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June 3, 2019

Debra A. Howland  
Executive Director  
New Hampshire Public Utilities Commission  
21 South Fruit Street, Suite 10  
Concord, NH 03301-2429

RE: DE 19-080, Public Service Company of New Hampshire d/b/a Eversource Energy  
Reconciliation of Energy Service and Stranded Costs for 2018

Dear Director Howland:

Please find enclosed an original and six copies of the pre-filed testimony of Erica L. Menard, Frederick B. White, and William H. Smagula supporting the reconciliation of revenues and expenses for Public Service Company of New Hampshire d/b/a Eversource Energy's Default Energy Service rate and Stranded Cost Recovery Charge ("SCRC") rate for 2018.

Please note that due to the divestiture of Eversource's generating assets in 2018, the timeframes covered by this filing differ from prior years. The reconciliation of energy service revenues and expenses covers only the period of 2018 until Eversource transitioned to competitively supplied energy service. Also, rather than a calendar year, this reconciliation of revenues and expenses relating to the SCRC covers the 13-month period until January 2019 to account for the shift in the setting of the SCRC rate from January 1 to February 1 consistent with the settlement agreement in Docket No. 17-113.

Thank you for your cooperation. Please do not hesitate to contact me with any questions.

Very truly yours,



Matthew J. Fossum  
Senior Counsel

Enclosures  
CC: Service List

PUBLIC SERVICE OF NEW HAMPSHIRE  
D/B/A EVERSOURCE ENERGY

RECONCILIATION OF ENERGY SERVICE  
AND STRANDED COSTS FOR CALENDAR YEAR 2018

DOCKET NO. 19-080

June 3, 2019

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Filing Letter

Direct Testimony of Erica L. Menard

Exhibit 1

Direct Testimony of Frederick B. White

Exhibit 2

Direct Testimony of William H. Smagula

Exhibit 3

Docket No. DE 19-080  
Exhibit No. 1

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

**Public Service Company of New Hampshire  
Reconciliation of Energy Service and Stranded Costs for  
January 2018 through January 2019**

**PREPARED TESTIMONY OF ERICA L. MENARD**

**Docket No. DE 19-080**

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

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”).

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

A. I have not testified in person before the Commission, but I have submitted testimony in the Company’s pending rate case in Docket No. DE 19-057.

**Q. Please describe your educational background.**

A. I graduated from the University of Maine in 1997 with a Bachelor of Arts degree in Economics and Business Administration with a concentration in Finance and from the University of New Hampshire in 2007 with a Master’s in Business Administration.

**Q. Please describe your professional experience.**

A. I was hired by Public Service Company of New Hampshire (now Eversource) in 2003 and have held various positions in the Company with increasing levels of responsibility. I was

1 appointed to my current position of Manager, Revenue Requirements –NH in April 2019.  
2 Prior to my current role, I held the position of Manager, Budgets & Investment Planning  
3 from September 2012 to April 2019. In that role I oversaw the capital and operations and  
4 maintenance plan budgets, actuals, and financial reporting for New Hampshire operations.  
5 From September 2003 to September 2012, I held the positions of Analyst and Senior  
6 Analyst in Economic Development and Load Forecasting and Supervisor of Performance  
7 Analysis and Business Planning where I was responsible for sales forecasting, economic  
8 analysis, performance management, and business planning activities. Prior to joining the  
9 Company, from June 1997 to September 2003, I held various positions at ICF Consulting  
10 in Fairfax, Virginia ranging from analyst, product consultant, and project manager with  
11 responsibilities for implementing load profiling and load settlement software at various  
12 utilities around the world.

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

14 A. I am currently responsible for the coordination and implementation of revenue  
15 requirements calculations for Eversource, as well as the filings associated with  
16 Eversource's default Energy Service ("ES") rate, Stranded Cost Recovery charge  
17 ("SCRC"), Transmission Cost Adjustment Mechanism ("TCAM"), and Distribution Rates.

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

19 A. The primary purpose of my testimony is to provide an overview of this filing and to seek  
20 approval of the reconciliation between the revenues and expenses contained within  
21 Eversource's ES and SCRC rate filings for the twelve-month reporting period January 1,  
22 2018 through January 31, 2019 ("reporting period").

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

24 A. Yes. William H. Smagula, consultant to Eversource and the former Vice President of  
25 Generation for Eversource, will review the performance of Eversource's fossil and hydro  
26 generation units during the period before Eversource divested them in 2018, and Frederick  
27 B. White, Supervisor - Power Supply Analysis and Policy, will review how Eversource met  
28 its energy and capacity requirements during this reporting period.

1 **Q. Have you provided a schedule showing replacement power costs as a result of**  
2 **outages?**

3 A. No. Historically, the Company had provided a schedule showing Replacement Power Costs  
4 (RPCs) due to outages at its generating stations. For example, see Schedule CJG-2 (Bates  
5 page 17) in the Company's filing in Docket No. DE 18-073 for calendar year 2017.  
6 However, because the Company owned its fossil facilities only a few days in 2018 and  
7 because there were no outages in those days meeting the reporting criteria, that schedule  
8 has been eliminated from this filing.

9 **Q. Please describe the ratemaking framework that began on May 1, 2001.**

10 A. On May 1, 2001 (Competition Day), Eversource began to recover costs under the  
11 Restructuring Settlement. Under the terms of the Restructuring Settlement, Eversource  
12 continues to recover costs related to the generation and delivery of electricity, but the  
13 specific rate structure now in place segments recovery into various components. The four  
14 major components of that segmentation are the Delivery Charge, the TCAM, the SCRC,  
15 and the ES rate. Two of the major interrelated rate components, the SCRC and the ES rate,  
16 are the subject of this proceeding.

17 **Q. Are there any changes to the schedules that have been previously presented in these**  
18 **filings?**

19 A. With the various changes due to divestiture and the new ES Rate design there are several  
20 changes in this filing.

21 Due to the divestiture of Eversource's generating assets in 2018, the timeframes covered by  
22 this filing differ from prior years. The reconciliation of energy service revenues and  
23 expenses covers only the period of January through March 2018. After March 2018,  
24 Eversource transitioned to competitively supplied energy service, with the exception of  
25 hydro unit activity that is included for April 2018 through August 2018 (the sale month) as  
26 well.

Due to the shift of SCRC annual rates now starting on February 1, the SCRC schedules in this filing include the 13 months of January 2018 through January 2019. Subsequent to this filing, and absent any other changes to the filing or the SCRC, SCRC schedules will include the 12-month period ending January 31.

## **Energy Service Charge**

### **Q. Please describe the ES recovery mechanism.**

A. Under restructuring, customers have a choice regarding their energy supplier. Customers may contract for and obtain energy on their own, or they may choose to continue to receive their energy from Eversource.

Under the terms of the Restructuring Settlement and subsequent legislation, Eversource is required to provide ES to those customers who request it. Initially, ES rates were set by statute. Beginning in February 2003, the ES rate for large commercial and industrial customers was based on Eversource's forecast of "actual, prudent and reasonable costs." Beginning in February 2004, the ES rate for all retail customers was based on a forecast of Eversource's "actual, prudent, and reasonable cost of service." The chart below shows the ES rates per kWh which have been in effect since Competition Day.

<b>Rate in Effect:</b>	<b>Rate Set By: Statute or Docket No.</b>	<b>Residential, Small Commercial/Industrial Customers (RSCI)</b>	<b>Large Commercial/ Industrial Customers (LCI)</b>
May 1, 2001 – January 31, 2003	Statute	4.40 cents	4.40 cents
February 1, 2003 - January 31, 2004	RSCI – Statute LCI-DE 02-166	4.60 cents	4.67 cents
February 1, 2004 - July 31, 2004	DE 03-175	5.36 cents	5.36 cents
August 1, 2004 - January 31, 2005	DE 03-175	5.79 cents	5.79 cents
February 1, 2005 - July 31, 2005	DE 04-177	6.49 cents	6.49 cents

August 1, 2005 - January 31, 2006	DE 04-177	7.24 cents	7.24 cents
February 1, 2006 - June 30, 2006	DE 05-164	9.13 cents	9.13 cents
July 1, 2006 - December 31, 2006	DE 05-164	8.18 cents	8.18 cents
January 1, 2007 - June 30, 2007	DE 06-125	8.59 cents	8.59 cents
July 1, 2007 – December 31, 2007	DE 06-125	7.83 cents	7.83 cents
January 1, 2008 - June 30, 2008	DE 07-096	8.82 cents	8.82 cents
July 1, 2008 - December 31, 2008	DE 07-096	9.57 cents	9.57 cents
January 1, 2009 - July 31, 2009	DE 08-113	9.92 cents	9.92 cents
August 1, 2009 - December 31, 2009	DE 08-113	9.03 cents	9.03 cents
January 1, 2010 - June 30, 2010	DE 09-180	8.96 cents	8.96 cents
July 1, 2010 - December 31, 2010	DE 09-180	8.78 cents	8.78 cents
January 1, 2011 - June 30, 2011	DE 10-257	8.67 cents	8.67 cents
July 1, 2011 - December 31, 2011	DE 10-257	8.89 cents	8.89 cents
January 1, 2012 – April 15, 2012	DE 11-215	8.31 cents	8.31 cents
April 16, 2012 – June 30, 2012	DE 11-250	8.75 cents	8.75 cents
July 1, 2012 - December 31, 2012	DE 11-215	7.11 cents	7.11 cents
January 1, 2013 – June 30, 2013	DE 12-292	9.54 cents	9.54 cents
July 1, 2013 - December 31, 2013	DE 12-292	8.62 cents	8.62 cents

<b>Rate in Effect:</b>	<b>Rate Set By: Statute or Docket No.</b>	<b>Residential, Small Commercial/Industrial Customers (RSCI)</b>	<b>Large Commercial/ Industrial Customers (LCI)</b>
January 1, 2014 – June 30, 2014	DE 13-275	9.23 cents	9.23 cents
July 1, 2014 – December 31, 2014	DE 13-275	9.87 cents	9.87 cents
January 1, 2015 – June 30, 2015	DE 14-235	10.56 cents	10.56 cents
July 1, 2015 – December 31, 2015	DE 14-235	8.98 cents	8.98 cents
January 1, 2016 – June 30, 2016	DE 15-415	9.99 cents	9.99 cents
July 1, 2016 – December 31, 2016	DE 15-415	10.95 cents	10.95 cents
January 1, 2017 – June 30, 2017	DE 16-822	11.17 cents	11.17 cents
July 1, 2017 – December 31, 2017	DE 16-822	11.66 cents	11.66 cents
January 1, 2018 – March 31, 2018	DE 17-150	11.25 cents	11.25 cents



1 **Q. Please describe the costs incurred in providing ES to customers during the**  
2 **three-month reporting period.**

3 A. ES costs include the fuel costs associated with Eversource's generation as well as  
4 costs and revenues from energy and capacity purchases and sales. Also included  
5 are costs related to the New Hampshire Renewable Portfolio Standard ("RPS") and  
6 the Regional Greenhouse Gas Initiative ("RGGI"). Finally, additional costs include  
7 those associated with IPP power valued at market prices, revenue requirements of  
8 generation such as: non-fuel O&M, depreciation, property taxes and payroll taxes,  
9 and a return on the net generation investment. Detailed information on the cost of  
10 generation is included in Attachment ELM-2 and Attachment ELM-3, page 10.

11 **Q. Subsequent to March 31, 2018, will the costs noted above continue to be**  
12 **included in ES?**

13 A. Beginning in April 2018, the cost to serve Energy Supply customers is supplied by  
14 the competitive market. There are some costs that were in ES that will now be  
15 recovered through the SCRC rate. These costs include Lempster over market costs,  
16 Burgess over market costs, various ISO-New England charges and credits,  
17 Seabrook insurance credits, and Renewal Energy Certificate (REC) costs and sales.

18 **Q. How were the costs of the Scrubber recovered over the period of January 1,**  
19 **2018 through March 31, 2018?**

20 A. By Order No. 25,854 (December 22, 2015), the Commission approved a temporary  
21 Scrubber rate of 1.72 cents per kWh which converted to a permanent rate by  
22 operation of Order No. 25,920 (July 1, 2016) in Docket No. DE 14-238. The only  
23 Scrubber costs incurred from January through March 2018 were the monthly  
24 amortization amounts of \$1.47 million.

25 **Q. What are the final results for ES in the 2018 reporting period?**

26 A. As shown on Attachment ELM-3, page 8, line 9, last column, the ES had a net  
27 adjusted under-recovery balance of \$127.9 million at March 31, 2018. This net  
28 adjusted under-recovery was due primarily to deferred Scrubber costs of \$99.7

1 million (i.e., Scrubber costs incurred in excess of the permanent rate recovery). The  
2 \$28.2 million non-Scrubber under-recovery balance (including the \$3.4 million  
3 attributable to the CSL settlement that was addressed in Docket No. DE 17-075)  
4 was transferred to the SCRC in April 2018, included in Attachment ELM-3, page 6,  
5 line 10.

6 **Q. Did Eversource include ES results beyond March 2018?**

7 A. Yes, ELM-3, pages 15 and 16 include Hydro revenue and expense through January  
8 31, 2019. Page 16 details the Return on Rate Base calculation for Hydro assets  
9 from April through August of 2018, and Page 15 details total revenues and  
10 expenses for Hydro activity from April 2018 through January 2019.

11 **Q. What are the final results for Hydro activity from April 2018 through January**  
12 **2019?**

13 A. As shown on Attachment ELM-3, page 15, line 12, last column, the Hydro portion  
14 of the ES had an under-recovery balance of \$2.4 million at January 31, 2019. There  
15 was a \$0.9 million under-recovery for the period April 2018 through July 2018  
16 related to the Hydro Adjuster rate set in the February 9, 2018 filing for Docket No.  
17 DE 18-002. This was primarily due to O&M and Depreciation actual costs being  
18 higher than forecast, and Energy Revenue being lower than forecast. There was a  
19 \$1.5 million under-recovery for the period August 2018 through January 2019  
20 related to the Hydro Adjuster rate set in the June 8, 2018 filing for Docket No. DE  
21 18-002. This was primarily due to the fact that because the rate was based on six  
22 months of activity, but the Hydro plants were sold in the first month of this rate  
23 period, the rate calculation included a forecast for larger revenues beyond the  
24 month of August 2018.

25 **Q. How will the Hydro under-recovery balance be recovered?**

26 A. The Hydro Adjuster rate was included in the ES rate for the period April 1, 2018  
27 through January 31, 2019, therefore the Hydro Adjuster under-recovery balance of

1 \$2.4 million will be included in the August 1, 2019 ES Rate filing Docket No. DE  
2 19-082.

3 **Q. Did Eversource file a summary of 2018 benefits for the Northern Wood Power**  
4 **Project (NWPP)?**

5 A. No. As the sale of Eversource's thermal generation fleet (which included the  
6 NWPP) closed on January 10, 2018, no activity was reported for 2018. Attachment  
7 ELM-3, page 6, line 10, in the July 2018 column reflects an \$824K true-up for 2017  
8 REC sales, that is being recovered via the SCRC.

9 **Q. Was there activity through the Seabrook Power Contracts in 2018 that affected**  
10 **the Seabrook net proceeds figure?**

11 A. Yes. There were credits to NAEC of \$154K in 2018 reported on Attachment ELM-  
12 3, page 10, line 5 in March and \$261K in 2018 reported on Attachment ELM-3,  
13 page 6, line 13, included in the April column. While there may be additional  
14 charges and credits in 2019 that will further impact the net proceeds figure, we do  
15 not expect these amounts to be significant. However, we are unable to quantify  
16 these charges and credits at this time.

17 **Q. Will these Seabrook-related subsequent charges and credits be passed on to**  
18 **Eversource?**

19 A. Yes, the Seabrook Power Contracts between Eversource and NAEC are still in  
20 place for Seabrook sale reconciliation purposes. Subsequent to March 2018, these  
21 will be reflected in the SCRC filing.

22 **Stranded Cost Recovery Charge**

23 **Q. Please describe the SCRC and its components in more detail.**

24 A. The SCRC recovers costs categorized as "stranded" by New Hampshire law in RSA  
25 Chapters 374-F and 369-B. The initial SCRC average rate of 3.4 cents per kWh  
26 was agreed to in the Restructuring Settlement which further defined what  
27 Eversource's stranded costs were and categorized them into three different parts

(i.e. Parts 1, 2, and 3) based on their priority of recovery. Effective June 30, 2006, Part 3 costs were fully recovered.

**Q. Please describe the costs that are recovered through the SCRC.**

A. Historically, the first tier, Part 1 stranded costs, had the highest priority for recovery. All Part 1 costs had been securitized through the issuance of rate reduction bonds (“RRBs”). Part 1 costs consisted of the over-market portion of Seabrook regulatory assets, a portion of Eversource’s share of Millstone 3, and certain financing costs that were incurred (i.e. underwriters fees, legal fees, etc.) while obtaining the RRB financing. RRB interest and RRB fees were also recovered as Part 1 costs. A new issuance of RRBs occurred in May 2018. Pages 4 and 5 of Attachment ELM-3 show the detailed Part 1 costs.

The second tier, Part 2 stranded costs, includes “ongoing” costs consisting of the over-market value of energy purchased from IPPs and the up-front payments made for IPP buy-downs and buyouts previously approved by the Commission, and Eversource’s share of the present value of the savings associated with these buy-down and buy-out transactions. Eversource was amortizing these up-front payments over the respective terms of the original IPP rate orders, including a return on the unrecovered costs. The last such rate order or contract expires in the early 2020s.

