

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 14-238

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-42

Witness: Michael D. Cannata

REQUEST:

On page 22, line 1: The witness testifies, “The retention of PSNH generation provides customers with a hedge to sharp increases in delivered gas prices that have recently developed in the ISO-NE market especially during winter high gas price spike conditions.”

- a. Do you agree that potential buyers would factor this value into their bids during the generation divestiture process?
- b. If not, why not?
- c. Do you disagree with the premise that a restructured electric industry is intended to harness the power of competitive markets?

RESPONSE:

- a. They may, but only to the amount that they deem necessary to secure the bid. I believe that they will hold back any portion of that value that they believe that they can in their bid to maximize profits.
- b. Not applicable.
- c. Yes, I do. From what I garner from the Settling Parities, all competitive alternatives must take from the market where there are “X” alternatives. Where Eversource is today is in a hybrid state, as proffered by more than one of the Settling Parties and they are correct. From a market perspective, PSNH is more market orientated today than if they sold their generation. Eversource must now determine if they will run their own generation, buy on an hour-to-hour basis, or self-supply from the market. If the Eversource generation assets are sold, Eversource Energy can only purchase from the market. Eversource’s current hybrid position provides the “best of both worlds” for energy pricing to its customers.

PSNH now generates from its own units when it is in the customer interest to so, and buys from the market when it is in customer interest to do so. Sale of the PSNH generation fleet prevents

PSNH from having the obligation to maximize customer benefits in this manner and allows them to say, “I bought from the market and that is what the market prices were” for a pass-through recovery of costs.

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 14-238

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-46

Witness: Michael D. Cannata

REQUEST:

Did the witness evaluate how the total costs of capacity in Table 1 compare to the current fixed costs of O&M, depreciation, payroll taxes, property taxes, and return associated with PSNH owning Generation? If yes, how do those costs compare?

RESPONSE:

No, I was not formally requested to do so. Non-Advocate Staff requested this exact information from PSNH to evaluate the costs of PSNH owned generation, but PSNH responded that they no longer kept any forecast beyond 2016. Where the sale of generation was assumed to take place on January 1, 2017, the data of 2015 and 2016 supplied by PSNH was not of value knowing that the maintenance and capital replacements schedules were constantly in flux due to reduced duty operation.

I note that Newington went through this same budget change and resulted in a \$500 thousand capital budget for the last few years due to reduced operational demands and has been able to live within that budget. I believe that Merrimack Station has not yet bottomed out on their ability to reduce capital and maintenance budgets as they have entered this cycle later than Newington Station.

**Public Service Company of New Hampshire d/b/a Eversource Energy  
Generation Fixed Costs vs Generation Market Savings Summary  
(\$ in Thousands)**

Default Energy Service Docket # Year	Actual	Actual
	DE 14-120 2013	DE 15-132 2014
<u>Fixed Costs (Includes Scrubber Costs)</u>		
O&M, Depreciation & Taxes	\$ 128,921	\$ 130,044
Return	80,715	72,150
<b>Total Fixed Costs</b>	<b>\$ 209,636</b>	<b>\$ 202,194</b>
<u>PSNH Generation Benefits</u>		
Savings vs Market <sup>1</sup>	\$ (91,847)	\$ (127,594)
Capacity Revenues <sup>2</sup>	(33,712)	(36,494)
<b>Total Generation Benefits</b>	<b>\$ (125,560)</b>	<b>\$ (164,087)</b>
<b>Net Costs/(Benefit)</b>	<b>\$ 84,076</b>	<b>\$ 38,107</b>

Docket # Year	Estimated	Estimated
	DE 14-238 2015	DE 14-238 2016
<u>Fixed Costs (Includes Scrubber Costs)</u>		
O&M <sup>3</sup>	\$ 86,764	\$ 72,248
Depreciation <sup>4</sup>	35,550	35,006
Property Taxes <sup>3</sup>	11,760	13,087
Payroll & Other Taxes <sup>3</sup>	2,419	2,120
Amortization of Retirement Obligations <sup>3</sup>	610	665
Total O&M, Depreciation & Taxes	<b>\$ 137,103</b>	<b>\$ 123,126</b>
Return <sup>5</sup>	71,227	67,195
<b>Total Fixed Costs</b>	<b>\$ 208,331</b>	<b>\$ 190,321</b>
<u>PSNH Generation Benefits</u>		
Savings vs Market <sup>1</sup>	\$ (70,644)	\$ (65,804)
Capacity Revenues <sup>2</sup>	(40,906)	(39,495)
<b>Total Generation Benefits</b>	<b>\$ (111,549)</b>	<b>\$ (105,300)</b>
<b>Net Costs/(Benefit)</b>	<b>\$ 96,781</b>	<b>\$ 85,021</b>

- (1) Response to Staff 1-177 (provided as Attachment EHC-R-3, Page 3 - 6)
- (2) Attachment EHC-R-3, Page 2, Capacity Revenue Summary
- (3) Response to Staff 1-171 (provided as Attachment EHC-R-3, Page 7 - 13)
- (4) Response to Staff 1-172 (provided as Attachment EHC-R-3, Page 14 - 20)
- (5) Response to Staff 1-172 (provided as Attachment EHC-R-3, Page 14 - 20) & Estimated 2015 WACC per DE 14-235 Attachment CJG-2 Page 6 (provided as Attachment EHC-R-3, Page 21)

$$2015 = (\$655,816 + \$642,770)/2 * 10.97\%$$

$$2016 = (\$642,770 + \$582,294)/2 * 10.97\%$$

**Public Service Company of New Hampshire d/b/a Eversource Energy  
PSNH Generation Capacity Revenue Summary  
(\$ in Thousands)**

<b>Description</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Average Capacity Payment Rate (\$/kW-mo)	\$ 2.52	\$ 2.71	\$ 3.01	\$ 2.90
Average PSNH Qualified Capacity (MW)	1,113	1,121	1,131	1,133
Total Capacity Revenue (\$000)	\$ 33,712	\$ 36,494	\$ 40,906	\$ 39,495

**Capacity Payment Detail<sup>1</sup>**

<b>Capacity Commitment Period (Jun-May)</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>
Capacity Payment Rate (\$/kW-mo)	\$ 2.54	\$ 2.52	\$ 2.86	\$ 3.13	\$ 2.74
Total PSNH Capacity Supply Obligation (MW)	1114.2	1112.3	1126.6	1133.6	1132.9

1 Available from ISO-NE

**Public Service Company of New Hampshire**  
**Docket No. DE 14-238**

**Date Request Received: 07/29/2015**

**Date of Response: 08/12/2015**

**Request No. STAFF 1-177**

**Page 1 of**

**Request from: New Hampshire Public Utilities Commission Staff**

**Witness: Frederick White**

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**Request:**

Please provide the following information separately and in total for the following facilities: Merrimack Station including both combustion turbines, Schiller Station including the combustion turbine, Newington Station, each hydro installation, Lost Nation combustion turbine, and White Lake combustion turbine:

