PUBLIC SERVICE OF NEW HAMPSHIRE

RECONCILIATION OF ENERGY SERVICE
AND STRANDED COSTS FOR CALENDAR YEAR 2011

DOCKET NO. DE-12-___

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A. Filing Letter

B. Direct Testimony of Robert A. Baumann — Exhibit 1

C. Direct Testimony of Frederick B. White — Exhibit 2

D. Direct Testimony of William H. Smagula — Exhibit 3

**Public Service of New Hampshire**

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A Northeast Utilities Company

**Sarah B. Knowlton**
Senior Counsel

May 1, 2012

***By Hand Delivery***

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

**Re: Docket DE 12-___; Reconciliation of PSNH's Energy Service and Stranded Cost for Calendar Year 2011**

Dear Ms. Howland:

I enclose for filing an original and six copies of the pre-filed testimony of Robert A. Baumann, Frederick B. White and William H. Smagula supporting the reconciliation of revenues and expenses for Public Service Company of New Hampshire's Default Energy Service Charge and Stranded Cost Recovery Charge for the calendar year 2011.

If you have any questions, please do not hesitate to contact me. Thank you for your assistance with this matter.

Very truly yours,

Sarah B. Knowlton

Sarah B. Knowlton

Enclosures
cc: Rorie Hollenberg, Acting Consumer Advocate (by electronic mail only)

Docket DE 12-XXX
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 CALENDAR YEAR 2011**
**PREPARED TESTIMONY OF**
**ROBERT A. BAUMANN**

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

A. My name is Robert A. Baumann. My business address is 107 Selden Street, Berlin, Connecticut. I am Director, Revenue Regulation & Load Resources for Northeast Utilities Service Company (NUSCO) which provides centralized services to the Northeast Utilities (NU) operating subsidiaries Public Service Company of New Hampshire (PSNH), The Connecticut Light and Power Company, Yankee Gas Services Company and Western Massachusetts Electric Company.

**Q. What are your responsibilities as Director - Revenue Regulation and Load Resources?**

A. I have overall responsibility for the planning and coordination of revenue requirement filings for PSNH, and for the planning, coordination, and implementation of fuel and generation recovery mechanisms and all other fuel recovery matters for the NU operating companies, before regulatory commissions including the New Hampshire Public Utilities Commission (PUC or the Commission).

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

A. Yes. I have testified in numerous hearings for PSNH. I have also testified in proceedings before the Connecticut Public Utilities Regulatory Authority and the Massachusetts Department of Public Utilities, and the Federal Energy Regulatory Commission.

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

A. The primary purpose of my testimony is to provide an overview of this filing and to seek approval of the reconciliation between the revenues and expenses contained within PSNH's Energy Service (ES) and Stranded Cost Recovery Charge (SCRC) rate filings for the twelve-month reporting period January 1, 2011 through December 31, 2011 ("reporting period").

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

A. Yes.

William H. Smagula, Director - PSNH Generation will review the performance of PSNH's fossil-hydro generation units and Frederick B. White, Supervisor - Power Supply Analysis and Policy, NUSCO will review how PSNH met its energy and capacity requirements during this reporting period.

**Q. What are the final results for ES and SCRC in the 2011 reporting period?**

A. For ES, the net balance as of December 31, 2011 is an under-recovery of $13.3 million. $13.1 million of the under-recovery relates to the deferral of costs of the Wet Flue Gas Desulfurization System (Scrubber) at Merrimack Station which were incurred from September 28, 2011 – December 31, 2011 but which were not approved by the Commission to be included in 2011 ES rates. The Scrubber was operational on September 28, 2011. The costs associated with the Scrubber are currently being considered in Docket No. DE 11-250 (Investigation of Scrubber Costs and Cost Recovery) and thus are not being addressed in this filing. Supporting calculations are contained in Attachment RAB-3 and Attachment RAB-4, page 6.

For SCRC, the net balance as of December 31, 2011 is an under-recovery of $1.5 million. The under-recovery primarily relates to higher than forecasted above-market IPP costs. Supporting calculations are contained in Attachment RAB-4, page 1.

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

A. On May 1, 2001 (Competition Day), PSNH began to recover costs under the Restructuring Settlement. Under the terms of the Restructuring Settlement, PSNH continues to recover costs related to the generation and delivery of electricity, but the specific rate structure now in place segments recovery into various components. The four major components of that segmentation are the Delivery Charge, the Transmission Cost Adjustment Mechanism (TCAM), the SCRC, and the

ES Charge. Two of the major interrelated rate components, the SCRC and the ES are the subject of this proceeding.

**Energy Service Charge**

**Q. Explain how the SCRC and the ES Charge interrelate.**

A. Through January 31, 2006, the ES rate recovery was a subset of the SCRC. The difference between ES revenues and ES costs was accounted for and included as an adjustment to Part 3 non-securitized stranded costs, which was a component of the SCRC. Effective February 1, 2006, ES reconciliation amounts were no longer applied to the SCRC. Instead, ES reconciliation amounts were deferred and applied to future ES rates per Order No. 24,579 in Docket No. DE 05-164.

The SCRC recovers all costs that qualify as stranded and will be described later in this testimony.

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

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

Under the terms of the Restructuring Settlement and subsequent legislation, PSNH 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 (Group 2) was based on PSNH's forecast of "actual, prudent and reasonable costs" (4.67 cents). Beginning in February 2004, the ES rate for all retail customers was based on a forecast of "PSNH'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.

| Rate in Effect: | Rate Set By: Statute or Docket No. | Residential, Small Commercial/Industrial Customers (RSCI) | Large Commercial/ Industrial Customers (LCI) |
|---|---|---|---|
| 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 – March 31, 2012 | DE 11-215 | 8.31 cents | 8.31 cents |
| April 1, 2012 – June 30, 2012 Temporary Rate | DE 11-250 | 8.75 cents | 8.75 cents |

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

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

**Q. Are Scrubber costs included in the final results of the reporting period for Energy Service?**

A. Yes. The Scrubber was operational and used and useful on September 28, 2011. The Scrubber costs relate to the return on the Scrubber, rate base, depreciation, property tax and Scrubber-related O&M, fuel and avoided SO2 costs effective September 28, 2011. We do not seek approval of these costs in this docket.

**Q. Has recovery of the cost of the Scrubber through ES rates commenced for the period January 1, 2011 through December 31, 2011?**

A. No, the costs of the Scrubber were not recovered in rates for 2011. The Commission opened Docket No. DE 11-250 - Investigation of Merrimack Station Scrubber Project and Cost Recovery to address the issue of Scrubber cost recovery. While the Commission recently approved temporary rates in that docket effective April 16, 2012, those rates are not reflected here since they were not approved during the reporting period.

**Q. For the twelve-month reporting period covered in this filing, how have the ES rates, as outlined in your table, compared to the actual costs of supplying power during the same periods ?**

**A.** In attachment RAB-3, we have calculated that the average ES cost for 2011 was approximately 8.84 cents per kWh.

PSNH's owned generation for the year continued to operate well and provided approximately 52% of PSNH's energy needs. Mr. Smagula provides further detailed testimony regarding specific units and their performance during 2011. When combined with IPP purchases, IPP buyout replacement purchases, Lempster and the Vermont Yankee purchased power arrangements, which cumulatively contributed another 14% of energy requirements; PSNH met 66% of its energy needs with sources other than market purchases. The remaining 34% of PSNH's energy needs were met by spot market purchases (19%) and bilateral energy purchases (15%).

In its initial decision in Docket No. DE 03-175 (Order No. 24,252), the Commission reiterated its desire to avoid ES cost deferrals. As a way to minimize these deferrals, the Commission provided any interested party with the option of making an interim ES rate filing, with the objective of setting a revised ES rate. In June 2011, PSNH filed such a petition with the Commission requesting an interim increase to the existing ES rate. A rate increase was granted by the Commission (Docket No. DE 10-257, (Order No. 25,242)) resetting the ES rate from 8.67 cents per kilowatt-hour to 8.89 cents per kilowatt-hour for all customer classes effective July 1, 2011. This new rate remained in effect through December 2011. The net ES deferral for the twelve months ended December 2011 was an under-recovery of $13.3 million as calculated in Attachment RAB-4, page 6.

**Stranded Cost Recovery Charge**

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

A. The SCRC recovers costs categorized as "stranded" by New Hampshire law in RSA Chapters 374-F and 369-B. The initial SCRC average rate of 3.4 cents per kWh was agreed to in the Restructuring Settlement which further defined what PSNH'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. The first tier, Part 1 stranded costs, has the highest priority for recovery. All Part 1 costs have been securitized through the issuance of rate reduction bonds (RRBs). Part 1 costs consist of the over-market portion of Seabrook regulatory assets, a portion of PSNH'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 are also recovered as Part 1 costs. Page 4 of Attachment RAB-4 shows the recovery of Part 1 costs by month.

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 PSNH's share of the present value of the savings associated with these buy-down and buy-out transactions. PSNH is amortizing these up-front payments over the respective terms of the original IPP rate orders, including a return on the unrecovered costs.

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. Page 5 of Attachment RAB-4 shows the detailed Part 2 costs by month.

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

A. That depends on the type of cost. Part 1 costs are recovered through the SCRC over the life of the corresponding terms of the rate reduction bonds. Part 1 recovery is expected to end in May 2013 when PSNH expects that the RRBs will have been fully amortized.

The timing of Part 2 cost recovery through the SCRC is dependent on the type of cost. There are several types of Part 2 costs: ongoing purchases from the IPPs; the amortization of up-front payments associated with buyouts or buydowns of IPP rate orders or contracts; and various returns, including (1) the return on the credit for Part 1 related deferred taxes, (2) returns on Part 2 stranded costs and the outstanding Yankee contract obligations, (3) the return on SCRC deferred balance.

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

fired IPP expiring in 2008. Therefore, Part 2 costs have decreased and will continue to decrease as those rate orders expire. In addition, the credit for Part 1 related deferred taxes pertaining to RRBs will end in 2013 once all Part 1 costs are fully recovered.

**Q. Please provide an overview of stranded cost recovery during the 2011 reporting period.**

A. During the reporting period, the total accumulated balance of Part 1 and 2 costs was reduced by $51 million from $139 million at the end of 2010 to $87 million at the end of 2011. See Attachment RAB-4, page 1.

**Q. Was there activity through the Seabrook Power Contracts in 2011 that affected the Seabrook net proceeds figure?**

A. Yes. There have been credits to NAEC in 2011 that increased Seabrook net proceeds on a cumulative basis by $237,000. See Attachment RAB-4, page 7. While there may be additional charges and credits in 2012 that will further impact the net proceeds figure, we do not expect these amounts to be significant. However, we are unable to quantify these charges and credits at this time.

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

A. Yes, the Seabrook Power Contracts between PSNH and NAEC are still in place for Seabrook sale reconciliation purposes.

**Q. Did PSNH file a summary of 2011 benefits for the Northern Wood Power project (NWPP)?**

A. Yes. Attachment RAB-4, page 11 provides the NWPP revenue target as well as the projected incremental revenues based on Schiller Unit 5 generation, consisting of Renewable Energy Certificates (RECs), Production Tax Credit (PTCs) and RGGI avoided costs. These 2011 credits will be trued up to actual in the 2012 ES/SCRC filing.

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

A. PSNH is requesting that the Commission approve the 2011 SCRC and ES reconciliations and find that PSNH's non-Scrubber costs were prudently incurred.

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

A. Yes, it does.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

SUMMARY OF EXHIBITS

| Exhibit No. | Description/Summary |
|---|---|
| 1. | **Direct testimony of Robert A. Baumann**<br>• **Attachment RAB-1 – Summary of Stranded Cost Recovery Reconciliation Exhibits and Testimonies**<br>• **Attachment RAB-2 – Summary of Replacement Power Costs for Fossil Outages during the period January 2011 - December 2011**<br>• **Attachment RAB-3 – Summary of Energy Service Costs and Revenues for the period January 2011 - December 2011**<br>• **Attachment RAB-4 – Reconciliation of Energy Service and Stranded Cost Recovery for the period January 2011 - December 2011** |
| 2. | **Direct testimony of Frederick B. White**<br>• **Generation Resources and Energy Requirements** |
| 3. | **Direct testimony of William H. Smagula**<br>• **Fossil Outages** |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
Replacement Power Costs (RPC)
For the Period January 1, 2011 through December 31, 2011

| UNIT | DATES | TYPE | PSNH RPC |
|---|---|---|---|
| Merrimack 1 | 01/04/11 - 01/07/11 | Outage | $ 104,401 |
| Merrimack 2 | 01/25/11 - 01/29/11 | Outage | 1,182,364 |
| | 03/05/11 - 03/07/11 | Outage | 197,595 |
| | 05/13/11 - 05/16/11 | Outage | 100,118 |
| | 12/07/11 - 12/12/11 | Outage | - |
| Newington | 09/21/11 - 09/23/11 | Outage | - |
| Schiller 5 | 11/12/11 - 11/19/11 | Outage | 51,894 |
| Total | | | $ 1,636,372 |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE RECONCILIATION

FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
(Dollars in 000s)

| ACTUAL ENERGY SERVICE REVENUES AND COSTS | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | Total for the six months ended 12/31/11 (2) | Total for the twelve months ended 12/31/11 |
|---|---|---|---|---|---|---|---|---|
| Energy Service Revenue | | | | | | | | |
| Residential | 27,400 | 25,836 | 23,266 | 21,599 | 18,317 | 20,727 | $ 138,665 | $ 275,810 |
| Commercial | 13,422 | 13,077 | 12,358 | 11,917 | 10,824 | 12,274 | 75,221 | 149,092 |
| Manufacturing | 1,871 | 1,978 | 1,919 | 1,901 | 1,774 | 1,805 | 11,322 | 22,570 |
| Public street lights | 107 | 90 | 82 | 72 | 57 | 56 | 435 | 899 |
| Sub-total | 42,800 | 40,981 | 37,625 | 35,489 | 30,972 | 34,862 | 225,643 | 448,372 |
| Unbilled ES accrual | 23,381 | 19,814 | 20,242 | 16,838 | 18,417 | 19,961 | 122,079 | 240,732 |
| Prior month reversal | (22,898) | (23,381) | (19,814) | (20,242) | (16,838) | (18,417) | (120,539) | (242,128) |
| Net ES unbilled | 483 | (3,567) | 429 | (3,405) | 1,579 | 1,545 | 1,541 | (1,396) |
| Net Energy Service Revenue | $ 43,283 | $ 37,414 | $ 38,054 | $ 32,084 | $ 32,551 | $ 36,407 | $ 227,184 | $ 446,976 |
| Energy Service Cost | | | | | | | | |
| Fossil energy costs | $ 19,111 | $ 14,553 | $ 13,178 | $ 7,745 | $ 5,088 | $ 9,294 | $ 37,393 | $ 106,362 |
| F/H O&M depr. & taxes | 9,327 | 8,886 | 10,812 | 14,989 | 13,338 | 10,050 | 72,284 | 139,686 |
| Return on rate base | 3,628 | 3,630 | 3,491 | 3,567 | 3,567 | 3,601 | 29,595 | 51,079 |
| Seabrook Costs (credits) | - | - | - | - | - | (150) | (86) | (237) |
| Vermont Yankee | 688 | 623 | 648 | 668 | 655 | 642 | 3,242 | 7,166 |
| IPP costs (1) | 4,174 | 2,090 | 2,341 | 2,638 | 2,231 | 1,581 | 10,326 | 25,381 |
| Purchases | 6,533 | 5,753 | 5,850 | 7,274 | 13,577 | 8,298 | 71,669 | 118,953 |
| Sales | (6,039) | (3,248) | (2,195) | (1,604) | (1,639) | (1,317) | (9,135) | (25,177) |
| ISO-NE Ancillary | (560) | 184 | (798) | 165 | 245 | 245 | (866) | (1,386) |
| Capacity Costs | 1,200 | 1,085 | 1,049 | 257 | 601 | 962 | 5,272 | 10,428 |
| NH RPS | 873 | 864 | 869 | 869 | 869 | 901 | 6,833 | 12,079 |
| RGGI Costs | 720 | 267 | 431 | 354 | 1,360 | 373 | 1,847 | 5,351 |
| ES Return | 22 | 18 | 13 | 15 | 24 | 27 | 111 | 230 |
| Total Energy Service Cost | $ 39,676 | $ 34,704 | $ 35,690 | $ 36,937 | $ 39,917 | $ 34,507 | $ 228,484 | $ 449,915 |
| Net Energy Service under (over) recovery (L43 - L24) | $ (3,607) | $ (2,709) | $ (2,364) | $ 4,852 | $ 7,365 | $ (1,900) | $ 1,301 | $ 2,939 |

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

(2) See Attachment RAB-3, page 2 of 2.

| ENERGY SERVICE COST PER KWH | TOTAL May - Dec 2001 | TOTAL Jan - Dec 2002 | TOTAL Jan - Dec 2003 | TOTAL Jan - Dec 2004 | TOTAL Jan - Dec 2005 | TOTAL Jan - Dec 2006 | TOTAL Jan - Dec 2007 | TOTAL Jan - Dec 2008 | TOTAL Jan - Dec 2009 | TOTAL Jan - Dec 2010 | TOTAL Jan - Dec 2011 | Average May 2001 - December 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Service cost | $ 209,997 | $ 361,474 | $ 410,943 | $ 444,757 | $ 551,027 | $ 609,654 | $ 621,471 | $ 680,380 | $ 647,751 | $ 486,589 | $ 449,915 | $ 5,473,958 |
| Retail MWH sales | 4,934,048 | 7,369,393 | 7,653,568 | 7,964,760 | 8,110,367 | 7,462,688 | 7,585,627 | 7,595,272 | 6,290,761 | 5,419,726 | 5,091,947 | 75,478,155 |
| Energy Service cost per KWH | $ 0.0426 | $ 0.0491 | $ 0.0537 | $ 0.0558 | $ 0.0679 | $ 0.0817 | $ 0.0819 | $ 0.0896 | $ 0.1030 | $ 0.0898 | $ 0.0884 | $ 0.0725 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE RECONCILIATION

FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
(Dollars in 000s)

| ACTUAL ENERGY SERVICE REVENUES AND COSTS | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total for the six months ended 12/31/11 |
|---|---|---|---|---|---|---|---|
| Energy Service Revenue | | | | | | | |
| Residential | 24,702 | 26,815 | 23,620 | 20,718 | 20,413 | 22,397 | $ 138,665 |
| Commercial | 13,615 | 14,116 | 13,367 | 12,049 | 11,087 | 10,987 | 75,221 |
| Manufacturing | 2,057 | 2,089 | 1,961 | 1,913 | 1,689 | 1,612 | 11,322 |
| Public street lights | 55 | 60 | 69 | 77 | 80 | 93 | 435 |
| Sub-total | 40,429 | 43,080 | 39,017 | 34,758 | 33,270 | 35,088 | 225,643 |
| Unbilled ES accrual | 24,241 | 22,686 | 18,857 | 16,486 | 18,307 | 21,502 | 122,079 |
| Prior month reversal | (19,961) | (24,241) | (22,686) | (18,857) | (16,486) | (18,307) | (120,539) |
| Net ES unbilled | 4,279 | (1,555) | (3,829) | (2,371) | 1,821 | 3,195 | 1,541 |
| Net Energy Service Revenue | $ 44,709 | $ 41,525 | $ 35,188 | $ 32,387 | $ 35,091 | $ 38,284 | $ 227,184 |
| Energy Service Cost | | | | | | | |
| Fossil energy costs | $ 9,378 | $ 8,675 | $ 1,565 | $ 5,482 | $ 9,369 | $ 2,924 | $ 37,393 |
| F/H O&M depr. & taxes | 10,506 | 9,634 | 9,877 | 14,779 | 15,611 | 11,876 | 72,284 |
| Return on rate base | 3,556 | 3,556 | 4,055 | 6,143 | 6,143 | 6,143 | 29,595 |
| Seabrook Costs (credits) | - | - | (87) | - | - | 0 | (86) |
| Vermont Yankee | 643 | 639 | 555 | 149 | 586 | 670 | 3,242 |
| IPP Costs | 1,597 | 1,061 | 1,804 | 2,076 | 1,983 | 1,805 | 10,326 |
| Purchases | 10,961 | 13,216 | 14,589 | 13,112 | 9,174 | 10,616 | 71,669 |
| Sales | (1,814) | (1,279) | (1,256) | (2,102) | (1,703) | (981) | (9,135) |
| ISO-NE Ancillary | 41 | (88) | 178 | 181 | (897) | (280) | (866) |
| Capacity Costs | 795 | 886 | 917 | 965 | 851 | 859 | 5,272 |
| NH RPS | 1,048 | 901 | 2,081 | 1,032 | 1,032 | 740 | 6,833 |
| RGGI Costs | 441 | 339 | 228 | 249 | 331 | 259 | 1,847 |
| ES Return | 19 | 10 | 7 | 14 | 28 | 32 | 111 |
| Total Energy Service Cost | $ 37,169 | $ 37,551 | $ 34,513 | $ 42,079 | $ 42,509 | $ 34,664 | $ 228,484 |
| Net Energy Service under (over) recovery (L43 - L24) | $ (7,540) | $ (3,974) | $ (675) | $ 9,692 | $ 7,418 | $ (3,620) | $ 1,301 |

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

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

## Stranded Cost (SC) Balances

| | | 01/01/11 Stranded Cost Balance | (Decr)/Incr for The twelve months ended 12/31/11 | 12/31/11 Stranded Cost Balance |
|---|---|---|---|---|
| 1 | Part 1 - Rate recovery bonds (RRB) | $ 129,780 | $ (53,389) | $ 76,391 |
| 2 | Part 2 - IPP Bio-energy Savings | 1,309 | $ (291) | 1,018 |
| 3 | IPP Buyouts/Buydowns & Savings | 10,190 | $ (1,609) | 8,580 |
| 4 | IPP Buyouts/Buydowns/Adjustments | - | - | - |
| 5 | Cumulative Net SCRC (Over)/Under Recovery | (2,435) | $ 3,896 | 1,460 |
| 6 | Total stranded cost (L1+L2+L3+L4+L5) | $ 138,844 | $ (51,393) | $ 87,449 |

## Stranded Cost Recovery Charge (SCRC)

| | | Total for The twelve months ended 12/31/11 |
|---|---|---|
| 7 | Revenues: | |
| 8 | Stranded Cost Recovery Revenues | $ 88,303 |
| 9 | Cost: | |
| 10 | Part 1 - RRBs, principal, interest & fees | 60,269 |
| 11 | Part 2 - Ongoing cost | 31,930 |
| 12 | Total cost (L10+L11): | $ 92,199 |
| 13 | Net SCRC (Over)/Under Recovery (L12-L8) | $ 3,896 |

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

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

**Stranded Cost (SC) Balances**

| | | | Stranded Cost Balance | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Stranded Cost Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Part 1 - Rate recovery bonds (RRB) | Page 4 | $ 129,780 | $ (4,232) | $ (4,451) | $ (4,451) | $ (4,451) | $ (4,276) | $ (4,276) | $ (4,276) | $ (4,666) | $ (4,666) | $ (4,666) | $ (4,488) | $ (4,488) | $ 76,391 |
| 2 | Part 2 - IPP Bio-energy Savings | Page 5 | 1,309 | (24) | (24) | (24) | (24) | (24) | (24) | (24) | (24) | (24) | (24) | (24) | (24) | 1,018 |
| | IPP Buyouts/Buydowns & Savings | Page 5 | 10,190 | (134) | (134) | (134) | (134) | (134) | (134) | (134) | (134) | (134) | (134) | (134) | (134) | 8,580 |
| 3 | Cumulative SCRC (Over)/Under Recovery | L11 | (2,435) | (2,205) | 83 | 703 | 964 | 699 | 32 | (1,283) | (277) | 1,234 | 1,912 | 1,521 | 513 | 1,461 |
| 4 | Total Stranded Cost | | $ 138,844 | $ (6,595) | $ (4,527) | $ (3,907) | $ (3,646) | $ (3,735) | $ (4,403) | $ (5,717) | $ (5,102) | $ (3,591) | $ (2,913) | $ (3,125) | $ (4,133) | $ 87,450 |