In addition, Part 2 costs include a negative return on the credit for deferred taxes related to the Part 1 securitized stranded costs and a return on the unpaid contract obligations to Connecticut Yankee Atomic Power Co., Maine Yankee Atomic Power Co., and Yankee Atomic Energy Corp., net of related deferred taxes. Pages 6 and 7 of Attachment ELM-3 show the detailed Part 2 costs by month.

**Q. What is your estimate of how long Eversource will continue to bill the SCRC?**

A. That depends on the type of cost. The original Part 1 costs were recovered through the SCRC over the life of the corresponding terms of the rate reduction bonds. The

1 original Part 1 recovery ended in May 2013 since the RRBs were fully amortized as  
2 of the end of April 2013. The new Part 1 costs related to the issuance of new RRBs  
3 in May 2018 are designed to be fully amortized in February 2033.

4 The timing of Part 2 cost recovery through the SCRC also depends upon on the type  
5 of cost. There are several types of Part 2 costs: ongoing purchases from the IPPs  
6 (potentially including any purchases Eversource could be required to make pursuant  
7 to RSA 362-H); the amortization of up-front payments associated with buyouts or  
8 buydowns of IPP rate orders or contracts; and various returns, including returns on  
9 Part 2 stranded costs and the outstanding Yankee contract obligations, and the  
10 return on SCRC deferred balance. Beginning in April 2018, many costs that were  
11 once included in the ES are now included in the SCRC. These costs include  
12 Lempster over market costs, Burgess over market costs, various ISO-New England  
13 charges and credits, Seabrook insurance credits, and Renewal Energy Certificate  
14 (REC) costs and sales.

15 Ongoing IPP purchases are obligations that will end when the various rate orders or  
16 contracts expire. The up-front payments associated with buyouts or buydowns of  
17 IPP rate orders or contracts are also being amortized over the remaining lives of the  
18 respective rate orders or contracts. The last such rate order or contract expires in  
19 the early 2020s. However, most wood-burning IPP rate orders expired in late 2006  
20 and the last rate order for a wood-fired IPP expired in 2008.

21 **Q. Please provide an overview of stranded cost recovery during the 13-month**  
22 **reporting period ending January 31, 2019.**

23 A. During the reporting period, the total accumulated balance of Part 2 costs increased  
24 by \$4.7 million from \$1.5 million at the end of 2017 to \$6.2 million at January 31,  
25 2019. See Attachment ELM-3, page 1.

1   **Q.   What are the final results for the SCRC in the 13-month reporting period**  
2       **ending January 31, 2019?**

3   A.   For the SCRC, the net balance as of January 31, 2019 is an under-recovery of \$5.1  
4       million as shown on Attachment ELM-3, page 1, line 5, 3<sup>rd</sup> column. This under-  
5       recovery primarily relates to Burgess costs \$13.2 million higher than forecasted  
6       plus the \$3.4 CSL contract settlement offset by a (\$6.8) million RPS true-up, and  
7       (\$4.1) million in ES REC revenue transfers that were both not forecasted for, and  
8       other items netting (\$0.6) million compared to forecast.

9   **Q.   Please summarize your request to the Commission.**

10   A.   Eversource is requesting that the Commission approve the 2018 ES and SCRC  
11       reconciliations and find that Eversource's generation and purchased power costs  
12       were prudently incurred.

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

14   A.   Yes, it does.

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE  
D/B/A EVERSOURCE ENERGY**

**SUMMARY OF EXHIBITS**

<b>Exhibit No.</b>	<b>Description/Summary</b>
<b>1.</b>	<b>Direct testimony of Erica L. Menard</b> <ul style="list-style-type: none"><li><b>• Attachment ELM-1 – Summary of Energy Service and Stranded Cost Recovery Reconciliation Exhibits and Testimonies</b></li><li><b>• Attachment ELM-2 – Summary of Energy Service Costs and Revenues for the period January 2018 - March 2018</b></li><li><b>• Attachment ELM-3 – Reconciliation of Energy Service and Stranded Cost Recovery for the period January 2018 – January 2019</b></li></ul>
<b>2.</b>	<b>Direct testimony of Frederick B. White</b> <ul style="list-style-type: none"><li><b>• Generation Resources and Energy Requirements</b></li></ul>
<b>3.</b>	<b>Direct testimony of William H. Smagula</b> <ul style="list-style-type: none"><li><b>• Fossil Outages</b></li></ul>

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
2018 ENERGY SERVICE RECONCILIATION

FOR THE 3 MONTHS ENDED MARCH 31, 2018  
(Dollars in 000s)

	January 2018	February 2018	March 2018	Total for the three months ended 03/31/18
9 ACTUAL ENERGY SERVICE				
10 REVENUES AND COSTS				
12 <u>Energy Service Revenue</u>				
14 Residential	\$ 29,719	23,945	\$ 21,880	\$ 75,544
15 Commercial	9,383	8,628	8,003	26,014
16 Manufacturing	908	870	876	2,655
17 Public street lights	72	44	54	170
18 Sub-total	40,082	33,489	30,812	104,383
20 Unbilled ES accrual	21,505	16,924	17,386	55,816
21 Prior month reversal	(22,233)	(21,505)	(16,924)	(60,663)
22 Net ES unbilled	(728)	(4,581)	462	(4,847)
24 Net Energy Service Revenue	\$ 39,355	\$ 28,907	\$ 31,274	\$ 99,536
27 <u>Energy Service Cost</u>				
29 Fossil energy costs	\$ 15,211	\$ 329	\$ (662)	\$ 14,878
30 F/H O&M depr. & taxes	6,515	1,375	1,304	9,194
31 Return on rate base	3,184	2,578	2,578	8,340
32 Burgess BioPower	3,516	3,134	2,995	9,645
33 Vermont Yankee	5	2	1	8
34 Seabrook costs / (credits)	-	-	-	-
35 IPP Costs (1)	1,749	684	547	2,980
36 Purchases	16,009	17,598	10,015	43,622
37 Sales	(18,442)	(475)	(765)	(19,682)
38 ISO-NE Ancillary	(137)	862	494	1,219
39 Capacity Costs	3,859	6,107	5,946	15,912
40 NH RPS	2,460	4,163	2,561	9,183
41 RGGI Costs	357	-	-	357
42 ES Return	60	47	58	165
43 2017 ES True-up	(2,017)			(2,017)
45 Total Energy Service Cost	\$ 32,330	\$ 36,403	\$ 25,071	\$ 93,803
47 Net Energy Service	\$ (7,025)	\$ 7,495	\$ (6,203)	\$ (5,733)
48 under (over) recovery (L45 - L24)				

50 (1) IPP Costs at market prices were calculated using the hourly ISO-NE clearing prices and a monthly capacity market value.

54 Amounts shown above may not add due to rounding.



**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019**  
**000s**

**Stranded Cost (SC) Balances**

	<u>01/01/18</u> <u>Stranded Cost</u> <u>Balance</u>	<u>(Decr)/Incr for</u> <u>the thirteen months</u> <u>ended</u> <u>01/31/19</u>	<u>01/31/19</u> <u>Stranded Cost</u> <u>Balance</u>
1 Part 1 - Rate recovery bonds (RRB)	\$ -	\$ 635,663	\$ 635,663
2 Part 2 - IPP Bio-energy Savings	\$ -	\$ -	\$ -
3 IPP Buyouts/Buydowns & Savings	1,692	(611)	1,081
4 IPP Buyouts/Buydowns/Adjustments	-	-	-
5 Cumulative Net SCRC (Over)/Under Recovery	(160)	5,263	5,103
6 Total Part 2 (L2+L3+L4+L5)	1,532	4,652	6,184
7 Total stranded cost (L1+L6)	\$ 1,532	\$ 640,315	\$ 641,847

**Stranded Cost Recovery Charge (SCRC)**

	<u>Total for</u> <u>the thirteen months</u> <u>ended</u> <u>01/31/19</u>
8 Revenues:	
9 Stranded Cost Recovery Revenues	\$ 116,953
10 Cost:	
11 Part 2 - Ongoing cost	122,216
12 Net SCRC (Over)/Under Recovery (L11-L9)	\$ 5,263

**Notes:**

All amounts above are supported on page 2.  
Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION  
SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019  
000s

01/01/18																
Stranded Cost Balance		January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	Stranded Cost Balance	
				-	-	635,663			-	-	-	-	-	-	635,663	
													</			

Line	Description	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	Total for the 13 month period ended 01/31/19
6	SCRC Part 1 Costs	\$ -	\$ -	\$ -	\$ -	\$ -	4,265	7,059	7,812	7,700	9,001	6,395	5,076	8,262	55,569
7	SCRC Part 2 Costs	346	807	704	39,701	4,260	(355)	10,186	1,872	2,422	5,501	(1,051)	(1,788)	4,020	66,647
8	Total SCRC Cost	\$ 346	\$ 807	\$ 704	\$ 39,701	\$ 4,260	\$ 3,909	\$ 17,245	\$ 9,685	\$ 10,122	\$ 14,503	\$ 5,344	\$ 3,308	\$ 12,282	\$ 122,216
9	Total SCRC Revenue (Current Rates)	735	1,209	949	7,271	11,948	10,013	12,933	13,052	11,865	11,022	10,821	12,164	12,970	116,953
10	SCRC Under/(Over) Recovery	\$ (388)	\$ (402)	\$ (245)	\$ 32,430	\$ (7,687)	\$ (6,104)	\$ 4,312	\$ (3,368)	\$ (1,743)	\$ 3,481	\$ (5,477)	\$ (8,956)	\$ (688)	\$ 5,263

11 Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019  
000s

Revenue By Class

1 Stranded Cost Revenue

	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	Total January 2018 - January 2019
2 Residential	\$ (121)	\$ 135	\$ 124	\$ 2,354	\$ 3,828	\$ 4,296	\$ 5,582	\$ 6,456	\$ 6,195	\$ 4,549	\$ 4,885	\$ 6,033	\$ 6,420	\$ 50,736
3 Commercial	(112)	112	103	1,838	3,507	3,896	4,303	4,816	4,834	4,008	3,973	4,361	4,395	40,032
4 Manufacturing	(44)	39	38	443	924	1,009	1,005	1,192	1,201	1,049	1,021	1,032	982	9,891
5 Public street lights	0	1	1	20	17	16	17	18	27	26	25	30	30	227
6 <b>Subtotal</b>	(277)	287	266	4,654	8,277	9,218	10,906	12,482	12,257	9,632	9,904	11,456	11,826	100,887
7 Unbilled SCRC accrual	(143)	150	157	2,166	5,213	5,347	6,561	6,401	5,394	6,195	6,526	6,591	7,063	57,618
8 Prior month reversal	391	143	(150)	(157)	(2,166)	(5,213)	(6,561)	(6,561)	(6,401)	(5,394)	(6,195)	(6,526)	(6,591)	(50,164)
9 Net SCRC Unbilled	248	293	7	2,009	3,047	134	1,214	(160)	(1,007)	801	331	65	472	7,454
10 <b>Net SCRC Revenue and RGGI Auction Revenue</b>	\$ (29)	\$ 580	\$ 273	\$ 6,663	\$ 11,323	\$ 9,352	\$ 12,120	\$ 12,322	\$ 11,249	\$ 10,433	\$ 10,235	\$ 11,521	\$ 12,298	\$ 108,341
11 <b>Less RGGI Auction Revenue</b>	(764)	(630)	(676)	(608)	(624)	(661)	(813)	(730)	(616)	(589)	(585)	(643)	(673)	(8,613)
12 <b>Net SCRC Revenue</b>	\$ 735	\$ 1,209	\$ 949	\$ 7,271	\$ 11,948	\$ 10,013	\$ 12,933	\$ 13,052	\$ 11,865	\$ 11,022	\$ 10,821	\$ 12,165	\$ 12,970	\$ 116,954

13 Energy Service Revenue

	January 2018	February 2018	March 2018	Total January 2018 - March 2018
14 Residential	\$ 29,719	\$ 23,945	\$ 21,880	\$ 75,544
15 Commercial	9,383	8,628	8,003	26,014
16 Manufacturing	908	870	876	2,655
17 Public street lights	72	44	54	170
18 <b>Subtotal</b>	40,082	33,489	30,812	104,383
19 Unbilled ES accrual	21,505	16,924	17,386	55,816
20 Prior month reversal	(22,233)	(21,505)	(16,924)	(60,663)
21 <b>Net ES Unbilled</b>	(728)	(4,581)	462	(4,847)
22 <b>Net ES Revenue</b>	\$ 39,355	\$ 28,907	\$ 31,274	\$ 99,536

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION  
SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019  
000s

SCRC Part 1	Description	Actual January 2018	Actual February 2018	Actual March 2018	Actual April 2018	Actual May 2018	Actual June 2018	Actual July 2018	Actual August 2018	Actual September 2018	Actual October 2018	Actual November 2018	Actual December 2018	Actual January 2019	Total
1	<b>Rate R RRB Charge Payments</b>														
2	Rate R RRB Charge (cents/kWh)	-	-	-	-	-	1,338	1,338	1,338	1,338	1,338	1,338	1,338	1,338	
3	Rate R Sales Forecast (MWh)	-	-	-	-	-	155,165	246,054	302,240	308,594	330,853	231,961	195,816	318,719	
4	Total Rate R RRB Charge Remittances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,062	\$ 3,270	\$ 4,016	\$ 4,101	\$ 4,397	\$ 3,083	\$ 2,602	\$ 4,256	\$ 27,787
5	<b>Rate G RRB Charge Payments</b>														
6	Rate G RRB Charge (cents/kWh)	-	-	-	-	-	1,207	1,207	1,207	1,207	1,207	1,207	1,207	1,207	
7	Rate G Sales Forecast (MWh)	-	-	-	-	-	91,035	150,696	158,438	154,414	181,911	135,278	98,933	164,084	
8	Total Rate G RRB Charge Remittances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,091	\$ 1,807	\$ 1,899	\$ 1,851	\$ 2,181	\$ 1,622	\$ 1,186	\$ 1,977	\$ 13,614
9	<b>Rate GV RRB Charge Payments</b>														
10	Rate GV RRB Charge (cents/kWh)	-	-	-	-	-	0,993	0,993	0,993	0,993	0,993	0,993	0,993	0,993	
11	Rate GV Sales Forecast (MWh)	-	-	-	-	-	88,488	152,879	149,765	139,715	181,888	133,598	99,145	158,555	
12	Total Rate GV RRB Charge Remittances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 873	\$ 1,508	\$ 1,477	\$ 1,378	\$ 1,794	\$ 1,318	\$ 978	\$ 1,572	\$ 10,897
13	<b>Rate LG RRB Charge Payments</b>														
14	Rate LG RRB Charge (cents/kWh)	-	-	-	-	-	0,371	0,371	0,371	0,371	0,371	0,371	0,371	0,371	
15	Rate LG Sales Forecast (MWh)	-	-	-	-	-	61,514	125,812	110,422	100,145	163,272	96,637	80,181	118,030	
16	Total Rate LG RRB Charge Remittances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 227	\$ 464	\$ 407	\$ 369	\$ 602	\$ 356	\$ 295	\$ 437	\$ 3,157
17	<b>Rate OL RRB Charge Payments</b>														
18	Rate OL RRB Charge (cents/kWh)	-	-	-	-	-	1,430	1,430	1,430	1,430	1,430	1,430	1,430	1,430	
19	Rate OL Sales Forecast (MWh)	-	-	-	-	-	845	822	872	45	2,009	1,177	1,008	1,345	
20	Total Rate OL RRB Charge Remittances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12	\$ 12	\$ 12	\$ 1	\$ 29	\$ 17	\$ 14	\$ 19	\$ 115
21	<b>Total RRB Charge Remittances</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,265	\$ 7,059	\$ 7,812	\$ 7,700	\$ 9,001	\$ 6,395	\$ 5,076	\$ 8,262	\$ 55,569

22 Amounts shown above may not add due to rounding.

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**  
**SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019**  
**000s**

**General & Excess Funds Account Balances**

Line	May 1, 2018		Less:		Plus:		Less:		Plus:		Jan 31, 2019	
	General & Excess Funds Account Balances	Col. A	Less: RRB Principal Payments	Col. B	Less: RRB Interest Payments	Col. C	Less: Ongoing Costs	Col. D	Less: Capital Replenishment	Col. E	Plus: Interest Earned	Col. F
1	\$ -	\$ -	\$ 55,569	\$ -	\$ -	\$ -	\$ (12)	\$ -	\$ -	\$ -	\$ 282	\$ 55,839

Notes:

- Col. A: Col. H prior year  
Col. B: RRB Charge Remittances: Attachment ELM-3 Page 4, Line 4, 8, 12, 16, & 20  
Col. C: RRB principal payments made on February 1 and August 1  
Col. D: RRB interest payments made on February 1 and August 1  
Col. E: Ongoing costs: Trustee, Admin, etc  
Col. F: Replenishment of Capital Account Drawdown  
Col. G: Interest earned on General and Excess Funds accounts  
Col. H: Sum of Cols. A to G.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION  
SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019  
000s