- a. Energy generated to serve PSNH load in 2013;
- b. Energy generated to serve PSNH load in 2014;
- c. Estimated energy generated to serve PSNH load 2015 through 2021 by year;
- d. Cost of energy generated to serve PSNH load in 2013;
- e. Cost of energy generated to serve PSNH load in 2014;
- f. Estimated cost of energy generated to serve PSNH load 2015 through 2021 by year;
- g. Savings of energy generated to serve PSNH load versus market price in 2013;
- h. Savings of energy generated to serve PSNH load versus market price in 2014;
- i. Savings of energy generated to serve PSNH load versus market price 2015 through 2021 by year;
- j. PSNH energy generated for sale into the ISO-NE market in 2013;
- k. PSNH energy generated for sale into the ISO-NE market for 2014;
- l. Estimated PSNH energy generated for sale into the ISO-NE market for 2015 through 2021 by year;
- m. Cost of PSNH energy generated for sale into the ISO-NE market for 2013;
- n. Cost of PSNH energy generated for sale into the ISO-NE market for 2014;
- o. Estimated cost of PSNH energy generated for sale into the ISO-NE market for 2015 through 2021 by year;
- p. Revenue from PSNH energy generated for sale into the ISO-NE market for 2013;
- q. Revenue from PSNH energy generated for sale into the ISO-NE market for 2014;
- r. Estimated revenue from PSNH energy generated for sale into the ISO-NE market for 2015 through 2021 by year;
- s. Amount of energy purchased from the ISO-NE market in 2013;
- t. Amount of energy purchased from the ISO-NE market in 2014;
- u. Estimated amount of energy purchased from the ISO-NE market 2015 through 2021 by year;
- v. Cost of energy purchased from the ISO-NE market in 2013;
- w. Cost of energy purchased from the ISO-NE market in 2014;
- x. Estimated cost of energy purchased from the ISO-NE market 2015 through 2021 by year;
- y. Amount of energy purchased from the NE-ISO market and resold into the ISO-NE market in 2013;
- z. Amount of energy purchased from the ISO-NE market and resold into the ISO-NE market in 2014;
- aa. Estimated amount of energy purchased from the ISO-NE market and resold into the ISO-NE market 2015 through 2021 by year;
- bb. Cost of energy purchased from and resold into the ISO-NE market in 2013;
- cc. Cost of energy purchased from and resold into the ISO-NE market in 2014;

- dd. Estimated cost of energy purchased from and resold into the ISO-NE market 2015 through 2021 by year;
- ee. Revenue from energy purchased from and resold into the ISO-NE market for 2013;
- ff. Revenue from energy purchased from and resold into the ISO-NE market for 2014; and
- gg. Estimated revenue from energy purchased from and resold into the ISO-NE market for 2015 through 2021 by year.

**Response:**

Please see the attached table for the requested information. Due to the format of available data hydros and combustion turbines have been provided as separate groups. The requested information (quantity serving load, etc.) is not readily available in the groupings requested, however all applicable information is included in the response. 2015 figures are reported in a manner consistent with PSNH's 2015 ES rate filing in June, 2015 (actual data thru April, then projections thru December); January-April actual figures may differ a small amount due to utilizing different vintage ISO-NE settlement reports. Also, provided below are actual generation MWh for the individual hydro and combustion turbine units.

Generation - MWh

<u>Year</u>	<u>Hydros</u>							
	<u>Amoskeag</u>	<u>Avers Island</u>	<u>Canaan</u>	<u>Eastman Falls</u>	<u>Garvins/ Hookset</u>	<u>Gorham</u>	<u>Jackman</u>	<u>Smith</u>
2013	93,687	46,696	6,000	27,422	56,677	12,170	10,438	110,756
2014	72,089	43,689	7,081	25,856	49,479	12,262	10,359	87,620
2015 (thru April)	34,040	13,269	2,120	8,371	18,028	4,173	3,898	41,715

<u>Year</u>	<u>ICUs</u>				
	<u>Lost Nation</u>	<u>Merrimack CT1</u>	<u>Merrimack CT2</u>	<u>Schiller CT1</u>	<u>White Lake</u>
2013	351	605	399	232	433
2014	1,075	1,437	1,364	95	1,311
2015 (thru April)	104	87	116	0	106

**Merrimack 1 & 2**

Year	Generation Energy Serving Load MWh	Cost of Energy Serving Load \$(000)	Savings vs. Market Price \$(000)	Energy Sold to ISO-NE Market MWh	Cost of Energy Sold to ISO-NE Market \$(000)	Revenue from Energy Sold to ISO-NE Market \$(000)	Purchased Energy MWh	Cost of Purchased Energy \$(000)	Purchased Energy Sold into ISO-NE Market MWh	Cost of Purchased Energy Sold into ISO-NE Market \$(000)	Revenue from Purchased Energy Sold into ISO-NE Market \$(000)
2013	1,087,600	57,099	38,904	230,014	12,470	15,481					
2014	1,021,613	56,343	66,465	127,514	7,135	10,780					
2015	1,102,813	57,373	37,397	77,566	3,876	4,876					
2016	839,056	40,941	29,275	123,238	6,108	7,607					
2017											
2018											
2019											
2020											
2021											
Based on the status of divestiture in the instant docket the company no longer maintains a generation forecast beyond 2016.											
Not Applicable to Generation See TOTAL Section on Page 3 of 3											

**Schiller 4.5, & 6**

Year	Generation Energy Serving Load MWh	Cost of Energy Serving Load \$(000)	Savings vs. Market Price \$(000)	Energy Sold to ISO-NE Market MWh	Cost of Energy Sold to ISO-NE Market \$(000)	Revenue from Energy Sold to ISO-NE Market \$(000)	Purchased Energy MWh	Cost of Purchased Energy \$(000)	Purchased Energy Sold into ISO-NE Market MWh	Cost of Purchased Energy Sold into ISO-NE Market \$(000)	Revenue from Purchased Energy Sold into ISO-NE Market \$(000)
2013	411,706	9,794	17,296	96,896	5,446	11,896					
2014	393,906	11,170	19,949	106,318	6,838	16,858					
2015	411,698	12,901	13,802	61,122	3,979	5,466					
2016	370,179	12,936	9,388	86,154	5,184	7,137					
2017											
2018											
2019											
2020											
2021											
Based on the status of divestiture in the instant docket the company no longer maintains a generation forecast beyond 2016.											
Not Applicable to Generation See TOTAL Section on Page 3 of 3											

**Newington**

Year	Generation Energy Serving Load MWh	Cost of Energy Serving Load \$(000)	Savings vs. Market Price \$(000)	Energy Sold to ISO-NE Market MWh	Cost of Energy Sold to ISO-NE Market \$(000)	Revenue from Energy Sold to ISO-NE Market \$(000)	Purchased Energy MWh	Cost of Purchased Energy \$(000)	Purchased Energy Sold into ISO-NE Market MWh	Cost of Purchased Energy Sold into ISO-NE Market \$(000)	Revenue from Purchased Energy Sold into ISO-NE Market \$(000)
2013	17,712	2,712	718	63,122	9,125	14,455					
2014	27,729	3,269	(250)	101,198	20,884	27,818					
2015	119,837	8,196	1,054	99,396	15,174	14,530					
2016	154,050	7,684	2,608	194,142	18,878	23,012					
2017											
2018											
2019											
2020											
2021											
Based on the status of divestiture in the instant docket the company no longer maintains a generation forecast beyond 2016.											
Not Applicable to Generation See TOTAL Section on Page 3 of 3											

**Hydros**

Year	Generation Energy Serving Load MWh	Cost of Energy Serving Load \$(000)	Savings vs. Market Price \$(000)	Energy Sold to ISO-NE Market MWh	Cost of Energy Sold to ISO-NE Market \$(000)	Revenue from Energy Sold to ISO-NE Market \$(000)	Purchased Energy MWh	Cost of Purchased Energy \$(000)	Purchased Energy Sold into ISO-NE Market MWh	Cost of Purchased Energy Sold into ISO-NE Market \$(000)	Revenue from Purchased Energy Sold into ISO-NE Market \$(000)
2013	363,845	0	20,157	0	0	0					
2014	308,437	0	20,403	0	0	0					
2015	337,968	0	16,688	0	0	0					
2016	346,811	0	16,948	0	0	0					
2017											
2018											
2019											
2020											
2021											
Based on the status of divestiture in the instant docket the company no longer maintains a generation forecast beyond 2016.											
Not Applicable to Generation See TOTAL Section on Page 3 of 3											