**Stranded Cost Recovery Charge (SCRC)**

| | | | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Revenues: | | | | | | | | | | | | | | |
| 6 | Stranded Cost Recovery Revenues | Page 3 | $ 8,249 | $ 7,308 | $ 7,615 | $ 6,775 | $ 7,283 | $ 7,574 | $ 8,265 | $ 7,778 | $ 6,847 | $ 6,610 | $ 6,625 | $ 7,374 | $ 88,303 |
| 7 | Cost: | | | | | | | | | | | | | | |
| 8 | Part 1 - RRBs, principle, interest and fees | Page 4 | 4,963 | 5,116 | 5,114 | 5,114 | 4,860 | 4,860 | 4,860 | 5,188 | 5,181 | 5,181 | 4,917 | 4,917 | 60,269 |
| 9 | Part 2 - Ongoing costs | Page 5 | 1,081 | 2,275 | 3,205 | 2,625 | 3,122 | 2,746 | 2,123 | 2,313 | 2,900 | 3,341 | 3,229 | 2,969 | 31,930 |
| 10 | Total Stranded Cost (L8+L9) | | 6,044 | 7,391 | 8,318 | 7,739 | 7,982 | 7,606 | 6,983 | 7,501 | 8,081 | 8,522 | 8,146 | 7,887 | 92,199 |
| 11 | Net SCRC (Over)/Under Recovery (L10-L6) | | $ (2,205) | $ 83 | $ 703 | $ 964 | $ 699 | $ 32 | $ (1,283) | $ (277) | $ 1,234 | $ 1,912 | $ 1,521 | $ 513 | $ 3,896 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| | Revenue By Class | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Stranded Cost Revenue | | | | | | | | | | | | | |
| 2 | Residential | $ 3,938 | $ 3,680 | $ 3,317 | $ 3,084 | $ 2,622 | $ 2,972 | $ 3,377 | $ 3,497 | $ 3,081 | $ 2,700 | $ 2,655 | $ 2,914 | $ 37,837 |
| 3 | Commercial | 3,250 | 3,100 | 2,963 | 3,001 | 2,757 | 3,305 | 3,267 | 3,239 | 3,112 | 3,016 | 2,643 | 2,706 | 36,359 |
| 4 | Manufacturing | 1,140 | 1,174 | 1,159 | 1,205 | 1,164 | 1,262 | 1,279 | 1,306 | 1,264 | 1,195 | 1,096 | 1,095 | 14,341 |
| 5 | Public street lights | 30 | 25 | 23 | 21 | 17 | 17 | 16 | 18 | 21 | 24 | 24 | 27 | 263 |
| 6 | **Subtotal** | 8,359 | 7,979 | 7,462 | 7,311 | 6,560 | 7,557 | 7,940 | 8,061 | 7,477 | 6,934 | 6,418 | 6,743 | 88,800 |
| 7 | Unbilled SCRC accrual | 4,519 | 3,848 | 4,001 | 3,465 | 4,188 | 4,205 | 4,530 | 4,248 | 3,617 | 3,293 | 3,500 | 4,131 | 47,544 |
| 8 | Prior month reversal | (4,628) | (4,519) | (3,848) | (4,001) | (3,465) | (4,188) | (4,205) | (4,530) | (4,248) | (3,617) | (3,293) | (3,500) | (48,042) |
| 9 | Net SCRC Unbilled | (110) | (671) | 153 | (536) | 722 | 17 | 326 | (283) | (630) | (324) | 207 | 631 | (497) |
| 10 | **Net SCRC Revenue** | $ 8,249 | $ 7,308 | $ 7,615 | $ 6,775 | $ 7,283 | $ 7,574 | $ 8,265 | $ 7,778 | $ 6,847 | $ 6,610 | $ 6,625 | $ 7,374 | $ 88,303 |
| 11 | Energy Service Revenue | | | | | | | | | | | | | |
| 12 | Residential | $ 27,400 | $ 25,836 | $ 23,266 | $ 21,599 | $ 18,317 | $ 20,727 | $ 24,702 | $ 26,815 | $ 23,620 | $ 20,718 | $ 20,413 | $ 22,397 | $ 275,810 |
| 13 | Commercial | 13,422 | 13,077 | 12,358 | 11,917 | 10,824 | 12,274 | 13,615 | 14,116 | 13,367 | 12,049 | 11,087 | 10,987 | 149,092 |
| 14 | Manufacturing | 1,871 | 1,978 | 1,919 | 1,901 | 1,774 | 1,805 | 2,057 | 2,089 | 1,961 | 1,913 | 1,689 | 1,612 | 22,570 |
| 15 | Public street lights | 107 | 90 | 82 | 72 | 57 | 56 | 55 | 60 | 69 | 77 | 80 | 93 | 899 |
| 16 | **Subtotal** | 42,800 | 40,981 | 37,625 | 35,489 | 30,972 | 34,862 | 40,429 | 43,080 | 39,017 | 34,758 | 33,270 | 35,088 | 448,372 |
| 17 | Unbilled ES accrual | 23,381 | 19,814 | 20,242 | 16,838 | 18,417 | 19,961 | 24,241 | 22,686 | 18,857 | 16,486 | 18,307 | 21,502 | 240,732 |
| 18 | Prior month reversal | (22,898) | (23,381) | (19,814) | (20,242) | (16,838) | (18,417) | (19,961) | (24,241) | (22,686) | (18,857) | (16,486) | (18,307) | (242,128) |
| 19 | Net ES Unbilled | 483 | (3,567) | 429 | (3,405) | 1,579 | 1,545 | 4,279 | (1,555) | (3,829) | (2,371) | 1,821 | 3,195 | (1,396) |
| 20 | **Net ES Revenue** | $ 43,283 | $ 37,414 | $ 38,054 | $ 32,084 | $ 32,551 | $ 36,407 | $ 44,709 | $ 41,525 | $ 35,188 | $ 32,387 | $ 35,091 | $ 38,284 | $ 446,976 |

**Amounts shown above may not add due to rounding.**

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| SCRC Part 1<br>Amortization of Securitized Assets | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Principal | | | | | | | | | | | | | |
| 2 Amortization of Seabrook cost | $ 4,011 | $ 4,218 | $ 4,218 | $ 4,218 | $ 4,052 | $ 4,052 | $ 4,052 | $ 4,422 | $ 4,422 | $ 4,422 | $ 4,252 | $ 4,252 | $ 50,592 |
| 3 Amortization of MP 3 | 127 | 134 | 134 | 134 | 129 | 129 | 129 | 140 | 140 | 140 | 135 | 135 | 1,607 |
| 4 Amortization of RRB1 financing cost | 94 | 99 | 99 | 99 | 95 | 95 | 95 | 104 | 104 | 104 | 100 | 100 | 1,191 |
| 5 Total | 4,232 | 4,451 | 4,451 | 4,451 | 4,276 | 4,276 | 4,276 | 4,666 | 4,666 | 4,666 | 4,488 | 4,488 | 53,389 |
| 6 Interest and Fees | | | | | | | | | | | | | |
| 7 RRB1 Interest | 675 | 609 | 609 | 609 | 534 | 534 | 534 | 467 | 467 | 467 | 385 | 385 | 6,276 |
| 8 Net RRB fees | 55 | 55 | 53 | 53 | 50 | 50 | 50 | 54 | 47 | 47 | 45 | 44 | 605 |
| 9 Total | 730 | 664 | 662 | 662 | 584 | 584 | 584 | 522 | 515 | 515 | 430 | 430 | 6,880 |
| 10 Total SCRC Part 1 cost | $ 4,963 | $ 5,116 | $ 5,114 | $ 5,114 | $ 4,860 | $ 4,860 | $ 4,860 | $ 5,188 | $ 5,181 | $ 5,181 | $ 4,917 | $ 4,917 | $ 60,269 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| | Part 2 Ongoing Cost Activity | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Energy Service Ongoing Costs** | | | | | | | | | | | | | |
| 2 | IPP at Market Costs (1) | $ 4,115 | $ 2,090 | $ 2,341 | $ 2,638 | $ 2,231 | $ 1,581 | $ 1,597 | $ 1,061 | $ 1,804 | $ 2,076 | $ 1,983 | $ 1,805 | $ 25,321 |
| 3 | 2010 ES true-up | 59 | - | - | - | - | - | - | - | - | - | - | - | 59 |
| 4 | **Total Ongoing Cost Applicable to Energy Service** | $ 4,174 | $ 2,090 | $ 2,341 | $ 2,638 | $ 2,231 | $ 1,581 | $ 1,597 | $ 1,061 | $ 1,804 | $ 2,076 | $ 1,983 | $ 1,805 | $ 25,381 |
| 5 | **SCRC Ongoing Costs** | | | | | | | | | | | | | |
| 6 | Amortization & Return on IPP buyout/buydown Savings | $ 225 | $ 240 | $ 263 | $ 278 | $ 271 | $ 240 | $ 210 | $ 207 | $ 206 | $ 222 | $ 247 | $ 266 | $ 2,875 |
| 7 | Above Market IPP Costs (1) | 1,261 | 2,431 | 3,322 | 2,711 | 3,199 | 2,847 | 2,231 | 2,414 | 2,986 | 3,388 | 3,231 | 2,978 | 32,999 |
| 8 | Return on deferred taxes | (352) | (340) | (328) | (315) | (303) | (291) | (274) | (262) | (249) | (234) | (222) | (210) | (3,379) |
| 9 | Return on Part 2 SCRC, net of deferred taxes | (38) | (37) | (36) | (35) | (34) | (34) | (32) | (31) | (30) | (29) | (28) | (27) | (391) |
| 10 | Return on SCRC deferred balance | (15) | (20) | (18) | (14) | (11) | (9) | (11) | (15) | (13) | (6) | 1 | 6 | (124) |
| 11 | Yankee Obligation & Amortization | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12 | Net Regulatory Obligations and Amortizations | - | - | - | - | - | (7) | - | - | - | - | - | (43) | (50) |
| 13 | 2010 SCRC true-up | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 14 | **Total ongoing costs applicable to SCRC** | $ 1,081 | $ 2,275 | $ 3,205 | $ 2,625 | $ 3,122 | $ 2,746 | $ 2,123 | $ 2,313 | $ 2,900 | $ 3,341 | $ 3,229 | $ 2,969 | $ 31,930 |

| | Ongoing Costs Balances | 01/01/2011 | Adjustments | Amortization | 12/31/2011 |
|---|---|---|---|---|---|
| 15 | | | | | |
| 16 | IPP Bio-energy Savings | $ 1,309 | $ - | $ 291 | $ 1,018 |
| 17 | IPP Buyouts/Buydowns & Savings | 10,190 | - | 1,609 | 8,580 |
| | | 11,499 | $ - | $ 1,900 | $ 9,598 |

(1) IPP ongoing costs are supported on page 9.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

**Energy Service Charge (ES)**

| | | Reference | 1/1/2011 ES Balance | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Revenues: | | | | | | | | | | | | | | | |
| 2 | Energy Service | Page 3 | | $ 43,283 | $ 37,414 | $ 38,054 | $ 32,084 | $ 32,551 | $ 36,407 | $ 44,709 | $ 41,525 | $ 35,188 | $ 32,387 | $ 35,091 | $ 38,284 | $ 446,976 |
| 3 | Cost: | | | | | | | | | | | | | | | |
| 4 | Part 2 - Ongoing costs | | | | | | | | | | | | | | | |
| 5 | - IPP at market | Page 5 | | 4,174 | 2,090 | 2,341 | 2,638 | 2,231 | 1,581 | 1,597 | 1,061 | 1,804 | 2,076 | 1,983 | 1,805 | 25,381 |
| 6 | - Generation Costs | Page 7 | | 35,480 | 32,597 | 33,335 | 34,284 | 37,661 | 32,899 | 35,553 | 36,479 | 32,702 | 39,989 | 40,497 | 32,826 | 424,304 |
| 7 | - Return on ES Deferral, net of deferred taxes | | | 22 | 18 | 13 | 15 | 24 | 27 | 19 | 10 | 7 | 14 | 28 | 32 | 230 |
| 8 | Total Costs (lines 4-7) | | | $ 39,676 | $ 34,704 | $ 35,690 | $ 36,937 | $ 39,917 | $ 34,507 | $ 37,169 | $ 37,551 | $ 34,513 | $ 42,079 | $ 42,509 | $ 34,664 | $ 449,915 |
| 9 | Net ES (Over)/Under Recovery (line 8 - line 2) | | $ 10,366 | $ (3,607) | $ (2,709) | $ (2,364) | $ 4,852 | $ 7,365 | $ (1,900) | $ (7,540) | $ (3,974) | $ (675) | $ 9,692 | $ 7,418 | $ (3,620) | $ 13,305 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| Generation Cost Summary | Reference | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Generation Cost | | | | | | | | | | | | | | |
| 2 Fossil energy costs | Page 8 | $ 19,111 | $ 14,553 | $ 13,178 | $ 7,745 | $ 5,088 | $ 9,294 | $ 9,378 | $ 8,675 | $ 1,565 | $ 5,482 | $ 9,369 | $ 2,924 | $ 106,362 |
| 3 F/H O&M, depr. & taxes | Page 13 | 9,327 | 8,886 | 10,812 | 14,989 | 13,338 | 10,050 | 10,506 | 9,634 | 9,877 | 14,779 | 15,611 | 11,876 | 139,686 |
| 4 Return on rate base | Page 12 | 3,628 | 3,630 | 3,491 | 3,567 | 3,567 | 3,601 | 3,556 | 3,556 | 4,055 | 6,143 | 6,143 | 6,143 | 51,079 |
| 5 Seabrook costs/ (credits) | | - | - | - | - | - | (150) | - | - | (87) | - | - | 0 | (237) |
| 6 Vermont Yankee | | 688 | 623 | 648 | 668 | 655 | 642 | 643 | 639 | 555 | 149 | 586 | 670 | 7,166 |
| 7 Purchases and sales | Page 10 | 495 | 2,505 | 3,655 | 5,670 | 11,938 | 6,981 | 9,147 | 11,937 | 13,333 | 11,011 | 7,472 | 9,635 | 93,777 |
| 8 ISO -NE Ancillary | Page 10 | (560) | 184 | (798) | 165 | 245 | 245 | 41 | (88) | 178 | 181 | (897) | (280) | (1,386) |
| 9 Capacity Costs | Page 10 | 1,200 | 1,085 | 1,049 | 257 | 601 | 962 | 795 | 886 | 917 | 965 | 851 | 859 | 10,427 |
| 10 NH RPS | Page 10 | 873 | 864 | 869 | 869 | 869 | 901 | 1,048 | 901 | 2,081 | 1,032 | 1,032 | 740 | 12,078 |
| 11 RGGI Costs | Page 10 | 720 | 267 | 431 | 354 | 1,360 | 373 | 441 | 339 | 228 | 249 | 331 | 259 | 5,352 |
| 12 Total | | $ 35,480 | $ 32,597 | $ 33,335 | $ 34,284 | $ 37,661 | $ 32,899 | $ 35,553 | $ 36,479 | $ 32,702 | $ 39,989 | $ 40,497 | $ 32,826 | $ 424,304 |

Amounts shown above may not add due to rounding

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| Fossil Energy Costs by Station | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December (3) 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 **Fossil Steam** | | | | | | | | | | | | | |
| 2 Merrimack (2) | $ 11,119 | $ 9,312 | $ 9,945 | $ 5,541 | $ 2,665 | $ 8,038 | $ 4,493 | $ 6,349 | $ (104) | $ 2,683 | $ 6,618 | $ 1,626 | $ 68,284 |
| 3 Schiller | 4,163 | 3,558 | 3,213 | 2,150 | 2,164 | 1,534 | 2,479 | 1,868 | 2,113 | 1,849 | 2,784 | 1,684 | 29,558 |
| 4 Newington | 3,880 | 1,700 | 197 | 67 | 46 | 145 | 2,634 | 790 | 218 | 1,685 | 554 | 261 | 12,178 |
| 5 Wyman No. 4 | 99 | 164 | 58 | 28 | 6 | 1 | 9 | 63 | 30 | 1 | 10 | 9 | 479 |
| 6 $SO_2$ allowance / $NO_X$ | 542 | 494 | 473 | 252 | 143 | 308 | 462 | 337 | 37 | 7 | 18 | 55 | 3,127 |
| 7 Other | 5 | 5 | (13) | 6 | 4 | 5 | 5 | 5 | 7 | 8 | 3 | 7 | 48 |
| 8 **Total Fossil Steam** | $ 19,808 | $ 15,233 | $ 13,872 | $ 8,045 | $ 5,028 | $ 10,031 | $ 10,082 | $ 9,412 | $ 2,301 | $ 6,234 | $ 9,986 | $ 3,641 | 113,674 |
| 9 **Internal Combustion** | | | | | | | | | | | | | |
| 10 C.T.'s: Lost Nation | 5 | 12 | - | 1 | 2 | - | 13 | - | 3 | - | - | - | 37 |
| 11 Merrimack | 24 | - | 4 | 6 | - | - | 5 | 21 | - | 6 | - | 16 | 82 |
| 12 Schiller | 7 | - | - | 15 | 2 | - | 32 | - | - | - | - | 8 | 63 |
| 13 White Lake | 17 | 2 | - | 5 | 6 | - | 9 | - | 5 | - | - | 13 | 57 |
| 14 **Total Internal Combustion** | $ 53 | $ 14 | $ 4 | $ 26 | $ 10 | $ - | $ 59 | $ 21 | $ 9 | $ 6 | $ - | $ 37 | $ 239 |
| 15 **NWPP Credits (1)** | (749) | (694) | (698) | (327) | 50 | (737) | (763) | (759) | (744) | (757) | (617) | (755) | (7,551) |
| 16 **Total Fossil Energy Costs** (Line 8 + Line 14 + Line 15) | $ 19,111 | $ 14,553 | $ 13,178 | $ 7,745 | $ 5,088 | $ 9,294 | $ 9,378 | $ 8,675 | $ 1,565 | $ 5,482 | $ 9,369 | $ 2,924 | $ 106,362 |

(1) See Page 11, Line 9.

(2) February 2011 includes a credit of $1.4M for resale of 30,000 tons of coal; July includes a credit of $5.2M for resale of 120,000 tons of coal; September reflects a credit of $1.572M for the annual physical-to-book inventory adjustment and December reflects a credit of $4.418M for Merrimack insurance proceeds.

(3) December reflects a reduction of $560 for the disallowance of the recovery of Replacement Power Costs per order 25,321 in DE 11-094.

**Amounts shown above may not add due to rounding**

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JANUARY 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 464,547 | 33,355.12 | 2,182.75 | 7.18 | 7.65 | 35,537.87 |
| 004 | Swans Falls Hydro | 286,231 | 18,354.65 | 639.70 | 6.41 | 6.64 | 18,994.35 |
| 005 | Stevens Mill | 92,665 | 5,656.48 | 527.27 | 6.10 | 6.67 | 6,183.75 |
| 008 | Cocheco Falls | 257,035 | 14,493.21 | 2,012.16 | 5.64 | 6.42 | 16,505.37 |
| 009 | China Mills Dam | 217,033 | 12,983.50 | 1,888.10 | 5.98 | 6.85 | 14,871.60 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,024.33 | 0.00 | 0.00 | 4,024.33 |
| 012 | Newfound Hydro | 368,000 | 45,521.60 | 6,368.96 | 12.37 | 14.10 | 51,890.56 |
| 014 | Sunapee Hydro | 354,900 | 22,524.65 | 1,186.36 | 6.35 | 6.68 | 23,711.01 |
| 017 | Nashua Hydro | 480,200 | 59,352.72 | 6,221.77 | 12.36 | 13.66 | 65,574.49 |
| 018 | Greggs Falls | 955,067 | 63,933.98 | 5,416.17 | 6.69 | 7.26 | 69,350.15 |
| 019 | Mine Falls | 616,571 | 41,606.44 | 5,943.44 | 6.75 | 7.71 | 47,549.88 |
| 021 | Pine Valley Mill | 98,695 | 5,126.92 | 1,045.73 | 5.19 | 6.25 | 6,172.65 |
| 023 | Lakeport Dam | 306,256 | 19,049.14 | 1,318.18 | 6.22 | 6.65 | 20,367.32 |
| 024 | West Hopkinton Hydro | 392,800 | 35,352.00 | 0.00 | 9.00 | 9.00 | 35,352.00 |
| 025 | Lisbon Hydro | 164,714 | 10,215.44 | 1,291.04 | 6.20 | 6.99 | 11,506.48 |
| 028 | Marlow Power | 61,778 | 3,855.86 | 248.13 | 6.24 | 6.64 | 4,103.99 |
| 029 | Sugar River Hydro | 57,800 | 5,936.06 | 780.19 | 10.27 | 11.62 | 6,716.25 |
| 032 | Great Falls Upper | 151,409 | 9,499.02 | 0.00 | 6.27 | 6.27 | 9,499.02 |
| 033 | Great Falls Lower | 343,200 | 30,888.00 | 0.00 | 9.00 | 9.00 | 30,888.00 |
| 034 | Waterloom Falls | 16,857 | 958.56 | 170.66 | 5.69 | 6.70 | 1,129.22 |
| 037 | Hosiery Mill Dam | 486 | 21.29 | 1,052.99 | 4.38 | 0.00 | 1,074.28 |
| 038 | Wyandotte Hydro | 40,761 | 2,335.75 | 315.90 | 5.73 | 6.51 | 2,651.65 |
| 039 | Clement Dam | 1,057,794 | 74,909.60 | 6,602.53 | 7.08 | 7.71 | 81,512.13 |
| 040 | Lochmere Dam | 545,621 | 31,994.00 | 2,050.93 | 5.86 | 6.24 | 34,044.93 |
| 044 | Rollinsford Hydro | 740,400 | 60,712.80 | 0.00 | 8.20 | 8.20 | 60,712.80 |
| 045 | Pembroke Hydro | 859,201 | 58,072.54 | 6,013.23 | 6.76 | 7.46 | 64,085.77 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 76.25 | 0.00 | 0.00 | 76.25 |
| 050 | Otis Mill Hydro | 2,953 | 142.21 | 159.77 | 4.82 | 10.23 | 301.98 |
| 051 | Steels Pond Hydro | 125,760 | 6,288.00 | 0.00 | 5.00 | 5.00 | 6,288.00 |
| 052 | Briar Hydro | 1,337,000 | 183,302.70 | 26,552.34 | 13.71 | 15.70 | 209,855.04 |
| 053 | River Bend Hydro | 684,529 | 43,172.54 | 1,011.90 | 6.31 | 6.45 | 44,184.44 |
| 054 | Penacook Upper Falls | 1,018,500 | 164,284.05 | 17,193.12 | 16.13 | 17.82 | 181,477.17 |
| 055 | Penacook Lower Falls | 1,473,500 | 52,014.55 | 0.00 | 3.53 | 3.53 | 52,014.55 |
| 056 | Campton Dam | 125,266 | 8,540.63 | 852.94 | 6.82 | 7.50 | 9,393.57 |
| 058 | Kelleys Falls | 48,127 | 2,672.47 | 1,066.17 | 5.55 | 7.77 | 3,738.64 |
| 060 | Goodrich Falls | 190,839 | 10,372.92 | 1,054.54 | 5.44 | 5.99 | 11,427.46 |
| 066 | Chamberlain Falls | 0 | 0.00 | 119.82 | 0.00 | 0.00 | 119.82 |
| 070 | Monadnock Paper Mills | 47,085 | 3,527.65 | 0.00 | 7.49 | 7.49 | 3,527.65 |
| 090 | Hadley Falls | 0 | 0.00 | 232.39 | 0.00 | 0.00 | 232.39 |
| 091 | Noone Falls | 14,804 | 1,024.90 | 174.46 | 6.92 | 8.10 | 1,199.36 |
| 106 | Otter Lane Hydro | 31,750 | 1,969.02 | 228.74 | 6.20 | 6.92 | 2,197.76 |
| 107 | Peterborough Lower Hydro | 17,600 | 2,196.91 | 760.67 | 12.48 | 16.80 | 2,957.58 |
| 108 | Garland Mill | 840 | 75.60 | 0.00 | 9.00 | 9.00 | 75.60 |
| 110 | Salmon Brook Station #3 | 45,897 | 3,195.62 | 523.39 | 6.96 | 8.10 | 3,719.01 |
| 118 | Fiske Mill | 114,380 | 6,627.06 | (286.00) | 5.79 | 5.54 | 6,341.06 |
| 120 | Avery Dam | 175,823 | 10,499.56 | 759.89 | 5.97 | 6.40 | 11,259.45 |
| 124 | Watson Dam | 75,488 | 9,380.99 | 981.23 | 12.43 | 13.73 | 10,362.22 |
| 128 | Weston Dam | 182,849 | 10,473.89 | 1,213.50 | 5.73 | 6.39 | 11,687.39 |
| 134 | Sunnybrook Hydro #2 | 5,565 | 306.89 | 81.42 | 5.51 | 6.98 | 388.31 |
| 171 | Pettyboro Hydro | 1,043 | 54.91 | 7.75 | 5.26 | 6.01 | 62.66 |
| 187 | Sugar River Hydro #2 | 84,612 | 4,684.99 | (265.83) | 5.54 | 5.22 | 4,419.16 |
| 189 | Errol Dam | 1,769,600 | 293045.76 | 25700 | 16.56 | 18.01 | 318,745.76 |
| 316 | Bridgewater Power | 11,015,403 | 782,315.34 | 56,929.87 | 7.10 | 7.62 | 839,245.21 |
| 320 | Alexandria Power | 7,968,812 | 472,111.15 | 0.00 | 5.92 | 5.92 | 472,111.15 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 9,241,299 | 1,238,077.32 | 127,620.96 | 13.40 | 14.78 | 1,365,698.28 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,372,263 | 164,025.11 | 14,581.40 | 6.91 | 7.53 | 178,606.51 |
| 445 | Dunbarton Road Landfill | 206,403 | 13,227.01 | 2,364.97 | 6.41 | 7.55 | 15,591.98 |
| 496 | Turnkey Rochester | 972,670 | 68,373.43 | 10,118.97 | 7.03 | 8.07 | 78,492.40 |
| 564 | Four Hills Landfill | 28,567 | 2,228.23 | 1,873.33 | 7.80 | 14.36 | 4,101.56 |
| 564A | Four Hills ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 564B | Four Hills Reducer | 862,859 | 50,208.50 | 2,291.31 | 5.82 | 6.08 | 52,499.81 |
| 628 | Eastman Brook Hydro | 39,634 | 2,455.25 | 155.08 | 6.19 | 6.59 | 2,610.33 |
| 631 | Bath Electric Hydro | 70,198 | 4,329.38 | 1,019.65 | 6.17 | 7.62 | 5,349.03 |
| 636 | Peterborough Upper Hydro | 86,752 | 10,791.50 | 799.88 | 12.44 | 13.36 | 11,591.38 |
| 642 | Spaulding Pond Hydro | 118,300 | 6,656.18 | (286.01) | 5.63 | 5.38 | 6,370.17 |
| 644 | Celley Mill Hydro | 62,784 | 3,756.15 | 314.04 | 5.98 | 6.48 | 4,070.19 |
| 1080 | UNH Turbine | 1,998,651 | 114,932.60 | 7,262.00 | 5.75 | 6.11 | 122,194.60 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JANUARY 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| | CP Power Sales Seventeen, LLC | 2,797,000 | 543,498.00 | | 19.43 | 19.43 | 543,498.00 |
| | SUB TOTAL | 54,345,426 | 4,961,548.30 | 360,544.43 | 9.13 | 9.79 | 5,322,092.73 |
| | Plus: Current Month Unvouchered IPP Liab. | 8,545,550 | 556,200.00 | - | - | - | 556,200.00 |
| | Less: Prior Month Unvouchered IPP Liab. | 9,032,500 | 503,100.00 | - | - | - | 503,100.00 |
| | GRAND TOTAL | 53,858,476 | $ 5,014,648.30 | $ 360,544.43 | 9.31 | 9.98 | $ 5,375,192.73 |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