Line	SCRC Part 2 (Ongoing Costs) Description	Actual January 2018	Actual February 2018	Actual March 2018	Actual April 2018	Actual May 2018	Actual June 2018	Actual July 2018	Actual August 2018	Actual September 2018	Actual October 2018	Actual November 2018	Actual December 2018	Actual January 2019	Total for the period ended 01/31/19
	<b>Ongoing Costs</b>														
1	Amortization and return on IPP	2,065	1,453	1,217	1,551	1,417	1,451	1,475	1,406	1,549	1,579	1,609	1,405	1,567	19,744
2	Buydown/Buyout Savings	1,747	682	547	1,043	611	300	847	809	777	907	1,441	976	1,144	11,832
		319	771	670	507	806	1,151	628	597	772	671	168	429	423	7,912
3	IPP Ongoing costs:														
4	IPP Cost	-	-	-	3,790	2,168	1,954	9,232	1,567	1,828	6,962	516	1,011	6,142	35,168
5	Less: IPP at Market Cost	-	-	-	-	-	(224)	425	26	73	396	(57)	74	(25)	1,206
6	Above/(Below) Market IPP Cost	-	-	-	(428)	(411)	(447)	(638)	(331)	(283)	(258)	(272)	(329)	(675)	(4,073)
7	Burgess Above/(Below) Market Cost (Page 7, Line 10)	-	-	-	28,219	-	-	824	-	-	-	-	-	-	29,043
8	Lempster Above/(Below) Market Cost (Page 7, Line 20)	-	-	-	3,273	468	(4,951)	(406)	(145)	(400)	-	(496)	(13)	-	(2,670)
9	Energy Service REC Revenues Transfer (Page 7, Line 25)	-	-	-	441	927	2,024	(5)	33	318	(912)	456	(1,549)	(1,020)	711
10	Non-Scrubber Energy Service Under Recovery	-	-	-	(261)	-	-	-	-	-	-	-	-	-	(261)
11	REC Sales Proceeds/RPS True Up (Page 7, Line 26)	-	-	-	2,208	-	-	-	-	-	-	-	-	-	2,208
12	ISO-NE Other/Residual Hydro O&M	-	-	-	1,468	-	-	-	-	-	-	-	-	-	1,468
13	Return on Thermal Stranded Costs	-	-	-	-	-	-	-	-	-	(1,476)	(1,476)	(1,476)	(885)	(5,312)
14	Scrubber Amortization (7 Year)	-	-	-	-	-	-	-	-	-	-	-	-	-	10
15	Excess Deferred Income Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	2018 SCRC True-up	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Total Part 2 Costs	\$ 346	\$ 809	\$ 708	\$ 39,637	\$ 4,144	\$ (442)	\$ 10,105	\$ 1,791	\$ 2,352	\$ 5,428	\$ (1,119)	\$ (1,806)	\$ 4,011	\$ 66,224
	<b>Ongoing Costs - Return</b>														
18	Return on Yankee Decommissioning	1	1	0	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(12)
19	Obligations and CVEC, net of deferred taxes	(1)	(3)	(4)	65	117	87	81	83	72	75	70	40	11	695
20	Return on SCRC deferred balance	\$ 0	\$ (2)	\$ (4)	\$ 64	\$ 117	\$ 86	\$ 80	\$ 82	\$ 71	\$ 73	\$ 68	\$ 38	\$ 9	\$ 683
21	Total Part 2 Return	\$ 346	\$ 807	\$ 704	\$ 39,701	\$ 4,260	\$ (355)	\$ 10,186	\$ 1,872	\$ 2,422	\$ 5,501	\$ (1,051)	\$ (1,768)	\$ 4,020	\$ 66,907
22	Total Part 2 Ongoing Costs and Return														

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/J&A EVERSOURCE ENERGY  
ANNUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION  
SUMMARY FOR THE 13 MONTHS ENDED JANUARY 31, 2019  
(\$ in 000's)

Line	Description	Actual January 2018	Actual February 2018	Actual March 2018	Actual April 2018	Actual May 2018	Actual June 2018	Actual July 2018	Actual August 2018	Actual September 2018	Actual October 2018	Actual November 2018	Actual December 2018	Actual January 2019	Thirteen Months Ended 01/31/2019	Comment													
1	Burgess Energy @ Contract	\$	-	\$	-	\$	2,112	\$	2,889	\$	3,310	\$	3,701	\$	3,561	\$	2,939	\$	2,014	\$	2,301	\$	3,236	\$	3,549	\$	29,611		
2	Burgess Energy @ Market	\$	-	\$	-	\$	488	\$	1,122	\$	1,556	\$	1,647	\$	1,647	\$	765	\$	966	\$	1,565	\$	1,903	\$	2,375	\$	13,207		
3	Total Above/(Below) Market Energy	\$	-	\$	-	\$	1,292	\$	2,401	\$	2,188	\$	2,145	\$	1,913	\$	2,174	\$	1,047	\$	736	\$	1,333	\$	1,174	\$	16,404	Line 1 - Line 2	
4	Burgess Capacity @ Contract	\$	-	\$	-	\$	278	\$	278	\$	278	\$	278	\$	278	\$	278	\$	278	\$	278	\$	288	\$	288	\$	2,798		
5	Burgess Capacity @ Market	\$	-	\$	-	\$	511	\$	511	\$	511	\$	738	\$	624	\$	624	\$	815	\$	498	\$	610	\$	610	\$	6,052		
6	Total Above/(Below) Market Capacity	\$	-	\$	-	\$	(234)	\$	(234)	\$	(234)	\$	(458)	\$	(346)	\$	(346)	\$	(346)	\$	(221)	\$	(323)	\$	(322)	\$	(3,253)	Line 4 - Line 5	
7	Number of Burgess REC's Delivered	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	-	\$	-	-	\$	96,877		
8	Burgess Delivered REC's @ Contract	\$	-	\$	-	\$	50,417	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	-	\$	-	-	\$	55,117		
9	Contract Costs of REC's	\$	-	\$	-	\$	2,731	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	-	\$	-	-	\$	5,280	Line 7 x Line 8	
10	Total Burgess PPA Above/(Below) Market Costs	\$	-	\$	-	\$	3,790	\$	2,168	\$	1,954	\$	9,232	\$	1,567	\$	1,828	\$	6,962	\$	516	\$	1,011	\$	8,142	\$	35,168	Line 3 + Line 6 + Line 9	
11	Lempster Energy @ Contract	\$	-	\$	-	\$	231	\$	265	\$	185	\$	166	\$	157	\$	173	\$	343	\$	322	\$	312	\$	393	\$	2,557		
12	Lempster Energy @ Market	\$	-	\$	-	\$	163	\$	129	\$	380	\$	110	\$	129	\$	97	\$	288	\$	304	\$	231	\$	410	\$	2,241		
13	Total Above/(Below) Market Energy	\$	-	\$	-	\$	48	\$	136	\$	(195)	\$	36	\$	28	\$	75	\$	67	\$	18	\$	81	\$	61	\$	(19)	Line 11 - Line 12	
14	Lempster Capacity @ Contract	\$	-	\$	-	\$	50	\$	51	\$	27	\$	27	\$	27	\$	27	\$	67	\$	56	\$	67	\$	67	\$	465		
15	Lempster Capacity @ Market	\$	-	\$	-	\$	55	\$	55	\$	55	\$	3	\$	29	\$	29	\$	4	\$	131	\$	74	\$	74	\$	511		
16	Total Above/(Below) Market Capacity	\$	-	\$	-	\$	(5)	\$	(5)	\$	(29)	\$	24	\$	(3)	\$	(3)	\$	63	\$	(75)	\$	(7)	\$	(7)	\$	(41)	Line 14 - Line 15	
17	Number of Lempster REC's Delivered	\$	-	\$	-	\$	17,177	\$	-	\$	-	\$	17,253	\$	-	\$	-	\$	12,354	\$	-	\$	-	-	-	-	46,784	Q4 2017, Q1 2018, Q2 2018	
18	Lempster Delivered REC's @ Contract	\$	-	\$	-	\$	20,000	\$	-	\$	-	\$	20,000	\$	-	\$	-	\$	20,000	\$	-	\$	-	-	-	-	-	936	Line 17 x Line 18
19	Contract Costs of REC's	\$	-	\$	-	\$	344	\$	-	\$	-	\$	345	\$	-	\$	-	\$	247	\$	-	\$	-	-	-	-	-	-	
20	Total Lempster PPA Above/(Below) Market Costs	\$	-	\$	-	\$	387	\$	131	\$	(224)	\$	425	\$	26	\$	73	\$	396	\$	(57)	\$	74	\$	(25)	\$	1,206	Line 13 + Line 16 + Line 19	
21	Total Energy Service MWh	-	-	-	-	-	232,949	-	223,812	-	243,230	-	347,344	-	315,572	-	269,529	-	245,732	-	258,749	-	313,674	-	326,033	-	2,776,624		
22	Class 1 Obligation (2018)	0.00%	0.00%	0.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	8.20%	Docket No. DE 18-002 Att FBW-4 Page 1	
23	Class 1 REC's Needed	-	-	-	17,471	16,786	18,242	26,051	23,668	20,215	18,430	19,406	23,526	26,735	210,539	Line 21 x Line 22													
24	Energy Service Transfer Revenue	\$0.00	\$0.00	\$0.00	(\$24,500)	(\$24,500)	(\$24,500)	(\$14,000)	(\$14,000)	(\$14,000)	(\$14,000)	(\$14,000)	(\$14,000)	(\$14,000)	(\$25,250)	Docket No. DE 18-002 Att FBW-4 Page 1													
25	Energy Service REC Revenue Transfer	\$	-	\$	-	\$	(428)	\$	(411)	\$	(447)	\$	(638)	\$	(331)	\$	(283)	\$	(258)	\$	(272)	\$	(329)	\$	(675)	\$	(4,073)	Line 23 x Line 24 /1000	
26	REC Sales Proceeds/RPS True Up	\$	-	\$	-	\$	3,273	\$	468	\$	(4,951)	\$	(406)	\$	(145)	\$	(400)	\$	-	\$	-	\$	(496)	\$	(13)	\$	-	(2,670)	
27	Total Burgess and Lempster Contract Costs	\$	-	\$	-	\$	7,021	\$	2,356	\$	(3,668)	\$	8,612	\$	1,117	\$	1,218	\$	7,099	\$	(309)	\$	743	\$	5,441	\$	29,031	Line 10 + Line 20 + Line 25 + Line 26	

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018  
000s

**Energy Service Charge (ES)**

		01/01/18	January	February	March	Total
		ES Balance	2018	2018	2018	2018
<hr/>						
1 Revenues:						
2 Energy Service	Page 3		\$ 39,355	\$ 28,907	\$ 31,274	\$ 99,536
<hr/>						
3 Cost:						
<hr/>						
4 Part 2 - Ongoing costs						
5 - IPP at market	Page 9		1,749	684	547	2,980
6 - 2017 ES True-up	Page 9		(2,017)	-	-	(2,017)
7 - Generation Costs	Page 10		32,537	35,672	24,466	92,676
8 - Return on ES Deferral, net of deferred taxes			60	47	58	165
<hr/>						
9 Total Costs (L5 + L6 + L7+L8)			\$ 32,330	\$ 36,403	\$ 25,071	\$ 93,803
<hr/>						
10 Net ES (Over)/Under Recovery (L9 - L2)		\$ 133,631	\$ (7,025)	\$ 7,495	\$ (6,203)	\$ 127,898

Amounts shown above may not add due to rounding.



**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECONCILIATION**

**SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018**  
**000s**

	January 2018	February 2018	March 2018	Total 2018
<b><u>Part 2 Ongoing Cost Activity</u></b>				
<b>1 Energy Service Ongoing Costs</b>				
2 IPPs at Market Costs (1)	\$ 1,749	\$ 684	\$ 547	\$ 2,980
3 2017 ES true-up	(2,017)	-	-	(2,017)
<b>4 Total Ongoing Cost Applicable to Energy Service</b>	<u>\$ (268)</u>	<u>\$ 684</u>	<u>\$ 547</u>	<u>\$ 962</u>

(1) IPP ongoing costs are supported on page 17.

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECONCILIATION

SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018  
000s

<u>Generation Cost Summary</u>	<u>Reference</u>	<u>January 2018</u>	<u>February 2018</u>	<u>March 2018</u>	<u>Total 2018</u>
<b>1 <u>Generation Cost</u></b>					
2 Fossil energy costs	Page 11	\$ 15,211	\$ 329	\$ (662)	\$ 14,878
3 F/H O&M, depr. & taxes	Page 14	6,515	1,375	1,458	9,347
4 Return on rate base	Page 13	3,184	2,578	2,578	8,340
5 Seabrook costs / (credits)		-	-	(154)	(154)
6 Vermont Yankee		5	2	1	8
7 Purchases and sales	Page 12	(2,433)	17,123	9,250	23,940
8 Burgess BioPower	Page 12	3,516	3,134	2,995	9,645
9 ISO -NE Ancillary	Page 12	(137)	862	494	1,219
10 Capacity Costs	Page 12	3,859	6,107	5,946	15,912
11 NH RPS	Page 12	2,460	4,163	2,561	9,183
12 RGGI Costs	Page 12	357	-	-	357
<b>13 Total</b>		<b>\$ 32,537</b>	<b>\$ 35,672</b>	<b>\$ 24,466</b>	<b>\$ 92,676</b>

Amounts shown above may not add due to rounding

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018  
000s

<b><u>Fossil Energy Costs by Station</u></b>	<b>January 2018</b>	<b>February 2018</b>	<b>March 2018</b>	<b>Total 2018</b>
<b>1 <u>Fossil Steam</u></b>				
2 Merrimack	\$ 4,014	\$ 366	\$ (556)	\$ 3,824
3 Schiller	1,778	(39)	(109)	1,631
4 Newington	9,418	1	3	9,423
5 Wyman No. 4	-	-	-	-
6 SO <sub>2</sub> allowance / NO <sub>x</sub>	-	-	-	-
7 Other	-	-	-	-
<b>8 Total Fossil Steam</b>	<b>\$ 15,211</b>	<b>\$ 329</b>	<b>\$ (662)</b>	<b>14,878</b>
<b>9 <u>Internal Combustion</u></b>				
10 C.T.'s: Lost Nation	1	-	-	1
11 Merrimack	-	-	-	-
12 Schiller	-	-	-	-
13 White Lake	-	-	-	-
<b>14 Total Internal Combustion</b>	<b>\$ 1</b>	<b>\$ -</b>	<b>\$ -</b>	<b>1</b>
<b>15 Total Fossil Energy Costs (L8 + L14)</b>	<b>\$ 15,211</b>	<b>\$ 329</b>	<b>\$ (662)</b>	<b>14,878</b>

Amounts shown above may not add due to rounding

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018  
000s

<u>Purchases and Sales</u>	January 2018	February 2018	March 2018	Total 2018
1 Purchases	\$ 16,009	\$ 17,598	\$ 10,015	\$ 43,622
2 Burgess Bio-Power	3,516	3,134	2,995	9,645
3 Sales	(18,442)	(475)	(765)	(19,682)
4 ISO -NE Ancillary	(137)	862	494	1,219
5 Capacity Costs	3,859	6,107	5,946	15,912
6 NH RPS	2,460	4,163	2,561	9,183
7 RGGI Costs	357	-	-	357
8 Total	\$ 7,623	\$ 31,389	\$ 21,244	\$ 60,256

Amounts shown above may not add due to rounding.

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECONCILIATION**

**SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018**

**000s**

	January 2018	February 2018	March 2018	Total 2018
<b>1 Return on Rate Base</b>				
<b>2 Rate base - Thermal</b>				
3 Net Plant	537,049	537,049	537,049	
4 Fossil Fuel Inventory	76,447	76,447	76,447	
5 Mat'ls and Supplies	71,089	71,089	71,089	
6 Deferred Taxes	(138,160)	(138,160)	(138,160)	
7 Other Regulatory Obligations	(37,679)	(37,679)	(37,679)	
8 Sales Proceeds from Thermals	(133,930)	(133,930)	(133,930)	
9 Total Rate Base (L3 thru L8)	374,816	374,816	374,816	
10 Average Rate Base (prev + curr month)	451,575	374,816	374,816	
11 x Return	0.6598%	0.5874%	0.5874%	
12 Return - Thermal (L10 x L11)	\$ 2,811	\$ 2,202	\$ 2,202	\$ 7,214
<b>13 Rate base - Hydro</b>				
14 Net Plant	53,364	53,353	53,295	
15 Working Capital Allow. (45 days of O&M)	1,067	1,067	1,067	
16 Mat'ls and Supplies	306	306	306	
17 Deferred Taxes	(7,949)	(7,949)	(7,949)	
18 Total Rate Base (L14 thru L17)	46,788	46,776	46,718	
19 Average Rate Base (prev + curr month)	46,359	46,782	46,747	
20 x Return	0.8046%	0.8046%	0.8046%	
21 Return - Hydro (L19 x L20)	\$ 373	\$ 376	\$ 376	\$ 1,125
22 Total Return (L12 + L21)	\$ 3,184	\$ 2,578	\$ 2,578	\$ 8,340

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECONCILIATION

SUMMARY FOR THE 3 MONTHS ENDED MARCH 31, 2018  
000s

	January 2018	February 2018	March 2018	Total 2018
1 <b><u>Fossil / Hydro O&amp;M, Depr. &amp; Taxes</u></b>				
2 F/H Operation & Maintenance Cost	\$ 4,597	\$ 2,062	\$ 544	\$ 7,204
3 F/H Depreciation Cost	1,038	100	100	1,237
4 F/H Property Taxes	421	(838)	898	481
5 F/H Payroll Taxes	437	48	(86)	399
6 Amortization of Asset Retirement Obligation	21	2	2	26
7 Total F/H O&M, Depr. and Taxes	<u>\$ 6,515</u>	<u>\$ 1,375</u>	<u>\$ 1,458</u>	<u>\$ 9,347</u>

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY  
JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION  
APRIL 1, 2018 THROUGH JANUARY 31, 2019  
(Dollars in 000s)