**ICUs**

Year	Generation Energy Serving Load MWh	Cost of Energy Serving Load \$(000)	Savings vs. Market Price \$(000)	Energy Sold to ISO-NE Market MWh	Cost of Energy Sold to ISO-NE Market \$(000)	Revenue from Energy Sold to ISO-NE Market \$(000)	Purchased Energy MWh	Cost of Purchased Energy \$(000)	Purchased Energy Sold into ISO-NE Market MWh	Cost of Purchased Energy Sold into ISO-NE Market \$(000)	Revenue from Purchased Energy Sold into ISO-NE Market \$(000)
2013	1,012	353	(54)	1,008	351	385					
2014	1,260	470	(69)	4,021	1,502	1,998					
2015	174	61	(29)	239	84	(27)					
2016	0	0	0	0	0	0					
2017											
2018											
2019											
2020											
2021											
Based on the status of divestiture in the instant docket the company no longer maintains a generation forecast beyond 2016.											
Not Applicable to Generation See TOTAL Section on Page 3 of 3											

**TOTAL**

Year	Generation Energy Serving Load MWh	Cost of Energy Serving Load \$(000)	Savings vs. Market Price \$(000)	Energy Sold to ISO-NE Market MWh	Cost of Energy Sold to ISO-NE Market \$(000)	Revenue from Energy Sold to ISO-NE Market \$(000)	Bilateral Purchased Energy MWh	Cost of Purchased Energy \$(000)	Purchased Energy Sold into ISO-NE Market MWh	Cost of Purchased Energy Sold into ISO-NE Market \$(000)	Revenue from Purchased Energy Sold into ISO-NE Market \$(000)
2013	1,881,875	69,958	77,022	391,040	27,392	42,217	777,600	35,186	60,142	2,871	3,309
2014	1,752,944	71,252	106,497	339,051	36,359	57,455	534,080	22,838	4,724	267	293
2015	1,972,488	78,531	68,912	238,324	23,113	24,845	67,200	2,825	0	0	0
2016	1,710,097	61,562	58,218	403,533	30,170	37,756	0	0	0	0	0
2017											
2018											
2019											
2020											
2021											
Based on the status of divestiture in the instant docket the company no longer maintains a generation forecast beyond 2016.											
The company has not estimated supplemental nor default service procurements at this time.											

**Public Service Company of New Hampshire**  
**Docket No. DE 14-238**

**Date Request Received: 07/29/2015**

**Date of Response: 08/12/2015**

**Request No. STAFF 1-171**

**Page 1 of 7**

**Request from: New Hampshire Public Utilities Commission Staff**

**Witness: Christopher J. Goulding**

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**Request:**

Please provide the following information separately and in total for the following facilities: Merrimack Station (including both combustion turbines), Schiller Station (including the combustion turbine), Newington Station, each hydro installation, Lost Nation combustion turbine, White Lake combustion turbine, and PPAs to be divested:

- a. Fully loaded O&M expenditures for 2013;
- b. Fully loaded O&M expenditures for 2014;
- c. Estimated fully loaded O&M expenditures for 2015 through 2021 by year;
- d. Capital expenditures for 2013 without property taxes;
- e. Capital expenditures for 2014 without property taxes;
- f. Capital expenditures for 2015 through 2021 by year without property taxes;
- g. Property taxes for 2013;
- h. Property taxes for 2014;
- i. Estimated property taxes for 2015 through 2021 by year;
- j. Fuel expenditures for 2013;
- k. Fuel expenditures for 2014;
- l. Estimated fuel expenditures for 2015 through 2021 by year;
- m. Remaining items and cost to account for total station costs for 2013;
- n. Remaining items and cost to account for total station costs for 2014; and
- o. Estimated remaining items and cost to account for total station costs for 2015 through 2021 by year.

**Response:**

- a, b and c -- Please see Page 2 of 7  
d, e and f -- Please see Page 3 of 7  
g, h and i -- Please see Page 4 of 7  
j, k and l -- Please see Page 5 of 7  
m, n and o -- Please see Pages 6 and 7 of 7

The pages noted above only contain information through December 31, 2016, as the Company did not budget for these facilities beyond that date. Additionally, no information has been provided related to PPAs, as these are not planned to be divested.

Data Request STAFF 1-171  
Dated: 07/29/2015  
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**Public Service Company of New Hampshire d/b/a Eversource Energy  
Determination Regarding PSNH's Generation Assets  
2013-2016 O&M**

(thousands of dollars)

<b>O&amp;M</b>	2013	2014	2015	2016
Merrimack Station	38,205	33,844	42,990	30,458
Schiller Station	22,082	24,205	24,487	23,874
Newington Station	10,978	11,326	8,300	8,225
Wyman Station	448	379	613	573
<b>Hydro (A)</b>			10,374	9,118
Hydro - Amoskeag	1,919	1,274	-	-
Hydro - Ayers Island	2,245	1,946	-	-
Hydro - Canaan	472	215	-	-
Hydro - Eastman Falls	726	868	-	-
Hydro - Garvins Falls	909	776	-	-
Hydro - Gorham	817	1,489	-	-
Hydro - Hooksett	218	229	-	-
Hydro - Jackman	399	1,091	-	-
Hydro - Smith	1,625	3,635	-	-
Internal Combustion - White Lake	241	224	-	-
Internal Combustion - Lost Nation	176	191	-	-
<b>Total O&amp;M</b>	<b>81,460</b>	<b>81,692</b>	<b>86,764</b>	<b>72,248</b>

(A) Hydro O&M was not budgeted by individual Hydro installation in 2015 and 2016

Amounts shown above may not add due to rounding.

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Dated: 07/29/2015  
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**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Determination Regarding PSNH's Generation Assets**  
**2013-2016 Capital Expenditures**

(thousands of dollars)

<b>Capital Expenditures</b>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Merrimack Station	6,802	7,161	26,194	11,849
Schiller Station	1,369	2,373	6,859	4,378
Newington Station	545	815	1,094	500
Wyman Station	3	5	18	2
Hydro - Amoskeag	102	1,706	(2)	214
Hydro - Ayers Island	25	116	935	107
Hydro - Canaan	-	1	-	14
Hydro - Eastman Falls	115	168	123	70
Hydro - Garvins Falls	570	29	-	1,107
Hydro - Gorham	1	52	108	609
Hydro - Hooksett	54	98	-	48
Hydro - Jackman	-	2	(1)	1
Hydro - Smith	19	16	90	108
Internal Combustion - White Lake	1	-	-	5
Internal Combustion - Lost Nation	-	-	920	1
Other	18	514	1,263	572
<b>Total Capital Expenditures</b>	<u>9,624</u>	<u>13,056</u>	<u>37,601</u>	<u>19,585</u>

Amounts shown above may not add due to rounding.

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Dated: 07/29/2015  
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**Public Service Company of New Hampshire d/b/a Eversource Energy  
Determination Regarding PSNH's Generation Assets  
2013-2016 Property Tax**

(thousands of dollars)

<b>F/H Property Tax</b>	2013	2014	2015	2016
Merrimack Station	3,415	3,485	3,852	4,287
Schiller Station	1,924	2,391	2,643	2,940
Newington Station	878	1,360	1,503	1,672
Amoskeag Hydro	83	71	78	87
Ayers Island Hydro	472	375	415	462
Canaan Hydro	102	75	83	93
Eastman Falls Hydro	183	151	167	186
Garvins Falls Hydro	239	158	175	195
Gorham Hydro	125	91	101	112
Hooksett Hydro	122	98	109	121
Jackman Hydro	334	271	300	334
Smith Hydro	2,652	2,041	2,256	2,510
Internal Combustion - White Lake	28	23	25	28
Internal Combustion - Lost Nation	64	49	55	61
<b>Total Property Tax</b>	<b>10,621</b>	<b>10,640</b>	<b>11,760</b>	<b>13,087</b>

Amounts shown above may not add due to rounding.