FOR THE MONTH ENDING FEBRUARY 28, 2011

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 353,878 | 20,779.23 | 2,190.07 | 5.87 | 6.49 | 22,969.30 |
| 004 | Swans Falls Hydro | 213,625 | 11,955.91 | 641.85 | 5.60 | 5.90 | 12,597.76 |
| 005 | Stevens Mill | 0 | 0.00 | 529.04 | 0.00 | 0.00 | 529.04 |
| 008 | Cocheco Falls | 251,953 | 16,865.30 | 2,018.91 | 6.69 | 7.50 | 18,884.21 |
| 009 | China Mills Dam | 82,864 | 5,866.46 | 1,894.43 | 7.08 | 9.37 | 7,760.89 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,037.82 | 0.00 | 0.00 | 4,037.82 |
| 012 | Newfound Hydro | 166,400 | 20,583.68 | 3,457.44 | 12.37 | 14.45 | 24,041.12 |
| 014 | Sunapee Hydro | 179,346 | 13,831.08 | 1,190.34 | 7.71 | 8.38 | 15,021.42 |
| 017 | Nashua Hydro | 323,400 | 39,972.24 | 5,055.18 | 12.36 | 13.92 | 45,027.42 |
| 018 | Greggs Falls | 553,421 | 41,233.75 | 5,434.33 | 7.45 | 8.43 | 46,668.08 |
| 019 | Mine Falls | 717,109 | 40,404.11 | 5,963.37 | 5.63 | 6.47 | 46,367.48 |
| 021 | Pine Valley Mill | 76,021 | 5,614.61 | 1,049.47 | 7.39 | 8.77 | 6,664.08 |
| 023 | Lakeport Dam | 181,340 | 14,106.63 | 1,322.60 | 7.78 | 8.51 | 15,429.23 |
| 024 | West Hopkinton Hydro | 256,800 | 23,112.00 | 0.00 | 9.00 | 9.00 | 23,112.00 |
| 025 | Lisbon Hydro | 125,603 | 9,401.77 | 1,295.37 | 7.49 | 8.52 | 10,697.14 |
| 028 | Marlow Power | 34,488 | 2,425.87 | 248.96 | 7.03 | 7.76 | 2,674.83 |
| 029 | Sugar River Hydro | 1,400 | 143.78 | 621.27 | 10.27 | 54.65 | 765.05 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 184,000 | 16,560.00 | 0.00 | 9.00 | 9.00 | 16,560.00 |
| 034 | Waterloom Falls | 10,542 | 771.33 | 171.27 | 7.32 | 8.94 | 942.60 |
| 037 | Hosiery Mill Dam | 72,916 | 5,772.73 | 1,056.76 | 7.92 | 9.37 | 6,829.49 |
| 038 | Wyandotte Hydro | 0 | 0.00 | 317.03 | 0.00 | 0.00 | 317.03 |
| 039 | Clement Dam | 760,282 | 43,081.42 | 6,624.67 | 5.67 | 6.54 | 49,706.09 |
| 040 | Lochmere Dam | 390,439 | 29,290.20 | 2,057.81 | 7.50 | 8.03 | 31,348.01 |
| 044 | Rollinsford Hydro | 429,600 | 35,227.20 | 0.00 | 8.20 | 8.20 | 35,227.20 |
| 045 | Pembroke Hydro | 469,897 | 35,223.84 | 6,033.39 | 7.50 | 8.78 | 41,257.23 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 76.52 | 0.00 | 0.00 | 76.52 |
| 050 | Otis Mill Hydro | 13 | 0.82 | 160.34 | 6.31 | 0.00 | 161.16 |
| 051 | Steels Pond Hydro | 72,000 | 3,600.00 | 0.00 | 5.00 | 5.00 | 3,600.00 |
| 052 | Briar Hydro | 997,500 | 136,757.25 | 26,552.34 | 13.71 | 16.37 | 163,309.59 |
| 053 | River Bend Hydro | 590,107 | 32,692.07 | 1,015.29 | 5.54 | 5.71 | 33,707.36 |
| 054 | Penacook Upper Falls | 794,500 | 128,152.85 | 17,193.12 | 16.13 | 18.29 | 145,345.97 |
| 055 | Penacook Lower Falls | 1,137,500 | 40,153.75 | 0.00 | 3.53 | 3.53 | 40,153.75 |
| 056 | Campton Dam | 51,765 | 4,070.08 | 855.80 | 7.86 | 9.52 | 4,925.88 |
| 058 | Kelleys Falls | 45,478 | 2,939.00 | 1,069.75 | 6.46 | 8.81 | 4,008.75 |
| 060 | Goodrich Falls | 55,615 | 3,975.50 | 1,058.08 | 7.15 | 9.05 | 5,033.58 |
| 066 | Chamberlain Falls | 0 | 0.00 | 120.25 | 0.00 | 0.00 | 120.25 |
| 070 | Monadnock Paper Mills | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 090 | Goffstown Hydro | 0 | 0.00 | 233.22 | 0.00 | 0.00 | 233.22 |
| 091 | Noone Falls | 12,397 | 886.05 | 175.05 | 7.15 | 8.56 | 1,061.10 |
| 106 | Otter Lane Hydro | 19,201 | 1,480.67 | 229.51 | 7.71 | 8.91 | 1,710.18 |
| 107 | Peterborough Lower Hydro | 120 | 16.54 | 352.51 | 13.78 | 0.00 | 369.05 |
| 108 | Garland Mill | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 110 | Salmon Brook Station #3 | 33,741 | 2,102.62 | 525.15 | 6.23 | 7.79 | 2,627.77 |
| 118 | Fiske Mill | 103,164 | 6,945.61 | (286.00) | 6.73 | 6.46 | 6,659.61 |
| 120 | Avery Dam | 147,184 | 10,490.66 | 762.44 | 7.13 | 7.65 | 11,253.10 |
| 124 | Watson Dam | 56,064 | 6,909.42 | 454.71 | 12.32 | 13.14 | 7,364.13 |
| 128 | Weston Dam | 113,276 | 7,815.35 | 1,217.57 | 6.90 | 7.97 | 9,032.92 |
| 134 | Sunnybrook Hydro #2 | 2,695 | 178.76 | 81.69 | 6.63 | 9.66 | 260.45 |
| 171 | Pettyboro Hydro | 0 | 0.00 | 7.78 | 0.00 | 0.00 | 7.78 |
| 187 | Sugar River Hydro #2 | 18,438 | 1,722.46 | (265.83) | 9.34 | 7.90 | 1,456.63 |
| 189 | Errol Dam | 1,708,000 | 282,844.80 | 25,700.00 | 16.56 | 18.06 | 308,544.80 |
| 316 | Bridgewater Power | 0 | 0.00 | 57,120.76 | 0.00 | 0.00 | 57,120.76 |
| 320 | Alexandria Power | 9,734,960 | 650,373.52 | 0.00 | 6.68 | 6.68 | 650,373.52 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 45 | 2.51 | 0.00 | 5.58 | 5.58 | 2.51 |
| 440 | WES Concord MSW | 8,332,433 | 1,119,675.34 | 127,620.96 | 13.44 | 14.97 | 1,247,296.30 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,051,525 | 117,304.97 | 14,630.29 | 5.72 | 6.43 | 131,935.26 |
| 445 | Dunbarton Road Landfill | 181,731 | 9,918.41 | 2,372.90 | 5.46 | 6.76 | 12,291.31 |
| 496 | Turnkey Rochester | 591,810 | 33,157.41 | 10,152.90 | 5.60 | 7.32 | 43,310.31 |
| 564 | Four Hills Landfill | 13,722 | 1,070.32 | 1,873.33 | 7.80 | 21.45 | 2,943.65 |
| 564A | Four Hills ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 564B | Four Hills Reducer | 770,943 | 56,394.15 | 2,298.99 | 7.31 | 7.61 | 58,693.14 |
| 628 | Eastman Brook Hydro | 14,494 | 1,079.80 | 155.60 | 7.45 | 8.52 | 1,235.40 |
| 631 | Bath Electric Hydro | 89,600 | 4,953.34 | 1,023.07 | 5.53 | 6.67 | 5,976.41 |
| 636 | Peterborough Upper Hydro | 44,672 | 5,437.01 | 370.68 | 12.17 | 13.00 | 5,807.69 |
| 642 | Spaulding Pond Hydro | 72,240 | 5,110.11 | (286.00) | 7.07 | 6.68 | 4,824.11 |
| 644 | Celley Mill Hydro | 43,136 | 3,240.66 | 315.09 | 7.51 | 8.24 | 3,555.75 |
| 1080 | UNH Turbine | 31,703 | 1,170.37 | 7,288.00 | 3.69 | 26.68 | 8,458.37 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING FEBRUARY 28, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| | CP Power Sales Seventeen, LLC | 5,386,000 | 1,232,994.00 | 0.00 | 22.89 | 22.89 | 1,232,994.00 |
| | SUB TOTAL | 39,153,096 | 4,347,839.32 | 355,437.24 | 11.10 | 12.01 | 4,703,276.56 |
| | Plus: Current Month Unvouchered IPP Liab. | 5,254,710 | 373,900.00 | - | - | - | 373,900.00 |
| | Less: Prior Month Unvouchered IPP Liab. | 8,545,550 | 556,200.00 | - | - | - | 556,200.00 |
| | GRAND TOTAL | 35,862,256 | $ 4,165,539.32 | $ 355,437.24 | 11.62 | 12.61 | $ 4,520,976.56 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING MARCH 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 446,523 | 20,268.88 | 2,196.83 | 4.54 | 5.03 | 22,465.71 |
| 004 | Swans Falls Hydro | 326,600 | 13,997.75 | 643.83 | 4.29 | 4.48 | 14,641.58 |
| 005 | Stevens Mill | 0 | 0.00 | 530.67 | 0.00 | 0.00 | 530.67 |
| 008 | Cocheco Falls | 257,033 | 12,827.61 | 2,025.14 | 4.99 | 5.78 | 14,852.75 |
| 009 | China Mills Dam | 263,038 | 12,078.63 | 1,900.27 | 4.59 | 5.31 | 13,978.90 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,050.28 | 0.00 | 0.00 | 4,050.28 |
| 012 | Newfound Hydro | 790,400 | 97,772.48 | 4,913.20 | 12.37 | 12.99 | 102,685.68 |
| 014 | Sunapee Hydro | 107,393 | 5,813.85 | 1,194.01 | 5.41 | 6.53 | 7,007.86 |
| 017 | Nashua Hydro | 476,000 | 58,833.60 | 5,638.47 | 12.36 | 13.54 | 64,472.07 |
| 018 | Greggs Falls | 771,141 | 42,042.45 | 5,451.09 | 5.45 | 6.16 | 47,493.54 |
| 019 | Mine Falls | 1,810,723 | 79,610.43 | 5,981.77 | 4.40 | 4.73 | 85,592.20 |
| 021 | Pine Valley Mill | 140,113 | 6,777.46 | 1,052.93 | 4.84 | 5.59 | 7,830.39 |
| 023 | Lakeport Dam | 120,464 | 6,490.01 | 1,326.68 | 5.39 | 6.49 | 7,816.69 |
| 024 | West Hopkinton Hydro | 197,600 | 17,784.00 | 0.00 | 9.00 | 9.00 | 17,784.00 |
| 025 | Lisbon Hydro | 133,891 | 6,872.94 | 1,299.37 | 5.13 | 6.10 | 8,172.31 |
| 028 | Marlow Power | 61,073 | 3,118.60 | 249.73 | 5.11 | 5.52 | 3,368.33 |
| 029 | Sugar River Hydro | 83,200 | 8,544.64 | 700.73 | 10.27 | 11.11 | 9,245.37 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 293,600 | 26,424.00 | 0.00 | 9.00 | 9.00 | 26,424.00 |
| 034 | Waterloom Falls | 36,650 | 1,715.19 | 171.83 | 4.68 | 5.15 | 1,887.02 |
| 037 | Hosiery Mill Dam | 40,392 | 1,935.22 | 1,060.24 | 4.79 | 7.42 | 2,995.46 |
| 038 | Wyandotte Hydro | 25,252 | 1,079.10 | 318.07 | 4.27 | 5.53 | 1,397.17 |
| 039 | Clement Dam | 1,373,534 | 59,061.45 | 6,645.11 | 4.30 | 4.78 | 65,706.56 |
| 040 | Lochmere Dam | 368,643 | 17,816.09 | 2,064.16 | 4.83 | 5.39 | 19,880.25 |
| 044 | Rollinsford Hydro | 610,800 | 50,085.60 | 0.00 | 8.20 | 8.20 | 50,085.60 |
| 045 | Pembroke Hydro | 601,603 | 32,589.95 | 6,052.00 | 5.42 | 6.42 | 38,641.95 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 76.77 | 0.00 | 0.00 | 76.77 |
| 050 | Otis Mill Hydro | 44,370 | 1,943.07 | 160.87 | 4.38 | 4.74 | 2,103.94 |
| 051 | Steels Pond Hydro | 69,120 | 3,456.00 | 0.00 | 5.00 | 5.00 | 3,456.00 |
| 052 | Briar Hydro | 3,125,500 | 428,506.05 | 26,552.34 | 13.71 | 14.56 | 455,058.39 |
| 053 | River Bend Hydro | 832,150 | 36,489.24 | 1,018.42 | 4.38 | 4.51 | 37,507.66 |
| 054 | Penacook Upper Falls | 2,026,500 | 326,874.45 | 17,193.12 | 16.13 | 16.98 | 344,067.57 |
| 055 | Penacook Lower Falls | 2,775,500 | 97,975.15 | 0.00 | 3.53 | 3.53 | 97,975.15 |
| 056 | Campton Dam | 35,076 | 1,952.72 | 858.44 | 5.57 | 8.01 | 2,811.16 |
| 058 | Kelleys Falls | 149,312 | 7,014.48 | 1,073.05 | 4.70 | 5.42 | 8,087.53 |
| 060 | Goodrich Falls | 122,564 | 5,233.46 | 1,061.34 | 4.27 | 5.14 | 6,294.80 |
| 066 | Chamberlain Falls | 37,211 | 1,548.88 | 120.65 | 4.16 | 4.49 | 1,669.53 |
| 070 | Monadnock Paper Mills | 14,651 | 657.28 | 0.00 | 4.49 | 4.49 | 657.28 |
| 090 | Goffstown Hydro | 0 | 0.00 | 233.99 | 0.00 | 0.00 | 233.99 |
| 091 | Noone Falls | 35,776 | 1,663.56 | 175.59 | 4.65 | 5.14 | 1,839.15 |
| 106 | Otter Lane Hydro | 19,736 | 1,093.41 | 230.22 | 5.54 | 6.71 | 1,323.63 |
| 107 | Peterborough Lower Hydro | 9,460 | 1,209.13 | 556.59 | 12.78 | 18.67 | 1,765.72 |
| 108 | Garland Mill | 110 | 9.90 | 0.00 | 9.00 | 9.00 | 9.90 |
| 110 | Salmon Brook Station #3 | 143,991 | 6,344.43 | 526.77 | 4.41 | 4.77 | 6,871.20 |
| 118 | Fiske Mill | 52,934 | 3,150.61 | 572.00 | 5.95 | 7.03 | 3,722.61 |
| 120 | Avery Dam | 143,185 | 7,101.15 | 764.79 | 4.96 | 5.49 | 7,865.94 |
| 124 | Watson Dam | 65,184 | 8,036.48 | 717.97 | 12.33 | 13.43 | 8,754.45 |
| 128 | Weston Dam | 179,309 | 8,372.90 | 1,221.33 | 4.67 | 5.35 | 9,594.23 |
| 134 | Sunnybrook Hydro #2 | 4,215 | 195.86 | 81.94 | 4.65 | 6.59 | 277.80 |
| 171 | Pettyboro Hydro | 0 | 0.00 | 7.80 | 0.00 | 0.00 | 7.80 |
| 187 | Sugar River Hydro #2 | 51,029 | 2,087.86 | 531.66 | 4.09 | 5.13 | 2,619.52 |
| 189 | Errol Dam | 1,531,600 | 253,632.96 | 25,700.00 | 16.56 | 18.24 | 279,332.96 |
| 316 | Bridgewater Power | 0 | 0.00 | 57,296.97 | 0.00 | 0.00 | 57,296.97 |
| 320 | Alexandria Power | 7,118,843 | 356,701.30 | 0.00 | 5.01 | 5.01 | 356,701.30 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 9,052,414 | 1,235,918.65 | 127,620.96 | 13.65 | 15.06 | 1,363,539.61 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 1,451,621 | 64,328.99 | 14,675.42 | 4.43 | 5.44 | 79,004.41 |
| 445 | Dunbarton Road Landfill | 189,465 | 7,950.45 | 2,380.22 | 4.20 | 5.45 | 10,330.67 |
| 496 | Turnkey Rochester | 437,574 | 18,906.62 | 10,184.22 | 4.32 | 6.65 | 29,090.84 |
| 564 | Four Hills Landfill | 17,172 | 1,339.42 | 2,961.07 | 7.80 | 25.04 | 4,300.49 |
| 564A | Four Hills ST | 6,394 | 250.00 | 0.00 | 3.91 | 3.91 | 250.00 |
| 564B | Four Hills Reducer | 1,345,152 | 67,434.90 | 2,306.08 | 5.01 | 5.18 | 69,740.98 |
| 628 | Eastman Brook Hydro | 19,402 | 994.98 | 156.08 | 5.13 | 5.93 | 1,151.06 |
| 631 | Bath Electric Hydro | 54,345 | 2,489.32 | 1,026.23 | 4.58 | 6.47 | 3,515.55 |
| 636 | Peterborough Upper Hydro | 53,440 | 6,489.78 | 585.28 | 12.14 | 13.24 | 7,075.06 |
| 642 | Spaulding Pond Hydro | 98,012 | 4,631.76 | 572.01 | 4.73 | 5.31 | 5,203.77 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING MARCH 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 644 | Celley Mill Hydro | 34,007 | 1,780.55 | 316.06 | 5.24 | 6.17 | 2,096.61 |
| 1080 | UNH Turbine | 457,085 | 16,964.86 | 7,312.00 | 3.71 | 5.31 | 24,276.86 |
| | CP Power Sales Seventeen, LLC | 7,430,000 | 1,669,269.00 | - | 22.47 | 22.47 | 1,669,269.00 |
| | | | | - | | | |
| | SUB TOTAL | 48,569,075 | 5,243,539.54 | 362,294.66 | 10.80 | 11.54 | 5,605,834.20 |
| Plus: Current Month Unvouchered IPP Liab. | | 7,981,610 | 431,600.00 | - | - | - | 431,600.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 5,254,710 | 373,900.00 | - | - | - | 373,900.00 |
| | GRAND TOTAL | 51,295,975 | $ 5,301,239.54 | $ 362,294.66 | 10.33 | 11.04 | $ 5,663,534.20 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING APRIL 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 387,367 | 17,629.41 | 2,206.96 | 4.55 | 5.12 | 19,836.37 |
| 004 | Swans Falls Hydro | 340,766 | 14,868.25 | 646.80 | 4.36 | 4.55 | 15,515.05 |
| 005 | Stevens Mill | 0 | 0.00 | 533.12 | 0.00 | 0.00 | 533.12 |
| 008 | Cocheco Falls | 411,699 | 17,565.20 | 2,034.48 | 4.27 | 4.76 | 19,599.68 |
| 009 | China Mills Dam | 519,163 | 21,950.14 | 1,909.04 | 4.23 | 4.60 | 23,859.18 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,068.96 | 0.00 | 0.00 | 4,068.96 |
| 012 | Newfound Hydro | 948,800 | 117,366.56 | 4,913.20 | 12.37 | 12.89 | 122,279.76 |
| 014 | Sunapee Hydro | 358,518 | 15,094.66 | 1,199.52 | 4.21 | 4.54 | 16,294.18 |
| 017 | Nashua Hydro | 546,000 | 67,485.60 | 5,638.47 | 12.36 | 13.39 | 73,124.07 |
| 018 | Greggs Falls | 2,205,699 | 91,749.43 | 5,476.24 | 4.16 | 4.41 | 97,225.67 |
| 019 | Mine Falls | 2,004,308 | 87,571.40 | 6,009.36 | 4.37 | 4.67 | 93,580.76 |
| 021 | Pine Valley Mill | 234,297 | 10,027.63 | 1,058.11 | 4.28 | 4.73 | 11,085.74 |
| 023 | Lakeport Dam | 320,436 | 13,539.06 | 1,332.80 | 4.23 | 4.64 | 14,871.86 |
| 024 | West Hopkinton Hydro | 450,400 | 40,536.00 | 0.00 | 9.00 | 9.00 | 40,536.00 |
| 025 | Lisbon Hydro | 324,052 | 13,622.84 | 1,305.36 | 4.20 | 4.61 | 14,928.20 |
| 028 | Marlow Power | 64,227 | 3,000.17 | 250.88 | 4.67 | 5.06 | 3,251.05 |
| 029 | Sugar River Hydro | 104,800 | 10,762.96 | 700.73 | 10.27 | 10.94 | 11,463.69 |
| 032 | Great Falls Upper | 948,034 | 39,886.83 | 0.00 | 4.21 | 4.21 | 39,886.83 |
| 033 | Great Falls Lower | 727,200 | 65,448.00 | 0.00 | 9.00 | 9.00 | 65,448.00 |
| 034 | Waterloom Falls | 57,024 | 2,441.18 | 172.68 | 4.28 | 4.58 | 2,613.86 |
| 037 | Hosiery Mill Dam | 0 | 0.00 | 1,065.46 | 0.00 | 0.00 | 1,065.46 |
| 038 | Wyandotte Hydro | 62,956 | 2,682.19 | 319.64 | 4.26 | 4.77 | 3,001.83 |
| 039 | Clement Dam | 1,478,820 | 64,453.83 | 6,675.76 | 4.36 | 4.81 | 71,129.59 |
| 040 | Lochmere Dam | 546,240 | 23,328.24 | 2,073.68 | 4.27 | 4.65 | 25,401.92 |
| 044 | Rollinsford Hydro | 1,000,800 | 82,065.60 | 0.00 | 8.20 | 8.20 | 82,065.60 |
| 045 | Pembroke Hydro | 1,880,305 | 78,396.33 | 0.00 | 4.17 | 4.17 | 78,396.33 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 77.15 | 0.00 | 0.00 | 77.15 |
| 050 | Otis Mill Hydro | 83,153 | 3,559.48 | 161.66 | 4.28 | 4.48 | 3,721.14 |
| 051 | Steels Pond Hydro | 75,840 | 3,792.00 | 0.00 | 5.00 | 5.00 | 3,792.00 |
| 052 | Briar Hydro | 3,587,500 | 491,846.25 | 26,552.34 | 13.71 | 14.45 | 518,398.59 |
| 053 | River Bend Hydro | 1,027,628 | 44,822.32 | 1,023.12 | 4.36 | 4.46 | 45,845.44 |
| 054 | Penacook Upper Falls | 2,324,000 | 374,861.20 | 17,193.12 | 16.13 | 16.87 | 392,054.32 |
| 055 | Penacook Lower Falls | 3,146,500 | 111,071.45 | 0.00 | 3.53 | 3.53 | 111,071.45 |
| 056 | Campton Dam | 91,271 | 3,974.16 | 862.40 | 4.35 | 5.30 | 4,836.56 |
| 058 | Kelleys Falls | 240,234 | 10,252.93 | 1,078.00 | 4.27 | 4.72 | 11,330.93 |
| 060 | Goodrich Falls | 129,224 | 5,385.27 | 1,066.24 | 4.17 | 4.99 | 6,451.51 |
| 066 | Chamberlain Falls | 78,823 | 3,380.20 | 121.24 | 4.29 | 4.44 | 3,501.44 |
| 070 | Monadnock Paper Mills | 216,200 | 8,491.19 | 0.00 | 3.93 | 3.93 | 8,491.19 |
| 090 | Goffstown Hydro | 0 | 0.00 | 235.14 | 0.00 | 0.00 | 235.14 |
| 091 | Noone Falls | 51,750 | 2,528.13 | 176.40 | 4.89 | 5.23 | 2,704.53 |
| 106 | Otter Lane Hydro | 56,663 | 2,438.09 | 231.28 | 4.30 | 4.71 | 2,669.37 |
| 107 | Peterborough Lower Hydro | 116,000 | 14,510.81 | 556.59 | 12.51 | 12.99 | 15,067.40 |
| 108 | Garland Mill | 1,520 | 136.80 | 0.00 | 9.00 | 9.00 | 136.80 |
| 110 | Salmon Brook Station #3 | 149,892 | 6,730.49 | 529.20 | 4.49 | 4.84 | 7,259.69 |
| 118 | Fiske Mill | 69,314 | 2,937.23 | 0.00 | 4.24 | 4.24 | 2,937.23 |
| 120 | Avery Dam | 161,875 | 6,913.93 | 768.32 | 4.27 | 4.75 | 7,682.25 |
| 124 | Watson Dam | 89,120 | 11,083.92 | 717.97 | 12.44 | 13.24 | 11,801.89 |
| 128 | Weston Dam | 262,878 | 11,428.24 | 1,226.96 | 4.35 | 4.81 | 12,655.20 |
| 134 | Sunnybrook Hydro #2 | 987 | 35.83 | 82.32 | 3.63 | 11.97 | 118.15 |
| 171 | Pettyboro Hydro | 11,162 | 483.03 | 7.84 | 4.33 | 4.40 | 490.87 |
| 187 | Sugar River Hydro #2 | 129,172 | 5,532.67 | 0.00 | 4.28 | 4.28 | 5,532.67 |
| 189 | Errol Dam | 1,366,400 | 226,275.84 | 25,700.00 | 16.56 | 18.44 | 251,975.84 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 8,912,068 | 379,533.39 | 0.00 | 4.26 | 4.26 | 379,533.39 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 4,458,374 | 597,016.78 | 127,620.96 | 13.39 | 16.25 | 724,637.74 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,712,181 | 118,288.42 | 14,743.12 | 4.36 | 4.90 | 133,031.54 |
| 445 | Dunbarton Road Landfill | 188,268 | 7,781.32 | 2,391.20 | 4.13 | 5.40 | 10,172.52 |
| 496 | Turnkey Rochester | 385,990 | 16,712.24 | 10,231.20 | 4.33 | 6.98 | 26,943.44 |
| 564 | Four Hills Landfill | 95,632 | 4,356.06 | 0.00 | 4.56 | 4.56 | 4,356.06 |
| 564A | Four Hills ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 564B | Four Hills Reducer | 630,564 | 27,349.75 | 2,316.72 | 4.34 | 4.70 | 29,666.47 |
| 628 | Eastman Brook Hydro | 56,716 | 2,402.35 | 156.80 | 4.24 | 4.51 | 2,559.15 |
| 631 | Bath Electric Hydro | 100,021 | 4,480.16 | 1,030.96 | 4.48 | 5.51 | 5,511.12 |
| 636 | Peterborough Upper Hydro | 134,304 | 16,679.92 | 585.28 | 12.42 | 12.86 | 17,265.20 |
| 642 | Spaulding Pond Hydro | 147,607 | 6,314.63 | 0.00 | 4.28 | 4.28 | 6,314.63 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING APRIL 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 644 | Celley Mill Hydro | 78,096 | 3,320.60 | 317.52 | 4.25 | 4.66 | 3,638.12 |
| 1080 | UNH Turbine | 41 | 1.82 | 7,348.00 | 4.44 | 0.00 | 7,349.82 |
| | CP Power Sales Seventeen, LLC | 7,200,000 | 1,604,898.00 | | 22.29 | 22.29 | 1,604,898.00 |
| | SUB TOTAL | 54,488,879 | 5,043,078.41 | 294,700.30 | 9.26 | 9.80 | 5,337,778.71 |
| Plus: Current Month Unvouchered IPP Liab. | | 9,078,150 | 443,000.00 | - | - | - | 443,000.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 7,981,610 | 431,600.00 | - | - | - | 431,600.00 |
| | GRAND TOTAL | 55,585,419 | $ 5,054,478.41 | $ 294,700.30 | 9.09 | 9.62 | $ 5,349,178.71 |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