Line	Hydro Fleet Cost	April 2018 Actual	May 2018 Actual	June 2018 Actual	July 2018 Actual	August 2018 Actual	September 2018 Actual	October 2018 Actual	November 2018 Actual	December 2018 Actual	January 2019 Actual	Total
1	Hydro Revenues	\$ 189	\$ 181	\$ 197	\$ 281	\$ (88)	\$ (75)	\$ (69)	\$ (72)	\$ (89)	\$ (95)	\$ 360
2	Hydro O&M	\$ 1,213	\$ 945	\$ 203	\$ 1,560	\$ 1,535	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,456
3	Hydro Depreciation	107	107	108	108	87	-	-	-	-	-	517
4	Hydro Property Taxes	(201)	550	844	(189)	383	-	-	-	-	-	1,388
5	Hydro Payroll and Other Taxes	(6)	28	27	20	23	-	-	-	-	-	91
6	Hydro ARO Amortization	2	2	-	-	-	-	-	-	-	-	5
7	Return on rate base	400	395	398	398	198	-	-	-	-	-	1,790
8	Energy Sales	(1,837)	(750)	(350)	(553)	(848)	-	-	-	-	-	(4,339)
9	ISO-NE ancillary	(4)	(4)	(4)	(4)	(4)	-	-	-	-	-	(21)
10	Capacity	(427)	(427)	(427)	(516)	(380)	-	-	-	-	-	(2,177)
11	Return on deferral	(1)	(2)	0	2	4	6	7	9	10	11	46
12	Total Hydro Expenses	\$ (754)	\$ 844	\$ 799	\$ 825	\$ 998	\$ 6	\$ 6	\$ 7	\$ 10	\$ 11	\$ 2,755
13	Monthly (Over)/Under Recovery	\$ (942)	\$ 663	\$ 602	\$ 544	\$ 1,086	\$ 82	\$ 75	\$ 82	\$ 99	\$ 105	\$ 2,395

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY**  
**JANUARY 1, 2018 THROUGH JANUARY 31, 2019 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**  
**APRIL 1, 2018 THROUGH AUGUST 31, 2019**  
**HYDRO RETURN ON RATE BASE**  
(Dollars in 000s)

Line	Return on Rate Base	April 2018 Actual	May 2018 Actual	June 2018 Actual	July 2018 Actual	August 2018 Actual	Total
1	Hydro Net Plant	56,211	56,162	57,155	55,958	-	-
2	Working Capital Allow. (45 days of O&M)	1,614	1,614	1,614	1,614	-	-
3	Mat'ls and Supplies	307	311	150	152	-	-
4	Deferred Taxes	(7,507)	(7,507)	(7,507)	(7,507)	-	-
5	Total Rate Base (L1 thru L4)	50,625	50,580	51,413	50,217	-	-
6	Average Rate Base (prev + curr month)	51,227	50,603	50,997	50,815	25,290	
7	x Return	0.7807%	0.7807%	0.7807%	0.7838%	0.7838%	
8	Return (L6 x L7)	\$ 400	\$ 395	\$ 398	\$ 398	\$ 198	



**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JANUARY 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY	TOTAL	
					(CENTS/KWHR)		
004	Swans Falls Hydro	93,786	\$ 15,282.08	\$ 2,867.95	16.29	19.32	\$ 18,150.03
011	Milton Mills Hydro	388,239	20878.23	6341.29	5.38	6.98	27,219.52
014	Sunapee Hydro	313,417	29692.55	1971.16	9.47	10.07	31,663.71
052	Briar Hydro	901,994	105349.27	22116.1	11.68	14.10	127,465.37
054	Pennacook Upper Falls	670,061	78773.53	15562.48	11.76	14.05	94,336.01
070	Monadnock Paper Mills	168,760	9933.55	0	5.89	5.86	9,933.55
091	Noone Falls	0	0	531.62	0	0.00	531.62
106	Otter Lane Hydro	22,150	2439.8	208.7	11.01	11.93	2,648.50
107	Peterborough Lower Hydro	115,864	14090.51	1419.42	12.16	13.39	15,509.93
171	Pettyboro Hydro	0	0	28.2	0	0.00	28.20
189	Errol Dam	1,775,451	145837	13724.19	8.21	8.96	159,561.19
440	WES Concord MSW	8,561,219	1161514.74	123590.83	13.57	15.01	1,285,105.57
440A	WES Concord MSW ST	0	0	0	0	0.00	-
496	Turnkey Rochester	762,576	99685.09	8523.18	13.07	14.16	108,208.27
564	Four Hills Landfill	1,184,439	121105.26	1389.59	10.22	10.31	122,494.85
631	Bath Electric Hydro	40,795	6087.81	1616.94	14.92	18.86	7,704.75
636	Peterborough Upper Hydro	116,730	14193.26	1492.58	12.16	13.44	15,685.84
642	Spaulding Pond Hydro	48,872	3386.33	1078.22	6.93	9.11	4,464.55
1080	UNH Turbine	326,299	22137.68	13990	6.78	11.04	36,127.68
N2123	Wire Belt - PV N2123	387	37.38	0	9.66	9.63	37.38
2373	Manch-Boston Airport PV	9	0.34	0	3.78	3.78	0.34
2470	Favorite Foods	143	15.54	0	10.87	10.84	15.54
N5465	Portsmouth School - PV N5465	-	0	0	0	0.00	-
N5465A	Portsmouth School - PV N5465A	19	2.51	0	13.21	13.16	2.51
N5466	Portsmouth DPW - PV N5466	444	26.64	0	6	5.97	26.64
N5486	Rochester - PV N5486	1,195	104.37	0	8.73	8.70	104.37
N5606	34 Cellu/Worthen - PV N5606	7,923	496.12	0	6.26	6.23	496.12
<b>GRAND TOTAL</b>		<b>15,500,772</b>	<b>1,851,070</b>	<b>216,452</b>	<b>11.94</b>	<b>13.34</b>	<b>2,067,522</b>

Attachment ELM-3

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING FEBRUARY 28, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT-- ENERGY (CENTS/KWHR)	TOTAL	NET PAYMENT AMOUNT
004	Swans Falls Hydro	0	\$ 0.00	\$ 2,867.95	0.00	0.00	\$ 2,867.95
011	Milton Mills Hydro	1,239,658	83,064.72	6,239.37	6.70	7.20	89,304.09
014	Sunapee Hydro	234,131	8,885.69	1,971.16	3.80	4.64	10,856.85
052	Briar Hydro	0	(17,700.63)	(2,457.34)	0.00	0.00	(20,157.97)
054	Pennacook Upper Falls	0	(11,333.36)	(1,729.16)	0.00	0.00	(13,062.52)
070	Monadnock Paper Mills	182,174	5,539.54	0.00	3.04	3.04	5,539.54
091	Noone Falls	0	0.00	531.62	0.00	0.00	531.62
106	Otter Lane Hydro	43,007	1,481.85	191.55	3.45	3.89	1,673.40
107	Peterborough Lower Hydro	156,978	19,211.76	1,419.42	12.24	13.14	20,631.18
171	Pettyboro Hydro	0	0.00	28.20	0.00	0.00	28.20
189	Errol Dam	1,504,064	40,079.99	13,724.19	2.66	3.58	53,804.18
440	WES Concord MSW	7,907,642	1,061,185.21	123,590.83	13.42	14.98	1,184,776.04
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	532,587	19,169.87	8,523.18	3.60	5.20	27,693.05
564	Four Hills Landfill	1,211,490	43,045.39	973.09	3.55	3.63	44,018.48
631	Bath Electric Hydro	32,721	944.49	1,580.68	2.89	7.72	2,525.17
636	Peterborough Upper Hydro	163,520	19,982.22	1,492.58	12.22	13.13	21,474.80
642	Spaulding Pond Hydro	71,029	2,498.40	1,078.22	3.52	5.04	3,576.62
1080	UNH Turbine	81,805	4,175.11	13,990.00	5.10	22.21	18,165.11
N2123	Wire Belt - PV N2123	(636)	(28.61)	0.00	0.00	0.00	(28.61)
2373	Manch-Boston Airport PV	852	13.19	0.00	1.55	1.55	13.19
2470	Favorite Foods	251	4.75	0.00	1.89	1.89	4.75
N5465	Portsmouth School - PV N5465	0	0.00	0.00	0.00	0.00	0.00
N5465A	Portsmouth School - PV N5465A	1	0.05	0.00	5.00	5.00	0.05
N5466	Portsmouth DPW - PV N5466	1,170	31.26	0.00	2.67	2.67	31.26
N5486	Rochester - PV N5486	2,421	40.60	0.00	1.68	1.68	40.60
N5606	34 Cellu/Worthen - PV N5606	6,816	272.30	0.00	4.00	4.00	272.30
<b>GRAND TOTAL</b>		<b>13,371,681</b>	<b>1,280,564</b>	<b>174,016</b>	<b>9.58</b>	<b>10.88</b>	<b>1,454,579</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING MARCH 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	197,946	\$6,546.71	\$2,867.95	3.31	4.76	\$9,414.66
011	Milton Mills Hydro	906,248	29,044.48	6,218.57	3.20	3.89	35,263.05
014	Sunapee Hydro	380,994	13,205.52	1,971.16	3.47	3.98	15,176.68
052	Briar Hydro		(10,912.42)	(2,457.34)	0.00	0.00	(13,369.76)
054	Pennacook Upper Falls		(8,829.02)	(1,729.16)	0.00	0.00	(10,558.18)
070	Monadnock Paper Mills	242,047	6,847.92	0.00	2.83	2.83	6,847.92
091	Noone Falls	0	0.00	531.62	0.00	0.00	531.62
106	Otter Lane Hydro	53,324	1,754.42	188.05	3.29	3.64	1,942.47
107	Peterborough Lower Hydro	158,717	19,413.68	1,419.42	12.23	13.13	20,833.10
171	Pettyboro Hydro	0	0.00	28.20	0.00	0.00	28.20
189	Errol Dam	1,401,019	37,540.07	13,724.19	2.68	3.66	51,264.26
440	WES Concord MSW	6,355,116	853,803.61	123,590.83	13.43	15.38	977,394.44
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	580,674	18,696.83	8,523.18	3.22	4.69	27,220.01
564	Four Hills Landfill	1,480,333	48,543.94	888.09	3.28	3.34	49,432.03
631	Bath Electric Hydro	122,295	3,932.80	1,573.28	3.22	4.50	5,506.08
636	Peterborough Upper Hydro	168,336	20,663.37	1,492.58	12.28	13.16	22,155.95
642	Spaulding Pond Hydro	87,903	2,736.38	1,078.22	3.11	4.34	3,814.60
1080	UNH Turbine	111	3.42	13,990.00	3.08	12,606.68	13,993.42
N2123	Wire Belt - PV N2123	899	12.20	0.00	1.36	1.36	12.20
2373	Manch-Boston Airport PV	3,855	109.80	0.00	2.85	2.85	109.80
2470	Favorite Foods	398	5.51	0.00	1.38	1.38	5.51
N5465	Portsmouth School - PV N5465	0	0.00	0.00	0.00	0.00	0.00
N5465A	Portsmouth School - PV N5465A	119	1.63	0.00	1.37	1.37	1.63
N5466	Portsmouth DPW - PV N5466	2,385	71.05	0.00	2.98	2.98	71.05
N5486	Rochester - PV N5486	3,581	60.93	0.00	1.70	1.70	60.93
N5606	34 Cellu/Worthen - PV N5606	7,686	117.41	0.00	1.53	1.53	117.41
<b>GRAND TOTAL</b>		<b>12,153,986</b>	<b>\$ 1,043,370.24</b>	<b>\$ 173,898.84</b>	<b>8.58</b>	<b>10.02</b>	<b>\$ 1,217,269.08</b>