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Dated: 07/29/2015  
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**Public Service Company of New Hampshire d/b/a Eversource Energy  
Determination Regarding PSNH's Generation Assets  
2013-2016 Fuel Expenditures**

(thousands of dollars)

<b>Fuel Expenditures</b>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016*</u>
Merrimack Station	69,683	64,362	58,609	44,801
Schiller Station	28,372	30,586	29,215	27,205
Newington Station	11,826	24,250	22,964	26,083
Wyman No. 4	1,089	1,479	1,547	-
Internal Combustion - White Lake	146	481	38	-
Internal Combustion - Lost Nation	116	388	39	-
<b>Total Fuel Expenditures</b>	<u>111,232</u>	<u>121,546</u>	<u>112,412</u>	<u>98,089</u>

Amounts shown above may not add due to rounding.

\*Specific to the 2016 forecast - The volatility in the northeast energy and natural gas markets have made the planning process less steady-state and less predictable. The role and resulting capacity factor of the units, specifically the Schiller coal units has a wide range of possible scenarios. We know that a small change in the energy market can result in significant changes in the operation of the units. ISO system conditions result in unpredictable operation to address shorter term demands associated with system constraints or volatile energy prices. For example, the simple comparison of Schiller Station coal unit costs versus a market forecast in a on/off model will identify a smaller capacity factor for their operation as this type of model does not include the daily cyclic operation the units provide in response to ISO system needs. This additional operation will result in higher actual unit capacity factors and associated fuel use.

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Dated: 07/29/2015  
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**Public Service Company of New Hampshire d/b/a Eversource Energy  
Determination Regarding PSNH's Generation Assets  
2013-2016 Payroll Taxes**

**(thousands of dollars)**

<b>Payroll Taxes</b>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Merrimack Station	918	1,008	1,207	901
Schiller Station	678	698	688	706
Newington Station	357	408	233	243
Hydro <b>(A)</b>	-	-	291	270
Hydro - Amoskeag	50	30		
Hydro - Ayers Island	41	27		
Hydro - Canaan	11	4		
Hydro - Eastman Falls	27	14		
Hydro - Garvins Falls	32	19		
Hydro - Gorham	19	15		
Hydro - Hooksett	9	6		
Hydro - Jackman	9	12		
Hydro - Smith	55	79		
Internal Combustion - White Lake	9	8		
Internal Combustion - Lost Nation	6	8		
<b>Total Payroll Taxes</b>	<u>2,221</u>	<u>2,336</u>	<u>2,419</u>	<u>2,120</u>

**(A)** Hydro Payroll Taxes were not budgeted by individual Hydro installation in 2015 and 2016

Amounts shown above may not add due to rounding.

Data Request STAFF 1-171  
Dated: 07/29/2015  
Page 7 of 7

**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Determination Regarding PSNH's Generation Assets**  
**2013-2016 Amortization of AROs**

(thousands of dollars)

<b>Amortization of AROs</b>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Merrimack Station	168	184	201	219
Schiller Station	290	316	346	378
Newington Station	17	18	20	22
Hydro - Canaan	4	5	5	5
Hydro - Gorham	14	15	16	17
Hydro - Jackman	2	2	2	2
Internal Combustion - White Lake	8	9	10	11
Internal Combustion - Lost Nation	8	9	10	11
Total Amortization of AROs	<u>511</u>	<u>558</u>	<u>610</u>	<u>665</u>

Amounts shown above may not add due to rounding.

**Public Service Company of New Hampshire**  
**Docket No. DE 14-238**

**Date Request Received: 07/29/2015**

**Date of Response: 08/12/2015**

**Request No. STAFF 1-172**

**Page 1 of 7**

**Request from: New Hampshire Public Utilities Commission Staff**

**Witness: Christopher J. Goulding**

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**Request:**

Please provide the following information separately and in total for the following facilities: Merrimack Station (including both combustion turbines), Schiller Station (including the combustion turbine), Newington Station, each hydro installation, Lost Nation combustion turbine, White Lake combustion turbine, and PPAs to be divested:

- a. January 1, 2013 rate base;
- b. January 1, 2014 rate base;
- c. 2015 through 2021 January 1, rate base by year;
- d. Depreciation for 2013;
- e. Depreciation for 2014;
- f. Depreciation for 2015 through 2021 by year;
- g. Renewable Energy Credits for 2013;
- h. Renewable Energy Credits for 2014; and
- i. Estimated Renewable Energy Credits for 2015 through 2021 by year.

**Response:**

- a., b., and c. Please see page 2 of this response for a rate base summary and pages 3, 4 and 5 for facility detail of certain components of rate base.
- d., e., and f. Please see page 6 of this response.
- g., h., and i. Please see page 7 of this response.

The pages noted above only contain information through January 1, 2017/December 2016, as the Company did not budget for these facilities beyond that date. Additionally, no information has been provided related to PPAs, as these are not planned to be divested.

Data Request STAFF 1-172

Dated: 07/29/2015

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**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Determination Regarding PSNH's Generation Assets**  
**1/1/13 - 1/1/17 Rate Base**

**(thousands of dollars)**

<b>Rate Base</b>	<b>1/1/2013</b>	<b>1/1/2014</b>	<b>1/1/2015</b>	<b>1/1/2016</b>	<b>1/1/2017</b>
Net Plant	698,301	665,940	645,856	651,427	631,308
Working Capital Allowance	10,132	10,384	10,445	11,122	9,332
Fossil Fuel Inventory	44,611	70,440	88,980	71,124	73,197
Materials and Supplies	<b>(B)</b> 51,469	51,266	53,110	57,162	55,216
Prepayments - Insurance / RGGI	<b>(A)</b> 892	968	744	1,061	1,499
Deferred Taxes	<b>(A)</b> (52,625)	(72,663)	(129,189)	(133,413)	(154,593)
Other Regulatory Obligations	<b>(B)</b> (16,913)	(11,116)	(14,130)	(15,713)	(33,665)
<b>Total Rate Base</b>	<b>735,867</b>	<b>715,219</b>	<b>655,816</b>	<b>642,770</b>	<b>582,294</b>

**(A)** This amount cannot be identified by specific facility, therefore no detail was provided.

**(B)** This amount is comprised of multiple items, some of which cannot be identified by specific facility. As such, detail was not provided for this item.

Amounts shown above may not add due to rounding.

Data Request STAFF 1-172

Dated: 07/29/2015

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**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Determination Regarding PSNH's Generation Assets**  
**1/1/13 - 1/1/17 Rate Base**

**(thousands of dollars)**

<b>Net Plant</b>	<b>1/1/2013</b>	<b>1/1/2014</b>	<b>1/1/2015</b>	<b>1/1/2016</b>	<b>1/1/2017</b>
Merrimack Station	515,448	494,367	486,104	492,722	479,378
Schiller Station	90,608	80,582	70,073	62,086	55,327
Newington Station	36,322	35,848	35,320	32,746	31,638
Wyman Station	597	647	572	2,005	1,595
Hydro - Amoskeag	8,995	8,921	8,910	9,948	10,254
Hydro - Ayers Island	9,713	9,639	9,577	9,929	10,197
Hydro - Canaan	2,676	2,656	2,635	2,737	2,817
Hydro - Eastman Falls	5,729	5,583	5,495	5,691	5,871
Hydro - Garvins Falls	6,941	6,820	6,663	7,431	7,672
Hydro - Gorham	918	968	944	1,045	1,099
Hydro - Hooksett	1,346	1,330	1,317	1,375	1,426
Hydro - Jackman	4,684	4,652	4,582	4,738	4,871
Hydro - Smith	6,418	6,345	6,260	6,504	6,722
Androscoggin	50	50	50	50	50
Internal Combustion - White Lake	515	409	303	171	63
Internal Combustion - Lost Nation	275	240	180	112	56
Other	7,067	6,882	6,873	12,139	12,272
<b>Total Net Plant</b>	<b>698,301</b>	<b>665,940</b>	<b>645,856</b>	<b>651,427</b>	<b>631,308</b>

Amounts shown above may not add due to rounding.