FOR THE MONTH ENDING MAY 31, 2011

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 462,007 | 20,469.77 | 2,214.28 | 4.43 | 4.91 | 22,684.05 |
| 004 | Swans Falls Hydro | 449,013 | 19,107.09 | 648.94 | 4.26 | 4.40 | 19,756.03 |
| 005 | Stevens Mill | 0 | 0.00 | 534.89 | 0.00 | 0.00 | 534.89 |
| 008 | Cocheco Falls | 384,253 | 16,934.91 | 2,041.23 | 4.41 | 4.94 | 18,976.14 |
| 009 | China Mills Dam | 421,134 | 18,246.83 | 1,915.37 | 4.33 | 4.79 | 20,162.20 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,082.45 | 0.00 | 0.00 | 4,082.45 |
| 012 | Newfound Hydro | 760,000 | 94,012.00 | 4,913.20 | 12.37 | 13.02 | 98,925.20 |
| 014 | Sunapee Hydro | 402,318 | 17,737.32 | 1,203.50 | 4.41 | 4.71 | 18,940.82 |
| 017 | Nashua Hydro | 597,800 | 73,888.08 | 5,638.47 | 12.36 | 13.30 | 79,526.55 |
| 018 | Greggs Falls | 1,694,914 | 72,776.23 | 5,494.40 | 4.29 | 4.62 | 78,270.63 |
| 019 | Mine Falls | 1,598,024 | 66,876.63 | 6,029.29 | 4.18 | 4.56 | 72,905.92 |
| 021 | Pine Valley Mill | 240,747 | 10,562.90 | 1,061.85 | 4.39 | 4.83 | 11,624.75 |
| 023 | Lakeport Dam | 358,376 | 15,401.51 | 1,337.22 | 4.30 | 4.67 | 16,738.73 |
| 024 | West Hopkinton Hydro | 449,600 | 40,464.00 | 0.00 | 9.00 | 9.00 | 40,464.00 |
| 025 | Lisbon Hydro | 473,888 | 20,591.38 | 1,309.69 | 4.35 | 4.62 | 21,901.07 |
| 028 | Marlow Power | 56,842 | 2,702.69 | 251.71 | 4.75 | 5.20 | 2,954.40 |
| 029 | Sugar River Hydro | 107,400 | 11,029.98 | 700.73 | 10.27 | 10.92 | 11,730.71 |
| 032 | Great Falls Upper | 289,891 | 11,409.29 | 0.00 | 3.94 | 3.94 | 11,409.29 |
| 033 | Great Falls Lower | 634,400 | 57,096.00 | 0.00 | 9.00 | 9.00 | 57,096.00 |
| 034 | Waterloom Falls | 36,753 | 1,608.29 | 173.29 | 4.38 | 4.85 | 1,781.58 |
| 037 | Hosiery Mill Dam | 129,950 | 5,880.33 | 1,069.23 | 4.53 | 5.35 | 6,949.56 |
| 038 | Wyandotte Hydro | 54,027 | 2,386.31 | 320.77 | 4.42 | 5.01 | 2,707.08 |
| 039 | Clement Dam | 1,370,093 | 57,887.64 | 6,697.90 | 4.23 | 4.71 | 64,585.54 |
| 040 | Lochmere Dam | 457,373 | 19,995.29 | 2,080.56 | 4.37 | 4.83 | 22,075.85 |
| 044 | Rollinsford Hydro | 798,000 | 65,436.00 | 0.00 | 8.20 | 8.20 | 65,436.00 |
| 045 | Pembroke Hydro | 1,573,034 | 67,518.76 | 6,100.08 | 4.29 | 4.68 | 73,618.84 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 77.42 | 0.00 | 0.00 | 77.42 |
| 050 | Otis Mill Hydro | 54,172 | 2,406.42 | 162.23 | 4.44 | 4.74 | 2,568.65 |
| 051 | Steels Pond Hydro | 53,760 | 2,688.00 | 0.00 | 5.00 | 5.00 | 2,688.00 |
| 052 | Briar Hydro | 2,989,000 | 409,791.90 | 26,552.34 | 13.71 | 14.60 | 436,344.24 |
| 053 | River Bend Hydro | 341,729 | 14,676.24 | 1,026.51 | 4.29 | 4.60 | 15,702.75 |
| 054 | Penacook Upper Falls | 2,044,000 | 329,697.20 | 17,193.12 | 16.13 | 16.97 | 346,890.32 |
| 055 | Penacook Lower Falls | 2,866,500 | 101,187.45 | 0.00 | 3.53 | 3.53 | 101,187.45 |
| 056 | Campton Dam | 252,681 | 11,483.27 | 865.26 | 4.54 | 4.89 | 12,348.53 |
| 058 | Kelleys Falls | 224,618 | 9,905.94 | 1,081.57 | 4.41 | 4.89 | 10,987.51 |
| 060 | Goodrich Falls | 290,146 | 12,889.35 | 1,069.78 | 4.44 | 4.81 | 13,959.13 |
| 066 | Chamberlain Falls | 45,982 | 2,042.17 | 121.67 | 4.44 | 4.71 | 2,163.84 |
| 070 | Monadnock Paper Mills | 144,911 | 5,819.74 | 0.00 | 4.02 | 4.02 | 5,819.74 |
| 090 | Goffstown Hydro | 0 | 0.00 | 235.97 | 0.00 | 0.00 | 235.97 |
| 091 | Noone Falls | 48,069 | 2,287.40 | 176.98 | 4.76 | 5.13 | 2,464.38 |
| 106 | Otter Lane Hydro | 57,552 | 2,552.66 | 232.05 | 4.44 | 4.84 | 2,784.71 |
| 107 | Peterborough Lower Hydro | 75,820 | 9,501.82 | 556.59 | 12.53 | 13.27 | 10,058.41 |
| 108 | Garland Mill | 2,800 | 252.00 | 0.00 | 9.00 | 9.00 | 252.00 |
| 110 | Salmon Brook Station #3 | 136,557 | 5,950.75 | 530.95 | 4.36 | 4.75 | 6,481.70 |
| 118 | Fiske Mill | 98,030 | 4,391.20 | 0.00 | 4.48 | 4.48 | 4,391.20 |
| 120 | Avery Dam | 161,302 | 7,112.59 | 770.87 | 4.41 | 4.89 | 7,883.46 |
| 124 | Watson Dam | 75,520 | 9,351.73 | 717.97 | 12.38 | 13.33 | 10,069.70 |
| 128 | Weston Dam | 370,395 | 16,464.74 | 1,231.03 | 4.45 | 4.78 | 17,695.77 |
| 134 | Sunnybrook Hydro #2 | 13,614 | 592.23 | 82.59 | 4.35 | 4.96 | 674.82 |
| 171 | Pettyboro Hydro | 15,251 | 661.62 | 7.87 | 4.34 | 4.39 | 669.49 |
| 187 | Sugar River Hydro #2 | 119,094 | 5,234.23 | 0.00 | 4.40 | 4.40 | 5,234.23 |
| 189 | Errol Dam | 1,334,000 | 222,566.40 | 25,700.00 | 16.68 | 18.61 | 248,266.40 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 4,196,021 | 180,782.78 | 0.00 | 4.31 | 4.31 | 180,782.78 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 8,769,082 | 1,174,598.88 | 127,620.96 | 13.39 | 14.85 | 1,302,219.84 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,803,890 | 119,981.08 | 14,792.01 | 4.28 | 4.81 | 134,773.09 |
| 445 | Dunbarton Road Landfill | 185,700 | 7,513.15 | 2,399.13 | 4.05 | 5.34 | 9,912.28 |
| 496 | Turnkey Rochester | 817,446 | 34,226.68 | 10,265.13 | 4.19 | 5.44 | 44,491.81 |
| 564 | Four Hills Landfill | 289,500 | 12,171.77 | 294.98 | 4.20 | 4.31 | 12,466.75 |
| 564B | Four Hills Reducer | 242,941 | 11,064.85 | 2,324.40 | 4.55 | 5.51 | 13,389.25 |
| 628 | Eastman Brook Hydro | 61,074 | 2,663.68 | 157.32 | 4.36 | 4.62 | 2,821.00 |
| 631 | Bath Electric Hydro | 171,288 | 7,268.24 | 1,034.38 | 4.24 | 4.85 | 8,302.62 |
| 636 | Peterborough Upper Hydro | 90,976 | 11,569.01 | 585.28 | 12.72 | 13.36 | 12,154.29 |
| 642 | Spaulding Pond Hydro | 123,668 | 5,397.86 | 0.00 | 4.36 | 4.36 | 5,397.86 |
| 644 | Celley Mill Hydro | 65,381 | 2,885.49 | 318.57 | 4.41 | 4.90 | 3,204.06 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING MAY 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 70,865 | 3,887.21 | 7,374.00 | 5.49 | 15.89 | 11,261.21 |
| | CP Power Sales Seventeen, LLC | 7,440,000 | 1,651,494.00 | 0.00 | 22.20 | 22.20 | 1,651,494.00 |
| | SUB TOTAL | 50,943,172 | 5,205,030.96 | 301,377.98 | 10.22 | 10.81 | 5,506,408.94 |
| Plus: Current Month Unvouchered IPP Liab. | | 6,629,350 | 366,800.00 | - | - | - | 366,800.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 9,078,150 | 443,000.00 | - | - | - | 443,000.00 |
| | GRAND TOTAL | 48,494,372 | $ 5,128,830.96 | $ 301,377.98 | 10.58 | 11.20 | $ 5,430,208.94 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JUNE 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 321,878 | 14,312.57 | 2,221.03 | 4.45 | 5.14 | 16,533.60 |
| 004 | Swans Falls Hydro | 405,472 | 16,996.64 | 650.92 | 4.19 | 4.35 | 17,647.56 |
| 005 | Stevens Mill | 0 | 0.00 | 536.52 | 0.00 | 0.00 | 536.52 |
| 008 | Cocheco Falls | 213,785 | 8,604.70 | 2,047.45 | 4.02 | 4.98 | 10,652.15 |
| 009 | China Mills Dam | 327,272 | 12,940.50 | 1,921.21 | 3.95 | 4.54 | 14,861.71 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,094.91 | 0.00 | 0.00 | 4,094.91 |
| 012 | Newfound Hydro | 259,200 | 32,063.04 | 4,913.20 | 12.37 | 14.27 | 36,976.24 |
| 014 | Sunapee Hydro | 303,291 | 13,076.23 | 1,207.17 | 4.31 | 4.71 | 14,283.40 |
| 017 | Nashua Hydro | 611,800 | 75,618.48 | 5,638.47 | 12.36 | 13.28 | 81,256.95 |
| 018 | Greggs Falls | 1,188,937 | 49,189.73 | 5,511.16 | 4.14 | 4.60 | 54,700.89 |
| 019 | Mine Falls | 1,177,097 | 48,348.57 | 6,047.68 | 4.11 | 4.62 | 54,396.25 |
| 021 | Pine Valley Mill | 174,766 | 6,928.28 | 1,065.31 | 3.96 | 4.57 | 7,993.59 |
| 023 | Lakeport Dam | 311,317 | 13,079.70 | 1,341.31 | 4.20 | 4.63 | 14,421.01 |
| 024 | West Hopkinton Hydro | 370,400 | 33,336.00 | 0.00 | 9.00 | 9.00 | 33,336.00 |
| 025 | Lisbon Hydro | 368,999 | 15,678.09 | 1,316.68 | 4.25 | 4.61 | 16,994.77 |
| 028 | Marlow Power | 22,682 | 1,015.19 | 252.48 | 4.48 | 5.59 | 1,267.67 |
| 029 | Sugar River Hydro | 23,000 | 2,362.10 | 700.73 | 10.27 | 13.32 | 3,062.83 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 463,200 | 41,688.00 | 0.00 | 9.00 | 9.00 | 41,688.00 |
| 034 | Waterloom Falls | 28,671 | 1,162.06 | 173.85 | 4.05 | 4.66 | 1,335.91 |
| 037 | Hosiery Mill Dam | 183,673 | 7,804.83 | 1,072.71 | 4.25 | 4.83 | 8,877.54 |
| 038 | Wyandotte Hydro | 34,604 | 1,415.02 | 321.81 | 4.09 | 5.02 | 1,736.83 |
| 039 | Clement Dam | 660,291 | 28,069.90 | 6,718.33 | 4.25 | 5.27 | 34,788.23 |
| 040 | Lochmere Dam | 414,302 | 17,129.46 | 2,086.90 | 4.13 | 4.64 | 19,216.36 |
| 044 | Rollinsford Hydro | 594,000 | 48,708.00 | 0.00 | 8.20 | 8.20 | 48,708.00 |
| 045 | Pembroke Hydro | 1,180,209 | 49,303.83 | 12,198.61 | 4.18 | 5.21 | 61,502.44 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 77.67 | 0.00 | 0.00 | 77.67 |
| 050 | Otis Mill Hydro | 26,233 | 1,018.26 | 162.76 | 3.88 | 4.50 | 1,181.02 |
| 051 | Steels Pond Hydro | 41,280 | 2,064.00 | 0.00 | 5.00 | 5.00 | 2,064.00 |
| 052 | Briar Hydro | 315,000 | 43,186.50 | 26,552.34 | 13.71 | 22.14 | 69,738.84 |
| 053 | River Bend Hydro | 0 | 0.00 | 1,029.64 | 0.00 | 0.00 | 1,029.64 |
| 054 | Penacook Upper Falls | 1,326,500 | 213,964.45 | 17,193.12 | 16.13 | 17.43 | 231,157.57 |
| 055 | Penacook Lower Falls | 1,928,500 | 68,076.05 | 0.00 | 3.53 | 3.53 | 68,076.05 |
| 056 | Campton Dam | 216,365 | 9,641.33 | 867.90 | 4.46 | 4.86 | 10,509.23 |
| 058 | Kelleys Falls | 145,138 | 5,922.22 | 1,084.87 | 4.08 | 4.83 | 7,007.09 |
| 060 | Goodrich Falls | 268,889 | 11,153.54 | 1,073.04 | 4.15 | 4.55 | 12,226.58 |
| 066 | Chamberlain Falls | 21,851 | 843.42 | 122.06 | 3.86 | 4.42 | 965.48 |
| 070 | Monadnock Paper Mills | 52,091 | 1,950.69 | 0.00 | 3.74 | 3.74 | 1,950.69 |
| 090 | Goffstown Hydro | 0 | 0.00 | 236.74 | 0.00 | 0.00 | 236.74 |
| 091 | Noone Falls | 25,294 | 1,088.34 | 177.52 | 4.30 | 5.00 | 1,265.86 |
| 106 | Otter Lane Hydro | 42,157 | 1,812.73 | 232.75 | 4.30 | 4.85 | 2,045.48 |
| 107 | Peterborough Lower Hydro | 43,980 | 5,429.95 | 556.59 | 12.35 | 13.61 | 5,986.54 |
| 108 | Garland Mill | 930 | 83.70 | 0.00 | 9.00 | 9.00 | 83.70 |
| 110 | Salmon Brook Station #3 | 23,492 | 1,024.81 | 532.57 | 4.36 | 6.63 | 1,557.38 |
| 118 | Fiske Mill | 105,556 | 4,477.60 | 0.00 | 4.24 | 4.24 | 4,477.60 |
| 120 | Avery Dam | 147,572 | 6,126.15 | 772.22 | 4.15 | 4.67 | 6,898.37 |
| 124 | Watson Dam | 57,632 | 7,123.85 | 717.97 | 12.36 | 13.61 | 7,841.82 |
| 128 | Weston Dam | 344,489 | 14,604.36 | 1,234.78 | 4.24 | 4.60 | 15,839.14 |
| 134 | Sunnybrook Hydro #2 | 21,931 | 911.08 | 82.84 | 4.15 | 4.53 | 993.92 |
| 171 | Pettyboro Hydro | 10,124 | 407.19 | 7.89 | 4.02 | 4.10 | 415.08 |
| 187 | Sugar River Hydro #2 | 51,453 | 2,114.77 | 0.00 | 4.11 | 4.11 | 2,114.77 |
| 189 | Errol Dam | 1,537,200 | 254,560.32 | 25,700.00 | 16.56 | 18.23 | 280,260.32 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 435.42 | 0.00 | 0.00 | 0.00 | 435.42 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 8,681,054 | 1,177,320.81 | 127,620.96 | 13.56 | 15.03 | 1,304,941.77 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,138,156 | 90,704.16 | 14,837.14 | 4.24 | 4.94 | 105,541.30 |
| 445 | Dunbarton Road Landfill | 166,114 | 6,661.82 | 2,406.45 | 4.01 | 5.46 | 9,068.27 |
| 496 | Turnkey Rochester | 423,986 | 17,645.20 | 10,296.45 | 4.16 | 6.59 | 27,941.65 |
| 564 | Four Hills Landfill | 304,652 | 12,613.95 | 700.86 | 4.14 | 4.37 | 13,314.81 |
| 564B | Four Hills Reducer | 299,815 | 12,621.49 | 2,331.49 | 4.21 | 4.99 | 14,952.98 |
| 628 | Eastman Brook Hydro | 28,526 | 1,217.87 | 157.80 | 4.27 | 4.82 | 1,375.67 |
| 631 | Bath Electric Hydro | 163,735 | 6,918.63 | 1,037.53 | 4.23 | 4.86 | 7,956.16 |
| 636 | Peterborough Upper Hydro | 88,736 | 10,746.76 | 585.28 | 12.11 | 12.77 | 11,332.04 |
| 642 | Spaulding Pond Hydro | 80,772 | 3,286.35 | 0.00 | 4.07 | 4.07 | 3,286.35 |
| 644 | Celley Mill Hydro | 68,137 | 2,875.05 | 319.54 | 4.22 | 4.69 | 3,194.59 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JUNE 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 750,979 | 35,719.65 | 7,398.00 | 4.76 | 5.74 | 43,117.65 |
| | CP Power Sales Seventeen, LLC | 7,200,000 | 1,630,926.00 | 0.00 | 22.65 | 22.65 | 1,630,926.00 |
| | SUB TOTAL | 36,787,165 | 4,206,109.39 | 308,145.21 | 11.43 | 12.27 | 4,514,254.60 |
| Plus: Current Month Unvouchered IPP Liab. | | 5,016,050 | 280,000.00 | - | - | - | 280,000.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 6,629,350 | 366,800.00 | - | - | - | 366,800.00 |
| | GRAND TOTAL | 35,173,865 | $ 4,119,309.39 | $ 308,145.21 | 11.71 | 12.59 | $ 4,427,454.60 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JULY 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 244,767 | 14,465.11 | 2,221.03 | 5.91 | 6.82 | 16,686.14 |
| 004 | Swans Falls Hydro | 196,250 | 10,710.32 | 650.92 | 5.46 | 5.79 | 11,361.24 |
| 005 | Stevens Mill | 0 | 0.00 | 536.52 | 0.00 | 0.00 | 536.52 |
| 008 | Cocheco Falls | 36,050 | 1,641.94 | 2,047.45 | 4.55 | 10.23 | 3,689.39 |
| 009 | China Mills Dam | 18,392 | 696.73 | 1,921.21 | 3.79 | 14.23 | 2,617.94 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 4,094.91 | 0.00 | 0.00 | 4,094.91 |
| 012 | Newfound Hydro | 219,200 | 27,115.04 | 4,913.20 | 12.37 | 14.61 | 32,028.24 |
| 014 | Sunapee Hydro | 122,881 | 5,222.63 | 1,207.17 | 4.25 | 5.23 | 6,429.80 |
| 017 | Nashua Hydro | 505,400 | 62,467.44 | 5,638.47 | 12.36 | 13.48 | 68,105.91 |
| 018 | Greggs Falls | 819,521 | 32,679.94 | 5,511.16 | 3.99 | 4.66 | 38,191.10 |
| 019 | Mine Falls | 481,083 | 25,289.49 | 6,047.68 | 5.26 | 6.51 | 31,337.17 |
| 021 | Pine Valley Mill | 90,659 | 3,627.26 | 1,065.31 | 4.00 | 5.18 | 4,692.57 |
| 023 | Lakeport Dam | 107,043 | 4,519.94 | 1,341.30 | 4.22 | 5.48 | 5,861.24 |
| 024 | West Hopkinton Hydro | 380,800 | 34,272.00 | 0.00 | 9.00 | 9.00 | 34,272.00 |
| 025 | Lisbon Hydro | 129,736 | 5,456.81 | 1,313.68 | 4.21 | 5.22 | 6,770.49 |
| 028 | Marlow Power | 0 | 0.00 | 252.48 | 0.00 | 0.00 | 252.48 |
| 029 | Sugar River Hydro | 200 | 20.54 | 700.73 | 10.27 | 0.00 | 721.27 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 81,600 | 7,344.00 | 0.00 | 9.00 | 9.00 | 7,344.00 |
| 034 | Waterloom Falls | 13,608 | 535.92 | 173.85 | 3.94 | 5.22 | 709.77 |
| 037 | Hosiery Mill Dam | 15,632 | 772.43 | 1,072.71 | 4.94 | 11.80 | 1,845.14 |
| 038 | Wyandotte Hydro | 915 | 40.89 | 321.81 | 4.47 | 39.64 | 362.70 |
| 039 | Clement Dam | 338,892 | 18,785.40 | 6,718.33 | 5.54 | 7.53 | 25,503.73 |
| 040 | Lochmere Dam | 143,468 | 6,599.22 | 2,086.90 | 4.60 | 6.05 | 8,686.12 |
| 044 | Rollinsford Hydro | 67,200 | 5,510.40 | 0.00 | 8.20 | 8.20 | 5,510.40 |
| 045 | Pembroke Hydro | 448,097 | 17,734.78 | 6,118.69 | 3.96 | 5.32 | 23,853.47 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 77.67 | 0.00 | 0.00 | 77.67 |
| 050 | Otis Mill Hydro | 16,702 | 638.07 | 162.76 | 3.82 | 4.79 | 800.83 |
| 051 | Steels Pond Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 052 | Briar Hydro | 147,000 | 20,153.70 | 26,552.34 | 13.71 | 31.77 | 46,706.04 |
| 053 | River Bend Hydro | 145,155 | 9,265.68 | 1,029.64 | 6.38 | 7.09 | 10,295.32 |
| 054 | Penacook Upper Falls | 567,000 | 91,457.10 | 17,193.12 | 16.13 | 19.16 | 108,650.22 |
| 055 | Penacook Lower Falls | 826,000 | 29,157.80 | 0.00 | 3.53 | 3.53 | 29,157.80 |
| 056 | Campton Dam | 82,173 | 3,627.48 | 867.90 | 4.41 | 5.47 | 4,495.38 |
| 058 | Kelleys Falls | 67,092 | 2,631.81 | 1,084.87 | 3.92 | 5.54 | 3,716.68 |
| 060 | Goodrich Falls | 109,979 | 4,601.96 | 1,073.04 | 4.18 | 5.16 | 5,675.00 |
| 066 | Chamberlain Falls | 14,108 | 529.69 | 122.06 | 3.75 | 4.62 | 651.75 |
| 070 | Monadnock Paper Mills | 53,558 | 1,895.88 | 0.00 | 3.54 | 3.54 | 1,895.88 |
| 090 | Goffstown Hydro | 0 | 0.00 | 236.74 | 0.00 | 0.00 | 236.74 |
| 091 | Noone Falls | 1,169 | 51.19 | 177.52 | 4.38 | 19.56 | 228.71 |
| 106 | Otter Lane Hydro | 7,993 | 322.06 | 232.75 | 4.03 | 6.94 | 554.81 |
| 107 | Peterborough Lower Hydro | 41,100 | 4,984.26 | 556.59 | 12.13 | 13.48 | 5,540.85 |
| 108 | Garland Mill | 20 | 1.80 | 0.00 | 9.00 | 9.00 | 1.80 |
| 110 | Salmon Brook Station #3 | 0 | 0.00 | 532.57 | 0.00 | 0.00 | 532.57 |
| 118 | Fiske Mill | 81,916 | 3,834.64 | 0.00 | 4.68 | 4.68 | 3,834.64 |
| 120 | Avery Dam | 79,007 | 3,849.34 | 773.22 | 4.87 | 5.85 | 4,622.56 |
| 124 | Watson Dam | 18,912 | 2,354.52 | 717.97 | 12.45 | 16.25 | 3,072.49 |
| 128 | Weston Dam | 170,736 | 8,235.68 | 1,234.78 | 4.82 | 5.55 | 9,470.46 |
| 134 | Sunnybrook Hydro #2 | 8,369 | 360.12 | 82.84 | 4.30 | 5.29 | 442.96 |
| 171 | Pettyboro Hydro | 725 | 28.70 | 7.89 | 3.96 | 5.05 | 36.59 |
| 187 | Sugar River Hydro #2 | 14,362 | 499.63 | 0.00 | 3.48 | 3.48 | 499.63 |
| 189 | Errol Dam | 1,276,800 | 211,438.08 | 25,700.00 | 16.56 | 18.57 | 237,138.08 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 8,952,874 | 1,195,602.92 | 127,620.96 | 13.35 | 14.78 | 1,323,223.88 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,867,241 | 165,894.62 | 14,837.14 | 5.79 | 6.30 | 180,731.76 |
| 445 | Dunbarton Road Landfill | 166,893 | 9,226.17 | 2,406.45 | 5.53 | 6.97 | 11,632.62 |
| 496 | Turnkey Rochester | 430,811 | 24,333.64 | 10,296.45 | 5.65 | 8.04 | 34,630.09 |
| 564 | Four Hills Landfill | 327,231 | 18,039.29 | 700.86 | 5.51 | 5.73 | 18,740.15 |
| 564B | Four Hills Reducer | 292,882 | 16,616.90 | 2,331.49 | 5.67 | 6.47 | 18,948.39 |
| 628 | Eastman Brook Hydro | 3,138 | 119.36 | 157.80 | 3.80 | 8.83 | 277.16 |
| 631 | Bath Electric Hydro | 55,344 | 2,870.93 | 1,037.53 | 5.19 | 7.06 | 3,908.46 |
| 636 | Peterborough Upper Hydro | 10,080 | 1,306.32 | 585.28 | 12.96 | 18.77 | 1,891.60 |
| 642 | Spaulding Pond Hydro | 5,851 | 244.15 | 0.00 | 4.17 | 4.17 | 244.15 |
| 644 | Celley Mill Hydro | 7,907 | 298.71 | 319.54 | 3.78 | 7.82 | 618.25 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING JULY 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 689,238 | 41,733.04 | 7,398.00 | 6.05 | 7.13 | 49,131.04 |
| | CP Power Sales Seventeen, LLC | 6,469,000 | 1,500,713.00 | | 23.20 | 23.20 | 1,500,713.00 |
| | SUB TOTAL | 28,469,760 | 3,662,426.47 | 302,063.28 | 12.86 | 13.93 | 3,964,489.75 |
| Plus: Current Month Unvouchered IPP Liab. | | 2,493,320 | 142,800.00 | - | - | - | 142,800.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 5,016,050 | 280,000.00 | - | - | - | 280,000.00 |
| | GRAND TOTAL | 25,947,030 | $ 3,525,226.47 | $ 302,063.28 | 13.59 | 14.75 | $ 3,827,289.75 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING AUGUST 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 303,914 | 13,333.48 | 1,205.86 | 4.39 | 4.78 | 14,539.34 |
| 004 | Swans Falls Hydro | 98,174 | 4,646.53 | 471.72 | 4.73 | 5.21 | 5,118.25 |
| 005 | Stevens Mill | 0 | 0.00 | 412.37 | 0.00 | 0.00 | 412.37 |
| 008 | Cocheco Falls | 57,797 | 2,858.53 | 393.62 | 4.95 | 5.63 | 3,252.15 |
| 009 | China Mills Dam | 0 | 0.00 | 9.37 | 0.00 | 0.00 | 9.37 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 776.97 | 0.00 | 0.00 | 776.97 |
| 012 | Newfound Hydro | 329,600 | 40,771.52 | 4,913.20 | 12.37 | 13.86 | 45,684.72 |
| 014 | Sunapee Hydro | 111,690 | 6,771.77 | 290.53 | 6.06 | 6.32 | 7,062.30 |
| 017 | Nashua Hydro | 176,400 | 21,803.04 | 5,638.47 | 12.36 | 15.56 | 27,441.51 |
| 018 | Greggs Falls | 64,571 | 4,155.09 | 834.11 | 6.43 | 7.73 | 4,989.20 |
| 019 | Mine Falls | 513,674 | 19,405.71 | 2,033.72 | 3.78 | 4.17 | 21,439.43 |
| 021 | Pine Valley Mill | 8,785 | 247.48 | 0.00 | 2.82 | 2.82 | 247.48 |
| 023 | Lakeport Dam | 104,728 | 6,487.49 | 602.91 | 6.19 | 6.77 | 7,090.40 |
| 024 | West Hopkinton Hydro | 59,200 | 5,328.00 | 0.00 | 9.00 | 9.00 | 5,328.00 |
| 025 | Lisbon Hydro | 32,738 | 1,856.37 | 506.09 | 5.67 | 7.22 | 2,362.46 |
| 028 | Marlow Power | 0 | 0.00 | 43.74 | 0.00 | 0.00 | 43.74 |
| 029 | Sugar River Hydro | 28,200 | 2,896.14 | 700.73 | 10.27 | 12.75 | 3,596.87 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 034 | Waterloom Falls | 2,499 | 70.95 | 0.00 | 2.84 | 2.84 | 70.95 |
| 037 | Hosiery Mill Dam | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 038 | Wyandotte Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 039 | Clement Dam | 568,345 | 23,887.34 | 2,561.68 | 4.20 | 4.65 | 26,449.02 |
| 040 | Lochmere Dam | 148,608 | 8,496.12 | 993.43 | 5.72 | 6.39 | 9,489.55 |
| 044 | Rollinsford Hydro | 7,200 | 590.40 | 0.00 | 8.20 | 8.20 | 590.40 |
| 045 | Pembroke Hydro | 24,761 | 1,205.54 | 1,012.18 | 4.87 | 8.96 | 2,217.72 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 050 | Otis Mill Hydro | 3,120 | 83.76 | 0.00 | 2.68 | 2.68 | 83.76 |
| 051 | Steels Pond Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 052 | Briar Hydro | 1,085,000 | 148,753.50 | 26,552.34 | 13.71 | 16.16 | 175,305.84 |
| 053 | River Bend Hydro | 358,647 | 15,732.98 | 699.78 | 4.39 | 4.58 | 16,432.76 |
| 054 | Penacook Upper Falls | 612,500 | 98,796.25 | 17,193.12 | 16.13 | 18.94 | 115,989.37 |
| 055 | Penacook Lower Falls | 1,067,500 | 37,682.75 | 0.00 | 3.53 | 3.53 | 37,682.75 |
| 056 | Campton Dam | 8,144 | 481.96 | 243.67 | 5.92 | 8.91 | 725.63 |
| 058 | Kelleys Falls | 7,504 | 276.99 | 9.37 | 3.69 | 3.82 | 286.36 |
| 060 | Goodrich Falls | 22,440 | 828.65 | 187.44 | 3.69 | 4.53 | 1,016.09 |
| 066 | Chamberlain Falls | 2,727 | 71.90 | 0.00 | 2.64 | 2.64 | 71.90 |
| 070 | Monadnock Paper Mills | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 090 | Goffstown Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 091 | Noone Falls | 5,868 | 226.45 | 37.49 | 3.86 | 4.50 | 263.94 |
| 106 | Otter Lane Hydro | 0 | 0.00 | 21.87 | 0.00 | 0.00 | 21.87 |
| 107 | Peterborough Lower Hydro | 0 | 0.00 | 556.59 | 0.00 | 0.00 | 556.59 |
| 108 | Garland Mill | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 110 | Salmon Brook Station #3 | 25,663 | 850.88 | 59.36 | 3.32 | 3.55 | 910.24 |
| 118 | Fiske Mill | 18,526 | 879.46 | 0.00 | 4.75 | 4.75 | 879.46 |
| 120 | Avery Dam | 99,098 | 5,575.40 | 416.49 | 5.63 | 6.05 | 5,991.89 |
| 124 | Watson Dam | 0 | 0.00 | 717.97 | 0.00 | 0.00 | 717.97 |
| 128 | Weston Dam | 74,233 | 4,053.85 | 506.09 | 5.46 | 6.14 | 4,559.94 |
| 134 | Sunnybrook Hydro #2 | 6,189 | 357.08 | 40.61 | 5.77 | 6.43 | 397.69 |
| 171 | Pettyboro Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 187 | Sugar River Hydro #2 | 2,187 | 128.96 | 0.00 | 5.90 | 5.90 | 128.96 |
| 189 | Errol Dam | 1,122,800 | 185,935.68 | 25,700.00 | 16.56 | 18.85 | 211,635.68 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 8,963,220 | 1,221,742.46 | 127,620.96 | 13.63 | 15.05 | 1,349,363.42 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,823,907 | 124,687.02 | 12,267.95 | 4.42 | 4.85 | 136,954.97 |
| 445 | Dunbarton Road Landfill | 162,591 | 6,902.99 | 1,615.60 | 4.25 | 5.24 | 8,518.59 |
| 496 | Turnkey Rochester | 435,272 | 19,205.23 | 6,538.67 | 4.41 | 5.91 | 25,743.90 |
| 564 | Four Hills Landfill | 99,863 | 4,854.56 | 1,386.25 | 4.86 | 6.25 | 6,240.81 |
| 564B | Four Hills Reducer | 740,282 | 31,375.61 | 912.21 | 4.24 | 4.36 | 32,287.82 |
| 628 | Eastman Brook Hydro | 0 | 0.00 | 8.01 | 0.00 | 0.00 | 8.01 |
| 631 | Bath Electric Hydro | 48,547 | 1,940.44 | 593.56 | 4.00 | 5.22 | 2,534.00 |
| 636 | Peterborough Upper Hydro | 768 | 94.76 | 585.28 | 12.34 | 88.55 | 680.04 |
| 642 | Spaulding Pond Hydro | 9,811 | 457.23 | 0.00 | 4.66 | 4.66 | 457.23 |
| 644 | Celley Mill Hydro | 0 | 0.00 | 21.36 | 0.00 | 0.00 | 21.36 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING AUGUST 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 765,007 | 48,456.88 | 5,286.00 | 6.33 | 7.03 | 53,742.88 |
| | CP Power Sales Seventeen, LLC | 4,992,000 | 1,193,301.00 | 0.00 | 23.90 | 23.90 | 1,193,301.00 |
| | SUB TOTAL | 26,204,298 | 3,318,546.18 | 253,178.74 | 12.66 | 13.63 | 3,571,724.92 |
| Plus: Current Month Unvouchered IPP Liab. | | 757,880 | 46,100.00 | - | - | - | 46,100.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 2,493,320 | 142,800.00 | - | - | - | 142,800.00 |