**Attachment ELM-3**  
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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING APRIL 30, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	277,099	\$12,559.12	\$2,872.87	4.53	5.57	\$15,431.99
011	Milton Mills Hydro	840,433	36,062.49	6,262.80	4.29	5.04	42,325.29
014	Sunapee Hydro	194,360	7,841.81	1,974.09	4.03	5.05	9,815.90
052	Briar Hydro		(14,788.52)	(2,461.56)	0.00	0.00	(17,250.08)
054	Pennacook Upper Falls		(10,092.03)	(1,732.13)	0.00	0.00	(11,824.16)
070	Monadnock Paper Mills	381,017	16,585.07	0.00	4.35	4.35	16,585.07
091	Noone Falls	0	0.00	532.53	0.00	0.00	532.53
106	Otter Lane Hydro	62,476	2,784.24	193.97	4.46	4.77	2,978.21
107	Peterborough Lower Hydro	174,532	21,424.09	1,419.42	12.28	13.09	22,843.51
171	Pettyboro Hydro	0	0.00	28.20	0.00	0.00	28.20
189	Errol Dam	1,108,136	33,530.28	13,747.73	3.03	4.27	47,278.01
440	WES Concord MSW	8,591,239	1,160,475.90	123,590.83	13.51	14.95	1,284,066.73
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	530,148	23,180.37	8,531.70	4.37	5.98	31,712.07
564	Four Hills Landfill	1,218,769	52,368.44	1,026.77	4.30	4.38	53,395.21
631	Bath Electric Hydro	127,125	5,853.12	1,587.92	4.60	5.85	7,441.04
636	Peterborough Upper Hydro	171,586	21,066.40	1,492.58	12.28	13.15	22,558.98
642	Spaulding Pond Hydro	54,028	2,449.71	1,079.85	4.53	6.53	3,529.56
1080	UNH Turbine	108,105	3,748.87	14,014.00	3.47	16.43	17,762.87
N2123	Wire Belt - PV N2123	3,707	96.39	0.00	2.60	2.60	96.39
2373	Manch-Boston Airport PV	9,627	284.30	0.00	2.95	2.95	284.30
2470	Favorite Foods	1,608	49.84	0.00	3.10	3.10	49.84
N5465	Portsmouth School - PV N5465	697	6.08	0.00	0.87	0.87	6.08
N5465A	Portsmouth School - PV N5465A	996	16.28	0.00	1.63	1.63	16.28
N5466	Portsmouth DPW - PV N5466	3,019	80.09	0.00	2.65	2.65	80.09
N5486	Rochester - PV N5486	10,175	253.66	0.00	2.49	2.49	253.66
N5606	34 Cellu/Worthen - PV N5606	22,443	534.10	0.00	2.38	2.38	534.10
<b>GRAND TOTAL</b>		<b>13,891,325</b>	<b>\$ 1,376,370.10</b>	<b>\$ 174,161.57</b>	<b>9.91</b>	<b>11.16</b>	<b>\$ 1,550,531.67</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING MAY 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	310,341	\$7,405.58	\$2,882.71	2.39	3.32	\$10,288.29
011	Milton Mills Hydro	570,603	17,050.24	6,392.86	2.99	4.11	23,443.10
014	Sunapee Hydro	202,011	4,698.83	1,979.95	2.33	3.31	6,678.78
052	Briar Hydro		(3,586.61)	(2,377.24)	0.00	0.00	(5,963.85)
054	Pennacook Upper Falls		(2,813.78)	(1,684.09)	0.00	0.00	(4,497.87)
070	Monadnock Paper Mills	31,490	563.66	0.00	1.79	1.79	563.66
091	Noone Falls	0	0.00	534.35	0.00	0.00	534.35
106	Otter Lane Hydro	18,275	377.24	212.81	2.06	3.23	590.05
107	Peterborough Lower Hydro	74,036	9,167.26	1,419.42	12.38	14.30	10,586.68
171	Pettyboro Hydro	0	0.00	28.20	0.00	0.00	28.20
189	Errol Dam	1,427,851	23,614.42	13,800.05	1.65	2.62	37,414.47
440	WES Concord MSW	8,092,075	1,092,416.79	123,590.83	13.50	15.03	1,216,007.62
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	517,545	12,328.59	8,548.74	2.38	4.03	20,877.33
564	Four Hills Landfill	1,359,720	32,455.91	1,474.13	2.39	2.50	33,930.04
631	Bath Electric Hydro	176,149	4,469.14	1,632.00	2.54	3.46	6,101.14
636	Peterborough Upper Hydro	92,467	11,419.22	1,492.58	12.35	13.96	12,911.80
642	Spaulding Pond Hydro	23,021	471.23	1,083.11	2.05	6.75	1,554.34
1080	UNH Turbine	1,017,619	29,855.34	14,062.00	2.93	4.32	43,917.34
N2123	Wire Belt - PV N2123	8,272	190.98	0.00	2.31	2.31	190.98
2373	Manch-Boston Airport PV	24,644	518.40	0.00	2.10	2.10	518.40
2470	Favorite Foods	672	11.20	0.00	1.67	1.67	11.20
N5465	Portsmouth School - PV N5465	355	5.95	0.00	1.68	1.68	5.95
N5465A	Portsmouth School - PV N5465A	690	9.46	0.00	1.37	1.37	9.46
N5466	Portsmouth DPW - PV N5466	4,334	84.29	0.00	1.94	1.94	84.29
N5486	Rochester - PV N5486	8,913	188.61	0.00	2.12	2.12	188.61
N5606	34 Cellu/Worthen - PV N5606	33,339	652.09	0.00	1.96	1.96	652.09
<b>GRAND TOTAL</b>		<b>13,994,422</b>	<b>\$ 1,241,554.04</b>	<b>\$ 175,072.41</b>	<b>8.87</b>	<b>10.12</b>	<b>\$ 1,416,626.45</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JUNE 30, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	103,982	\$2,955.05	\$3,549.25	2.84	6.26	\$6,504.30
011	Milton Mills Hydro	104,196	2,743.58	3,568.33	2.63	6.06	6,311.91
014	Sunapee Hydro	70,391	1,850.16	963.64	2.63	4.00	2,813.80
052	Briar Hydro		(524.03)	(1,074.32)	0.00	0.00	(1,598.35)
054	Pennacook Upper Falls		(590.67)	(1,001.81)	0.00	0.00	(1,592.48)
070	Monadnock Paper Mills	7,589	267.63	0.00	3.53	3.53	267.63
091	Noone Falls	0	0.00	(149.37)	0.00	0.00	(149.37)
106	Otter Lane Hydro	0	0.00	71.39	0.00	0.00	71.39
107	Peterborough Lower Hydro	13,845	1,732.49	1,419.42	12.51	22.77	3,151.91
171	Pettyboro Hydro	0	0.00	(14.80)	0.00	0.00	(14.80)
189	Errol Dam	986,146	20,836.13	15,851.42	2.11	3.72	36,687.55
440	WES Concord MSW	8,449,876	1,139,736.29	123,590.83	13.49	14.95	1,263,327.12
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	482,482	12,624.12	8,957.67	2.62	4.47	21,581.79
564	Four Hills Landfill	1,084,033	28,826.94	3,387.06	2.66	2.97	32,214.00
631	Bath Electric Hydro	134,625	3,764.27	2,232.59	2.80	4.45	5,996.86
636	Peterborough Upper Hydro	15,716	1,942.61	1,492.58	12.36	21.86	3,435.19
642	Spaulding Pond Hydro	0	0.00	200.36	0.00	0.00	200.36
1080	UNH Turbine	1,900,692	50,129.09	19,082.00	2.64	3.64	69,211.09
N2123	Wire Belt - PV N2123	15,686	364.86	0.00	2.33	2.33	364.86
2373	Manch-Boston Airport PV	24,898	588.37	0.00	2.36	2.36	588.37
2470	Favorite Foods	505	6.90	0.00	1.37	1.37	6.90
N5465	Portsmouth School - PV N5465	1,518	26.67	0.00	1.76	1.76	26.67
N5465A	Portsmouth School - PV N5465A	1,667	31.41	0.00	1.88	1.88	31.41
N5466	Portsmouth DPW - PV N5466	2,481	52.15	0.00	2.10	2.10	52.15
N5486	Rochester - PV N5486	13,841	364.21	0.00	2.63	2.63	364.21
N5606	34 Cellu/Worthen - PV N5606	48,992	1,229.55	0.00	2.51	2.51	1,229.55
<b>GRAND TOTAL</b>		<b>13,463,161</b>	<b>\$ 1,268,957.78</b>	<b>\$ 182,126.24</b>	<b>9.43</b>	<b>10.78</b>	<b>\$ 1,451,084.02</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JULY 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	105,642	\$3,919.91	\$3,549.25	3.71	7.07	\$7,469.16
011	Milton Mills Hydro	(1,650)	589.47	3,568.33	0.00	0.00	4,157.80
014	Sunapee Hydro	0	0.00	963.64	0.00	0.00	963.64
052	Briar Hydro		(349.16)	(1,074.32)	0.00	0.00	(1,423.48)
054	Pennacook Upper Falls		(1,125.43)	(1,001.81)	0.00	0.00	(2,127.24)
070	Monadnock Paper Mills	6,889	186.35	0.00	2.71	2.71	186.35
091	Noone Falls	0	0.00	(147.55)	0.00	0.00	(147.55)
106	Otter Lane Hydro	0	0.00	71.39	0.00	0.00	71.39
107	Peterborough Lower Hydro	30,897	3,776.68	1,419.42	12.22	16.82	5,196.10
171	Pettyboro Hydro	0	0.00	(14.80)	0.00	0.00	(14.80)
189	Errol Hydro	1,172,206	33,510.79	15,922.04	2.86	4.22	49,432.83
440	WES Concord MSW	8,483,667	1,139,300.60	123,590.83	13.43	14.89	1,262,891.43
496	Turnkey Rochester	499,219	16,848.36	8,957.67	3.37	5.17	25,806.03
564	Four Hills Landfill	1,346,847	45,224.65	3,387.06	3.36	3.61	48,611.71
631	Bath Electric Hydro	95,661	3,410.51	2,232.59	3.57	5.90	5,643.10
636	Peterborough Upper Hydro	36,285	4,422.38	1,492.58	12.19	16.30	5,914.96
642	Spaulding Pond Hydro	4	0.09	200.36	2.25	5,011.25	200.45
1080	UNH Turbine	1,181,411	38,163.85	19,154.00	3.23	4.85	57,317.85
N2123	Wire Belt - PV N2123	11,881	375.80	0.00	3.16	3.16	375.80
2373	Manch-Boston Airport PV	33,064	1,100.91	0.00	3.33	3.33	1,100.91
2470	Favorite Foods	218	4.67	0.00	2.14	2.14	4.67
N5465	Portsmouth School - PV N5465	958	24.14	0.00	2.52	2.52	24.14
N5465A	Portsmouth School - PV N5465A	1,494	35.36	0.00	2.37	2.37	35.36
N5466	Portsmouth DPW - PV N5466	3,249	107.18	0.00	3.30	3.30	107.18
N5486	Rochester - PV N5486	20,366	758.74	0.00	3.73	3.73	758.74
N5606	34 Cellu/Worthen - PV N5606	55,332	2,166.96	0.00	3.92	3.92	2,166.96
<b>GRAND TOTAL</b>		<b>13,083,640</b>	<b>\$ 1,292,452.81</b>	<b>\$ 182,270.68</b>	<b>9.88</b>	<b>11.27</b>	<b>\$ 1,474,723.49</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING AUGUST 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	138,214	\$5,125.20	\$3,549.25	3.71	6.28	\$8,674.45
011	Milton Mills Hydro	313,224	12,776.65	3,568.33	4.08	5.22	16,344.98
014	Sunapee Hydro	0	0.00	963.64	0.00	0.00	963.64
052	Briar Hydro		0.00	(1,074.32)	0.00	0.00	(1,074.32)
054	Pennacook Upper Falls		(7,048.75)	(1,001.81)	0.00	0.00	(8,050.56)
070	Monadnock Paper Mills	166,404	5,312.89	0.00	3.19	3.19	5,312.89
091	Noone Falls	0	0.00	(147.55)	0.00	0.00	(147.55)
106	Otter Lane Hydro	0	0.00	71.39	0.00	0.00	71.39
107	Peterborough Lower Hydro	152,271	18,749.72	1,419.42	12.31	13.25	20,169.14
171	Pettyboro Hydro	0	0.00	(14.80)	0.00	0.00	(14.80)
189	Errol Hydro	1,236,226	40,609.15	15,851.42	3.28	4.57	56,460.57
440	WES Concord MSW	7,338,802	990,577.27	123,590.83	13.50	15.18	1,114,168.10
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	494,772	19,493.16	8,957.67	3.94	5.75	28,450.83
564	Four Hills Landfill	1,056,742	41,749.58	3,387.06	3.95	4.27	45,136.64
631	Bath Electric Hydro	91,035	3,788.48	2,232.59	4.16	6.61	6,021.07
636	Peterborough Upper Hydro	160,859	19,801.74	1,492.58	12.31	13.24	21,294.32
642	Spaulding Pond Hydro	3,035	171.62	200.36	5.65	12.26	371.98
1080	UNH Turbine	1,934,568	70,060.08	19,082.00	3.62	4.61	89,142.08
N2123	Wire Belt - PV N2123	10,138	428.15	0.00	4.22	4.22	428.15
2373	Manch-Boston Airport PV	24,760	1,039.59	0.00	4.20	4.20	1,039.59
2470	Favorite Foods	186	4.62	0.00	2.48	2.48	4.62
N5465	Portsmouth School - PV N5465	438	12.34	0.00	2.82	2.82	12.34
N5465A	Portsmouth School - PV N5465A	354	9.28	0.00	2.62	2.62	9.28
N5466	Portsmouth DPW - PV N5466	2,578	102.57	0.00	3.98	3.98	102.57
N5486	Rochester - PV N5486	10,579	423.44	0.00	4.00	4.00	423.44
N5606	34 Cellu/Worthen - PV N5606	28,942	962.52	0.00	3.33	3.33	962.52
<b>GRAND TOTAL</b>		<b>13,164,127</b>	<b>\$ 1,224,149.30</b>	<b>\$ 182,128.06</b>	<b>9.30</b>	<b>10.68</b>	<b>\$ 1,406,277.36</b>



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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING SEPTEMBER 30, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	39,115	\$1,509.72	\$3,549.25	3.86	12.93	\$5,058.97
011	Milton Mills Hydro	231,481	8,124.84	3,568.33	3.51	5.05	11,693.17
052	Briar Hydro		0.00	(1,074.32)	0.00	0.00	(1,074.32)
054	Pennacook Upper Falls		(3,640.21)	(1,001.81)	0.00	0.00	(4,642.02)
070	Monadnock Paper Mills	170,777	4,675.90	0.00	2.74	2.74	4,675.90
091	Noone Falls	0	0.00	(147.55)	0.00	0.00	(147.55)
106	Otter Lane Hydro	0	0.00	71.39	0.00	0.00	71.39
107	Peterborough Lower Hydro	108,547	13,297.24	1,419.42	12.25	13.56	14,716.66
171	Pettyboro Hydro	0	0.00	(14.80)	0.00	0.00	(14.80)
189	Errol Hydro	1,031,752	38,792.98	15,851.42	3.76	5.30	54,644.40
440	WES Concord MSW	8,590,696	1,145,046.09	123,590.83	13.33	14.77	1,268,636.92
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	489,377	20,229.21	8,957.67	4.13	5.96	29,186.88
564	Four Hills Landfill	1,335,806	57,815.14	3,387.06	4.33	4.58	61,202.20
631	Bath Electric Hydro	8,610	580.32	2,232.59	6.74	32.67	2,812.91
636	Peterborough Upper Hydro	116,171	14,236.72	1,492.58	12.25	13.54	15,729.30
642	Spaulding Pond Hydro	0	0.00	200.36	0.00	0.00	200.36
1080	UNH Turbine	1,361,400	64,730.13	19,082.00	4.75	6.16	83,812.13
N2123	Wire Belt - PV N2123	7,608	215.13	0.00	2.83	2.83	215.13
2373	Manch-Boston Airport PV	13,916	513.35	0.00	3.69	3.69	513.35
2470	Favorite Foods	400	8.47	0.00	2.12	2.12	8.47
N5465	Portsmouth School - PV N5465	1,113	40.47	0.00	3.64	3.64	40.47
N5465A	Portsmouth School - PV N5465A	793	30.08	0.00	3.79	3.79	30.08
N5466	Portsmouth DPW - PV N5466	2,734	84.02	0.00	3.07	3.07	84.02
N5486	Rochester - PV N5486	8,453	379.71	0.00	4.49	4.49	379.71
N5606	34 Cellu/Worthen - PV N5606	27,866	1,608.63	0.00	5.77	5.77	1,608.63
<b>GRAND TOTAL</b>		<b>13,546,615</b>	<b>\$ 1,368,277.94</b>	<b>\$ 181,164.42</b>	<b>10.10</b>	<b>11.44</b>	<b>\$ 1,549,442.36</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING OCTOBER 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	126,044	\$5,009.68	\$3,819.15	3.97	7.00	\$8,828.83
011	Milton Mills Hydro	792,924	31,776.49	7,805.97	4.01	4.99	39,582.46
052	Briar Hydro		0.00	(2,623.51)	0.00	0.00	(2,623.51)
054	Pennacook Upper Falls		(7,137.55)	(1,946.10)	0.00	0.00	(9,083.65)
070	Monadnock Paper Mills	251,862	9,767.60	0.00	3.88	3.88	9,767.60
106	Otter Lane Hydro	1,546	47.54	220.43	3.08	17.33	267.97
107	Peterborough Lower Hydro	166,158	20,358.25	1,419.42	12.25	13.11	21,777.67
171	Pettyboro Hydro	0	0.00	32.96	0.00	0.00	32.96
189	Errol Hydro	417,328	12,150.70	18,359.87	2.91	7.31	30,510.57
440	WES Concord MSW	9,060,831	1,225,722.65	123,590.83	13.53	14.89	1,349,313.48
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	499,852	20,130.50	9,752.44	4.03	5.98	29,882.94
564	Four Hills Landfill	1,430,403	55,677.39	2,021.36	3.89	4.03	57,698.75
636	Peterborough Upper Hydro	160,958	19,740.49	1,492.58	12.26	13.19	21,233.07
642	Spaulding Pond Hydro	0	0.00	1,602.18	0.00	0.00	1,602.18
1080	UNH Turbine	0	0.00	18,630.00	0.00	0.00	18,630.00
N2123	Wire Belt - PV N2123	5,826	186.90	0.00	3.21	3.21	186.90
2373	Manch-Boston Airport PV	7,540	244.58	0.00	3.24	3.24	244.58
2470	Favorite Foods	372	12.92	0.00	3.47	3.47	12.92
N5465	Portsmouth School - PV N5465	245	6.98	0.00	2.85	2.85	6.98
N5465A	Portsmouth School - PV N5465A	212	5.98	0.00	2.82	2.82	5.98
N5466	Portsmouth DPW - PV N5466	2,913	95.06	0.00	3.26	3.26	95.06
N5486	Rochester - PV N5486	3,598	123.78	0.00	3.44	3.44	123.78
N5606	34 Cellu/Worthen - PV N5606	12,920	411.44	0.00	3.18	3.18	411.44
<b>GRAND TOTAL</b>		<b>12,941,532</b>	<b>\$ 1,394,331.38</b>	<b>\$ 184,177.58</b>	<b>10.77</b>	<b>12.20</b>	<b>\$ 1,578,508.96</b>

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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING NOVEMBER 30, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	10,323	\$360.08	\$2,493.24	3.49	27.64	\$2,853.32
011	Milton Mills Hydro	878,261	47,700.52	6,289.15	5.43	6.15	53,989.67
052	Briar Hydro		0.00	(2,626.50)	0.00	0.00	(2,626.50)
054	Pennacook Upper Falls		(11,775.60)	(1,948.22)	0.00	0.00	(13,723.82)
070	Monadnock Paper Mills	283,381	15,730.22	0.00	5.55	5.55	15,730.22
106	Otter Lane Hydro	14,284	978.21	220.58	6.85	8.39	1,198.79
107	Peterborough Lower Hydro	179,243	21,839.35	1,419.42	12.18	12.98	23,258.77
171	Pettyboro Hydro	0	0.00	32.96	0.00	0.00	32.96
189	Errol Hydro	1,527,766	69,128.17	19,740.99	4.52	5.82	88,869.16
440	WES Concord MSW	8,397,008	1,123,618.48	123,590.83	13.38	14.85	1,247,209.31
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	482,109	26,095.45	10,792.24	5.41	7.65	36,887.69
564	Four Hills Landfill	1,294,897	72,854.07	11,835.08	5.63	6.54	84,689.15
636	Peterborough Upper Hydro	153,684	18,723.73	1,492.58	12.18	13.15	20,216.31
642	Spaulding Pond Hydro	0	0.00	1,519.02	0.00	0.00	1,519.02
1080	UNH Turbine	751,064	24,923.19	24,528.22	3.32	6.58	49,451.41
N2123	Wire Belt - PV N2123	2,600	52.04	0.00	2.00	2.00	52.04
2373	Manch-Boston Airport PV	1,649	40.09	0.00	2.43	2.43	40.09
2470	Favorite Foods	185	2.02	0.00	1.09	1.09	2.02
N5465	Portsmouth School - PV N5465	0	0.00	0.00	0.00	0.00	0.00
N5465A	Portsmouth School - PV N5465A	98	0.95	0.00	0.97	0.97	0.95
N5466	Portsmouth DPW - PV N5466	984	20.98	0.00	2.13	2.13	20.98
N5486	Rochester - PV N5486	1,841	31.10	0.00	1.69	1.69	31.10
N5606	34 Cellu/Worthen - PV N5606	5,277	72.55	0.00	1.37	1.37	72.55
<b>GRAND TOTAL</b>		<b>13,984,654</b>	<b>\$ 1,410,395.60</b>	<b>\$ 199,379.59</b>	<b>10.09</b>	<b>11.51</b>	<b>\$ 1,609,775.19</b>

