric reliability. These reliability costs are billed to all entities in the

[1] The wholesale Transmission rate transparency settlement, filed at FERC on June 15, 2020, was approved by FERC on December 28, 2020 in Docket No. ER20-2054-000. Under the Settlement, effective January 1, 2022 Local Service revenue requirements will be billed based on state by state unit rates multiplied times the customer's monthly load, in a manner similar to the RNS rate.

region that have RNS load responsibility, such as Eversource, based on their monthly peak load.

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

The "other transmission" costs and credits or revenues are as follows:

A) Hydro-Québec (HQ) Phase I/II support costs and related revenues,

B) TCAM working capital allowance return, and

C) HQ Interconnection Capacity Credits.

Other transmission costs and revenues A) and B) were previously recovered through Eversource's distribution rates, but were transferred in total or in part to the TCAM for recovery, effective July 1, 2010, as part of a negotiated "Settlement Agreement on Permanent Distribution Service Rates" ("Settlement Agreement") between Eversource, the Commission Staff, and the Office of Consumer Advocate (OCA) in Docket No. DE 09-035 that was approved in Order No. 25,123. These costs and revenues are discussed below in more detail.

A) HQ Phase I/II support costs are costs associated with FERC-approved contractual agreements between Eversource and other New England utilities

> to provide support for, and receive rights related to, transmission and terminal facilities that are used to import electricity from HQ in Canada. Under the amended, extended and restated agreements[2], Eversource is charged its proportionate share of O&M and capital costs for a twenty-year term that ends on October 31, 2040.

Prior to July 1, 2010, Eversource's share of any revenue associated with HQ Phase I/II was returned to customers through the ES rate. Effective July 1, 2010, consistent with the requirements of NHPUC Order No. 25,122, in the 2010 TCAM docket, Docket No. DE 10-158, Eversource began returning its share of any HQ Phase I/II revenues to customers as a revenue credit in the TCAM. That credit continues in the TCAM today[3].

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[2] On December 18, 2020 in Docket No. ER21-712-000, the Asset Owners and the IRH Management Committee ("Filing Parties") submitted to FERC for approval an Offer of Settlement ("Settlement") that amended and restated the four Support Agreements and the Use Agreement as part of a comprehensive package that will provide for ongoing financial support of, and related rights and obligations with respect to, the Phase I/II HVDC-TF. The Settlement reflected the exercise by certain IRH of rights under the existing Support Agreements to extend the term of those Support Agreements another twenty years until October 31, 2040. Further, because the Use Agreement by its own terms will remain in effect through expiration of the term of the last Support Agreement, the term of Use Agreement was also extended to October 31, 2040. The Filing Parties asserted that the Phase I/II HVDC-TF are vitally important to both the New England and Québec regions and provide a variety of benefits to consumers in New England. In an order issued on May 20, 2021, FERC accepted the Settlement, finding that it appears to be fair and reasonable and in the public interest. 175 FERC ¶ 61,140 (2020). Materials pertaining to the extension were shared with the Commission, Staff, and OCA in January 2021, and notice of FERC's acceptance of the Settlement was provided to the Commission, Staff, and OCA on May 24, 2021.

[3] On April 1, 2021, Public Service Company of New Hampshire ("PSNH") and its affiliates, The Connecticut Light and Power Company ("CL&P") and NSTAR Electric Company ("NSTAR" and together with PSNH and CL&P, "Eversource"), issued a Request for Proposals for the Reassignment of their Use Rights on the Phase I/II HVDC-TF. Proposals were requested for 100% of the Eversource Use Rights or for tranches of their combined Use Rights in bid blocks of 25%, and a fixed dollar proposal was requested. Based on the proposals received, Eversource signed agreements to reassign all of its Use Rights to H.Q. Energy

B) When the TCAM was initially approved in Docket No. DE 06-028, there was no provision for a working capital allowance in the TCAM. The TCAM working capital allowance continued to be included with the distribution working capital allowance. As part of the Settlement Agreement, the distribution revenue requirement calculation excluded working capital on transmission costs. Therefore, the TCAM includes a working capital allowance. An updated lead/lag analysis has been completed for rates effective August 1, 2021 based on the lead/lag study discussed later in this testimony.

C) HQ Interconnection Capacity Credits were historically included in the Capacity Expense/Credit portion of the ES rate. With the transition from the Eversource-owned generation energy service rates to the new market solicitation rates effective April 1, 2018, it was appropriate to start including these credits in the TCAM, as that is where HQ Phase I/II Support Costs and Revenue Credits currently are included.