| | GRAND TOTAL | 24,468,858 | $ 3,221,846.18 | $ 253,178.74 | 13.17 | 14.20 | $ 3,475,024.92 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING SEPTEMBER 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 468,372 | 20,626.18 | 1,230.57 | 4.40 | 4.67 | 21,856.75 |
| 004 | Swans Falls Hydro | 262,244 | 10,966.13 | 481.39 | 4.18 | 4.37 | 11,447.52 |
| 005 | Stevens Mill | 0 | 0.00 | 420.82 | 0.00 | 0.00 | 420.82 |
| 008 | Cocheco Falls | 168,414 | 6,567.84 | 401.69 | 3.90 | 4.14 | 6,969.53 |
| 009 | China Mills Dam | 0 | 0.00 | 9.56 | 0.00 | 0.00 | 9.56 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 776.97 | 0.00 | 0.00 | 776.97 |
| 012 | Newfound Hydro | 683,200 | 84,511.84 | 4,913.20 | 12.37 | 13.09 | 89,425.04 |
| 014 | Sunapee Hydro | 276,188 | 11,087.36 | 296.48 | 4.01 | 4.12 | 11,383.84 |
| 017 | Nashua Hydro | 369,600 | 45,682.56 | 5,638.47 | 12.36 | 13.89 | 51,321.03 |
| 018 | Greggs Falls | 718,926 | 27,089.81 | 851.20 | 3.77 | 3.89 | 27,941.01 |
| 019 | Mine Falls | 1,258,703 | 52,960.31 | 2,075.39 | 4.21 | 4.37 | 55,035.70 |
| 021 | Pine Valley Mill | 134,057 | 4,845.51 | 0.00 | 3.61 | 3.61 | 4,845.51 |
| 023 | Lakeport Dam | 85,201 | 3,262.61 | 615.29 | 3.83 | 4.55 | 3,877.90 |
| 024 | West Hopkinton Hydro | 312,800 | 28,152.00 | 0.00 | 9.00 | 9.00 | 28,152.00 |
| 025 | Lisbon Hydro | 177,100 | 6,716.45 | 516.46 | 3.79 | 4.08 | 7,232.91 |
| 028 | Marlow Power | 8,583 | 306.02 | 44.63 | 3.57 | 4.09 | 350.65 |
| 029 | Sugar River Hydro | 105,000 | 10,783.50 | 700.73 | 10.27 | 10.94 | 11,484.23 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 256,000 | 23,040.00 | 0.00 | 9.00 | 9.00 | 23,040.00 |
| 034 | Waterloom Falls | 36,797 | 1,392.51 | 0.00 | 3.78 | 3.78 | 1,392.51 |
| 037 | Hosiery Mill Dam | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 038 | Wyandotte Hydro | 21,189 | 858.51 | 0.00 | 4.05 | 4.05 | 858.51 |
| 039 | Clement Dam | 1,383,319 | 58,362.10 | 2,614.16 | 4.22 | 4.41 | 60,976.26 |
| 040 | Lochmere Dam | 438,944 | 17,289.51 | 1,013.78 | 3.94 | 4.17 | 18,303.29 |
| 044 | Rollinsford Hydro | 370,800 | 30,405.60 | 0.00 | 8.20 | 8.20 | 30,405.60 |
| 045 | Pembroke Hydro | 616,673 | 24,048.00 | 1,032.91 | 3.90 | 4.07 | 25,080.91 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 050 | Otis Mill Hydro | 42,719 | 1,601.82 | 0.00 | 3.75 | 3.75 | 1,601.82 |
| 051 | Steels Pond Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 052 | Briar Hydro | 2,758,000 | 378,121.80 | 26,552.34 | 13.71 | 14.67 | 404,674.14 |
| 053 | River Bend Hydro | 51,024 | 2,091.30 | 714.11 | 4.10 | 5.50 | 2,805.41 |
| 054 | Penacook Upper Falls | 1,816,500 | 293,001.45 | 17,193.12 | 16.13 | 17.08 | 310,194.57 |
| 055 | Penacook Lower Falls | 2,607,500 | 92,044.75 | 0.00 | 3.53 | 3.53 | 92,044.75 |
| 056 | Campton Dam | 92,646 | 3,910.46 | 248.66 | 4.22 | 4.49 | 4,159.12 |
| 058 | Kelleys Falls | 102,005 | 3,680.84 | 9.56 | 3.61 | 3.62 | 3,690.40 |
| 060 | Goodrich Falls | 113,937 | 4,204.76 | 191.28 | 3.69 | 3.86 | 4,396.04 |
| 066 | Chamberlain Falls | 36,666 | 1,370.28 | 0.00 | 3.74 | 3.74 | 1,370.28 |
| 070 | Monadnock Paper Mills | 100,709 | 4,159.59 | 0.00 | 4.13 | 4.13 | 4,159.59 |
| 090 | Goffstown Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 091 | Noone Falls | 32,837 | 1,631.18 | 38.26 | 4.97 | 5.08 | 1,669.44 |
| 106 | Otter Lane Hydro | 0 | 0.00 | 22.32 | 0.00 | 0.00 | 22.32 |
| 107 | Peterborough Lower Hydro | 53,560 | 6,631.70 | 556.59 | 12.38 | 13.42 | 7,188.29 |
| 108 | Garland Mill | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 110 | Salmon Brook Station #3 | 94,413 | 4,147.22 | 60.57 | 4.39 | 4.46 | 4,207.79 |
| 118 | Fiske Mill | 82,592 | 3,352.47 | 0.00 | 4.06 | 4.06 | 3,352.47 |
| 120 | Avery Dam | 159,351 | 6,365.55 | 424.00 | 3.99 | 4.26 | 6,789.55 |
| 124 | Watson Dam | 0 | 0.00 | 717.97 | 0.00 | 0.00 | 717.97 |
| 128 | Weston Dam | 214,936 | 8,241.23 | 516.46 | 3.83 | 4.07 | 8,757.69 |
| 134 | Sunnybrook Hydro #2 | 9,637 | 353.51 | 41.44 | 3.67 | 4.10 | 394.95 |
| 171 | Pettyboro Hydro | 1,144 | 33.56 | 6.31 | 2.93 | 3.49 | 39.87 |
| 187 | Sugar River Hydro #2 | 107,554 | 4,263.12 | 0.00 | 3.96 | 3.96 | 4,263.12 |
| 189 | Errol Dam | 1,834,000 | 303,710.40 | 25,700.00 | 16.56 | 17.96 | 329,410.40 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 7,789,751 | 1,043,870.11 | 127,620.96 | 13.40 | 15.04 | 1,171,491.07 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,346,528 | 98,839.45 | 12,519.28 | 4.21 | 4.75 | 111,358.73 |
| 445 | Dunbarton Road Landfill | 169,187 | 6,767.60 | 1,636.33 | 4.00 | 4.97 | 8,403.93 |
| 496 | Turnkey Rochester | 424,989 | 17,919.32 | 6,622.96 | 4.22 | 5.77 | 24,542.28 |
| 564 | Four Hills Landfill | 5,480 | 235.55 | 1,408.90 | 4.30 | 30.01 | 1,644.45 |
| 564B | Four Hills Reducer | 1,058,279 | 45,268.19 | 930.90 | 4.28 | 4.37 | 46,199.09 |
| 628 | Eastman Brook Hydro | 23,261 | 819.39 | 8.01 | 3.52 | 3.56 | 827.40 |
| 631 | Bath Electric Hydro | 136,208 | 5,743.69 | 605.72 | 4.22 | 4.66 | 6,349.41 |
| 636 | Peterborough Upper Hydro | 65,408 | 8,131.53 | 585.28 | 12.43 | 13.33 | 8,716.81 |
| 642 | Spaulding Pond Hydro | 71,605 | 2,721.63 | 0.00 | 3.80 | 3.80 | 2,721.63 |
| 644 | Celley Mill Hydro | 35,714 | 1,437.18 | 21.36 | 4.02 | 4.08 | 1,458.54 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2010 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING SEPTEMBER 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 1,333,415 | 55,864.81 | 5,414.00 | 4.19 | 4.60 | 61,278.81 |
| | CP Power Sales Seventeen, LLC | 6,720,000 | 1,584,008.00 | 0.00 | 23.57 | 23.57 | 1,584,008.00 |
| | SUB TOTAL | 38,643,665 | 4,463,497.79 | 254,000.39 | 11.55 | 12.21 | 4,717,498.18 |
| Plus: Current Month Unvouchered IPP Liab. | | 2,841,690 | 118,800.00 | - | - | - | 118,800.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 757,880 | 46,100.00 | - | - | - | 46,100.00 |
| | GRAND TOTAL | 40,727,475 | $ 4,536,197.79 | $ 254,000.39 | 11.14 | 11.76 | $ 4,790,198.18 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING OCTOBER 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 339,299 | 14,017.22 | 1,285.77 | 4.13 | 4.51 | 15,302.99 |
| 004 | Swans Falls Hydro | 287,797 | 11,625.39 | 502.98 | 4.04 | 4.21 | 12,128.37 |
| 005 | Stevens Mill | 0 | 0.00 | 439.69 | 0 | 0.00 | 439.69 |
| 008 | Cocheco Falls | 244,704 | 10,234.31 | 419.71 | 4.18 | 4.35 | 10,654.02 |
| 009 | China Mills Dam | 0 | 0.00 | 9.99 | 0 | 0.00 | 9.99 |
| 011 | Milton Mills Hydro | 0 | 0.00 | 776.97 | 0 | 0.00 | 776.97 |
| 012 | Newfound Hydro | 846,400 | 104,699.68 | 4,913.20 | 12.37 | 12.95 | 109,612.88 |
| 014 | Sunapee Hydro | 313,121 | 12,632.31 | 309.78 | 4.03 | 4.13 | 12,942.09 |
| 017 | Nashua Hydro | 551,600 | 68,177.76 | 5,638.47 | 12.36 | 13.38 | 73,816.23 |
| 018 | Greggs Falls | 1,147,727 | 46,275.27 | 889.38 | 4.03 | 4.11 | 47,164.65 |
| 019 | Mine Falls | 1,541,965 | 66,323.24 | 2,168.48 | 4.3 | 4.44 | 68,491.72 |
| 021 | Pine Valley Mill | 199,509 | 8,337.42 | 0.00 | 4.18 | 4.18 | 8,337.42 |
| 023 | Lakeport Dam | 157,163 | 7,062.25 | 642.88 | 4.49 | 4.90 | 7,705.13 |
| 024 | West Hopkinton Hydro | 320,000 | 28,800.00 | 0.00 | 9 | 9.00 | 28,800.00 |
| 025 | Lisbon Hydro | 216,521 | 8,823.31 | 539.62 | 4.08 | 4.32 | 9,362.93 |
| 028 | Marlow Power | 53,813 | 2,478.04 | 46.63 | 4.6 | 4.69 | 2,524.67 |
| 029 | Sugar River Hydro | 102,200 | 10,495.94 | 700.73 | 10.27 | 10.96 | 11,196.67 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 403,200 | 36,288.00 | 0.00 | 9 | 9.00 | 36,288.00 |
| 034 | Waterloom Falls | 45,294 | 1,906.36 | 0.00 | 4.21 | 4.21 | 1,906.36 |
| 037 | Hosiery Mill Dam | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 038 | Wyandotte Hydro | 23,226 | 913.47 | 0.00 | 3.93 | 3.93 | 913.47 |
| 039 | Clement Dam | 852,860 | 33,791.56 | 2,731.42 | 3.96 | 4.28 | 36,522.98 |
| 040 | Lochmere Dam | 382,625 | 15,985.60 | 1,059.26 | 4.18 | 4.45 | 17,044.86 |
| 044 | Rollinsford Hydro | 565,200 | 46,346.40 | 0.00 | 8.2 | 8.20 | 46,346.40 |
| 045 | Pembroke Hydro | 1,035,582 | 41,864.82 | 1,079.24 | 4.04 | 4.15 | 42,944.06 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 050 | Otis Mill Hydro | 11,198 | 582.62 | 0.00 | 5.2 | 5.20 | 582.62 |
| 051 | Steels Pond Hydro | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 052 | Briar Hydro | 3,510,500 | 452,866.55 | 26,552.34 | 12.9 | 13.66 | 479,418.89 |
| 053 | River Bend Hydro | 670,508 | 26,553.71 | 746.14 | 3.96 | 4.07 | 27,299.85 |
| 054 | Penacook Upper Falls | 2,331,000 | 315,639.50 | 17,193.12 | 13.54 | 14.28 | 332,832.62 |
| 055 | Penacook Lower Falls | 3,265,500 | 115,272.15 | 0.00 | 3.53 | 3.53 | 115,272.15 |
| 056 | Campton Dam | 155,368 | 6,591.04 | 259.82 | 4.24 | 4.41 | 6,850.86 |
| 058 | Kelleys Falls | 158,117 | 6,599.14 | 9.99 | 4.17 | 4.18 | 6,609.13 |
| 060 | Goodrich Falls | 194,482 | 8,332.30 | 199.86 | 4.28 | 4.39 | 8,532.16 |
| 066 | Chamberlain Falls | 54,203 | 2,264.66 | 0.00 | 4.18 | 4.18 | 2,264.66 |
| 070 | Monadnock Paper Mills | 116,460 | 4,662.04 | 0.00 | 4 | 4.00 | 4,662.04 |
| 090 | Goffstown Hydro | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 091 | Noone Falls | 46,859 | 2,113.85 | 39.97 | 4.51 | 4.60 | 2,153.82 |
| 106 | Otter Lane Hydro | 0 | 0.00 | 23.32 | 0 | 0.00 | 23.32 |
| 107 | Peterborough Lower Hydro | 93,300 | 11,361.81 | 556.59 | 12.18 | 12.77 | 11,918.40 |
| 108 | Garland Mill | 730 | 65.70 | 0.00 | 9 | 9.00 | 65.70 |
| 110 | Salmon Brook Station #3 | 123,421 | 4,927.94 | 63.29 | 3.99 | 4.04 | 4,991.23 |
| 118 | Fiske Mill | 39,684 | 1,886.46 | 0.00 | 4.75 | 4.75 | 1,886.46 |
| 120 | Avery Dam | 135,754 | 5,623.83 | 443.02 | 4.14 | 4.47 | 6,066.85 |
| 124 | Watson Dam | 8,448 | 1,068.70 | 717.97 | 12.65 | 21.15 | 1,786.67 |
| 128 | Weston Dam | 261,768 | 10,899.73 | 539.62 | 4.16 | 4.37 | 11,439.35 |
| 134 | Sunnybrook Hydro #2 | 14,631 | 599.32 | 43.30 | 4.1 | 4.39 | 642.62 |
| 171 | Pettyboro Hydro | 1,434 | 64.54 | 3.33 | 4.5 | 4.73 | 67.87 |
| 187 | Sugar River Hydro #2 | 93,991 | 3,961.43 | 0.00 | 4.21 | 4.21 | 3,961.43 |
| 189 | Errol Dam | 1,722,000 | 285,163.20 | 25,700.00 | 16.56 | 18.05 | 310,863.20 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 9,229,066 | 1,233,889.20 | 127,620.96 | 13.37 | 14.75 | 1,361,510.16 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,670,112 | 106,914.64 | 13,080.84 | 4 | 4.49 | 119,995.48 |
| 445 | Dunbarton Road Landfill | 175,814 | 6,977.68 | 1,682.66 | 3.97 | 4.93 | 8,660.34 |
| 496 | Turnkey Rochester | 428,734 | 17,188.56 | 6,811.29 | 4.01 | 5.60 | 23,999.85 |
| 564 | Four Hills Landfill | 970 | 45.98 | 1,459.52 | 4.74 | 0.00 | 1,505.50 |
| 564B | Four Hills Reducer | 1,060,001 | 43,097.33 | 972.65 | 4.07 | 4.16 | 44,069.98 |
| 628 | Eastman Brook Hydro | 19,314 | 803.60 | 8.01 | 4.16 | 4.20 | 811.61 |
| 631 | Bath Electric Hydro | 76,937 | 3,120.88 | 632.89 | 4.06 | 4.88 | 3,753.77 |
| 636 | Peterborough Upper Hydro | 130,304 | 15,859.39 | 585.28 | 12.17 | 12.62 | 16,444.67 |
| 642 | Spaulding Pond Hydro | 113,231 | 4,774.99 | 0.00 | 4.22 | 4.22 | 4,774.99 |
| 644 | Celley Mill Hydro | 17,615 | 732.63 | 21.36 | 4.16 | 4.28 | 753.99 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING OCTOBER 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 1,632,111 | 69,815.81 | 5,700.00 | 4.28 | 4.63 | 75,515.81 |
| | CP Power Sales Seventeen, LLC | 7,440,000 | 1,742,874.00 | | 23.43 | 23.43 | 1,742,874.00 |
| | SUB TOTAL | 45,633,371 | 5,090,273.26 | 255,821.34 | 11.15 | 11.72 | 5,346,094.60 |
| Plus: Current Month Unvouchered IPP Liab. | | 4,470,120 | 237,300.00 | - | - | - | 237,300.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 2,841,690 | 118,800.00 | - | - | - | 118,800.00 |
| | GRAND TOTAL | 47,261,801 | $ 5,208,773.26 | $ 255,821.34 | 11.02 | 11.56 | $ 5,464,594.60 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING NOVEMBER 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 472,194 | 18,300.28 | 1,352.16 | 3.88 | 4.16 | 19,652.44 |
| 004 | Swans Falls Hydro | 410,174 | 15,385.51 | 528.95 | 3.75 | 3.88 | 15,914.46 |
| 005 | Stevens Mill | 0 | 0.00 | 462.40 | 0.00 | 0.00 | 462.40 |
| 008 | Cocheco Falls | 266,297 | 10,468.22 | 441.38 | 3.93 | 4.10 | 10,909.60 |
| 009 | China Mills Dam | 0 | 0.00 | 10.51 | 0.00 | 0.00 | 10.51 |
| 011 | Milton Mills Hydro | 798,393 | 31,785.79 | 725.17 | 3.98 | 4.07 | 32,510.96 |
| 012 | Newfound Hydro | 795,200 | 98,366.24 | 4,913.20 | 12.37 | 12.99 | 103,279.44 |
| 014 | Sunapee Hydro | 435,253 | 17,693.18 | 325.78 | 4.07 | 4.14 | 18,018.96 |
| 017 | Nashua Hydro | 645,400 | 79,771.44 | 5,638.47 | 12.36 | 13.23 | 85,409.91 |
| 018 | Greggs Falls | 1,731,089 | 68,969.97 | 935.30 | 3.98 | 4.04 | 69,905.27 |
| 019 | Mine Falls | 1,665,246 | 61,848.11 | 2,280.45 | 3.71 | 3.85 | 64,128.56 |
| 021 | Pine Valley Mill | 306,892 | 12,029.44 | 0.00 | 3.92 | 3.92 | 12,029.44 |
| 023 | Lakeport Dam | 142,742 | 5,743.60 | 676.08 | 4.02 | 4.50 | 6,419.68 |
| 024 | West Hopkinton Hydro | 210,400 | 18,936.00 | 0.00 | 9.00 | 9.00 | 18,936.00 |
| 025 | Lisbon Hydro | 238,690 | 9,491.27 | 567.49 | 3.98 | 4.21 | 10,058.76 |
| 028 | Marlow Power | 56,791 | 2,361.88 | 49.04 | 4.16 | 4.25 | 2,410.92 |
| 029 | Sugar River Hydro | 107,400 | 11,029.98 | 700.73 | 10.27 | 10.92 | 11,730.71 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 645,600 | 58,104.00 | 0.00 | 9.00 | 9.00 | 58,104.00 |
| 034 | Waterloom Falls | 52,256 | 2,128.21 | 0.00 | 4.07 | 4.07 | 2,128.21 |
| 037 | Hosiery Mill Dam | 2,857 | 107.06 | 0.00 | 3.75 | 3.75 | 107.06 |
| 038 | Wyandotte Hydro | 46,737 | 1,816.44 | 0.00 | 3.89 | 3.89 | 1,816.44 |
| 039 | Clement Dam | 1,433,862 | 53,244.69 | 2,872.46 | 3.71 | 3.91 | 56,117.15 |
| 040 | Lochmere Dam | 267,161 | 10,035.87 | 1,113.95 | 3.76 | 4.17 | 11,149.82 |
| 044 | Rollinsford Hydro | 675,600 | 55,399.20 | 0.00 | 8.20 | 8.20 | 55,399.20 |
| 045 | Pembroke Hydro | 1,469,349 | 58,726.04 | 1,134.97 | 4.00 | 4.07 | 59,861.01 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 050 | Otis Mill Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 051 | Steels Pond Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 052 | Briar Hydro | 3,276,000 | 333,954.40 | 26,552.34 | 10.19 | 11.00 | 360,506.74 |
| 053 | River Bend Hydro | 927,465 | 34,611.65 | 784.67 | 3.73 | 3.82 | 35,396.32 |
| 054 | Penacook Upper Falls | 2,215,500 | 236,006.75 | 17,193.12 | 10.65 | 11.43 | 253,199.87 |
| 055 | Penacook Lower Falls | 3,185,000 | 112,430.50 | 0.00 | 3.53 | 3.53 | 112,430.50 |
| 056 | Campton Dam | 123,414 | 5,174.71 | 273.23 | 4.19 | 4.41 | 5,447.94 |
| 058 | Kelleys Falls | 217,974 | 8,745.10 | 10.51 | 4.01 | 4.02 | 8,755.61 |
| 060 | Goodrich Falls | 309,703 | 12,027.78 | 210.18 | 3.88 | 3.95 | 12,237.96 |
| 066 | Chamberlain Falls | 66,996 | 2,619.98 | 0.00 | 3.91 | 3.91 | 2,619.98 |
| 070 | Monadnock Paper Mills | 168,898 | 6,004.48 | 0.00 | 3.56 | 3.56 | 6,004.48 |
| 090 | Goffstown Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 091 | Noone Falls | 42,479 | 1,782.09 | 42.04 | 4.20 | 4.29 | 1,824.13 |
| 106 | Otter Lane Hydro | 31,060 | 1,109.49 | 24.52 | 3.57 | 3.65 | 1,134.01 |
| 107 | Peterborough Lower Hydro | 141,240 | 17,252.79 | 556.59 | 12.22 | 12.61 | 17,809.38 |
| 108 | Garland Mill | 240 | 21.60 | 0.00 | 9.00 | 9.00 | 21.60 |
| 110 | Salmon Brook Station #3 | 138,254 | 5,315.09 | 66.56 | 3.84 | 3.89 | 5,381.65 |
| 118 | Fiske Mill | 30,253 | 1,218.82 | 0.00 | 4.03 | 4.03 | 1,218.82 |
| 120 | Avery Dam | 163,607 | 6,391.13 | 465.90 | 3.91 | 4.19 | 6,857.03 |
| 124 | Watson Dam | 94,496 | 11,601.01 | 717.97 | 12.28 | 13.04 | 12,318.98 |
| 128 | Weston Dam | 273,052 | 10,715.19 | 567.49 | 3.92 | 4.13 | 11,282.68 |
| 134 | Sunnybrook Hydro #2 | 15,096 | 581.12 | 45.54 | 3.85 | 4.15 | 626.66 |
| 171 | Pettyboro Hydro | 2,497 | 93.61 | 3.50 | 3.75 | 3.89 | 97.11 |
| 187 | Sugar River Hydro #2 | 119,444 | 4,586.13 | 0.00 | 3.84 | 3.84 | 4,586.13 |
| 189 | Errol Dam | 1,604,400 | 237,476.16 | 25,700.00 | 14.80 | 16.40 | 263,176.16 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 440 | WES Concord MSW | 8,719,004 | 1,165,858.07 | 127,620.96 | 13.37 | 14.84 | 1,293,479.03 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,421,942 | 90,462.12 | 13,756.28 | 3.74 | 4.30 | 104,218.40 |
| 445 | Dunbarton Road Landfill | 136,512 | 4,890.84 | 1,738.39 | 3.58 | 4.86 | 6,629.23 |
| 496 | Turnkey Rochester | 526,482 | 19,449.21 | 7,037.81 | 3.69 | 5.03 | 26,487.02 |
| 564 | Four Hills Landfill | 224,774 | 8,235.68 | 1,520.41 | 3.66 | 4.34 | 9,756.09 |
| 564B | Four Hills Reducer | 552,996 | 20,655.86 | 1,520.41 | 3.74 | 4.01 | 22,176.27 |
| 628 | Eastman Brook Hydro | 23,257 | 946.13 | 8.01 | 4.07 | 4.10 | 954.14 |
| 631 | Bath Electric Hydro | 164,965 | 6,182.21 | 665.57 | 3.75 | 4.15 | 6,847.78 |
| 636 | Peterborough Upper Hydro | 162,816 | 19,851.74 | 585.28 | 12.19 | 12.55 | 20,437.02 |
| 642 | Spaulding Pond Hydro | 129,803 | 5,029.06 | 0.00 | 3.87 | 3.87 | 5,029.06 |
| 644 | Celley Mill Hydro | 43,103 | 1,741.86 | 21.36 | 4.04 | 4.09 | 1,763.22 |
| 1080 | UNH Turbine | 1,669,487 | 64,826.52 | 6,044.00 | 3.88 | 4.25 | 70,870.52 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING NOVEMBER 30, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| | CP Power Sales Seventeen, LLC | 7,210,000 | 1,705,946.00 | | 23.66 | 23.66 | 1,705,946.00 |
| | SUB TOTAL | 48,007,792 | 4,865,537.30 | 258,461.13 | 10.13 | 10.67 | 5,123,998.43 |
| | Plus: Current Month Unvouchered IPP Liab. | 6,231,680 | 327,000.00 | - | - | - | 327,000.00 |
| | Less: Prior Month Unvouchered IPP Liab. | 4,470,120 | 237,300.00 | - | - | - | 237,300.00 |
| | GRAND TOTAL | 49,769,352 | $ 4,955,237.30 | $ 258,461.13 | 9.96 | 10.48 | $ 5,213,698.43 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING DECEMBER 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | --PAYMENT-- ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | Franklin Falls | 475,826 | 16,679.63 | 1,856.55 | 3.51 | 3.90 | 18,536.18 |
| 004 | Swans Falls Hydro | 426,950 | 14,281.92 | 570.97 | 3.35 | 3.48 | 14,852.89 |
| 005 | Stevens Mill | 0 | 0.00 | 553.01 | 0.00 | 0.00 | 553.01 |
| 008 | Cocheco Falls | 299,171 | 10,371.17 | 1,594.40 | 3.47 | 4.00 | 11,965.57 |
| 009 | China Mills Dam | 0 | 0.00 | 1,547.72 | 0.00 | 0.00 | 1,547.72 |
| 011 | Milton Mills Hydro | 905,966 | 32,325.43 | 3,147.03 | 3.57 | 3.92 | 35,472.46 |
| 012 | Newfound Hydro | 1,040,000 | 128,648.00 | 4,913.20 | 12.37 | 12.84 | 133,561.20 |
| 014 | Sunapee Hydro | 288,995 | 10,421.35 | 991.12 | 3.61 | 3.95 | 11,412.47 |
| 017 | Nashua Hydro | 628,600 | 77,694.96 | 5,638.47 | 12.36 | 13.26 | 83,333.43 |
| 018 | Greggs Falls | 1,758,336 | 61,710.72 | 5,099.22 | 3.51 | 3.80 | 66,809.94 |
| 019 | Mine Falls | 2,227,203 | 74,382.59 | 5,408.05 | 3.34 | 3.58 | 79,790.64 |
| 021 | Pine Valley Mill | 272,282 | 9,519.24 | 936.11 | 3.50 | 3.84 | 10,455.35 |
| 023 | Lakeport Dam | 310,549 | 11,100.51 | 1,123.98 | 3.57 | 3.94 | 12,224.49 |
| 024 | West Hopkinton Hydro | 193,600 | 17,424.00 | 0.00 | 9.00 | 9.00 | 17,424.00 |
| 025 | Lisbon Hydro | 272,148 | 9,404.63 | 1,134.76 | 3.46 | 3.87 | 10,539.39 |
| 028 | Marlow Power | 54,280 | 2,032.73 | 208.28 | 3.74 | 4.13 | 2,241.01 |
| 029 | Sugar River Hydro | 121,200 | 12,447.24 | 700.73 | 10.27 | 10.85 | 13,147.97 |
| 032 | Great Falls Upper | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 033 | Great Falls Lower | 732,000 | 65,880.00 | 0.00 | 9.00 | 9.00 | 65,880.00 |
| 034 | Waterloom Falls | 52,020 | 1,770.71 | 158.61 | 3.40 | 3.71 | 1,929.32 |
| 037 | Hosiery Mill Dam | 41,923 | 1,688.77 | 901.90 | 4.03 | 6.18 | 2,590.67 |
| 038 | Wyandotte Hydro | 46,501 | 1,643.91 | 270.57 | 3.54 | 4.12 | 1,914.48 |
| 039 | Clement Dam | 1,324,656 | 44,711.65 | 5,127.95 | 3.38 | 3.76 | 49,839.60 |
| 040 | Lochmere Dam | 514,022 | 18,080.59 | 1,924.78 | 3.52 | 3.89 | 20,005.37 |
| 044 | Rollinsford Hydro | 672,000 | 55,104.00 | 0.00 | 8.20 | 8.20 | 55,104.00 |
| 045 | Pembroke Hydro | 1,604,555 | 56,233.68 | 5,174.63 | 3.50 | 3.83 | 61,408.31 |
| 049 | Bell Mill/Elm St. Hydro | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 050 | Otis Mill Hydro | 0 | 0.00 | 171.05 | 0.00 | 0.00 | 171.05 |
| 051 | Steels Pond Hydro | 39,360 | 1,968.00 | 0.00 | 5.00 | 5.00 | 1,968.00 |
| 052 | Briar Hydro | 3,535,000 | 268,176.50 | 26,552.34 | 7.59 | 8.34 | 294,728.84 |
| 053 | River Bend Hydro | 985,732 | 33,292.12 | 1,346.62 | 3.38 | 3.51 | 34,638.74 |
| 054 | Penacook Upper Falls | 2,341,500 | 187,277.75 | 17,193.12 | 8.00 | 8.73 | 204,470.87 |
| 055 | Penacook Lower Falls | 3,328,500 | 117,496.05 | 0.00 | 3.53 | 3.53 | 117,496.05 |
| 056 | Campton Dam | 137,685 | 5,048.00 | 725.38 | 3.67 | 4.19 | 5,773.38 |
| 058 | Kelleys Falls | 189,321 | 6,613.56 | 944.43 | 3.49 | 3.99 | 7,557.99 |
| 060 | Goodrich Falls | 269,086 | 9,287.79 | 955.21 | 3.45 | 3.81 | 10,243.00 |
| 066 | Chamberlain Falls | 64,657 | 2,171.63 | 0.00 | 3.36 | 3.36 | 2,171.63 |
| 070 | Monadnock Paper Mills | 183,282 | 5,985.44 | 0.00 | 3.27 | 3.27 | 5,985.44 |
| 090 | Goffstown Hydro | 0 | 0.00 | 199.04 | 0.00 | 0.00 | 199.04 |
| 091 | Noone Falls | 52,482 | 1,960.14 | 122.09 | 3.73 | 3.97 | 2,082.23 |
| 106 | Otter Lane Hydro | 21,638 | 846.78 | 197.50 | 3.91 | 4.83 | 1,044.28 |
| 107 | Peterborough Lower Hydro | 134,280 | 16,445.32 | 556.59 | 12.25 | 12.66 | 17,001.91 |
| 108 | Garland Mill | 1,280 | 115.20 | 0.00 | 9.00 | 9.00 | 115.20 |
| 110 | Salmon Brook Station #3 | 82,734 | 2,819.87 | 448.87 | 3.41 | 3.95 | 3,268.74 |
| 118 | Fiske Mill | 42,773 | 1,539.07 | 0.00 | 3.60 | 3.60 | 1,539.07 |
| 120 | Avery Dam | 160,559 | 5,586.41 | 596.11 | 3.48 | 3.85 | 6,182.52 |
| 124 | Watson Dam | 95,104 | 11,763.44 | 717.97 | 12.37 | 13.12 | 12,481.41 |
| 128 | Weston Dam | 300,036 | 10,348.30 | 1,052.16 | 3.45 | 3.80 | 11,400.46 |
| 134 | Sunnybrook Hydro #2 | 10,258 | 348.80 | 68.23 | 3.40 | 4.07 | 417.03 |
| 171 | Pettyboro Hydro | 3,091 | 104.16 | 3.59 | 3.37 | 3.49 | 107.75 |
| 187 | Sugar River Hydro #2 | 112,428 | 3,871.00 | 0.00 | 3.44 | 3.44 | 3,871.00 |
| 189 | Errol Dam | 1,601,600 | 207,221.44 | 25,700.00 | 12.94 | 14.54 | 232,921.44 |
| 316 | Bridgewater Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320 | Alexandria Power | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 376 | NE Wood - ZBE-001 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 377 | Middleton Cogen | 186 | 5.49 | 0.00 | 2.95 | 2.95 | 5.49 |
| 440 | WES Concord MSW | 8,944,957 | 1,198,109.13 | 127,620.96 | 13.39 | 14.82 | 1,325,730.09 |
| 440A | WES Concord MSW ST | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 441 | WES Claremont MSW | 2,492,162 | 84,231.76 | 14,870.33 | 3.38 | 3.98 | 99,102.09 |
| 445 | Dunbarton Road Landfill | 71,189 | 2,247.28 | 1,766.90 | 3.16 | 5.64 | 4,014.18 |
| 496 | Turnkey Rochester | 437,417 | 14,670.22 | 7,193.21 | 3.35 | 5.00 | 21,863.43 |
| 564 | Four Hills Landfill | 225,315 | 7,416.72 | 854.91 | 3.29 | 3.67 | 8,271.63 |
| 565 | Four Hills Reducer | 792,947 | 26,196.30 | 2,432.73 | 3.30 | 3.61 | 28,629.03 |
| 628 | Eastman Brook Hydro | 36,144 | 1,282.01 | 130.10 | 3.55 | 3.91 | 1,412.11 |
| 631 | Bath Electric Hydro | 162,756 | 5,530.09 | 851.07 | 3.40 | 3.92 | 6,381.16 |
| 636 | Peterborough Upper Hydro | 151,616 | 18,559.21 | 585.28 | 12.24 | 12.63 | 19,144.49 |
| 642 | Spaulding Pond Hydro | 132,751 | 4,572.58 | 0.00 | 3.44 | 3.44 | 4,572.58 |
| 644 | Celley Mill Hydro | 67,024 | 2,372.23 | 258.37 | 3.54 | 3.92 | 2,630.60 |