**Attachment ELM-3**  
**Page 171**

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING DECEMBER 31, 2018**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	29,493	\$1,415.65	\$3,822.84	4.80	17.76	\$5,238.49
011	Milton Mills Hydro	906,674	38,669.46	7,813.51	4.26	5.13	46,482.97
052	Briar Hydro		(3,688.28)	(3,544.13)	0.00	0.00	(7,232.41)
054	Pennacook Upper Falls		(9,284.57)	(2,439.66)	0.00	0.00	(11,724.23)
070	Monadnock Paper Mills	382,225	13,272.62	0.00	3.47	3.47	13,272.62
106	Otter Lane Hydro	36,601	1,423.78	220.58	3.89	4.49	1,644.36
107	Peterborough Lower Hydro	171,323	20,709.17	1,419.42	12.09	12.92	22,128.59
171	Pettyboro Hydro	0	0.00	(100.87)	0.00	0.00	(100.87)
189	Errol Hydro	997,942	37,887.79	18,377.60	3.80	5.64	56,265.39
440	WES Concord MSW	7,696,231	1,017,744.69	123,590.83	13.22	14.83	1,141,335.52
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	836,393	32,470.07	9,758.78	3.88	5.05	42,228.85
564	Four Hills Landfill	1,189,711	50,177.17	2,023.31	4.22	4.39	52,200.48
636	Peterborough Upper Hydro	172,754	20,910.39	1,492.58	12.10	12.97	22,402.97
642	Spaulding Pond Hydro	0	0.00	1,603.73	0.00	0.00	1,603.73
1080	UNH Turbine	0	0.00	18,648.00	0.00	0.00	18,648.00
N2123	Wire Belt - PV N2123	3,685	127.37	0.00	3.46	3.46	127.37
2373	Manch-Boston Airport PV	39	1.31	0.00	3.36	3.36	1.31
2470	Favorite Foods	221	6.34	0.00	2.87	2.87	6.34
N5465	Portsmouth School - PV N5465	0	0.00	0.00	0.00	0.00	0.00
N5465A	Portsmouth School - PV N5465A	94	2.55	0.00	2.71	2.71	2.55
N5466	Portsmouth DPW - PV N5466	321	10.36	0.00	3.23	3.23	10.36
N5486	Rochester - PV N5486	3,024	94.88	0.00	3.14	3.14	94.88
N5606	34 Cellu/Worthen - PV N5606	10,652	336.57	0.00	3.16	3.16	336.57
<b>GRAND TOTAL</b>		<b>12,437,383</b>	<b>\$ 1,222,287.32</b>	<b>\$ 182,686.52</b>	<b>9.83</b>	<b>11.30</b>	<b>\$ 1,404,973.84</b>

**Attachment ELM-3**  
**Page 17m**

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**2018 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JANUARY 31, 2019**

SESD NO.	PROJECT NAME	KWHR PURCHASED	ENERGY PAYMENT	CAPACITY PAYMENT	--PAYMENT--		NET PAYMENT AMOUNT
					ENERGY (CENTS/KWHR)	TOTAL	
004	Swans Falls Hydro	11,525	\$598.79	\$3,822.84	5.20	38.37	\$4,421.63
011	Milton Mills Hydro	844,057	40,956.88	7,813.51	4.85	5.78	48,770.39
052	Briar Hydro		(12,334.69)	(3,085.31)	0.00	0.00	(15,420.00)
054	Pennacook Upper Falls		(8,795.04)	(2,193.94)	0.00	0.00	(10,988.98)
070	Monadnock Paper Mills	241,437	7,336.24	0.00	3.04	3.04	7,336.24
106	Otter Lane Hydro	43,673	2,064.10	220.58	4.73	5.23	2,284.68
107	Peterborough Lower Hydro	88,885	10,785.84	1,410.14	12.13	13.72	12,195.98
171	Pettyboro Hydro	0	0.00	32.96	0.00	0.00	32.96
189	Errol Hydro	584,032	27,961.43	18,377.60	4.79	7.93	46,339.03
440	WES Concord MSW	9,006,935	1,216,168.85	124,934.20	13.50	14.89	1,341,103.05
440A	WES Concord MSW ST	0	0.00	0.00	0.00	0.00	0.00
496	Turnkey Rochester	557,310	27,105.83	9,758.78	4.86	6.61	36,864.61
564	Four Hills Landfill	1,129,097	58,077.07	2,023.31	5.14	5.32	60,100.38
636	Peterborough Upper Hydro	95,721	11,723.53	1,482.83	12.25	13.80	13,206.36
642	Spaulding Pond Hydro	0	0.00	1,603.73	0.00	0.00	1,603.73
1080	UNH Turbine	0	0.00	18,648.00	0.00	0.00	18,648.00
D1123	Merrimack PV D1123	0	0.00	0.00	0.00	0.00	0.00
N2123	Wire Belt - PV N2123	2,869	102.03	0.00	3.56	3.56	102.03
2373	Manch-Boston Airport PV	54	1.59	0.00	2.94	2.94	1.59
2470	Favorite Foods	243	10.02	0.00	4.12	4.12	10.02
N5465	Portsmouth School - PV N5465	0	0.00	0.00	0.00	0.00	0.00
N5465A	Portsmouth School - PV N5465A	70	2.29	0.00	3.27	3.27	2.29
N5466	Portsmouth DPW - PV N5466	1,086	48.14	0.00	4.43	4.43	48.14
N5486	Rochester - PV N5486	2,638	106.28	0.00	4.03	4.03	106.28
N5606	34 Cellu/Worthen - PV N5606	8,040	279.87	0.00	3.48	3.48	279.87
GRAND TOTAL		12,617,672	\$ 1,382,199.05	\$ 184,849.23	10.95	12.42	\$ 1,567,048.28

Docket No. DE 19-080  
Exhibit No. 2

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

**Public Service Company of New Hampshire  
Reconciliation of Energy Service and Stranded Costs for  
Calendar Year 2018**

**DIRECT TESTIMONY OF  
FREDERICK B. WHITE**

---

1 **I. INTRODUCTION**

2 **Q. Please state your name.**

3 A. My name is Frederick B. White.

4 **Q. Mr. White, please provide your business address and title.**

5 A. My business address is 107 Selden St, Berlin, Connecticut. I am a Supervisor in the  
6 Electric Supply department of Eversource Energy.

7 **Q. Mr. White, please describe your responsibilities at Eversource Energy.**

8 A. I supervise and provide analytical support required to fulfill the power supply requirement  
9 obligations of Public Service of New Hampshire, d/b/a Eversource Energy ("Eversource"  
10 or the "Company"). This included, prior to the divestiture of Eversource's generation fleet,  
11 supporting the development of default Energy Service (at times referred to herein as "ES")  
12 rates, evaluation of the need to supplement Eversource's resources for the provision of  
13 energy service, and acquisition of Financial Transmission Rights ("FTR") to manage  
14 congestion. Subsequent to the divestiture, this involves conducting solicitations for the  
15 competitive procurement of power for energy service and the fulfillment of Renewable  
16 Portfolio Standards ("RPS") obligations. I am also responsible for on-going activities  
17 associated with independent power producers and purchase power agreements.

18 **II. PURPOSE**

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

20 A. The purpose of my testimony is to report on how Eversource's generation resources and  
21 supplemental purchases were used to meet energy and capacity requirements during the  
22 period January 1, 2018 through March 31, 2018. During this period as a load-serving

1 entity, Eversource was responsible for having sufficient energy to meet the hourly needs of  
2 its customers and was also responsible for its share of the ISO-NE capacity requirement.  
3 Eversource met its requirements through its owned generation, PURPA-mandated  
4 purchases under short term rates and long-term rate orders, power purchase agreements,  
5 and through supplemental purchases of energy and capacity from the market. I will also  
6 discuss Eversource's participation in the FTR auction process.

7 Beginning on April 1, 2018 Eversource competitively procured power for ES and was no  
8 longer a load-serving entity. Activities and costs associated with ES beginning on April 1,  
9 2018 are not within the scope of the instant docket.

10 **III. ENERGY REQUIREMENTS**

11 **Q. Please summarize the generation resources that were available to meet Eversource's**  
12 **energy requirements during the period January 1, 2018 through March 31, 2018.**

13 A. Attachment FBW-1 lists the resource portfolio available to Eversource to meet its  
14 customers' energy requirements at the start of 2018. Eversource's owned fossil generation  
15 resources were divested as of 1/10/18, and owned hydro generation resources as of 8/26/18.  
16 As shown on the Attachment, available energy resource capacity was about 1,244 MW for  
17 the winter months. These values are based on ISO-NE seasonal claimed capability ratings.  
18 The portfolio was comprised of the following resource groups: hydroelectric (59 MW from  
19 nine stations), coal and biomass (577 MW from Merrimack and Schiller Stations), gas/oil  
20 (400 MW from Newington), combustion turbines (102 MW from five units), biomass (68  
21 MW from Burgess Biopower), wind (7 MW from Lempster), and non-utility generation (31  
22 MW from numerous PURPA-mandated purchases).

23 **Q. Please summarize how Eversource's resources met energy requirements during**  
24 **January through March 2018.**

25 A. Attachment FBW-2 summarizes how energy requirements were met and how Eversource's  
26 generation resources were utilized by month during peak and off-peak periods. 42% of  
27 peak energy requirements and 48% of off-peak energy requirements were met with the  
28 generation resources listed on FBW-1. The remaining energy needs were met through  
29 bilateral or spot market energy purchases.

30 **Q. Were Eversource's must-take resources and economic generation sufficient to meet**  
31 **energy requirements in every month?**

32 A. No. Eversource's resources did not meet its customers' energy requirements in all hours  
33 and, therefore, Eversource purchased a portion of its customers' needs. The purchase

1 requirement changed hourly and ranged from zero to a significant portion, depending on  
2 ownership and availability of resources, the level of demand, the migration of customers to  
3 competitive energy service options, and the relative economics of Eversource's generation  
4 versus purchase alternatives.

5 **Q. Please summarize how supplemental purchases were used to meet energy**  
6 **requirements.**

7 A. Attachment FBW-3 summarizes the purchases made to supplement Eversource's  
8 generating resources during January through March 2018. Approximately 268 GWh of  
9 peak energy were purchased at an average cost of \$82.37 per MWh (a total expense of  
10 \$22.1 million). 184 GWh were purchased bilaterally at an average cost of \$78.70 per MWh  
11 (a total expense of \$14.5 million). All 184 GWh of bilateral purchases were procured via  
12 fixed-price contracts to address forecasted supplemental requirements. The remaining 84  
13 GWh of peak energy were procured via the ISO-NE hourly spot market at an average cost  
14 of \$90.37 per MWh (a total expense of \$7.6 million). (Figures may not add due to  
15 rounding.)

16 Approximately 229 GWh of off-peak energy were purchased at an average cost of \$64.84  
17 per MWh (a total expense of \$14.8 million). 92 GWh were purchased bilaterally at an  
18 average cost of \$72.62 per MWh (a total expense of \$6.7 million). All 92 GWh of bilateral  
19 purchases were procured via fixed-price contracts to address forecasted supplemental  
20 requirements. The remaining 137 GWh of off-peak energy were procured via the ISO-NE  
21 hourly spot market at an average cost of \$59.61 per MWh (a total expense of \$8.2 million).  
22 (Figures may not add due to rounding.) The combined expense for all supplemental energy  
23 purchases was \$36.9 million.

24 **Q. Please discuss how forward bilateral purchases were used to replace owned fossil**  
25 **resources which were divested as of 1/10/18.**

26 A. Since the precise date of ownership transfer was not known well in advance, during  
27 January, after closing, Eversource made weekly and daily peak purchases. For February  
28 and March, since there was sufficient lead time after closing, Eversource made monthly  
29 peak and off-peak purchases. Eversource analyzed forecasted loads and developed a  
30 purchase plan based on pre-existing guidelines for peak and off-peak purchases. The plan  
31 was reviewed with and approved by senior management prior to execution of the  
32 purchases. During February, Eversource purchased 250 MW during peak hours and 150  
33 MW during off-peak hours, and during March, Eversource purchased 225 MW during peak  
34 hours and 100 MW during off-peak hours.



1 **Q. Were there any hours during January through March 2018 in which Eversource's**  
2 **supply resources exceeded energy needs?**

3 A. Yes. Attachment FBW-3 also summarizes the hours in which supply resources, including  
4 supplemental bilateral purchases, exceeded energy requirements resulting in sales to the  
5 ISO-NE spot market. Approximately 43 GWh of peak energy were sold at an average price  
6 of \$148.84 per MWh (total revenues of \$6.4 million). In addition, approximately 50 GWh  
7 of off-peak energy were sold at an average price of \$155.84 per MWh (total revenues of  
8 \$7.8 million). The combined revenue for all surplus energy sales was \$14.1 million.

9 **Q. Please summarize how commodity prices (oil, natural gas, and energy) varied during**  
10 **2018.**

11 A. Attachment FBW-4 is a chart of the 2018 daily prices for crude oil (West Texas  
12 Intermediate), natural gas (delivered to Algonquin Gate), and bilateral energy (peak hours  
13 at the Massachusetts Hub). The chart shows the range of commodity and energy market  
14 prices in 2018. The chart also shows the continuing correlation between natural gas prices  
15 and energy purchase prices in New England. Note the natural gas price spikes during  
16 winter months, due to space heating demand and delivery constraints on the natural gas  
17 transportation pipeline system.

18 **IV. CAPACITY REQUIREMENTS**

19 **Q. Please describe the net benefit to Eversource's customers associated with the Forward**  
20 **Capacity Market during January through March 2018.**

21 A. Attachment FBW-5 summarizes Eversource's monthly capacity market activity and reflects  
22 the divestiture of owned fossil generation resources as of January 10, 2018. For the period,  
23 capacity market expenses exceeded capacity market revenues from generation resources  
24 (including owned assets, non-utility IPPs, and the Hydro-Quebec Interconnection Capacity  
25 Credits), resulting in a net expense to Energy Service customers of \$15.7 million.

26 **Q. Please summarize the ISO-NE capacity market rules that were in effect during this**  
27 **period.**

28 A. The capacity market in New England is governed by the Forward Capacity Market  
29 ("FCM") rules as administered by ISO-NE. ISO-NE conducts Forward Capacity Auctions  
30 ("FCA"), into which capacity resources offer MWs, to "procure" the lowest cost resources  
31 necessary to meet the ISO-NE Installed Capacity Requirement and to establish the market  
32 value of capacity. The capacity prices established for 2018 were \$7.025/kW-month for the  
33 January to March period. Additional components of the FCM which occur after the FCAs,

1 including Reconfiguration Auctions and monthly Peak Energy Rent adjustments, result in  
2 adjustments to Capacity Supply Obligations, the overall rate paid to capacity, and the rate  
3 paid by load for capacity. Generally, resources are paid for providing capacity, and the  
4 total payments for capacity resources in each month are charged to ISO-NE load serving  
5 entities based on their relative share of the prior year's peak demand.

6 **Q. Please summarize the supply resources that were used to meet Eversource's capacity**  
7 **requirements.**

8 A. During January through March, a total of 105,371 MW-months of capacity qualified for  
9 credits in the ISO-NE capacity market (this equates to a monthly average of 35,124 MWs).  
10 Eversource was allocated 3.01% (3,175 MW-months) of this capacity obligation.  
11 Eversource's supply resources had capacity supply obligations of 1,157 MW-months of  
12 capacity; comprised of owned generation (494 MW-months), non-utility IPPs (306 MW-  
13 months, including Burgess Biopower and Lempster Wind), and Hydro-Quebec  
14 Interconnection Capacity Credits (357 MW-months). Eversource had a net capacity  
15 deficiency of 2,018 MW-months. (Figures may not add due to rounding.) Attachment  
16 FBW-5 provides additional details.

17 **V. FINANCIAL TRANSMISSION RIGHTS**

18 **Q. What is a Financial Transmission Right?**

19 A. An FTR is a financial instrument available to participants seeking to manage congestion  
20 cost risk or those wishing to speculate on the difference in congestion costs between two  
21 locations. These instruments have been available since the introduction of the ISO-NE  
22 Standard Market Design. All FTRs are defined in the day-ahead market by a MW amount,  
23 a source location, and a sink location. For each MW of FTR, the owner will receive a  
24 credit or a charge from ISO-NE equal to the difference in the congestion component of the  
25 hourly day-ahead LMP between the sink and the source. If the sink location congestion  
26 price exceeds the source location price, the FTR will have a positive value, i.e. - a credit to  
27 that participant's ISO-NE settlement in that hour. Similarly, if the sink location price is  
28 less than the source location price, the owner will be charged the difference.

29 **Q. Please summarize Eversource's participation in the ISO-NE FTR auction process.**

30 A. Eversource participated in these auctions as a method of hedging the congestion price  
31 differential between major energy resources and the New Hampshire load zone, for periods  
32 and in quantities according to forecasted unit operation. Since divestiture was pending  
33 regarding Eversource's fossil stations, Eversource did not participate in the FTR auctions  
34 for these units. Eversource did participate to hedge the differential between the source

1 location of bilateral purchases (e.g. the Massachusetts Hub and Burgess Biopower) and the  
2 New Hampshire load zone. Energy purchases provide an effective hedge against the  
3 energy component of the zonal LMP, but they do not guard against a congestion component  
4 differential. Therefore, even in an hour in which Eversource had sufficient resources to  
5 serve its energy requirement, it would be exposed to potential congestion charges. The  
6 purpose of acquiring FTRs is to convert the risk associated with a variable, unknown  
7 expense (i.e. the hour-by-hour difference in the applicable LMP congestion component), to  
8 a fixed, known expense (i.e. the cost of the FTR); however, not at any cost. The prices bid  
9 to acquire FTRs are evaluated against potential congestion cost exposure to achieve a  
10 balance between risk coverage and minimizing costs for ES customers. During 2018,  
11 Eversource acquired via auction 49 GWh of FTRs for a net cost of \$196,987. Settlement of  
12 the FTRs resulted in elimination of \$90,619 of congestion charges. Thus, managing a  
13 portion of congestion cost risk with FTRs resulted in an overall increase in Energy Service  
14 expense of \$106,368.

15 **Q. Will Eversource continue to participate in the FTR auction process in order to hedge**  
16 **against unpredictable congestion costs?**

17 A. Under the paradigm of competitively procured full requirements service from wholesale  
18 suppliers, suppliers incur the congestion cost risk, and therefore participation by Eversource  
19 is unnecessary. As of April 1, 2018, the use of FTRs was phased out as divestiture of  
20 Eversource's fossil steam units was completed and procurement of wholesale supply for  
21 energy service was implemented.