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

A. The TCAM is a mechanism that allows Eversource to fully recover defined FERC and/or Commission approved transmission costs. The proposed TCAM rate is

Services (U.S.) Inc. for a one-year term commencing June 1, 2021. All proceeds from the reassignment of Eversource's Use Rights will be credited back on a pro rata basis to the retail customers of PSNH, CL&P and NSTAR. The forecast proceeds as a result of the RFP for the period June 2021 to July 2022 are shown in Attachment ELM-1, pages 2, 3 and 5, line 19.

based on reconciliations of historic transmission costs and forecasted future transmission costs using the latest approved FERC transmission rates.

There are two premises that form the basis of the TCAM. First, the TCAM sets transmission rates for a defined future billing period based on transmission cost estimates using current budget and forecast data supported by the latest known FERC approved transmission rates. This future billing period is referred to as the "forecast period". Second, the TCAM provides all available actual cost and revenue (recovery) data referred to as the "reconciliation period". Any over- or under-recoveries that are incurred in the reconciliation period are rolled into the subsequent billing period as part of the next TCAM rate.

Q. What is the forecast period used in this filing, and what is the reconciliation period?

A. The forecast period in this filing is the twelve-month period August 2021 through July 2022. The reconciliation period includes actual results for January 2020 through May 2021 and estimated results for June and July 2021.

Q. Do the transmission rate forecasts contained in this filing reflect the most current FERC rates that were to be effective on June 1, 2021?

A. Yes. Please see the table below for the current FERC rates that are proposed for effect on August 1, 2021 and the prior year's FERC rates approved in DE 20-085:

		DE 21-109		DE 20-085		Change	
FERC Approved Rates	Description	Aug 21 to Dec 21	Jan 22 to Jul 22 **	Aug 20 to Dec 20	Jan 21 to Jul 21	Aug to Dec	Jan to Jul
RNS Rate	$ per kW per year	$ 140.98	$ 143.73	$ 129.26	$ 129.26	$ 11.72	$ 14.47
	$ per MWh	$ 30.39	$ 30.98	$ 26.44	$ 26.44	$ 3.95	$ 4.54
LNS Monthly Expense	Load Ratio Share	21.6%	79.0%	20.9%	20.9%	0.7%	58.1%
	Expense	$ 2,114,000	$ 2,059,000	$ 2,045,700	$ 2,046,000	$ 68,300	$ 13,000
	$ per MWh	$ 4.05	$ 4.23	$ 3.85	$ 3.85	$ 0.20	$ 0.38
** reflects change per the Rate Transparency Settlement approved in Docket No. ER20-2054-000							

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

A. As shown in Attachment ELM-1, page 1a, Eversource is proposing a forecasted average TCAM rate of 2.785 cents/kWh as compared to the current average rate of 2.758 cents/kWh. The increase in the average TCAM rate is driven primarily by an increase in RNS cost of $16.9M, a decrease in LNS costs of ($0.2)M, an increase in Reliability cost of $1.6M, a decrease in the forecasted under recovery of $9.0M, a decrease in the forecasted HQ Interconnection Capacity Credits of $0.9M, a decrease in Hydro Quebec Support cost of $1.5M, an increase in the forecasted Revenue Credits of $7.2M, and decreased other costs of $1.1M.

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

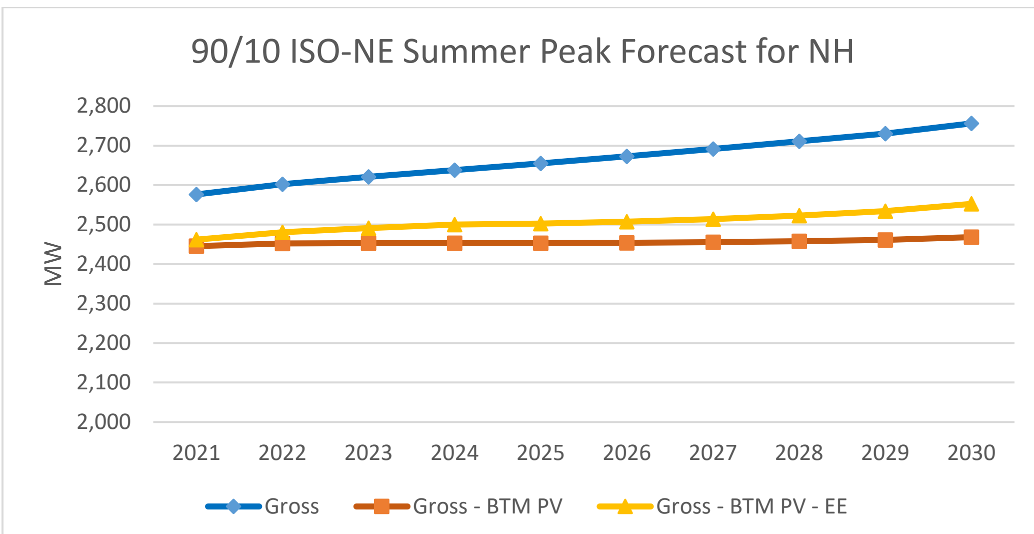
filings. What efforts has Eversource made to address peak demand in New Hampshire?