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**
**2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION**

**FOR THE MONTH ENDING DECEMBER 31, 2011**

| SESD NO. | PROJECT NAME | KWHR PURCHASED | ENERGY PAYMENT | CAPACITY PAYMENT | –PAYMENT– ENERGY (CENTS/KWHR) | TOTAL | NET PAYMENT AMOUNT |
|---|---|---|---|---|---|---|---|
| 1080 | UNH Turbine | 864,805 | 31,166.59 | 6,220.00 | 3.60 | 4.32 | 37,386.59 |
| | CP Power Sales Seventeen, LLC | 6,106,000 | 1,478,411.00 | 0.00 | 24.21 | 24.21 | 1,478,411.00 |
| | SUB TOTAL | 48,440,438 | 4,508,614.81 | 289,316.20 | 9.31 | 9.90 | 4,797,931.01 |
| Plus: Current Month Unvouchered IPP Liab. | | 6,581,290 | 311,900.00 | - | - | - | 311,900.00 |
| Less: Prior Month Unvouchered IPP Liab. | | 6,231,680 | 327,000.00 | - | - | - | 327,000.00 |
| | GRAND TOTAL | 48,790,048 | $ 4,493,514.81 | $ 289,316.20 | 9.21 | 9.80 | $ 4,782,831.01 |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| Purchases and Sales | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Purchases | $ 6,533 | $ 5,753 | $ 5,850 | $ 7,274 | $ 13,577 | $ 8,298 | $ 10,961 | $ 13,216 | $ 14,589 | $ 13,112 | $ 9,174 | $ 10,616 | $ 118,953 |
| 2 Sales | (6,039) | (3,248) | (2,195) | (1,604) | (1,639) | (1,317) | (1,814) | (1,279) | (1,256) | (2,102) | (1,703) | (981) | (25,176) |
| 3 ISO -NE Ancillary | (560) | 184 | (798) | 165 | 245 | 245 | 41 | (88) | 178 | 181 | (897) | (280) | (1,386) |
| 4 Capacity Costs | 1,200 | 1,085 | 1,049 | 257 | 601 | 962 | 795 | 886 | 917 | 965 | 851 | 859 | 10,427 |
| 5 NH RPS | 873 | 864 | 869 | 869 | 869 | 901 | 1,048 | 901 | 2,081 | 1,032 | 1,032 | 740 | 12,078 |
| 6 RGGI Costs | 720 | 267 | 431 | 354 | 1,360 | 373 | 441 | 339 | 228 | 249 | 331 | 259 | 5,352 |
| 7 Total | $ 2,727 | $ 4,905 | $ 5,206 | $ 7,315 | $ 15,012 | $ 9,462 | $ 11,471 | $ 13,975 | $ 16,736 | $ 13,436 | $ 8,788 | $ 11,212 | $ 120,248 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

## Northern Wood Power Project (NWPP)

| Summary of Total 2010 NWPP Benefit | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Total Projected REC Revenue (1) | $ 540 | $ 472 | $ 476 | $ 15 | $ 221 | $ 524 | $ 558 | $ 553 | $ 534 | $ 550 | $ 376 | $ 547 | $ 5,366 |
| 2 Total Projected Production Tax Credit (PTC) (1) | 330 | 288 | 291 | 9 | 135 | 321 | 341 | 338 | 326 | 336 | 230 | 334 | 3,279 |
| 3 Total Projected Avoided RGGI Cost | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 4,553 |
| 4 Total NWPP Benefit | $ 1,250 | $ 1,140 | $ 1,146 | $ 404 | $ 735 | $ 1,224 | $ 1,278 | $ 1,270 | $ 1,239 | $ 1,266 | $ 986 | $ 1,260 | $ 13,198 |
| **Customer Share of 2010 NWPP Benefit** | | | | | | | | | | | | | |
| 5 NWPP Revenue Target | 628 | 628 | 628 | 628 | 628 | 628 | 628 | 628 | 628 | 628 | 628 | 628 | 7,541 |
| 6 Projected PTC Credit (Line 2 x 50%) | 165 | 144 | 145 | 5 | 67 | 160 | 170 | 169 | 163 | 168 | 115 | 167 | 1,640 |
| 7 Projected REC Revenue Over Target (Line 1 - Line 5) x 50% | (44) | (78) | (76) | (306) | (204) | (52) | (35) | (38) | (47) | (39) | (126) | (41) | (1,088) |
| 8 2010 REC Revenue True-Up (2) | - | - | - | - | (542) | - | - | - | - | - | - | - | (542) |
| 9 Subtotal Fossil Energy Cost Offset (Page 8, Line 15) | $ 749 | $ 694 | $ 698 | $ 327 | $ (50) | $ 737 | $ 763 | $ 759 | $ 744 | $ 757 | $ 617 | $ 755 | $ 7,551 |
| 10 RGGI Avoided Cost (Line 3 x 50%) | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 2,276 |
| 11 Total Projected Customer Share of NWPP Benefit (Line 9 + Line 10) | $ 939 | $ 884 | $ 887 | $ 516 | $ 140 | $ 926 | $ 953 | $ 949 | $ 934 | $ 947 | $ 807 | $ 944 | $ 9,827 |

(1) REC revenues are projected at a rate of $18.00 per MWh and PTC credits are projected at a rate of $11.00 per MWh. The NWPP customer benefit will be adjusted in 2012 to reflect actual REC revenues and PTC credits.