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

23 A. Yes, it does.

**Attachment FBW-1**  
**PSNH Resource Portfolio - 2018**

<u>Resource</u>	<u>Rating - MW</u>		<u>Interest</u>	<u>Capability - MW</u>	
	<u>Winter</u>	<u>Summer</u>		<u>Winter</u>	<u>Summer</u>
Amoskeag	17.5	17.0	100%	17.5	17.0
Ayers Island	8.9	8.3	100%	8.9	8.3
Canaan	1.0	0.8	100%	1.0	0.8
Eastman Falls	6.1	5.3	100%	6.1	5.3
Garvins/Hooksett	5.3	2.8	100%	5.3	2.8
Gorham	1.4	0.0	100%	1.4	0.0
Jackman	3.5	3.6	100%	3.5	3.6
Smith	15.2	10.2	100%	15.2	10.2
Merrimack 1 *	108.1	108.0	100%	108.1	108.0
Merrimack 2 *	330.5	330.0	100%	330.5	330.0
Schiller 4 *	48.0	47.5	100%	48.0	47.5
Schiller 5 *	42.6	43.1	100%	42.6	43.1
Schiller 6 *	48.2	47.8	100%	48.2	47.8
Newington *	400.2	400.2	100%	400.2	400.2
Lost Nation *	17.7	14.0	100%	17.7	14.0
Merrimack CT1 *	21.7	16.8	100%	21.7	16.8
Merrimack CT2 *	21.3	16.8	100%	21.3	16.8
Schiller CT 1 *	18.5	17.6	100%	18.5	17.6
White Lake Jet *	22.4	17.4	100%	22.4	17.4
Lempster Wind	7.8	3.2	90%	7.0	2.9
Burgess Biopower	67.5	67.5	100%	67.5	67.5
IPPs Total	31.2	25.0	100%	31.2	25.0
Total				1,243.8	1,202.7

Notes:

\* Owned fossil generation was divested as of 1/10/18.

# **Attachment FBW-2** **PSNH Supply Resources Used to Serve Energy Requirements - 2018**

<u>Peak</u>	Energy Requirement MWh	PSNH Resource Subtotal	<u>Portion of Requirement Served by ...</u>										
			<u>IPPs</u>	<u>Lempster Wind</u>	<u>Burgess Biomass</u>	<u>Hydro</u>	<u>Merrimack</u>	<u>Schiller</u>	<u>Newington</u>	<u>Wyman</u>	<u>Bilateral Purchases</u>	<u>ISO-NE Spot Purchases</u>	<u>Combustion Turbines</u>
<u>2018</u>													
Jan	172,716	53%	6%	2%	14%	10%	19%	3%	0%	0%	14%	33%	0.00%
Feb	139,533	35%	6%	2%	15%	12%	0%	0%	0%	0%	56%	9%	0.00%
Mar	142,628	35%	6%	2%	14%	14%	0%	0%	0%	0%	54%	10%	0.00%
Apr	0												
May	0												
Jun	0												
Jul	0												
Aug	0												
Sep	0												
Oct	0												
Nov	0												
<u>Dec</u>	<u>0</u>												
Totals	454,877	42%	6%	2%	14%	12%	7%	1%	0%	0%	40%	19%	0.00%

Off-Peak	Energy Requirement MWh	PSNH Resource Subtotal	Portion of Requirement Served by ...										
			IPPs	Lempster Wind	Burgess Biomass	Hydro	Merrimack	Schiller	Newington	Wyman	Bilateral Purchases	ISO-NE Spot Purchases	Combustion Turbines
2018													
Jan	167,903	61%	6%	2%	16%	11%	22%	4%	1%	0%	0%	39%	0.00%
Feb	134,051	40%	7%	2%	17%	14%	0%	0%	0%	0%	39%	21%	0.00%
Mar	138,336	40%	7%	2%	16%	16%	0%	0%	0%	0%	28%	31%	0.00%
Apr	0												
May	0												
Jun	0												
Jul	0												
Aug	0												
Sep	0												
Oct	0												
Nov	0												
Dec	0												
Totals	440,289	48%	7%	2%	16%	13%	8%	2%	0%	0%	21%	31%	0.00%

Notes:  
1) PSNH Resource Subtotal is the sum of all columns except Bilateral and Spot Purchases.

**Attachment FBW-3**  
**PSNH Bilateral and ISO-NE Spot Purchases and Sales - 2018**

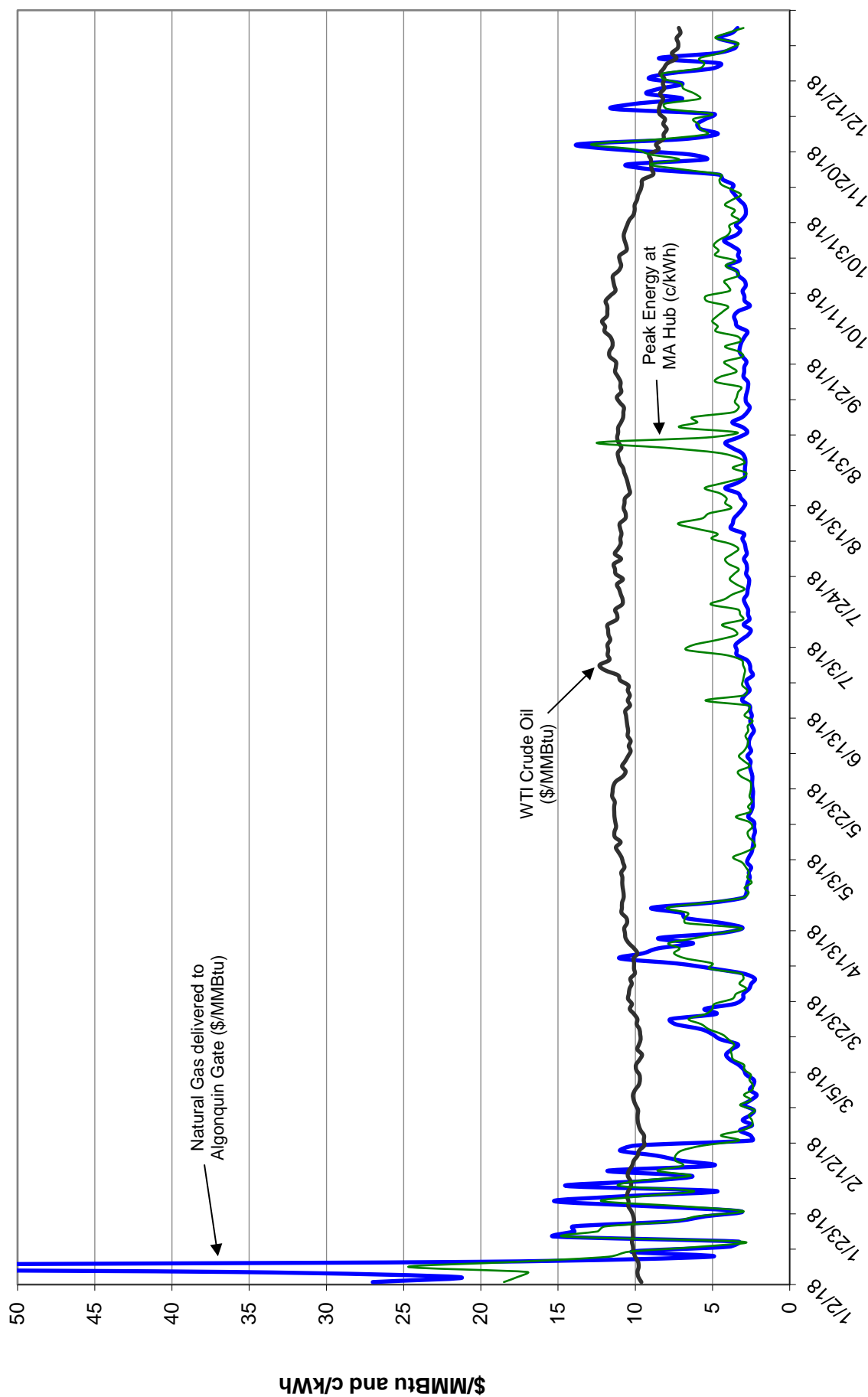
**Peak**

2018	Total Bilateral Purchases MWh	Total Bilateral Purchases \$000	Avg Price \$/MWh	Total ISO-NE Spot Purchases MWh	Total ISO-NE Spot Purchases \$000	Avg Price \$/MWh	Total ISO-NE Spot Sales MWh	Total ISO-NE Spot Sales \$000	Avg Price \$/MWh
Jan	24,800	1,811	73.03	56,765	6,008	105.84	38,490	6,372	165.56
Feb	80,000	8,453	105.66	12,873	898	69.79	2,533	(20)	(7.81)
Mar	79,200	4,217	53.25	14,701	715	48.66	1,703	7	3.94
Apr									
May									
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Totals	184,000	14,481	78.70	84,340	7,622	90.37	42,726	6,359	148.84

**Off-Peak**

2018	Total Bilateral Purchases MWh	Total Bilateral Purchases \$000	Avg Price \$/MWh	Total ISO-NE Spot Purchases MWh	Total ISO-NE Spot Purchases \$000	Avg Price \$/MWh	Total ISO-NE Spot Sales MWh	Total ISO-NE Spot Sales \$000	Avg Price \$/MWh
Jan	0	0	0.00	65,139	5,107	78.41	48,660	7,776	159.80
Feb	52,800	5,056	95.75	28,262	1,465	51.82	1,085	(5)	(5.01)
Mar	39,100	1,618	41.38	43,476	1,588	36.52	87	(4)	(49.38)
Apr									
May									
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Totals	91,900	6,673	72.62	136,877	8,160	59.61	49,832	7,766	155.84

**Attachment FBW-4**  
**Daily Prices (Natural Gas, Crude Oil, Day-Ahead Peak Energy) - 2018**



**Attachment FBW-5**  
**Summary of PSNH Capacity Position - 2018**

2018	Total ISO-NE Capacity Requirement MW	PSNH Share of ISO-NE Obligation %	PSNH Share of ISO-NE Obligation MW	PSNH Capacity Expense \$(000)	PSNH Capacity Resources MW *	PSNH Capacity Revenues \$(000) *	PSNH Net Capacity Expense \$(000)
Jan *	35,138	3.03%	1,065	8,115	597	4,298	3,817
Feb	35,117	3.02%	1,061	8,053	280	2,076	5,977
Mar	35,117	2.99%	1,049	7,975	280	2,077	5,898
Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Totals	105,371	3.01%	3,175	24,143	1,157	8,451	15,691

Notes:

\* The benefits shown for January are adjusted to reflect the divestiture of fossil generation as of 1/10/18.  
PSNH Resources include Fossil-Hydro Assets, non-utility IPPs, and Hydro-Quebec Interconnection Credits.



Docket No. DE 19-080  
Exhibit No. 3

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

**Public Service Company of New Hampshire  
Reconciliation of Energy Service and Stranded Costs for  
Calendar Year 2018**

**DIRECT TESTIMONY OF  
WILLIAM H. SMAGULA**

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1 **I. Introduction**

2 **Q. Please state your name, position, employer and address.**

3 A. My name is William H. Smagula. I am a consultant to Eversource Energy and the  
4 former Vice President of Generation for Public Service Company of New  
5 Hampshire, d/b/a Eversource Energy (“Eversource”). My business address is 780  
6 North Commercial Street, Manchester, New Hampshire 03101.

7 **Q. Please provide a brief summary of your background.**

8 A. I received a Bachelor of Science in Mechanical Engineering from the University  
9 of New Hampshire and Masters of Science in Mechanical Engineering from  
10 Northeastern University. I began working for Public Service Company of New  
11 Hampshire in 1978. My duties have included craft skills training, engineering  
12 projects, station management, Director of fossil and hydro fleet management (in  
13 NH and CT/MA). I became Vice President of New Hampshire Generation in  
14 2012. From 2003 to 2013 I served on the New Hampshire Board of Professional  
15 Engineers (including 2 years as Chairman) and I also served for 10 years on the  
16 New Hampshire Air Resource Council from 2007 to 2017. I retired from  
17 Eversource in August 2018, but have been hired by Eversource as a consultant to  
18 assist on numerous transition issues related to the formerly owned New  
19 Hampshire fossil and hydro generating assets.

1     **Q.     Have you ever testified before this Commission?**

2     A.     Yes. I have provided testimony in many previous Commission proceedings  
3           including energy service and reconciliation dockets. I also testified before the  
4           Commission during the Schiller Biomass Conversion proceeding and the  
5           Merrimack Scrubber docket.

6     **Q.     What is the purpose of your testimony in this proceeding?**

7     A.     The purpose of my testimony is to provide information on all outages that took  
8           place at Eversource's fossil-fired, hydroelectric and biomass units during 2018,  
9           prior to the divestiture of these facilities. This information will be for the period  
10          January 1 through January 9, 2018 for the six steam units (fossil and biomass) and  
11          the five combustion turbines which transferred ownership to Granite Shore Power  
12          on January 10, 2018. The hydro facilities transferred ownership to Hull Street  
13          Energy on August 26, 2018; therefore I will also provide information on hydro  
14          assets operations from January 1 through August 25, 2018. I shall also provide  
15          information on unit equivalent availability achieved by Eversource's steam  
16          generating units during our ownership period. With no Generation employees  
17          since September 2018, Eversource has limited ability to produce and provide the  
18          same scope of historical statistical data traditionally provided in Exhibit 3 of the  
19          annual reconciliation filing. Furthermore, partial year data would not have any  
20          comparative value versus prior, full year data. As a result, no such data is being  
21          provided. Refer to Exhibit 3 of the Reconciliation of Energy Services and  
22          Stranded Costs filing for 2017 (Docket No. DE 18-073) should historic data be  
23          desired for review.

24     **II.     Generating Unit Operation**

25     **Q.     Please provide an overview of the performance of Eversource's generating**  
26     **units in 2018.**

27     A.     Eversource's fossil and biomass units were comprised of:

28           Merrimack Station, Unit No. 1 – coal

29           Merrimack Station, Unit No. 2 – coal

- 1 Newington Station, Unit No. 1 – oil, natural gas
- 2 Schiller Station, Unit No. 4 – coal, oil
- 3 Schiller Station, Unit No. 5 – biomass
- 4 Schiller Station, Unit No. 6 – coal, oil
- 5 Merrimack Station, Combustion Turbine CT-1 – light oil
- 6 Merrimack Station, Combustion Turbine CT-2 – light oil
- 7 Schiller Station, Combustion Turbine CT-1 – light oil
- 8 Lost Nation, Combustion Turbine – light oil
- 9 White Lake, Combustion Turbine – light oil

10 During the period January 1 through January 9, these units were all available with  
11 two exceptions. These two exceptions were:

Unit	Outage Start	Outage Stop	Duration	Cause
Schiller Unit 5	1/1/18 18:00	1/2/18 02:30	8.50 hrs	Frozen wood caused a bridge in the #2 silo reducing fuel flow until cleared by an operator
Schiller Unit 5	1/4/18 09:05	1/4/18 10:30	7.42 hrs	ID fan electrical breaker contacts opened and were reset

12 Both incidents are not unusual. Wet and frozen biomass fuel is an ongoing  
13 challenge with Schiller Unit No. 5 since the biomass fuel is stored outdoors.  
14 Numerous equipment modifications and procedural changes have been made to  
15 minimize fuel flow interruptions from occurring causing significant reductions in  
16 the frequency and duration of these types of events, however, they still occur on  
17 occasion.

18 The electrical equipment breaker opening is an unusual circumstance that does  
19 occasionally occur even with the thorough preventative maintenance programs that  
20 are in place. A thorough inspection and troubleshooting effort was used resulting in  
21 nothing observed that was out of the ordinary, thus this event only required

1 inspectional reverification of proper contact surfaces condition and mechanical  
2 mechanism operation, which was fully and successfully completed.

3 It should be noted that due to the operation of the “Delayed Closing Adjustment  
4 Calculation” contained in the divestiture “Purchase and Sale Agreement” between  
5 Eversource and Granite Shore Power LLC, Eversource’s customers were not  
6 affected as a result of these two incidents. Reference should be made in particular  
7 to the PSA’s Schedule 2.6(a)(iv), “Delayed Closing Adjustment Calculation”.

8 Eversource’s hydroelectric facilities consisted of 9 hydro facilities with a total of 20  
9 units. These units have a total installed capacity of 70.6 MW. These units were  
10 comprised of:

11 Amoskeag Station – Units 1,2,3  
12 Ayers Island Station – Units 1,2,3  
13 Canaan Station – Unit 1  
14 Eastman Falls Station – Units 1,2  
15 Garvins Falls Station – Units 1,2,3,4  
16 Gorham Station – Units 1,2,3,4  
17 Hooksett Station – Unit 1  
18 Jackman Station – Unit 1  
19 Smith Station – Unit 1

20 These units were owned by Eversource in 2018 from January 1 through  
21 August 25.

22 During this period, the hydro fleet demonstrated reliable operations, consistent  
23 with prior years.

24 **Q. Please provide an overview of the safety and environmental performance of**  
25 **Eversource’s Generation employees in 2018.**

26 A. There were no safety incidents in 2018 in which New Hampshire Generation  
27 employees lost workdays or had any restricted ability to perform their full duties.

1 With the ownership changes of Generation assets to occur in 2018, Generation  
2 management stepped up dialogue and emphasis on safety in 2017 and 2018,  
3 recognizing employee distractions would be increasing. Eversource's Generation  
4 employees maintained a high focus on individual ownership of safety. Generation  
5 employees had the ability to stop and/or modify jobs as necessary to maintain a  
6 safe environment. A hazard assessment was completed before each job by the  
7 crew doing the work and more detailed job hazard analyses were developed for  
8 more complex tasks involving more personnel.