A. As the Company described during the hearing in Docket No. DE 17-081, energy efficiency programs reduce consumption of energy (kWh), and costs, for customers across New Hampshire. The efficiency measures that reduce kWh often also reduce electric demand (kW) at the ISO-NE, distribution and customer level during peak periods. The New Hampshire 3-Year Energy Efficiency Plan per Docket No. DE 17-136 included revised estimates of kW savings for 2020 during ISO-NE summer and winter peak hours. Per the end of year filing the efficiency measures installed in 2020 were estimated to achieve 11.8 MW in summer peak demand reduction and 13.5 MW in winter peak demand reduction. The settlement agreement submitted for Commission approval in Docket No. DE 20-092 for the New Hampshire 3-Year Energy Efficiency plan for 2021-2023 was filed in December 2020 included proposed estimates of kW savings. The efficiency measures proposed for 2021-2023 were estimated to achieve 42.3 MW in summer peak demand reduction and 38.4 MW in winter peak demand reduction[4]. As with the kWh savings, the demand savings will persist over the lifetime of the measures installed. The proposed 3-Year Energy Efficiency plan for 2021-2023 has not yet been approved by the Commission as of the filing of this testimony. In the interim, the Commission has ordered a short-term extension of existing 2020 Energy

[4] There has been no final Order in DE 20-092 approving the proposed plan. These figures are therefore draft and subject to change based on changes that may be made to savings assumptions, programs and other elements determined by a final Order.

Efficiency Programs and System Benefits Charge rates. As a result, budgets for 2021 are expected to track closer to those approved for 2020, with savings and peak demand reductions likely lower than those of 2020 due to new realization rates and net-to-gross factors included in the 2021 New Hampshire Technical Reference Manual.

ISO-NE has recognized the impact of these energy efficiency measures on its peak demand forecast for New Hampshire, as shown in the below chart[5]:



As is the case in New Hampshire, the majority of demand savings from energy efficiency programs in the region are achieved as a secondary benefit of the measures designed to generate kWh savings. However, New Hampshire efficiency programs have been monitoring demand management demonstrations and programs taking place in other states to advance tailored methodologies for

[5] Graphical representation of the 90/10 data contained in the Final 2021 CELT Report published May 1, 2021, using data from the 6.2 Forecasts for Transmission tab. https://www.iso-ne.com/system-planning/system-plans-studies/celt

adoption in New Hampshire. The 2018-2020 New Hampshire 3-Year Energy Efficiency Plan includes a section on Capacity Demand Management that describes many of the demand offerings being monitored as viable possibilities to model in state. In 2019 the Company proposed and implemented an active demand reduction offering: the 2019 NH Commercial and Industrial Active Demand Reduction (ADR) Initiative. Results indicated that the 2019 ADR Initiative achieved 3.9 MW in summer peak demand reduction. For 2020 the ADR Initiative was expanded to include residential offerings and results indicate a reduction of 12.0 MW in summer peak demand. For the 2021-2023 term, the Company will build upon the demonstrations offered in 2019 and 2020 and explore new active demand reduction offerings during the term. Based upon its success to date, the Company has proposed shifting the Commercial and Industrial demonstration to a full program for the 2021-2023 term. The active demand measures proposed for 2021-2023 were estimated to achieve 44.3 MW in summer peak demand reduction.

Q. Has Eversource taken any other direct efforts to reduce peak demand in New Hampshire?

A. Yes, Eversource has developed a Commercial and Industrial Demand Reduction Initiative as part of its energy efficiency offerings. This initiative was approved as part of the 2019 Update plan in Docket No. DE 17-136. Under an ADR approach, customers agree to respond to an event call targeting conditions that typically result in peak reductions through curtailment service providers ("CSPs")—vendors who identify curtailable load, enroll customers, manage curtailment events, and calculate payments. The customer is incentivized to respond to event calls using performance-based incentives. This approach is technology agnostic and can utilize single end-use control strategies or a multitude of approaches that can reduce demand when an event is called. This typically entails customers using lighting with both manual and automated controls, HVAC with both manual and automated controls, process loads, scheduling changes, excess Combined Heat & Power (CHP) capacity, and energy storage to reduce demand. The residential ADR demonstration and proposed program consists of two main bring-your-own-device offerings: Battery Storage and Wi-Fi thermostats. For the 2021-2023 term, the New Hampshire Utilities will also explore electric vehicle (EV) load management as a third offering.

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

A. Yes, Eversource conducted a lead/lag study for the TCAM and provides that analysis as Attachment ELM-2. The results of the lead/lag analysis will be applied effective August 1, 2021. This lead/lag study methodology is substantially the same as the one provided in Docket No. DE 20-085.