Data Request STAFF 1-172

Dated: 07/29/2015

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**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Determination Regarding PSNH's Generation Assets**  
**1/1/13 - 1/1/17 Working Capital**

(thousands of dollars)

<b>Working Capital</b>	<b>1/1/2013</b>	<b>1/1/2014</b>	<b>1/1/2015</b>	<b>1/1/2016</b>	<b>1/1/2017</b>
Merrimack Station	4,128	4,870	4,327	5,511	3,934
Schiller Station	3,042	2,815	3,095	3,139	3,084
Newington Station	1,495	1,399	1,448	1,064	1,062
Wyman Station	49	57	48	79	74
Hydro <b>(A)</b>	-	-	-	1,330	1,178
Hydro - Amoskeag	380	245	163	-	-
Hydro - Ayers Island	260	286	249	-	-
Hydro - Canaan	48	60	27	-	-
Hydro - Eastman Falls	71	93	111	-	-
Hydro - Garvins Falls	118	116	99	-	-
Hydro - Gorham	107	104	190	-	-
Hydro - Hooksett	22	28	29	-	-
Hydro - Jackman	108	51	139	-	-
Hydro - Smith	259	207	465	-	-
Internal Combustion - White Lake	17	31	29	-	-
Internal Combustion - Lost Nation	28	22	24	-	-
<b>Total Working Capital</b>	<b>10,132</b>	<b>10,384</b>	<b>10,445</b>	<b>11,122</b>	<b>9,332</b>

**(A)** Hydro O&M was not budgeted by individual Hydro installation in 2015 and 2016.

Amounts shown above may not add due to rounding.

Data Request STAFF 1-172

Dated: 07/29/2015

Page 5 of 7

**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Determination Regarding PSNH's Generation Assets**  
**1/1/13 - 1/1/15 Fuel Inventory**

**(thousands of dollars)**

<b>Fuel Inventory</b>	<b>1/1/13</b>	<b>1/1/14</b>	<b>1/1/15</b>
Merrimack Station	36,437	43,237	40,295
Schiller Station	2,797	5,868	8,707
Newington Station	4,299	20,173	38,226
Wyman Station	622	667	1,152
Internal Combustion - White Lake	260	284	324
Internal Combustion - Lost Nation	196	211	277
<b>Total Fuel Inventory</b>	<b>44,611</b>	<b>70,440</b>	<b>88,980</b>

Note: 1/1/16 and 1/1/17 are not included as Fuel Inventory is not forecasted by individual facility.

Amounts shown above may not add due to rounding.

Data Request STAFF 1-172

Dated: 07/29/2015

Page 6 of 7

**Public Service Company of New Hampshire d/b/a Eversource Energy  
Determination Regarding PSNH's Generation Assets  
2013-2016 Depreciation Expense**

**(thousands of dollars)**

<b>Depreciation Expense</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Merrimack Station	19,926	20,420	21,048	20,818
Schiller Station	11,484	11,667	11,677	11,342
Newington Station	1,283	1,307	1,335	1,307
Wyman Station	79	81	66	104
Hydro - Amoskeag	144	146	158	163
Hydro - Ayers Island	124	125	133	137
Hydro - Canaan	21	21	22	23
Hydro - Eastman Falls	148	149	156	158
Hydro - Garvins Falls	173	180	196	198
Hydro - Gorham	23	24	26	27
Hydro - Hooksett	15	15	17	17
Hydro - Jackman	70	70	73	76
Hydro - Smith	96	96	101	105
Internal Combustion - White Lake	107	107	111	107
Internal Combustion - Lost Nation	59	59	58	55
Other	357	352	373	369
<b>Total Depreciation Expense</b>	<b>34,109</b>	<b>34,819</b>	<b>35,550</b>	<b>35,006</b>

Amounts shown above may not add due to rounding.

Data Request STAFF 1-172

Dated: 07/29/2015

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**Public Service Company of New Hampshire d/b/a Eversource Energy  
Determination Regarding PSNH's Generation Assets  
2013-2016 Renewable Energy Credits (RECs)**

**(thousands of dollars)**

	2013	2014	2015	2016
Schiller RECs	20,786	16,895	16,162	11,198

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY**  
**2015 ENERGY SERVICE RATE CALCULATION**  
**FOSSIL/HYDRO RETURN ON RATE BASE**  
**RATE EFFECTIVE JULY 1, 2015**  
 (Dollars in 000's)

	January 2015 Actual	February 2015 Actual	March 2015 Actual	April 2015 Actual	May 2015 Estimate	June 2015 Estimate	July 2015 Estimate	August 2015 Estimate	September 2015 Estimate	October 2015 Estimate	November 2015 Estimate	December 2015 Estimate	Total
12 <b>Return on Rate Base</b>													
13													
14													
15 <b>Rate base</b>													
16 <b>Net Plant</b>	274,731	276,002	269,822	271,083	289,475	288,739	289,881	291,291	292,644	297,720	297,660	300,647	
17													
18 Working Capital Allow. (45 days of O&M)	10,826	10,826	10,826	10,826	10,826	10,826	10,826	10,826	10,826	10,826	10,826	10,826	10,826
19 Fossil Fuel Inventory	95,075	95,075	54,584	54,584	48,429	53,792	53,718	53,653	59,018	67,147	71,172	71,124	71,124
20 Mat's and Supplies	55,216	55,216	57,528	57,528	57,162	57,162	57,162	57,162	57,162	57,162	57,162	57,162	57,162
21 Prepayments	1,500	1,500	1,062	1,062	1,061	1,061	1,061	1,061	1,061	1,061	1,061	1,061	1,061
22 Deferred Taxes	(36,345)	(36,345)	(41,883)	(41,883)	(35,437)	(34,659)	(33,545)	(32,131)	(31,067)	(29,015)	(28,829)	(26,770)	(26,770)
23 Other Regulatory Obligations	(16,388)	(16,388)	(16,041)	(16,041)	(17,821)	(10,374)	(11,263)	(12,153)	(13,043)	(13,933)	(14,823)	(15,713)	(15,713)
24 <b>Total Rate Base (L16 thru L23)</b>	384,616	385,887	335,899	337,160	353,696	366,547	367,840	369,710	376,601	390,968	394,229	398,337	
25													
26 <b>Average Rate Base (prev + curr month)</b>	389,745	385,251	360,893	336,529	345,428	360,122	367,194	368,775	373,156	383,785	392,599	396,283	
27 <b>x Return</b>	0.9135%	0.9135%	0.9135%	0.9145%	0.9145%	0.9145%	0.9145%	0.9145%	0.9145%	0.9145%	0.9145%	0.9145%	0.9145%
28 <b>Return (L26 x L27)</b>	\$ 3,560	\$ 3,519	\$ 2,885	\$ 3,077	\$ 3,159	\$ 3,293	\$ 3,358	\$ 3,372	\$ 3,412	\$ 3,510	\$ 3,590	\$ 3,624	\$ 40,361

Amounts shown above may not add due to rounding.

DE 14-238 Determination Regarding PSNH's Generation Assets  
Eversource's Tech Session Data Requests to NHPUC Staff

Date Request Received: 11/6/2015  
Request Number: Eversource TS 2-25  
Witness: Michael D. Cannata, Jr.