(2) The 2010 actual REC revenues were lower than reflected in the annual reconciliation - DE 11-094. The average REC sales price was $14.69 vs. the $18.00 per MWH that was projected in DE 11-094.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| | 1 Return on Rate Base | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 (2) | October 2011 | November 2011 | December 2011 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Net Plant | 301,381 | 301,381 | 310,157 | 310,157 | 310,157 | 312,102 | 312,102 | 312,102 | 631,765 | 631,765 | 631,765 | 631,765 | |
| 3 | Working Capital Allow. (45 days of O&M) | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | 12,841 | |
| 4 | Fossil Fuel Inventory | 57,962 | 57,962 | 41,641 | 41,641 | 41,641 | 48,402 | 48,402 | 48,402 | 48,421 | 48,421 | 48,421 | 48,421 | |
| 5 | Mat'ls and Supplies | 51,799 | 51,799 | 53,325 | 53,325 | 53,325 | 49,058 | 49,058 | 49,058 | 49,575 | 49,575 | 49,575 | 49,575 | |
| 6 | Prepayments incl. Insurance and RGGI | 2,563 | 2,563 | 2,235 | 2,235 | 2,235 | 1,893 | 1,893 | 1,893 | 1,034 | 1,034 | 1,034 | 1,034 | |
| 7 | Deferred Taxes | (25,536) | (25,536) | (26,090) | (26,090) | (26,090) | (34,619) | (34,619) | (34,619) | (40,897) | (40,897) | (40,897) | (40,897) | |
| 8 | Other Regulatory Obligations incl. ARO, RPS | (12,303) | (12,303) | (15,050) | (15,050) | (15,050) | (8,223) | (8,223) | (8,223) | (13,524) | (13,524) | (13,524) | (13,524) | |
| 9 | Total Rate Base-Adjusted (sum L2 thru L8) | 388,707 | 388,707 | 379,060 | 379,060 | 379,060 | 381,454 | 381,454 | 381,454 | 689,215 | 689,215 | 689,215 | 689,215 | |
| 10 | Average Rate Base ( prev + curr month) | 388,491 | 388,707 | 383,883 | 379,060 | 379,060 | 380,257 | 381,454 | 381,454 | 535,335 | 689,215 | 689,215 | 689,215 | |
| 11 | x Return | 0.9339% | 0.9339% | 0.9339% | 0.9411% | 0.9411% | 0.9411% | 0.9322% | 0.9322% | 0.9322% | 0.8913% | 0.8913% | 0.8913% | |
| 12 | Return-Adjusted (L10 x L11) (1) | $ 3,628 | $ 3,630 | $ 3,491 | $ 3,567 | $ 3,567 | $ 3,601 | $ 3,556 | $ 3,556 | $ 4,055 | $ 6,143 | $ 6,143 | $ 6,143 | $ 51,079 |

13 (1) Line 12 includes a quarterly true-up adjustment in March, June and September.

14 (2) The Merrimack Scrubber was declared in service on 9/28/11, therefore, the September return
15 for the Merrimack Scrubber was pro-rated to represent three days (3/30 or 10%) of the monthly return.

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2011 ENERGY SERVICE AND STRANDED COST RECOVERY RECONCILIATION

SUMMARY FOR THE 12 MONTHS ENDED DECEMBER 31, 2011
000s

| | January 2011 | February 2011 | March 2011 | April 2011 | May 2011 | June 2011 | July 2011 | August 2011 | September 2011 | October 2011 | November 2011 | December 2011 | Total 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 **Fossil / Hydro O&M, Depr. & Taxes** | | | | | | | | | | | | | |
| 2 F/H Operation & Maintenance Cost (1) | $ 6,587 | $ 6,098 | $ 8,025 | $ 12,102 | $ 10,426 | $ 7,022 | $ 7,593 | $ 6,730 | $ 6,871 | $ 10,828 | $ 11,643 | $ 7,756 | $ 101,679 |
| 3 F/H Depreciation Cost | 1,812 | 1,814 | 1,841 | 1,839 | 1,851 | 1,851 | 1,851 | 1,852 | 1,951 | 2,889 | 2,900 | 2,967 | 25,418 |
| 4 F/H Property Taxes | 666 | 744 | 661 | 862 | 847 | 884 | 847 | 847 | 847 | 880 | 847 | 870 | 9,803 |
| 5 F/H Payroll Taxes | 214 | 182 | 236 | 137 | 165 | 243 | 165 | 154 | 158 | 132 | 170 | 232 | 2,188 |
| 6 Amortization of Asset Retirement Obligation | 48 | 48 | 48 | 49 | 49 | 49 | 50 | 50 | 50 | 51 | 51 | 51 | 597 |
| 7 Total F/H O&M, Depr. and Taxes | $ 9,327 | $ 8,886 | $ 10,812 | $ 14,989 | $ 13,338 | $ 10,050 | $ 10,506 | $ 9,634 | $ 9,877 | $ 14,779 | $ 15,611 | $ 11,876 | $ 139,686 |

Amounts shown above may not add due to rounding.

Docket No. DE 12-XXX
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 2011

DIRECT TESTIMONY OF
FREDERICK B. WHITE

## I. INTRODUCTION

**Q. Please state your name.**

A. My name is Frederick B. White.

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

A. My business address is 107 Selden St, Berlin, Connecticut. I am a Supervisor in the Wholesale Power Contracts department of Northeast Utilities Service Company (NUSCO).

**Q. Mr. White, please describe your responsibilities at NUSCO.**

A. NUSCO provides centralized administrative services to Northeast Utilities' principal subsidiaries, including Public Service Company of New Hampshire (PSNH), The Connecticut Light and Power Company (CL&P), and Western Massachusetts Electric Company (WMECO). I primarily supervise and provide analytical support required to fulfill the power supply requirement obligations of PSNH, CL&P, and WMECO. For PSNH, this includes the development of Energy Service rates, evaluation of the need to supplement PSNH's resources for the provision of Energy Service, and PSNH's acquisition of Financial Transmission Rights (FTR) to manage congestion. For CL&P and WMECO, I assist in the design and execution of the power supply sourcing contracts associated with these companies' versions of energy service. I participate in ISO-NE stakeholder meetings and monitor ISO-NE, NEPOOL, and FERC activities to ensure that our operations are up to date.

## II. PURPOSE

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

A. The purpose of my testimony is to report on how PSNH's generation resources and supplemental purchases were used to meet PSNH's energy and capacity requirements during the period January 1, 2011 through December 31, 2011. As a load-serving entity, PSNH is responsible for having sufficient energy to meet the hourly needs of its customers and is also responsible for its share of the ISO-NE capacity requirement. PSNH meets its requirements through its owned generation, PURPA-mandated purchases under short term rates and long term rate orders, and through supplemental purchases of energy and capacity from the market. I will also discuss PSNH's participation in the FTR auction process.

## III. ENERGY REQUIREMENTS

**Q. Please summarize the generation resources that were available to meet PSNH's energy requirements.**

A. Attachment FBW-1 lists the generation resource portfolio PSNH used to meet its customers' energy requirements as of December, 2011. As shown on that Attachment, PSNH's available generation capacity during this time period was about 1,216 MW for the summer months. The portfolio is comprised of the following resource groups: hydroelectric (61 MW from nine stations), nuclear (20 MW from the Vermont Yankee purchased power arrangement), coal and wood (589 MW from Merrimack and Schiller Stations), gas/oil (419 MW from Newington and Wyman 4), combustion turbines (83 MW from five units), and non-utility generation (33 MW from numerous PURPA-mandated purchases and 10 MW from one IPP buyout replacement contract). PSNH's resource portfolio can also be categorized as baseload (714 MW from hydroelectric, nuclear, coal, wood, non-utility IPPs, and the buyout replacement contract), intermediate (419 MW from gas/oil resources), and peaking (83 MW from combustion turbines). PSNH also served a portion of its customers' energy requirements via a unit-contingent power purchase arrangement (Lempster Wind).

**Q. Please summarize how PSNH's generation resources met PSNH's energy requirements during 2011.**

A. Attachment FBW-2 summarizes how PSNH's energy requirements were met and how PSNH's generation resources were utilized by month during peak and off-peak periods. During 2011, 63% of peak energy requirements and 69% of off-peak energy

requirements were met with the generation resources listed on FBW-1. These figures also include the energy produced by Lempster Wind. The remaining energy needs were met through bilateral or spot market energy purchases.

**Q. Was PSNH's generation sufficient to meet PSNH's energy requirements in every month?**

A. No. PSNH does not own sufficient generating capability to meet its customers' energy requirements in all hours and, therefore, must purchase a portion of its customers' needs. The purchase requirement changes hourly and can range from zero to a significant portion, depending on the availability of PSNH's resources, the level of demand, the migration of customers to competitive energy service options, and the relative economics of PSNH's generation versus purchase alternatives.

**Q. Please summarize how supplemental purchases were used to meet PSNH's energy requirements.**

A. Attachment FBW-3 summarizes the purchases made to supplement PSNH's generating resources. Approximately 1,114 GWh of peak energy were purchased at an average cost of $62.90 per MWh (a total expense of $70.1 million). 733 GWh (66%) were purchased bilaterally at an average cost of $69.15 per MWh (a total expense of $50.7 million). Of that, 475 GWh (43% of total) were procured via fixed-price monthly contracts to address forecasted supplemental requirements and planned unit outages; and 258 GWh (23% of total) were procured via fixed-price short-term arrangements (e.g. daily, weekly) to address unplanned outages and higher load periods. The remaining approximately 382 GWh (34%) of peak energy were procured via the ISO-NE hourly spot market at an average cost of $50.89 per MWh (a total expense of $19.4 million).

Approximately 820 GWh of off-peak energy were purchased at an average cost of ~~$41.20~~ $41.12 per MWh (a total expense of ~~$33.8~~ 33.7 million). 185 GWh (23%) were purchased bilaterally at an average cost of ~~$43.39~~ 43.03 per MWh (a total expense of $8.0 million). Of that, 61 GWh (7% of total) were procured via fixed-price monthly contracts to address forecasted supplemental requirements and planned unit outages; and 124 GWh (15% of total) were procured via fixed-price short-term arrangements (e.g. daily, weekly) to address unplanned outages and higher load periods. The remaining approximately 635 GWh (77%) of off-peak energy were procured via the ISO-NE hourly spot market at an average cost of $40.57 per MWh (a total expense of $25.8 million). The combined expense for all supplemental energy purchases was ~~$103.9~~ 103.8 million.

**Q. Were there any hours in which PSNH's supply resources exceeded PSNH's energy needs?**

A. Yes. Attachment FBW-3 also summarizes the hours in which supply resources, including supplemental bilateral purchases, exceeded energy requirements resulting in sales to the ISO-NE spot market. Approximately 102 GWh of peak energy were sold at an average price of $66.08 (total revenues of $6.7 million). In addition, approximately 121 GWh of off-peak energy were sold at an average price of $48.31 (total revenues of $5.8 million). The combined revenue for all surplus energy sales was $12.6 million.

**Q. Please summarize how commodity prices (oil, natural gas, and energy) varied during 2011.**

A. Attachment FBW-4 is a chart of the 2011 daily prices for residual oil (1% sulfur at New York Harbor), natural gas (delivered to Algonquin Gate), and bilateral energy (peak hours at the Mass. HUB). The chart shows the range of commodity and energy market prices in 2011. The chart also shows the continuing correlation between natural gas prices and bilateral energy purchase prices in New England.

**Q. Please summarize the impact of commodity market volatility on the cost of serving PSNH's energy requirement.**

A. During 2011, approximately 54% of PSNH's energy requirements were met with coal, wood, hydro, and nuclear resources. Newington is capable of operating on either residual fuel oil or natural gas. Because of PSNH's fuel diverse supply portfolio, PSNH is largely insulated from volatility in the natural gas market. During periods of high and volatile natural gas prices PSNH's resource mix provides price stability, and during periods of low natural gas prices ES load can be served through low priced market purchases while PSNH's resources provide insurance against price increases.

## IV. CAPACITY REQUIREMENTS

**Q. Please describe the cost impact to PSNH's customers associated with the Forward Capacity Market during 2011.**

A. Attachment FBW-5 summarizes PSNH's monthly capacity activity. Approximately 87% of PSNH's capacity need was met with generation resources (including PSNH-owned assets, non-utility IPPs, the Vermont Yankee PPA, and the Hydro-Quebec Interconnection Capacity Credits). The remaining 13% was procured via ISO-NE at a total net cost of $10.1 million.

**Q. Please summarize the ISO-NE capacity market rules that were in effect during 2011.**

A. The Forward Capacity Market (FCM) Settlement Agreement was approved by the Federal Energy Regulatory Commission (FERC) on June 16, 2006. The FCM Settlement Agreement implemented Forward Capacity Auctions (FCA) during which capacity resources offer MWs into ISO-NE administered auctions to "procure" the lowest cost resources necessary to meet the ISO-NE Installed Capacity Requirement and to establish the market value of capacity. The first such auction was conducted in February, 2008 for the Capacity Commitment Period June 1, 2010 to May 31, 2011. The capacity price established during this auction was $4.50/kW-month. The capacity price established for the Capacity Commitment Period June 1, 2011 to May 31, 2012 was $3.60/kW-month. Additional components of the FCM which occur after the FCAs, including Reconfiguration Auctions and monthly Peak Energy Rent adjustments, result in adjustments to Capacity Supply Obligations, the overall rate paid to capacity, and the rate paid by load for capacity. Resources are paid for providing capacity, and the total payments for capacity resources in each month are charged to ISO-NE load serving entities based on their relative share of the prior year's peak demand.

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

A. During 2011, a total of 407,133 MW-months of capacity qualified for credits in the ISO-NE capacity market (this equates to a monthly average of 33,928 MWs). PSNH was allocated 4.27% (17,384 MW-months) of this capacity obligation. PSNH's supply resources qualified for 15,042 MW-months of capacity; comprised of owned generation (13,083 MW-months), non-utility IPPs (577 MW-months, including Lempster), the Vermont Yankee purchase agreement (246 MW-months), and Hydro-Quebec Interconnection Capacity Credits (1,136 MW-months). For 2011, PSNH had a net capacity obligation of 2,342 MW-months. Attachment FBW-5 provides additional details.

**Q. Can you estimate the ES customers' capacity credit associated with PSNH's owned generation resources during 2011?**

A. Yes. As noted above, for 2011, PSNH's owned resources provided 13,083 MW-months of capacity to ISO-NE. This created over $45.1 million in revenue credited to the Energy Service rate.

**Q. Are there any capacity market changes expected and how might the cost to PSNH's customers be affected?**

A. At this time, a New England stakeholder process is underway to revisit the forward capacity market structure, but any impacts will not be seen until June, 2017 at the earliest. NU and PSNH participate in this process and it is too early to predict how the market design may change. What will not change is ISO-NE will continue to conduct periodic competitive auctions to solicit a quantity of capacity resources that is sufficient to satisfy reliability standards. PSNH's generation resources will continue to provide significant customer value as an important hedge against the uncertainty related to future auction clearing prices and changes to FCM rules.

## V. FINANCIAL TRANSMISSION RIGHTS

**Q. What is a Financial Transmission Right (FTR)?**

A. An FTR is a financial instrument available to participants seeking to manage congestion cost risk or those wishing to speculate on the difference in congestion costs between two locations. These instruments have been available since the introduction of the ISO-NE Standard Market Design. All FTRs are defined by a MW amount, a source location, and a sink location (e.g. a participant may own 100 MW of FTRs that are sourced at the Merrimack node and sink at the New Hampshire load zone). For each MW of FTR, the owner will receive a credit or a charge from ISO-NE equal to the difference in the congestion component of the hourly LMP between the sink and the source. If the sink location congestion price exceeds the source location price, the FTR will have a positive value, i.e. - a credit to that participant's ISO-NE settlement in that hour. Similarly, if the sink location price is less than the source location price, the owner will be charged the difference.

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

A. PSNH participated in these auctions as a method of hedging the congestion price differential between the major fossil stations (Merrimack, Schiller, and Newington) and the New Hampshire load zone for periods and in quantities according to forecasted unit operation. PSNH also procured FTRs to hedge the differential between the source location of bilateral purchases (e.g. the Massachusetts Hub) and the New Hampshire load zone. PSNH's generation resources and bilateral purchases provide an effective hedge against the energy component of the zonal LMP, but they do not guard against a congestion component differential. Therefore, even in an hour in which PSNH had sufficient resources to serve its energy requirement, it would be exposed to potential

congestion charges. The purpose of acquiring FTRs is to convert the risk associated with a variable, unknown expense (i.e. the hour-by-hour difference in the applicable LMP congestion component), to a fixed, known expense (i.e. the cost of the FTR); however, not at any cost. The prices bid to acquire FTRs are evaluated against potential congestion cost exposure to achieve a balance between risk coverage and minimizing costs for ES customers. During 2011, PSNH procured via auction 1,605 GWh of FTRs at a net cost of $15,896. Settlement of the FTRs resulted in $6,664 of congestion charges. Thus, managing a portion of PSNH's congestion cost risk with FTRs resulted in an overall Energy Service expense of $22,560.

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

A. Yes. FTRs serve as an insurance policy against unanticipated congestion costs. PSNH procures FTRs primarily to provide cost certainty and thus reduce risk, rather than to achieve savings. If PSNH did not purchase FTRs and there was a problem on the system that resulted in congestion, the cost could be several times the cost of the FTR. Therefore, it makes sense to continue to purchase FTRs to manage the exposure to congestion costs.

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

A. Yes it does.

# Attachment FBW-1
## PSNH Resource Portfolio - 2011

| Resource | Rating - MW Winter | Rating - MW Summer | Interest | Entitlement - MW Winter | Entitlement - MW Summer |
|---|---|---|---|---|---|
| Amoskeag | 17.5 | 16.8 | 100% | 17.5 | 16.8 |
| Ayers Island | 9.1 | 8.5 | 100% | 9.1 | 8.5 |
| Canaan | 1.0 | 0.6 | 100% | 1.0 | 0.6 |
| Eastman Falls | 6.5 | 5.6 | 100% | 6.5 | 5.6 |
| Garvins/Hooksett | 14.0 | 12.5 | 100% | 14.0 | 12.5 |
| Gorham | 2.1 | 2.0 | 100% | 2.1 | 2.0 |
| Jackman | 3.6 | 3.6 | 100% | 3.6 | 3.6 |
| Smith | 15.2 | 11.7 | 100% | 15.2 | 11.7 |
| Merrimack 1 | 114.0 | 112.5 | 100% | 114.0 | 112.5 |
| Merrimack 2 | 343.0 | 338.4 | 100% | 343.0 | 338.4 |
| Schiller 4 | 48.0 | 47.5 | 100% | 48.0 | 47.5 |
| Schiller 5 | 42.6 | 43.1 | 100% | 42.6 | 43.1 |
| Schiller 6 | 48.6 | 47.9 | 100% | 48.6 | 47.9 |
| Newington | 400.2 | 400.2 | 100% | 400.2 | 400.2 |
| Lost Nation | 18.0 | 14.0 | 100% | 18.0 | 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 |
| Wyman 4 | 610.4 | 603.2 | 3.14% | 19.2 | 19.0 |
| VT Yankee (note 1) | 628.0 | 604.3 | 3.33% | 20.9 | 20.1 |
| IPP Total (note 2) | 50.8 | 33.3 | 100% | 50.8 | 33.3 |
| Bio Energy buyout (note 3) | 10.0 | 10.0 | 100% | 10.0 | 10.0 |
| Total | | | | 1,268.2 | 1,215.7 |

Notes:

1) Vermont Yankee contract expires March 21, 2012.

2) IPP Total does not include Lempster Wind PPA.

3) Bio Energy buyout contract is for energy only (no capacity) and expires July, 2015.

## Attachment FBW-2
## PSNH Supply Resources Used to Serve Energy Requirements - 2011

**Peak**

| 2011 | Energy Requirement MWh | PSNH Resource Subtotal | Portion of Requirement Served by ... IPPs | Buyout Contracts | Vermont Yankee | Hydro | Merrimack and Schiller | Newington and Wyman | Bilateral Purchases | ISO-NE Spot Purchases | Combustion Turbines |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 261,038 | 82% | 9% | 0% | 3% | 6% | 61% | 3% | 15% | 3% | 0.00% |
| Feb | 238,940 | 90% | 8% | 1% | 3% | 5% | 73% | 1% | 8% | 2% | 0.00% |
| Mar | 251,879 | 90% | 10% | 1% | 3% | 8% | 67% | 0% | 7% | 3% | 0.00% |
| Apr | 209,089 | 68% | 11% | 2% | 3% | 9% | 43% | 0% | 23% | 9% | 0.04% |
| May | 209,627 | 51% | 11% | 2% | 3% | 9% | 26% | 0% | 42% | 7% | 0.00% |
| Jun | 251,139 | 64% | 6% | 1% | 3% | 5% | 49% | 0% | 16% | 20% | 0.00% |
| Jul | 269,328 | 70% | 4% | 1% | 2% | 2% | 54% | 7% | 12% | 18% | 0.07% |
| Aug | 275,810 | 50% | 5% | 1% | 3% | 4% | 35% | 3% | 19% | 31% | 0.03% |
| Sep | 222,559 | 33% | 8% | 1% | 3% | 6% | 15% | 1% | 42% | 25% | 0.01% |
| Oct | 207,421 | 45% | 10% | 2% | 1% | 7% | 19% | 6% | 41% | 15% | 0.00% |
| Nov | 223,694 | 58% | 10% | 2% | 3% | 6% | 36% | 2% | 30% | 12% | 0.00% |
| Dec | 244,988 | 53% | 9% | 1% | 3% | 6% | 34% | 0% | 33% | 14% | 0.05% |
| Totals | 2,865,512 | 63% | 8% | 1% | 3% | 6% | 43% | 2% | 23% | 13% | 0.02% |

**Off-Peak**

| 2011 | Energy Requirement MWh | PSNH Resource Subtotal | Portion of Requirement Served by ... IPPs | Buyout Contracts | Vermont Yankee | Hydro | Merrimack and Schiller | Newington and Wyman | Bilateral Purchases | ISO-NE Spot Purchases | Combustion Turbines |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 256,643 | 95% | 11% | 1% | 3% | 7% | 69% | 4% | 0% | 5% | 0.00% |
| Feb | 216,339 | 94% | 9% | 1% | 3% | 6% | 73% | 1% | 0% | 6% | 0.00% |
| Mar | 207,201 | 88% | 13% | 2% | 4% | 10% | 59% | 0% | 0% | 12% | 0.00% |
| Apr | 190,657 | 76% | 14% | 2% | 4% | 12% | 43% | 0% | 8% | 16% | 0.00% |
| May | 201,876 | 51% | 13% | 2% | 4% | 12% | 20% | 0% | 31% | 18% | 0.01% |
| Jun | 188,441 | 81% | 8% | 2% | 4% | 8% | 59% | 0% | 0% | 19% | 0.00% |
| Jul | 270,911 | 69% | 5% | 1% | 3% | 3% | 55% | 2% | 0% | 31% | 0.00% |
| Aug | 216,442 | 57% | 6% | 1% | 3% | 4% | 42% | 0% | 6% | 37% | 0.00% |
| Sep | 205,331 | 37% | 9% | 2% | 3% | 7% | 15% | 1% | 16% | 47% | 0.00% |
| Oct | 195,946 | 46% | 13% | 2% | 1% | 9% | 20% | 1% | 15% | 40% | 0.00% |
| Nov | 202,450 | 66% | 13% | 2% | 4% | 8% | 41% | 0% | 0% | 34% | 0.00% |
| Dec | 242,917 | 59% | 11% | 1% | 3% | 7% | 36% | 0% | 10% | 30% | 0.00% |
| Totals | 2,595,156 | 69% | 10% | 2% | 3% | 7% | 45% | 1% | 7% | 24% | 0.00% |

Note: "Buyout Contracts" refers to IPP replacement purchases (Bio Energy).
Note: "PSNH Resource Subtotal" is the sum of all columns except Bilateral and Spot Purchases.
Note: Lempster PPA is included in "IPPs".