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

A. A lead/lag study identifies the amount of time it typically takes for the Company to collect revenue from customers, as well as the amount of time the Company takes to make payment for applicable operating costs. The difference between those two numbers is used as the basis to estimate cash working capital requirements.

Q. Please describe the lead/lag study completed for the TCAM provided as Attachment ELM-2.

A. The Lead/Lag Study consists of 15 pages of calculations and supporting schedules to calculate working capital allowances by month for RNS, S&D, LNS, Reliability, Hydro Quebec Interconnection Capacity Credits (HQ ICC), and HQ support components. Revenue lag days are the same for all components, however expense lead days vary by component. Each component has a separate expense lead days schedule.

Q. Please define the terms "revenue lag days" and "expense lead days."

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

Q. How is the retail revenue lag computed?

A. The retail revenue lag consists of a "meter reading or service lag," "collection lag" and a "billing lag." The sum of the days associated with these three lag components is the total retail revenue lag experienced by Eversource. See Attachment ELM-2, Page 7 of 15.

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

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

Q. How was the "collection lag" calculated and what was the result?

A. The "collection lag" for TCAM totaled 27.2 days. This lag reflects the time delay between the mailing of customer bills and the receipt of the billed revenues from customers. The 27.2-day lag was arrived at by a thorough examination of TCAM accounts receivable balances using the accounts receivable turnover method. End-of-month balances were utilized as the measure of customer accounts receivable. Attachment ELM-2, Page 7 details monthly balances for the majority of the accounts receivable accounts. Attachment ELM-2, Page 7 calculated the average daily revenue amount by dividing total revenue by 365 days. The resulting Collection Lag is derived by dividing the average daily accounts receivable balance by the average daily revenue amount to arrive at the Collection lag of 27.2 days.

Q. How did you arrive at the 1.48 day "billing lag"?

A. Nearly all customers are billed the evening after the meters are read. However, if a meter is read on a Friday or prior to a scheduled holiday, there is additional lag over the weekend or holiday. Consistent with last year's filing the Company's billing lag calculation accounts for this additional lag. The updated lead/lag study uses a 1.48-day billing lag as shown in Attachment ELM-2, Page 9. An exception for large customers which may require additional time to process has not been made in this calculation.

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

A. Yes. The total retail revenue lag of 43.9 days is computed by adding the number of days associated with each of the three retail revenue lag components. See, Attachment ELM-2, Page 7. This total number of lag days represents the amount of time between the recorded delivery of service to retail customers and the receipt of the related revenues from retail customers.

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

A. The monthly payments were reviewed and the expense lead days were calculated based on the actual payment date of the payments. Once the lead days for each category were determined, they were summarized and dollar weighted according to 2020 actual annual amounts to arrive at the lead days. These calculations are shown in Attachment ELM-2, pages 10 through 15.

Q. Please explain how the Eversource Energy Service Company (EESC) due date is determined related to LNS billings.

A. Per the terms of the Service Contract between the Company and EESC, bills are rendered for each calendar month on or before the twentieth day of the succeeding month and are payable upon presentation and not later than the last day of that month.

Q. Has the Company included an expense lead for the 2019 LNS true-up amount that was accounted for in July 2020? If so, please explain how the expense lead is determined relative to 2019 LNS true-up amount compared to the current month LNS billing in July 2020.

A. Yes. As shown in Attachment ELM-2, Page 12, the expense lead for the prior year 2019 LNS true up under recovery is determined by calculating the number of days from the mid-point of the true-up year (in this case 2019) to the payment date. This results in a longer expense lead compared to the current month LNS billing that is paid on the same day.

Q. Please explain how the change in RNS rates impacts the Company's proposed revenue requirement.

A. The RNS rate effective June 1, 2021 and January 1, 2022 increased as compared to the prior RNS rate due to forecasted incremental investments in transmission infrastructure. The TCAM thus reflects higher RNS costs attributable to the Company in accordance with applicable FERC-approved tariffs.

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

A. Based on the results of the lead/lag analysis of Eversource TCAM Cash Working Capital, the Company identified an RNS working capital component of (19.4) days, or (5.32) percent, an S&D working capital component of (19.4) days, or (5.32) percent, an LNS working capital component of (131.4) days, or (35.99) percent, a Reliability working capital component of (19.4) days, or (5.31) percent, an HQ Expense working capital component of 44.7 days, or 12.24 percent, and an HQ ICC working capital component of (19.5) days or (5.35) percent. Application of these values results in a total forecasted cash working capital allowance of ($20.346) million and a forecasted return on working capital of ($1.780) million for the forecasted period of August 2021 through July 2022.

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

A. Yes, Eversource is requesting final approval of the proposed TCAM rate change by July 26, 2021 to allow for the implementation of an August 1, 2021 change in rates.

Q. Does this conclude your testimony?

A. Yes, it does.