Date of Response: 11/13/2015  
Page 1 of 1

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**Request:**

Refer to your response to Eversource 1-33. Explain why the approach used by Staff for forecasting competitive Default Service rates (in IR 13-020 Staff Report dated April 1, 2014) that customers would pay if the plants were sold did not capture periods of high market prices.

**Response:**

There are three reasons. As stated by Mr. Hahn in the LaCapra technical conference held on October 26, 2015, the data used for the price of gas was compiled in the fall of 2013 prior to the occurrence of the price spikes, the LaCapra model does not model gas transmission constraints, and the monthly average price of gas was used in the analysis. Staff used the analysis results supplied by LaCapra to calculate what it calls ES rates.

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 14-238

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-37

Witness: Michael D. Cannata

REQUEST:

On page 12, line 16-20: What portion of the savings from PSNH generation running are captured in the savings analysis and what portion is not captured due to the use of monthly gas price forecasts? Provide all supporting calculations to quantify the respective portions.

RESPONSE:

I cannot specifically answer your question because the details of the operation of the La Capra model are proprietary as stated in my testimony. In order to make a good faith effort to respond to your request, I refer you to my response to Eversource 1-35 above and the fact that my testimony recognized that some small value may not be recognized. I reasoned that the \$100 million in savings for customers that Eversource could not reconcile in its response to Data Request TS-21 was an appropriate offset for the small offset I could not reconcile in the price spikes. I believe that my decision was conservative and underestimated the reduction to Eversource expected savings from the sale of its generation fleet.

DE 14-238 Determination Regarding PSNH's Generation Assets  
Eversource's Tech Session Data Requests to NHPUC Staff

Date Request Received: 11/6/2015  
Request Number: Eversource TS 2-26  
Witness: Michael D. Cannata, Jr.

Date of Response: 11/13/2015  
Page 1 of 1

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**Request:**

Have you evaluated the inaccuracy of dispatch analysis using monthly average gas prices with actual historical pricing data in addition to the hypothetical scenarios you described in response to Eversource 1-35?

**Response:**

No.

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 14-238

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-35

Witness: Michael D. Cannata

REQUEST:

On page 12, line 12-14. Explain how dispatch analysis utilizing average monthly gas prices does not capture the value to customers and is more inaccurate as the price of gas drops. Provide supporting analysis and/or published studies that document the inaccuracy.

RESPONSE:

Let me respond to your request through three hypothetical examples.

Assume we have 720 hours in a month where 72 hours (3 days) are at \$300/MWH, all the other hours are \$40/MWH, and PSNH coal units (540 MW) are at \$50/MWH. The monthly hourly average is \$66/MWH ( $648 \text{ hours} \times 40 \text{ \$/MWH} + 72 \text{ hours} \times 300 \text{ \$/MWH} = 47520/720 = \$66/\text{MWH}$ ). According to the monthly average gas price model ("monthly average model"), coal units would run the entire month (because the coal units at \$50/MWH are cheaper than the \$66/MWH average) and generate \$6.22 million in savings ( $540 \text{ MW} \times 16 \text{ \$/MWH} \times 720 \text{ hours} = \$6.22 \text{ million}$ ). In reality, the PSNH coal units would only run for 72 hours but create \$9.72 million in savings ( $540 \text{ MW} \times 250 \text{ \$/MWH} \times 72 \text{ hours} = \$9.72 \text{ million}$ ). So, in this example, 64% of the savings are captured by the monthly average model.

Something interesting happens when the price of market energy goes down outside the peak hours. Repeating the above calculation with a lower market price of \$30/MWH in the non-spike hours and with everything else held the same, we get a lower average price of \$57/MWh. The monthly average model would still show the coal units running for the entire month, but now they would generate only \$2.72 million in savings according to the model. The reality would be unchanged from the first example: the coal units would run for just 72 hours and generate the same \$9.72 million in savings. In this example, the monthly average model captures only 28% of the savings.

Doing the same calculation a third time with a price of \$20/MWh for the non-spike hours, the average hourly price falls to \$48/MWH. Here, the monthly average model would say that the coal units will not run at all (because \$48/MWH average is less than the coal units' cost of \$50/MWH) and thus generate no savings. The reality, again, is that they would run for 72 hours and save \$9.72 million. In this case the monthly average model captures none of the savings.

Not only do the mathematics slant the results towards the market alternative, the slanting increases as market prices are lower to a point where the price spike savings are all but excluded in the analysis.

[WITNESS PANEL: RICHARD HAHN and DANIEL KOEHLER]

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1 A. (Hahn) That was not a conclusion we offered one  
2 way or another.

3 Q. Thank you.

4 Just a clarification on what -- again,  
5 going back to what La Capra did in the 2014  
6 report as updated, as opposed to what Staff did  
7 in its report. Am I correct to say that what  
8 La Capra did is it calculated and projected  
9 LMP, and it prepared a capacity forecast, but  
10 it was Staff that put those two numbers with  
11 whatever other adjustments it made to come up  
12 with a competitive rate and a PSNH rate? Is  
13 that a fair statement?

14 A. (Hahn) But we did talk with Staff about that,  
15 as I previously indicated. Staff asked us  
16 if -- you know, how would you do a comparison.  
17 And we said, well, the -- if you buy default  
18 service from a supplier, a third-party  
19 supplier, or if you go to the ISO markets  
20 directly, you'll pay capacity energy, ISO's  
21 other costs, which include ancillary services  
22 and things like that. And that information --  
23 certainly the two biggest pieces are capacity  
24 and energy. They account for 95, 97 percent of

{DE 14-238} (TECHNICAL SESSION) {10-26-15}

[WITNESS PANEL: RICHARD HAHN and DANIEL KOEHLER]

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1 the cost. So we gave them that. We suggested  
2 that that could be used to estimate what a  
3 third-party supplier would bid in a competitive  
4 market. So we did provide them with that  
5 guidance. But as I said earlier, Staff did the  
6 calculation itself.

7 Q. So if one were to critique what Staff did in  
8 its report, putting the pieces together, that  
9 was Staff's work, not La Capra's. I understand  
10 you gave them some data points.

11 A. (Hahn) Correct. What happened was we gave them  
12 a spreadsheet. They made some calculations.  
13 They sent it back to us, and it looked okay to  
14 us. But we did not actually do it, no.

15 Q. Okay.

16 MR. SHEEHAN: To the extent,  
17 Alex, that you're the chairman of these  
18 proceedings, I don't have any more questions  
19 now. I think -- go ahead.

20 A. (Hahn) Mr. Koehler reminded me. In one of my  
21 previous answers to your questions, you said  
22 that we estimated the asset valuation as of  
23 March 31st, 2014. My answer to that was too  
24 quick. In the 2014 La Capra report, the asset

{DE 14-238} (TECHNICAL SESSION) {10-26-15}

[WITNESS PANEL: RICHARD HAHN and DANIEL KOEHLER]

42

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{DE 14-238} (TECHNICAL SESSION) {10-26-15}

[WITNESS PANEL: RICHARD HAHN and DANIEL KOEHLER]

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1 average prices of those is going down.

2 Q. And for purposes of forecasting, then you're  
3 comfortable using an annual average, even  
4 though there are price spikes?

5 A. (Hahn) Well, we don't use an annual average.  
6 We use a monthly average. That's a fairly  
7 standard technique in long-term simulations.  
8 Even though it's an hourly dispatch model, we  
9 use monthly fuel prices. So they would show  
10 very high prices in January and February for  
11 natural gas, which is an input fuel to many  
12 generators in New England, and they would show  
13 very low prices in April -- March, April, May,  
14 June. You might see another slight price  
15 increase in July and August, but not as high as  
16 it would be in the winter. And then they'd  
17 climb again.

18 Q. I think there has been some criticism by  
19 Non-Advocate Staff of your use of average  
20 monthly prices, and that's why I'm questioning  
21 you a little about whether that's a valid  
22 measure for purposes of forecasting. And I  
23 assume the answer to that is yes, that you  
24 consider that valid still?