9 Environmental compliance received a similar high-priority focus. There were  
10 well trained staff at each facility to maintain compliance and recognize potential  
11 environmental risks. Local environmental staff were supported by highly  
12 qualified subject matter experts. Key permits and approvals were in place to  
13 operate the facilities, and regulatory requirements and deadlines were tracked and  
14 had been appropriately satisfied. Importantly, during Eversource's ownership in  
15 2018, the facilities continued their record of zero Notices of Violation.

16 **Q. Please provide a summary of how Eversource's generating units operated in**  
17 **2018.**

18 A. Eversource's generating units operated very well, with high reliability and  
19 availability. Continuing focus on safety and operational excellence, while  
20 ongoing attrition of staffing grew during divestiture, was a priority for Generation  
21 management.

22 Quality operations and maintenance ensured the generating equipment was  
23 prepared to provide high reliability in an efficient and timely fashion to provide  
24 value to customers and support obligations to the ISO-NE grid.

25 Eversource's Generation management team continued to focus on key items  
26 important to long-term operational success: the day-in and day-out operation and  
27 maintenance of the units; the corrective and preventative maintenance conducted

1 during forced outages; pre-planning and execution of scheduled and planned  
2 maintenance outages; and the use of a long-term maintenance outage and capital  
3 expenditure planning process. While plans to accomplish these goals had been  
4 revised to accommodate the changing market due to availability of low priced  
5 shale gas, the goals of safety and high reliability at the lowest possible cost still  
6 remained.

7 While the goals of the preventive and predictive maintenance program, as well as  
8 maintaining safety and high reliability at the lowest cost had not changed,  
9 assessment methods for equipment and system conditions had changed as capacity  
10 factors had decreased over recent years. More information and accurate  
11 information allowed targeted expenditure of funds and only when needed.

12 With less wear and tear on equipment due to reduced operating hours, the need for  
13 major overhaul work and preventive and predictive maintenance work had been  
14 reassessed utilizing new and expanded techniques which allow maintenance and  
15 operations professionals to make better-informed decisions. These expanded  
16 efforts to assess equipment condition generally resulted in reduced maintenance  
17 needs and lengthened overhaul and repair cycles, as appropriate. Condition-based  
18 maintenance was used to more cost effectively determine needed routine work, as  
19 well as outage timing, scope and budgets.

20 Long-term maintenance plans prioritize reliable plant operations and were  
21 founded on operations, equipment history, on-going condition assessment, and  
22 industry experience. The generating stations maintained a long-standing  
23 preventative maintenance program to best execute needed maintenance and the  
24 operation of the units. With fluctuations in market conditions due to economic  
25 changes, as well as the continuing evolution of shale gas markets, Generation had  
26 made changes to the management of its fleet with adjustments to expenses and  
27 staffing consistent with reduced capacity factor operations. Generation had relied  
28 on an experienced management team and a well-trained, skilled work force which

1 utilized sound practices derived from experience within our facilities, as well as  
2 from working with suppliers, contractors, experts, and other generating plant peers  
3 in the industry.

4 To summarize, Generation management continued to perform thorough execution  
5 of the preventative maintenance programs at all fossil steam units through the  
6 transfer of ownership. The key goals in making any adjustments were to avoid  
7 any risks of reduced reliability while reducing customer costs. As an example, by  
8 utilizing modified work practices, efforts had focused over recent years on  
9 appropriately reducing inventory levels to be in line with reduced replacement  
10 frequency of worn parts and materials.

11 Capital and O&M budgets were not formally developed for 2018 due to the  
12 projected partial year of ownership and inability to define end dates of  
13 responsibilities. Corporate Budgeting tracked actual expenditures on a monthly  
14 basis to monitor costs. These expenditures were managed on a daily basis with  
15 typical local management oversight and reviewed and approved on a monthly  
16 basis by Generation leadership. No major overhauls or large planned projects  
17 occurred in 2018. Repairs to the dam and station intake sluice-way at Gorham  
18 Hydro were needed during the summer of 2018 due to damage which occurred  
19 due to an excessively high water flow event on October 29 and 30, 2017. Sixty  
20 five feet of the lower spillway wooden apron was damaged along with  
21 undermining of the concrete foundation of the debris sluice-way at the station  
22 intake.

23 Operating costs continued to emphasize a proper balance between spending what  
24 was necessary in the most critical areas, while being sensitive to the overall cost  
25 of production and pending ownership changes. Generation reviewed maintenance  
26 needs to determine how they could be most effectively executed and how capital  
27 investments could be best applied to achieve a proper level of plant performance  
28 for both customers and the new owners.

1 Regarding Divestiture activities, Eversource efforts continued to support  
2 Environmental Site Assessments and to remove any identified RECs or  
3 “recognized environmental conditions” identified in those assessments. One REC  
4 was identified at Eversource’s Upper Hydro School Street office in Berlin. A  
5 potentially improper discharge of storm drainage was alleviated by modifying  
6 drainage flow paths.

7 **III. Unit Outages and Availabilities**

8 **Q. Please provide a list of all unplanned outages that took place during the**  
9 **period January 1, 2018 through December 31, 2018 for Eversource’s fossil,**  
10 **hydro, and biomass units during the ownership period.**

11 A. Attachment WHS-1, in Exhibit 3 lists these outages. This listing is similar to the  
12 information submitted in the past.

13 **Q. Is there additional reporting with respect to outages?**

14 A. Yes. Eversource provides outage reports for all forced and maintenance outages  
15 in excess of two days at either Newington Station or at the two units at Merrimack  
16 Station, and in excess of four days at the three units at Schiller Station. During  
17 the nine day ownership period of the fossil assets there were no such forced  
18 outages.

19 **Q. Were scheduled Planned Outages performed at any of Eversource’s fossil**  
20 **units during the period January 1, 2018 through December 31, 2018?**

21 A. No.

22 **Q Does this conclude your testimony?**

23 A. Yes, it does.



Exhibit 3

Attachment WHS-1

Eversource Generation  
2018  
Unit Outage Lists

### **2018 Fossil Unit Outages**

Only two outages occurred during the period of Eversource's ownership of January 1 – January 10, 2018.

#### **Schiller Unit No. 5**

Outage	Start	End	Duration Hours	Outage Cause Description
A	1/1/18 18:00	1/2/18 02:30	8.50	Frozen wood chips caused bridging in No. 2 wood silo interrupting fuel flow to the boiler
B	1/4/18 09:05	1/4/18 10:30	7.42	Induced fan electric breaker contact mechanism failure

Item	Site	Unit Number	Date & Time OFF line	Date & Time ON line	Outage Duration - Hours	Outage Duration - Days	Lost Generation (Y or N)	Outage Type	Cause of Outage	Comment	Notes (flows cfs)
A	Amoskeag	S	1/8/18 7:03	1/8/18 11:28	4.42	0.18	Y	T/D	Transmission needed outage to complete divestiture work	Removed 355 GSU lines and installed a metering point on GSU 354 line.	3420
B	Amoskeag	S	1/11/18 7:44	1/11/18 15:36	7.87	0.33	Y	T/D	Transmission needed outage to complete divestiture work	Removed 355 GSU lines and installed a metering point on GSU 354 line.	1140
C	Amoskeag	S	2/21/18 6:53	2/21/18 18:31	11.63	0.48	Y	T/D	Transmission needed outage to complete divestiture work	Removed 355 GSU lines and installed a metering point on GSU 354 line.	5919
	Amoskeag	1	No outages								
	Amoskeag	2	No outages								
	Amoskeag	3	No outages								
A	Hooksett	1	1/2/18 9:50	1/2/18 10:19	0.48	0.02	N	EMO	Worn exciter brushes	Replaced worn brushes.	880
B	Hooksett	1	1/13/18 18:30	1/15/18 11:03	40.55	1.69	Y	Trip	ESCC lost the RTU	Call in and shut down unit. Fairpoint to trouble shoot. RTU back and return to service.	7750

C	Hooksett	1	1/19/18 10:17	1/19/18 11:03	<b>0.77</b>	<b>0.03</b>	Y		Contractor working on 335 line made contact causing trip.	Cleared alarms and returned the unit to service.	5500
D	Hooksett	1	3/29/18 10:02	3/29/18 11:10	<b>1.13</b>	<b>0.05</b>	Y	EMO	Worn exciter brushes	Replaced worn brushes.	2300
E	Hooksett	1	4/30/18 7:04	4/30/18 7:47	<b>0.72</b>	<b>0.03</b>	Y	T/D	Line fault at Rimmon substation	Checked unit, reset relays, restarted unit.	10000
F	Hooksett	1	5/4/18 9:16	5/4/18 10:36	<b>1.33</b>	<b>0.06</b>	Y	T/D	Line fault at Rimmon substation	bird flew into Bus	7000
A	Jackman	1	4/30/18 6:59	4/30/18 10:24	<b>3.42</b>	<b>0.14</b>		T/D	Planned outage for divestiture and substation work	Unit shutdown. However, outage cancelled by Eversource Engineering and Relay Dept. Unit returned to service.	
	Garvins	S	No station outages								
A	Garvins	1	4/18/18 14:07	4/18/18 15:16	<b>1.15</b>	<b>0.05</b>	Y	Trip	Unit tripped while operator was making actuator PLC logic changes.	Completed the changes and restarted the unit.	
B	Garvins	1	5/4/18 22:10	5/4/18 23:08	<b>0.97</b>	<b>0.04</b>	Y	T/D	Line fault - 334 line	Severe wind storm	9000
A	Garvins	2	5/11/18 8:54	5/16/18 15:33	<b>126.65</b>	<b>5.28</b>	Y	Trip	Drive Blade Failure		5000
A	Garvins	3	1/26/18 11:48	1/26/18 13:29	<b>1.68</b>	<b>0.07</b>	Y	Trip	Bus bar shorted out causing a spike on the line which tripped annunciator.	Checked the unit and restarted.	6800

A	Garvins	4	5/2/18 16:36	5/2/18 17:57	1.35	0.06	Y	Trip	High winding temp.	High ambient temp.	6450
B	Garvins	4	5/4/18 22:10	5/4/18 23:19	1.15	0.05	Y	T/D	line fault - 334 line	Severe wind storm	9000
Item	Site	Unit Number	Date & Time OFF line	Date & Time ON line	Outage Duration - Hours	Outage Duration - Days	Lost Generation(Y or N)	Outage Type	Cause of Outage	Comment	Notes
A	Ayers Island	S	5/4/18 22:00	5/4/18 23:11	1.18	0.05	Y	Trip	Lightening strike initiated overspeed trip.	Reset drops, inspected the units and retarted.	6000
A	Ayers Island	1	1/22/18 13:36	1/22/18 14:13	0.62	0.03	Y	EMO	Collector ring brushes and exciter brushes worn	Changed 2 collector ring brushes and 3 exciter brushes	1500
B	Ayers Island	1	7/24/18 0:03	7/24/18 7:43	7.67	0.32	Y	Trip	PLC glitch causing overspeed trip	HECM reset pulses on HMI and restarted unit	1500
A	Ayers Island	2	8/10/18 14:37	8/25/18 23:59	369.37	15.39	Y	Trip / AI	Severe brush arcing on collector ring.	Decided to do AI while Leppert Nutmeg repaired collector rings in shop.	
B											
A	Ayers Island	3	4/3/18 8:27	4/3/18 9:29	1.03	0.04	Y	Trip	Possible momentary blockage in oil line	Alarm for low oil flow. Let middle guide bearing cool down, checked oil lines and sump levels - restarted unit.	2300

B	Ayers Island	3	6/19/18 9:30	7/11/18 10:25	<b>528.92</b>	<b>22.04</b>	Y	Trip / AI	Damage to Exciter	Remover exciter and sent it to Leppert Nutmeg for repair. Decided to do AI at this time.	
A	Eastman	S	7/30/18 11:32	7/30/18 12:09	<b>0.62</b>	<b>0.03</b>	Y	Trip	Both units tripped while performing waste gate test with emergency generator. Cause unknown.	HECM not available to troubleshoot.	1200
A	Eastman	1	2/5/18 8:23	2/16/18 14:22	<b>269.98</b>	<b>11.25</b>	N	AI	Annual Inspection		
A	Eastman	2	2/6/18 19:26	2/6/18 20:55	<b>1.48</b>	<b>0.06</b>	Y	T/D	Line problem out of Webster Substation	Reset alarms, inspected the unit and restarted unit.	1000
B	Eastman	2	6/6/18 9:01	6/6/18 12:03	<b>3.03</b>	<b>0.13</b>	Y	T/D	Failed fuse on transmission line.	Reset unit and restarted.	500
C	Eastman	2	6/10/18 15:13	6/12/18 10:54	<b>43.68</b>	<b>1.82</b>	Y	Trip	Generator lube oil pump failed	Replaced pump.	600
D	Eastman	2	7/30/18 23:32	8/20/18 11:14	<b>491.70</b>	<b>20.49</b>		Trip / AI	Unit tripped due to seal failure in guide bearing lube oil system.	It was decided to begin the AI early due to this incident. Seal was repaired and all AI work was completed.	

Item	Site	Unit Number	Date & Time OFF line	Date & Time ON line	Outage Duration - Hours	Outage Duration - Days	Lost Generation (Y or N)	Outage Type	Cause of Outage	Comment	Notes
A	Smith	1	3/13/18 22:47	3/14/18 0:02	1.25	0.05	Y	Trip	Brookfield plant upstream tripped causing temporary upset in river flow		
	Gorham	S	No station outages								
A	Gorham	1	6/25/18 6:50	6/25/18 6:51	0.02	0.00	N	Trip	Contractor error - Accidentally bumped manual/auto switch. Eversource immediately reset switch.	G2 started when G1 tripped.	
B	Gorham	1	7/25/18 1:15	7/25/18 3:42	2.45	0.10	Y	Trip	Incident at an upstream Brookfield plant caused a temporary upset in river flow.		
C	Gorham	1	8/13/18 9:02	8/17/18 12:31	99.48	4.15	N	AI	Annual Inspection		
D	Gorham	1	8/20/18 10:45	8/20/18 10:53	0.13	0.01	Y	Trip	PLC design flaw.	Repair being discussed.	
A	Gorham	2	2/25/18 6:07	2/25/18 8:29	2.37	0.10	Y	Trip	Numerous alarms. Cause unknown.	Reset alarms, restarted unit w/o issues. HECM to investigate.	3300

B	Gorham	2	8/13/18 9:02	8/17/18 12:31	99.48	4.15	N	AI	Annual Inspection		
C	Gorham	2	8/20/18 10:45	8/20/18 10:50	0.08	0.00	Y	Trip	PLC design flaw.	Repair being discussed.	
A	Gorham	3	7/25/18 1:10	7/25/18 4:09	2.98	0.12	Y	Trip	Incident at an upstream Brookfield plant caused a temporary upset in river flow.		
B	Gorham	3	8/20/18 9:30	8/23/18 15:15	77.75	3.24	N	AI	Annual Inspection		
Item	Site	Unit Number	Date & Time OFF line	Date & Time ON line	Outage Duration - Hours	Outage Duration - Days	Lost Generation (Y or N)	Outage Type	Cause of Outage	Comment	Notes
A	Gorham	4	5/14/18 18:11	5/15/18 9:59	15.80	0.66	Y	Trip	Unknown. No alarms. Regular controlled stop.	See next outage.	
B	Gorham	4	7/2/18 11:56	7/2/18 16:01	4.08	0.17	Y	Trip	Loose RTD connections	Tightened connections and restarted unit. Could explain previous trip.	
C	Gorham	4	7/4/18 7:09	7/4/18 7:23	0.23	0.01	Y	Trip	Damaged RTD connections	Repaired connections. Will check all connections at the next AI.	
D	Gorham	4	7/6/18 7:22	7/6/18 10:32	3.17	0.13	Y	Trip	Failed gov. oil pump.	Replaced pump.	
E	Gorham	4	7/13/18 8:42	7/13/18 10:59	2.28	0.10	Y	Trip	Gov oil pump motor starter failed.	Connections burned up. Repaired.	



F	Gorham	4	7/25/18 1:23	7/25/18 2:56	<b>1.55</b>	<b>0.06</b>	Y	Trip	Incident at an upstream Brookfield plant caused a temporary upset in river flow.		
G	Gorham	4	7/29/18 21:48	8/1/18 10:26	<b>60.63</b>	<b>2.53</b>	Y	Trip	Thrust bearing flow switch failed.	Made temp repairs. More during AI.	
A	Canaan	1	1/14/18 4:08	1/14/18 7:25	<b>3.28</b>	<b>0.14</b>	Y	T/D	355 line outage		
B	Canaan	1	4/10/18 15:58	4/10/18 17:07	<b>1.15</b>	<b>0.05</b>	Y	Trip	HECM testing		
C	Canaan	1	4/16/18 10:28	4/16/18 12:10	<b>1.70</b>	<b>0.07</b>	Y	Trip	HECM testing		
D	Canaan	1	5/7/18 7:37	6/20/18 11:34	<b>1059.95</b>	<b>44.16</b>	Y	EMO	GSU replacement		
E	Canaan	1	6/20/18 10:33	6/20/18 11:34	<b>1.02</b>	<b>0.04</b>	Y	Trip	GSU testing		
F	Canaan	1	7/1/18 17:30	7/2/18 10:58	<b>17.47</b>	<b>0.73</b>	Y	Trip	High bearing temp alarm	Caused by PLC issue - to be corrected.	
G	Canaan	1	7/27/18 13:08	7/31/18 16:20	<b>99.20</b>	<b>4.13</b>	Y	Trip	Waste gate stuck open	Closed waste gate, but future concrete repairs needed.	