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September 10, 2024

Via Electronic Mail Only
Daniel C. Goldner, Chairman
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

RE: Docket No. DE 24-046, Public Service Company of New Hampshire
d/b/a Eversource Energy, 2024 Energy Service Solicitation
Responses to Commission Record Requests

Dear Chairman Goldner:

As requested in the Commission's procedural order dated August 30, 2024, Public Service Company of New Hampshire d/b/a Eversource Energy hereby submits responses to the record requests set forth in that procedural order. Please note that Attachment DE 24-046 RR-004 is provided in both confidential and redacted versions because of the inclusion of forecast small customer retail energy service load information therein.

Consistent with current Commission policy, this filing is being made electronically only and paper copies will not follow. If you should have any questions, please contact me.

Sincerely,

/s/ David K. Wiesner

David K. Wiesner
Principal Counsel

Enclosures
cc: DE 24-046 Service List

Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 24-046

Date Request Received: August 30, 2024 **Date of Response: September 10, 2024**
Record Request No. RR-001 **Page 1 of 2**

Request from: New Hampshire Public Utilities Commission

Witness: Littlehale, Parker

Request:

Are there any advantages or disadvantages to utilizing the ISO-NE Day Ahead Energy Market rather than purchasing the energy in the ISO-NE Real Time Energy Market?

Response:

It is the Company's understanding that ISO New England prefers load assets with significant load to be scheduled in the Day Ahead Market, as that strategy allows ISO-NE to set prices in that market that are more reflective of supply and demand conditions. *See* Section III Market Rule 1 Standard Market Design:[1]

III.1.7.20 Information and Operating Requirements. (e) Market Participant, as applicable, shall provide to the ISO requests to purchase specified amounts of energy for each hour of the Operating Day during which it intends to purchase from the Day-Ahead Energy Market.

Energy supply, energy demand, and reliability actions taken by ISO New England determine day-ahead and real-time prices. Thus, when day-ahead and real-time prices vary, it is often the result of shifts in supply and demand conditions. For example, if a generator clears an energy supply offer in the day-ahead market but experiences an unplanned outage in real-time, the available system supply falls and real-time prices will likely rise as higher-cost generators are brought online to replace the power that is unavailable due to the unplanned outage. In another example, higher-than expected temperatures on a summer day can translate to greater real-time loads and higher real-time prices.

In June 2023, the Internal Market Monitor (IMM) of ISO-NE released "An Overview of New England's Wholesale Electricity Markets," on page 17 of which the IMM documents three clear and concise advantages of Day Ahead Market participation are summarized[2]:

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[1] https://www.iso-ne.com/static-assets/documents/2014/12/mr1_sec_1_12.pdf
[2] https://www.iso-ne.com/static-assets/documents/2023/06/imm-markets-primer.pdf

1. Productive efficiency, because coordinating generators in advance allows units to schedule lead times that avoid fast start-up costs, which in turn helps meet demand at the lowest cost.
2. Risk management, where locking into the day ahead price allows a participant to hedge against any real time price spikes.
3. Development of a reliable day ahead operating plan that becomes the starting point of next day real time operations.

Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 24-046

Date Request Received: August 30, 2024 **Date of Response: September 10, 2024**
Record Request No. RR-002 **Page 1 of 1**

Request from: New Hampshire Public Utilities Commission

Witness: Littlehale, Parker

Request:

The Company's third-party load forecasting software only uses historical load data and weather forecasts to produce the next day load forecast. Does the Company have a plan to feather in Community Power Aggregation conversions on a monthly or 6-month basis?

Response:

The Company's third-party load forecasting vendor utilizes Eversource customer migration report data to forecast load numbers that are reflective of current levels of customer migration. The Company updates the forecast software model monthly based on available data: actual load and migration. The model then recalibrates itself as the most recent data becomes available.

The model output is not overridden to factor in potential migration in the upcoming months. The migration transition happens upon the customer's next meter read. Identifying when the customer's migration may start and when it actually occurs could change or be delayed, which would impact any adjustments that are made to the forecast in an attempt to predict the timing of that migration. The Company believes the model should "do the work," with updated actual data provided to have more reliable and prudent forecasts developed.

Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 24-046

Date Request Received: August 30, 2024 **Date of Response: September 10, 2024**
Record Request No. RR-003 **Page 1 of 1**

Request from: New Hampshire Public Utilities Commission

Witness: Littlehale, Parker

Request:

Please provide historical evidence where price spikes caused the monthly Real Time All Hours Locational Marginal Price for the New Hampshire zone to increase by 10% or more. In other words, if high priced outliers were removed from the monthly RT All Hours LMP calculation, please provide examples where the calculated monthly RT All Hours LMP would drop by 10% or more.

Response:

To be responsive to this Record Request, the Company first identified the five (5) Pay-for-Performance (PfP) events that have occurred since the PfP market rules went into effect on June 1, 2018. Second, the Company calculated the Monthly Average Real-Time (RT) All-Hours locational marginal price (LMP), which included those PfP-related price spikes. Third, the Company estimated a counterfactual Monthly Average RT All-Hours LMP had those PfP-related price spikes not occurred. Finally, the Company compared the *actual* monthly LMP with prices spikes to the *counterfactual* estimate of what the monthly LMP would have been if those PfP-related price spikes had not occurred.

The results of that analysis, as well as an indication of the magnitude of the price spikes during each PfP event, are summarized in the table below:

Pay-for-Performance (PfP) Event	Maximum hour-over-hour price spike	Monthly Average Real-Time (RT) All-Hours Locational Marginal Price (LMP) with PfP price spike	Estimated Counterfactual Monthly Average RT All-Hours LMP without PfP price spike	% change
03-Sep-18	191%	$42	$35	-17%
24-Dec-22	99%	$121	$116	-4%
05-Jul-23	509%	$39	$37	-5%
18-Jun-24	505%	$31	$29	-7%
01-Aug-24	336%	$39	$33	-15%

Source: ISO-NE via Velocity Suite; Eversource estimate on counterfactual calculation

Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 24-046

Date Request Received: August 30, 2024 **Date of Response: September 10, 2024**
Record Request No. RR-004 **Page 1 of 1**

Request from: New Hampshire Public Utilities Commission

Witness: Littlehale, Parker

Request:
Please compare the 6-month residential retail price to the ISO-NE equivalent price (as in the Company's monthly report) for the last 5 years. Also provide the dollar impact (price delta * volume) for each 6-month period and the 5 year total.

Response:

See Attachment DE 24-046 RR-004, which includes data in tabled format for service periods August 2019 through July 2024. Note that Attachment DE 24-046 RR-004 is provided in both confidential and redacted versions because of the inclusion of forecast small customer retail energy service load information therein.