{DE 14-238} (TECHNICAL SESSION) {10-26-15}

[WITNESS PANEL: RICHARD HAHN and DANIEL KOEHLER]

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1 A. (Hahn) Absolutely.

2 Q. And so is it fair to say that your natural gas  
3 forecast in your 2015 update takes into account  
4 those winter price peaks in gas pricing?

5 A. (Hahn) Yes.

6 Q. And how does your asset value in the 2015  
7 update capture Forward Capacity Market pricing  
8 increases?

9 A. (Hahn) Well, it's higher Forward Capacity  
10 Market revenues which are offset by lower  
11 energy market revenues.

12 Q. Okay. So, even though the overall number is  
13 slightly higher for the assets, is that a  
14 reflection of the capacity market?

15 A. (Hahn) It's a reflection of both.

16 Q. Of both.

17 A. (Hahn) Now, I need to be maybe -- offer a  
18 little more detail here. For the hydro units,  
19 they get -- hydro unit gets more of its revenue  
20 from the energy market than it does capacity  
21 market. So those would not -- they would have  
22 some increase in capacity, but less of a  
23 reduction in energy. Some units like Newington  
24 don't run very much, so the energy impact on

{DE 14-238} (TECHNICAL SESSION) {10-26-15}

**Public Service of New Hampshire d/b/a Eversource Energy**  
**Docket No. DE 14-238**

**Date Request Received: 08/2 /2015**

**Date of Response: 09/01/2015**

**Request No. TS 1-021**

**Page 1 of 1**

**Request from: New Hampshire Public Utilities Commission Staff**

**Witness: William H. Smagula**

**Request:**

Re: Staff 1-044: Please take these values and determine what the savings were to customers from winter energy price spikes in the ISO-NE market.

**Response:**

To illustrate the savings value of the generating resources, a calculation is made comparing the cost of producing energy at PSNH's plants to the avoided costs of procuring energy in the daily ISO-New England energy marketplace during the same period. The values for 2013, 2014 and the first half of 2015 are provided on a monthly basis to identify the winter periods.

Month	2013 Value (\$M)	YTD 2013 (\$M)	2014 Value (\$M)	YTD 2014 (\$M)
January	21.7	21.7	50	50
February	34.4	56.1	36	86
March	4.5	60.6	31	117
April	2.4	63	2	119
May	2.5	65.5	2	121
June	2.5	68	2	123
July	7.5	75.5	1.5	124.5
August	0.9	76.4	1.1	125.6
September	1.9	78.3	1.3	126.9
October	1.3	79.6	1.5	128.4
November	2.8	82.4	2.7	131.1
December	21	103.4	3	134.1
<b>2015 Value (\$M)</b>	<b>YTD 2015 (\$M)</b>			
12.6	12.6			
29.5	42.1			
8.5	50.6			
1.0	51.6			
1.3	52.9			
1.1	54.0			

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 14-238

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-29

Witness: Michael D. Cannata

REQUEST:

On page 9, line 9-10: Will an increase in capacity payments have an impact on the sale price? If yes, will an increase in capacity payments increase or decrease the total sale price?

RESPONSE:

All else being equal, the value of the plants should be higher. A buyer of the generation should reflect the higher capacity payment in their bid to the extent that they feel it is necessary to do so.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-39

Witness: Michael D. Cannata

REQUEST:

On page 20, line 17-18: Explain how the down-side risk on the current price of gas has impacted the capacity factor of Merrimack Station.

RESPONSE:

Because of the low gas prices and the resultant lower risks of even lower gas prices, I believe that the ability of lower gas prices to further the decline of Merrimack Station capacity factors to be minimal, as stated in my testimony at page 20.

It is common sense that lower gas prices make it is less probable that they will be lower in the future given the very low prices that exist today.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. OEP 1-13

Witness: Michael D. Cannata

REQUEST:

Page 20, lines 14-18. Please clarify whether your calculation of “Adjustment E” assumes a total scrubber cost of 0.40 cents/kWh in PSNH ES rates for the years 2016 through 2022, and a total scrubber cost of 0.00 cents beginning in 2023. If it does, please provide the basis for your assumption that PSNH will be permitted to recover *only* the deferred portion of the actual scrubber costs beginning in 2015. If it does not, please provide a breakdown of all scrubber related costs for the period 2016-2025 with and without divestiture.

RESPONSE:

The correct reference is page 15, lines 14 through 18, of my revised testimony.

Adjustment E assumes a 1.4 cents/kWh scrubber cost for the 2016-2022 time period.

My analysis assumed that the 0.98 cents/kWh charge would continue in 2023 and beyond, but that the 0.4 cents/kWh charge for the scrubber deferral account would end in 2022.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-44

Witness: Michael D. Cannata

REQUEST:

Referring to Exhibit MDC-3B: Explain how the amortization period of the scrubber deferral account impacts competitive retail electric rates.

RESPONSE:

Please see Exhibit MDC-3B.

The Chung analysis assumed that it would take a 1.0 cent/kWh charge for 15 years (about \$600 million) to pay for the deferred scrubber account (about \$100 million), when in fact by its own calculations the charge will be 4 mills/kWh for 7 years (about \$115 million).

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-40

Witness: Michael D. Cannata

REQUEST:

On page 20, line 19-21: Provide all projections on natural gas exploration costs, production costs, transmission costs and investor returns that you produced or reviewed as part your analysis.

RESPONSE:

There are none.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1- 2

Witness: Jay E. Dudley

REQUEST:

On page 9, line 3: The witness states that “in order for the Commission to accept PSNH’s inclusion of the avoided cost savings in the overall cost savings analysis, estimated by Mr. Chung to be \$77.2 million, the Commission would have to find that such costs are legitimate under the “known and measurable” standard of traditional cost-of-service regulation, and as extensively applied by the U.S. Federal Energy Regulatory Commission (“FERC”) under its Good Utility Practice guidelines.<sup>8</sup>” Your footnote 8 reference reads, “Federal Regulatory Commission, Pro Forma Open Access Transmission Tariff (OATT), Appendix C.” Please provide a copy of the referenced FERC document and identify therein the specific portions of that document that support your statement.

RESPONSE:

FERC’s Pro Forma Open Access Transmission Tariff (OATT), Appendix C, Original Sheet No. 14, defines “Good Utility Practice” as:

Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4).

It is generally accepted by utilities regulators that “Good Utility Practice” incorporates three principles that determine whether utilities will be allowed to recover their costs and earn a return on their capital investments. In determining the revenue requirement, costs and

investments are examined as to whether they are (1) prudent, (2) used and useful, and (3) *known and measurable*. Allowed expenses must satisfy all three tests. As stated in my testimony at page 6, PSNH did not submit a cost-of-service analysis or test year for the PUC to consider in its review of this issue. The OATT is a publicly available document on FERC's website at [www.ferc.gov](http://www.ferc.gov). A search of FERC's orders on the website for "known and measurable" provides numerous listings where FERC has applied the standard. Also see 18 C.F.R § 154.303.

**ELECTRONIC CODE OF FEDERAL REGULATIONS****e-CFR data is current as of November 13, 2015**[Title 18](#) → [Chapter I](#) → [Subchapter E](#) → [Part 154](#) → [Subpart D](#) → §154.303

Title 18: Conservation of Power and Water Resources

[PART 154—RATE SCHEDULES AND TARIFFS](#)[Subpart D—Material To Be Filed With Changes](#)**§154.303 Test periods.**

Statements A through M, O, P, and supporting schedules, in §154.312 and §154.313, must be based upon a test period.

(a) If the natural gas company has been in operation for 12 months on the filing date, then the test period consists of a base period followed by an adjustment period.

(1) The base period consists of 12 consecutive months of the most recently available actual experience. The last day of the base period may not be more than 4 months prior to the filing date.

(2) The adjustment period is a period of up to 9 months immediately following the base period.

(3) The test period may not extend more than 9 months beyond the filing date.

(4) The rate factors (volumes, costs, and billing determinants) established during the base period may be adjusted for changes in revenues and costs which are known and measurable with reasonable accuracy at the time of the filing and which will become effective within the adjustment period. The base period factors must be adjusted to eliminate nonrecurring items. The company may adjust its base period factors to normalize items eliminated as nonrecurring.

(b) If the natural gas company has not been in operation for 12 months on the filing date, then the test period must consist of 12 consecutive months ending not more than one year after the filing date. Rate factors may be adjusted as in paragraph (a)(4) of this section but must not be adjusted for occurrences anticipated after the 12-month period.

(c)(1) Adjustments to base period experience, or to estimates where 12 months' experience is not available, may include the costs for facilities for which either a permanent or temporary certificate has been granted, provided such facilities will be in service within the test period; or a certificate application is pending. The filing must identify facilities, related costs and the docket number of each such outstanding certificate. Subject to paragraph (c)(2) of this section, adjustments to base period experience, or to estimates where 12 months' experience is not available, may include any amounts for facilities that require a certificate of public convenience and necessity, where a certificate has not been issued by the filing date but is expected to be issued before the end of the test period. Adjustments to base period may include costs for facilities that do not require a certificate and are in service by the end of the test period.

(2) When a pipeline files a motion to place the rates into effect, the filing must be revised to exclude the costs associated with any facilities that will not be in service as of the end of the test period, or for which certificate authorization is required but will not be granted as of the end of the test period. At the end of the test period, the pipeline must remove from its rates costs associated with any facility that is not in service or for which certificate authority is required but has not been granted.

(d) The Commission may allow reasonable deviation from the prescribed test period.

[Order 582, 60 FR 52996, Oct. 11, 1995, as amended by Order 582-A, 61 FR 9629, Mar. 11, 1996]

[Need assistance?](#)

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PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 14-238

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. OEP 1-27

Witness: Jay E. Dudley

REQUEST:

Page 15, lines 15-21. You state that if “the goal of PSNH is to quickly take advantage of historically low interest rates . . . it would appear that PSNH is in a position to do so currently without divestiture (*assuming modification by the Legislature of RSA 125-O:13*) . . .” (emphasis added). OEP presumes that you meant to reference RSA 125-O:18 rather than RSA 125-O:13. Please provide your estimate on the timing and likelihood of success of securing a legislative change to RSA 125-O:18 that would eliminate PSNH’s statutory entitlement to recover its prudent costs with PSNH’s approved return on equity.

RESPONSE:

Non-Advocate Staff object to this question on the basis that it seeks information that is highly speculative in nature. As such, the requested information is neither relevant nor material to the issue before the Commission in this proceeding. Notwithstanding the objection, to the extent it is responsive to this question, Mr. Dudley replies:

I cannot speculate on the likelihood of the legislature modifying RSA 125-O:18. My testimony merely states what would probably be required legally to bring about the projected bond financing that I discuss.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1- 7

Witness: Jay E. Dudley

REQUEST:

On page 19, line 16: The witness states that “First, we can establish the approximate issuance amount by deducting the estimated amount of the recovered scrubber costs through rates, approximately \$120 million” referencing Mr. Chung’s Attachment EHC-2. Please identify where on Attachment EHC-2 the “amount of the recovered scrubber costs” is stated.

RESPONSE:

The reference to \$120 million in recovered scrubber costs was in error. Please see my response to Eversource 1-10.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1- 9

Witness: Jay E. Dudley

REQUEST:

On page 20, line 17: Please explain why you deducted the \$120 million deferral balance from the \$422 million estimated scrubber investment when arriving at the amount to finance?

RESPONSE:

The reference to \$120 million in recovered scrubber costs was in error. Please see my response to Eversource 1-10.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1- 10

Witness: Jay E. Dudley

REQUEST:

On page 20: Please rerun the debt payment schedule assuming a \$351M scrubber net plant balance at the end of 2015 and adding in the projected \$120 million scrubber deferral balance. Please quantify what impact this would have on the total interest expense over the 15 year period, average annual interest expense savings and the interest rate savings for the first 5 years (2017 to 2021). Please provide the working excel spreadsheet.

RESPONSE:

The total financing amount proposed by PSNH above equals \$471 million. In my response to Eversource 1-17 below, I accept Eversource’s revised financing amount of \$478.5 million in calculating PSNH’s capital structure post issuance for the reasons stated. The requested rerun of the debt schedule on page 20 of my testimony is as follows (supporting spreadsheet is below):

Year	Principal Pymt	Interest Pymt	Admin Pymt	Total Pymt	Balance
2016	\$0	\$0	\$0	\$0	\$478,500
2017	31,899	16,206	829	48,934	446,601
2018	31,899	15,119	829	47,847	414,702
2019	31,899	14,003	829	46,731	382,803
2020	31,899	12,886	829	45,614	350,904
2021	31,899	11,770	829	44,498	319,005
2022	31,899	10,653	829	43,381	287,106
2023	31,899	9,537	829	42,265	255,207
2024	31,899	8,420	829	41,148	223,308
2025	31,899	7,304	829	40,032	191,409
2026	31,899	6,187	829	38,915	159,510
2027	31,899	5,070	829	37,798	127,611
2028	31,899	3,954	829	36,682	95,712
2029	31,899	2,838	829	35,566	63,813
2030	31,899	1,721	829	34,449	31,900
2031	31,899	605	829	33,333	0
Total	\$478,500	\$126,273	\$12,435	\$617,193	-

The revised payment schedule, as compared to the one depicted in Mr. Chung's Attachment EHC-1 at 5, track each other fairly closely in terms of amortization and interest expense. Accordingly, the rate impact of the revised schedule would be very similar to that projected by Mr. Chung in Attachment EHC-1 at page 1. The five year differential in average interest expense is approximately \$1.3 million more in my scenario than Mr. Chung's at the end of five years. Likewise, after the 15 year period, the revised schedule shows \$11.5 million more in interest expense than Mr. Chung's attachment which I largely attribute to the higher interest rate of 3.5% that I assigned in my analysis. However, I consider the effect of these differences to be limited and the comparison does not give me cause to change my overall conclusion that PSNH can finance the scrubber costs now at favorable terms absent divestiture. Moreover, because the face amount of the debt is still lower, the principal balance to be securitized at the end of five years, assuming divestiture is approved by the PUC at that time, is \$19 million less than the amount provided by Mr. Chung.

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Date Request Received: 10/2/15

Date of Response: 10/16/15

Request No. Eversource 1-71

Witness: Mark Berkman

REQUEST:

Page 6, lines 15 to 16: The witness states that "A high natural gas price scenario and three scenarios reflecting three consumer savings allocations specified by PUC non-settling staff were completed."

- a. For the high natural gas price scenario, what is your understanding of whether any other inputs to the baseline analysis were changed besides natural gas prices?
- b. For each of the three consumer savings allocation scenarios, what is your understanding of whether any other inputs to the baseline were changed besides the rate class allocation percentages?

RESPONSE:

- a. As I understand it from a response from Mr. Chung and Mr. Judson on September 14, 2015(TC-46) the only changes made to create the high natural gas price scenario were (1) the adoption the "Staff / La Capra Natural Gas Price" curve, and (2) the use of the high sales of \$410.5 million. As noted in the response, Eversource expressed caution regarding the results of this scenario because no changes were made to other assumptions such as customer migration and higher power plant O&M and capital costs attributable to higher utilization occasioned by higher natural gas price.
- b. I am unaware of any other changes to the three consumer savings allocation scenarios.