## Attachment FBW-3
## PSNH Bilateral and ISO-NE Spot Purchases and Sales - 2011

**Peak**

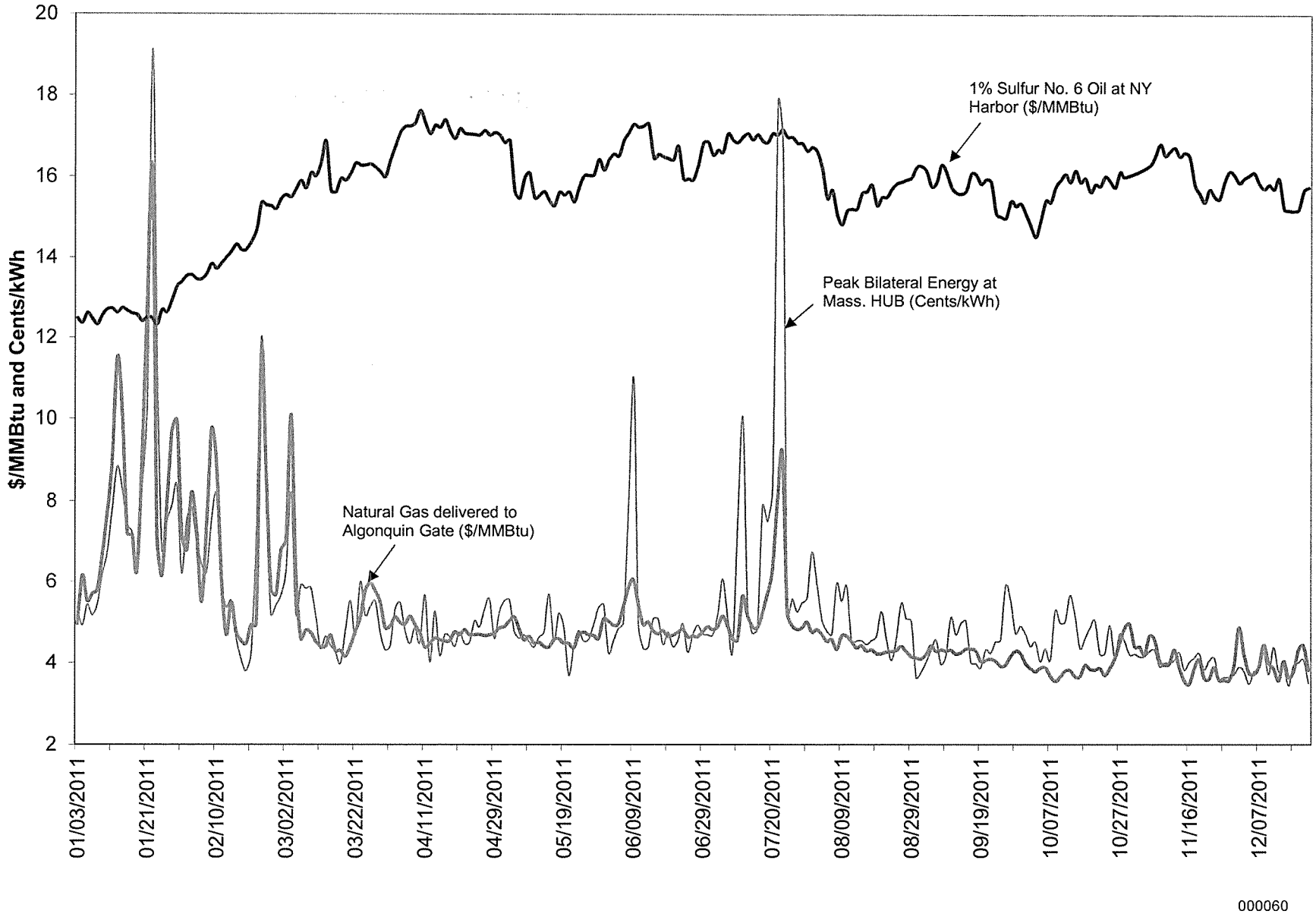
| 2011 | Total Bilateral Purchases MWh | Total Bilateral Purchases $000 | Avg Price $/MWh | Total ISO-NE Spot Purchases MWh | Total ISO-NE Spot Purchases $000 | Avg Price $/MWh | Total ISO-NE Spot Sales MWh | Total ISO-NE Spot Sales $000 | Avg Price $/MWh |
|---|---|---|---|---|---|---|---|---|---|
| Jan | 48,000 | 4,013 | 83.60 | 8,857 | 720 | 81.30 | 21,425 | 2,069 | 96.59 |
| Feb | 32,000 | 2,768 | 86.50 | 4,362 | 336 | 76.99 | 20,748 | 1,492 | 71.93 |
| Mar | 36,800 | 3,183 | 86.50 | 7,535 | 450 | 59.71 | 21,461 | 1,047 | 48.78 |
| Apr | 56,800 | 3,990 | 70.24 | 17,839 | 825 | 46.23 | 9,156 | 507 | 55.43 |
| May | 100,800 | 5,933 | 58.86 | 14,674 | 772 | 52.60 | 11,808 | 537 | 45.47 |
| Jun | 40,800 | 3,532 | 86.56 | 49,982 | 2,529 | 50.59 | 1,277 | 73 | 57.28 |
| Jul | 32,000 | 2,768 | 86.50 | 47,652 | 2,918 | 61.25 | 1,938 | 331 | 170.94 |
| Aug | 53,600 | 3,968 | 74.03 | 84,855 | 4,214 | 49.66 | 275 | 158 | 574.95 |
| Sep | 93,600 | 5,568 | 59.49 | 55,206 | 2,560 | 46.36 | 150 | 29 | 194.21 |
| Oct | 84,800 | 5,411 | 63.81 | 30,136 | 1,419 | 47.08 | 6,296 | 248 | 39.39 |
| Nov | 69,600 | 4,573 | 65.71 | 25,898 | 1,133 | 43.73 | 4,259 | 166 | 38.89 |
| Dec | 84,000 | 4,964 | 59.09 | 34,634 | 1,548 | 44.69 | 3,115 | 76 | 24.31 |
| Totals | 732,800 | 50,671 | 69.15 | 381,632 | 19,422 | 50.89 | 101,908 | 6,734 | 66.08 |

**Off-Peak**

| 2011 | 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 | 11,781 | 716 | 60.80 | 38,415 | 2,610 | 67.93 |
| Feb | 0 | 0 | 0.00 | 12,867 | 661 | 51.35 | 21,410 | 1,250 | 58.38 |
| Mar | 0 | 0 | 0.00 | 25,899 | 1,099 | 42.45 | 14,171 | 501 | 35.33 |
| Apr | 15,200 | 623 | 40.99 | 30,690 | 1,247 | 40.62 | 12,237 | 469 | 38.35 |
| May | 70,800 | ~~3,178~~ 3,111 | ~~44.88~~ 43.95 | 36,192 | 1,539 | 42.54 | 9,037 | 302 | 33.39 |
| Jun | 0 | 0 | 0.00 | 35,780 | 1,421 | 39.72 | 4,725 | 169 | 35.81 |
| Jul | 0 | 0 | 0.00 | 84,524 | 3,858 | 45.65 | 349 | 25 | 72.76 |
| Aug | 12,800 | 590 | 46.09 | 80,272 | 3,388 | 42.21 | 22 | 1 | 31.35 |
| Sep | 32,800 | 1,363 | 41.56 | 96,757 | 3,732 | 38.57 | 0 | 0 | 0.00 |
| Oct | 28,800 | 1,308 | 45.40 | 77,950 | 3,051 | 39.14 | 393 | (13) | (33.15) |
| Nov | 0 | 0 | 0.00 | 68,057 | 2,526 | 37.11 | 11,641 | 320 | 27.50 |
| Dec | 24,800 | 975 | 39.31 | 74,000 | 2,511 | 33.93 | 8,216 | 194 | 23.58 |
| Totals | 185,200 | ~~8,036~~ 7,970 | ~~43.39~~ 43.03 | 634,770 | 25,750 | 40.57 | 120,616 | 5,827 | 48.31 |

**Attachment FBW-4**

**2011 Daily Prices (Natural Gas, 1% Oil, Day-Ahead Peak Energy)**



## Attachment FBW-5
## Summary of PSNH Capacity Position - 2011

| 2011 | 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 | 32,702 | 4.37% | 1,430 | 5,528 | 1,227 | 4,555 | 973 |
| Feb | 32,702 | 4.36% | 1,425 | 5,527 | 1,212 | 4,519 | 1,007 |
| Mar | 34,034 | 4.34% | 1,478 | 5,752 | 1,362 | 5,120 | 632 |
| Apr | 33,954 | 4.33% | 1,469 | 5,754 | 1,362 | 5,139 | 615 |
| May | 33,954 | 4.31% | 1,462 | 5,727 | 1,362 | 5,139 | 588 |
| Jun | 34,166 | 4.27% | 1,458 | 4,480 | 1,209 | 3,563 | 917 |
| Jul | 34,166 | 4.24% | 1,450 | 4,543 | 1,209 | 3,639 | 903 |
| Aug | 34,166 | 4.23% | 1,445 | 4,718 | 1,209 | 3,811 | 907 |
| Sep | 34,166 | 4.23% | 1,445 | 4,950 | 1,209 | 4,016 | 934 |
| Oct | 34,353 | 4.22% | 1,449 | 5,082 | 1,228 | 4,191 | 891 |
| Nov | 34,351 | 4.20% | 1,443 | 5,064 | 1,227 | 4,190 | 874 |
| Dec | 34,418 | 4.16% | 1,432 | 5,023 | 1,228 | 4,202 | 821 |
| Totals | 407,133 | 4.27% | 17,384 | 62,148 | 15,042 | 52,085 | 10,063 |

Note: PSNH Resources include Fossil-Hydro Assets, non-utility IPPs, Vermont Yankee and Hydro-Quebec Interconnection Credits.

Docket No. DE 12-

Exhibit No. 3

STATE OF NEW HAMPSHIRE

BEFORE THE

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

DIRECT TESTIMONY OF

WILLIAM H. SMAGULA

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

RECONCILIATION OF ENERGY SERVICE AND STRANDED COSTS FOR

CALENDAR YEAR 2011

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## I. Introduction

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

A. My name is William H. Smagula. I am Director of Generation for Public Service Company of New Hampshire, (PSNH), a subsidiary of Northeast Utilities (NU). My business address is 780 North Commercial Street, P.O. Box 330, Manchester, New Hampshire 03105.

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

A. I received a Bachelor of Science in Mechanical Engineering from the University of New Hampshire and a Master of Science in Mechanical Engineering from Northeastern University. I have worked for Public Service Company of New Hampshire and then Northeast Utilities since 1978. I am a Registered Professional Engineer in the states of New Hampshire, Connecticut and Massachusetts. My duties have included Manager of Generation Training for the PSNH system, Station Manager - Merrimack Station, Steam Production Manager - PSNH,

Director Fossil Generation - The Connecticut Light and Power Company, and Director, Manage and Operate Services - Northeast Generation Services Company. In June 2001, I assumed the responsibilities of Director - PSNH Generation in New Hampshire.

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

A. Yes. I have provided similar testimony in many previous Commission proceedings regarding the operation of PSNH's fossil-fired, biomass and hydroelectric generating plants.

**Q. Please describe your responsibilities as Director - PSNH Generation.**

A. In my present position, as Director - PSNH Generation, I am responsible for the operation and maintenance of PSNH's generating stations. I have responsibility for three fossil-fired, steam electric generating stations, nine hydroelectric generating stations, two remote combustion turbine/diesel generator sites and a biomass fueled boiler with the repowering of Schiller Unit 5. PSNH Generation maintains a diversified fuel portfolio including gas, oil and coal-fired units as well as hydro and renewable biomass with a total generation capacity of approximately 1150 MW.

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

A. The purpose of my testimony is to provide information on all outages that took place at PSNH's fossil-fired, hydroelectric and biomass units and at NextEra Energy Resources, LLC's (formerly FPL Energy) Wyman Station, Unit No. 4 in which PSNH is a minority owner. This information will be for the period January 1, 2011 through December 31, 2011. I shall also provide information on unit equivalent availability achieved by PSNH's steam generating units, consistent with reporting provided in previous years. Unit availability including planned outages will be calculated consistent with past submittals, as well as similar calculations, without the influence of planned outages.

## II. Generating Unit Operation

**Q. Please provide an overview of the performance of PSNH's generating units in 2011.**

A. PSNH's generating units produced 3,000,948 megawatt-hours (MWH). The fleet's availability during the 30 highest-priced days when customers' exposure to high market prices was the greatest was 95.6%.

Merrimack Station Unit 2 demonstrated a winter claimed capacity of 343.025 MW with its recently installed, more efficient HP/IP turbine. Merrimack Station's Units 1 and 2 each completed scheduled outages to perform not only routine maintenance, but also complete the tie-in of the newly constructed wet flue gas desulfurization system (FGD), commonly referred to as the scrubber. These outages were completed ahead of schedule and under budget. With the successful planned outages and few forced outages during 2011, Unit 1 and Unit 2's annual availability factors were 79.4% and 84.5%, respectively. In support of the fall scrubber tie-in outages, the Clean Air Project was completed successfully. The project was completed ahead of schedule and under budget. The scrubber was declared in-service on September 28 and continues to operate and perform well. Merrimack Station's Unit 1 and Unit 2 each operate with two ESP's, an SCR and a wet FGD to significantly reduce flue gas emissions.

At Schiller Station, December 1, 2011 marked the fifth anniversary of the Northern Wood Power at its Unit 5. Unit 5 produced 298,105 MWH in 2011 and has generated over 1,500,000 MWH during its 5 years of operation. Northern Wood Power completed a run of 113 consecutive days, the second longest run in its history. In addition, during the 178 days following its scheduled overhaul, the Unit sustained an availability of 99.7% for that period. In total, Schiller Station generated 526,996 MWH.

In 2011, PSNH's hydroelectric facilities generated 365,071 MWH. The 9 hydro facilities which are comprised of 20 units operated successfully and produced 8% more generation than last year.

Newington Station continued to burn a significant amount of natural gas, almost 70%, in 2011. The unit utilized its fuel diversity, blending oil and natural gas to support the system and maximize its value to customers. Newington completed the year with a 93.6% equivalent availability.

PSNH Generation continued to focus on safe, compliant, reliable, and cost-effective operations and management of the generating fleet to provide benefit to customers. Similar to 2010, these efforts resulted in the generating stations' aggregate equivalent availability of 83.4% in 2011.

**Q. Please provide a summary of why PSNH's generating units have continued to operate well, with high reliability and high availability.**

A. PSNH Generation focuses on four key items important to long-term operational success: the day-in and day-out operation and maintenance of the units; the corrective and preventative maintenance conducted during forced outages; pre-planning and execution of scheduled and planned maintenance outages; and the use of a long-term maintenance outage and capital expenditure planning process. The long-term maintenance plans prioritize reliable plant operations and are founded on equipment history, on-going condition assessment and industry experience. The generating stations maintain a long-standing preventative maintenance program which allows for proactive management of plant equipment problems to best execute quality maintenance and the operations of the units.

PSNH Generation relies on an experienced management team and a skilled work force utilizing sound practices derived from experience within our facilities, as well as working with suppliers, contractors, experts and other generating plant peers in the industry. PSNH Generation's budget requests continue to emphasize a

proper balance between spending what is necessary in the most critical areas, while being sensitive to the overall cost of production to our customers taking Energy Service, both long term and short term. PSNH Generation works hard to determine how maintenance projects can be most effectively executed and how capital investments can be best applied to achieve a high level of plant performance. PSNH Generation also continues to integrate, into the above management focus, consideration of recommendations by the Commission's consultants.

## III. Unit Outages and Availabilities

**Q. Please provide a list of all unplanned outages that took place during the period January 1, 2011 through December 31, 2011 for PSNH's fossil, hydro and biomass units and for NextEra's Wyman Station Unit No. 4.**

A. Attachment WHS-1 lists these outages. This listing is similar to the information submitted in the past, as a reporting requirement for the fossil hydro "outage information" resulting from discussion with the Staff in Docket No. DR 91-011.

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

A. Yes. PSNH provides outage reports for all unscheduled outages in excess of two days at either Newington Station or at the two units at Merrimack Station, and in excess of four days at the three units at Schiller Station and at Wyman Unit 4. These Outage Reports are included as Attachment WHS-2.

**Q. Please provide a chronological listing of the unplanned outages for which Outage Reports are provided in the testimony.**

A. The table below provides the chronological listing along with the start and end dates and times, the duration and the cause of the unplanned outages.

| Report No. | | Outage Start Date | Outage Start Time | Outage End Date | Outage End Time | Duration Days | Reason |
|---|---|---|---|---|---|---|---|
| OR-1 | MK1 | 1/4 | 1655 | 1/7 | 1255 | 2.8 | Furnace Wall Tube Leak |
| OR-2 | MK2 | 1/25 | 1353 | 1/29 | 1209 | 3.9 | Front Wall Tube Leak |
| OR-3 | MK2 | 3/5 | 0737 | 3/7 | 2342 | 2.7 | 2A Condensate Pump |
| OR-4 | MK2 | 5/13 | 1913 | 5/16 | 0055 | 2.2 | Turbine Drain Leak |
| OR-5 | NT | 9/21 | 0700 | 9/23 | 1200 | 2.2 | Planned Preventative Maintenance |
| OR-6 | SR5 | 11/12 | 2108 | 11/19 | 1000 | 6.5 | Plugged Cyclones |
| OR-7 | MK2 | 12/7 | 0335 | 12/12 | 1610 | 5.5 | Flue Gas Recirculating Fans |

**Q. Please provide a brief summary of each of the Outage Reports discussed above.**

A. A summary of the Outage Reports follows:

2011-OR-01

This Merrimack Unit 1 outage was 2.8 days long and began on January 4. The unit was removed from service due to excessive water usage. The boiler inspection revealed leaks in the lower furnace on the south firebox wall in tubes 5 and 6. Due to the location of the leaks, staging was constructed on both the inside and the outside of the boiler to make the repairs. After the staging was erected outside the

firebox, removal of lagging, insulation, casing and refractory was completed. The tubes leaks were repaired with pad welding. After the weld repairs were performed, a successful pressure check and black light procedure were completed. While the repairs were being performed, an air heater wash was completed. An inspection of the circumferential and radial seals was performed and determined that no seal replacements were needed. Critical path was the water wall repair with additional jobs from the outage backlog also completed.

2011-OR-02

Merrimack Unit 2 was taken off line on January 25 for 3.9 days due to a tube leak in the front wall of the gas recirculating duct. Two tubes failed at the floor level which also caused damage to the floor of the gas recirculation duct, as well as the refractory and metal expansion joint. A tube leak was also located in "F" cyclone. The tubes were repaired with pad welding and a pressure check was performed. During the pressure check, two additional tube leaks were discovered. One leak was in the encased area of the windbox which cut a hole through the casing making it evident to the inspection team. The encased area was cut open and four barrel tubes were repaired with pad welding restoring the original wall thickness. The second leak was on a cracked weld of a furnace supply tube. The insulation, lagging and metal frame were removed to access the leak. Once all the tube leaks were repaired, a final waterside pressure test was performed and no other tube leaks were found. Critical path was the boiler tube repairs with additional jobs from the outage backlog also completed.

2011-OR-03

This Merrimack Unit 2 outage began on March 5 and was 2.7 days long. The outage was due to the failure of the 2A condensate pump. The upper guide bushing was found to have worn resulting in the failure of the pump. A spare pump and motor from inventory were installed. The failed pump and motor were removed and sent out to be rebuilt and returned to inventory. Critical path was the

installation of the spare condensate pump and motor with additional jobs from the outage backlog also completed.

2011-OR-04

Merrimack Unit 2 was removed from service on May 13 due to a turbine drain steam leak. This outage was 2.2 days long. The unit developed a steam leak under the HP/IP turbine on a governor valve drain-line. The entire drain line was replaced. The new welds were stress relieved and non-destructively examined. Critical path was the weld repair of the drain steam leak with additional jobs from the outage backlog also completed.

2011-OR-05

This Newington outage was 2.2 days long and began on September 21 to complete planned maintenance. The outage was scheduled to allow for a number of projects to be completed prior to the beginning of the 2011-2012 winter season. The critical path job of the outage was the replacement of the rebuilt main boiler feed pump/turbine 1B lube oil pump. The pump had been inspected in March 2011 during the scheduled Annual Overhaul. A crack in the pump's outlet flange was discovered. As the original equipment manufacturer, KSB Pump, no longer manufactured or supported the pump, a new pump casing was fabricated by PSNH's Generation Maintenance. Prior to this planned outage, Generation Maintenance also reverse engineered the housing and installed the original rotating assembly in the new casing. A technical representative from KSB performed a full inspection of the original pump prior to the new casing being fabricated and found that despite the age of the pump, the internals were all within the original specifications and concluded that they were suitable for continued operation. The unit consisting of the new casing, the new housing, and the original rotating assembly was installed during this outage.

2011-OR-06

This Schiller Unit 5 outage began on November 12 and was 6.5 days long. The unit was taken offline to clean cyclone and dip leg pluggage.

A boiler inspection was conducted, as well as an inspection of the ash system. A bag house inspection was conducted and the perforated plate sections in the eight modules were repaired or replaced as necessary. Condenser water-boxes were opened and cleaned. Moly-guard coolers were also opened and cleaned. A number of outage backlog jobs were also completed. Drum level controls were adjusted to address start-up problems that tripped the boiler. With additional adjustments, the unit was stabilized and remained on-line.

2011- OR-07

Merrimack Station Unit 2 was taken off line on December 7 for a 5.5 day outage due to problems with the gas recirculation fans. The 2A fan was experiencing high vibration and the 2B fan outboard fan bearing temperature was running high. A contractor was utilized to turn down and hone the 2B rotors on both ends of the fan. The bearings were sent out, re-babbitted and bored to the new dimensions. The drive couplings were replaced, motors were cleaned, seals and internals were inspected, and balancing/alignments were performed on each fan. When the gas recirculation fan work was complete, the unit was made available for dispatch.

**Q. Were scheduled outages performed at any of PSNH's fossil and hydro units during the period January 1, 2011 through December 31, 2011?**

A. Yes. Attachment WHS-1 contains a list of outages including scheduled maintenance outages for each of PSNH's fossil, biomass, hydro, and combustion turbine units, as well as the Wyman 4 unit and the Clean Air Project tie-in outages. WHS-3 also summarizes the planned maintenance periods for the fossil units.

**Q. Please provide a list of scheduled outages at PSNH's fossil units during January 1, 2011 through December 31, 2011.**

A. The scheduled maintenance outages are listed below.

| Unit | Scheduled Outages |
|---|---|
| Schiller Unit 6 | 3/4 – 3/25 |
| Newington Unit 1 | 3/26 – 4/10 |
| Schiller Unit 5 | 4/1 – 5/18 |
| Merrimack Unit 1 | 4/12 – 5/15 |
| Merrimack Unit 2 | 4/21 – 4/29 |
| Merrimack Unit 1 | 9/6 – 9/25 |
| Schiller Unit 4 | 10/1 – 11/5 |
| Merrimack Unit 2 | 10/12 – 11/14 |
| Merrimack Unit 1 | 10/31 – 11/13 |

The outages listed in the table above were scheduled to complete routine maintenance and to coordinate with the Merrimack Station scrubber installation. Routine maintenance was conducted at Schiller Unit 6, Newington Unit 1, Schiller Unit 5, Merrimack Unit 1, Schiller Unit 4 and Merrimack Unit 2.

With low-priced energy available in the wholesale market, Merrimack Unit 1's scheduled maintenance work was moved to the spring. This allowed the Merrimack 1 fall tie-in outage to be shortened by 2.5 weeks and provide almost 3 weeks between the end of the Merrimack 1 tie-in outage and the beginning of the Merrimack 2 fall outage to operate the newly installed scrubber equipment with only Merrimack 1. Merrimack 2 was also brought off line in the spring during the Merrimack 1 maintenance outage to perform transmission work that required both units to be off.

The Merrimack 1 fall tie-in outage was 2.5 weeks shorter due to the work completed in the spring. More importantly, Merrimack 1 returned to service on

September 23, rather than the originally planned October 10, and this allowed a longer operational period for the scrubber with Merrimack 1 only. With the scrubber operating well, Merrimack 2 was taken off line for its tie-in outage. The period of scrubber operation with Merrimack 1 was very successful, which confirmed that proceeding with the Merrimack 2 tie-in outage provided no foreseeable operational risks. Merrimack Unit 2 began its maintenance and tie-in outage on October 12 to complete a scheduled 6 week outage. It returned to service on November 14. During this outage Merrimack 1 was removed from service to complete duct work, and the bypass duct which required both units to be offline.

**Q. Are these scheduled outages usually reviewed as part of the Reconciliation of Energy Service and Stranded Costs docket?**

A. Yes. A review of the scheduled outages is completed by the Commission's Staff utilizing an outside consultant. The outside consultant completes on-site interviews and a review process of the planned outages.

**Q. Are there any other reporting requirements associated with this filing?**

A. Yes, PSNH is providing updates to new and ongoing recommendations by Accion, consistent with the requirements of Commission Order 25,321. Those updates are contained in Appendix A which contains all of the recommendations that were included in the settlement agreement. Also included is a description of the actions PSNH has taken to address each recommendation.

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

A. Yes, it does.

# WHS – Testimony

# Appendix A

## Recommendation No. 1

***Review unit startup procedures for all its major units (Merrimack, Schiller, and Newington) to determine if changes need to be made to start-up procedures when coming on line after longer than normal downtimes.***

**Response:**
PSNH has taken action and is continuing to assess start-up procedures at Merrimack and Schiller stations to ensure implementation of new procedures takes place to maximize unit start-up readiness. Although adjustments to the start-up procedures were made, the primary focus of this assessment is a more proactive approach designed to confirm that critical equipment is in a ready state and functional when a unit is called for dispatch. This is being implemented so there would be minimal if any adjustments to the existing ISO start-up time required.

Merrimack and Schiller station management discussed this issue with Newington management to better understand where enhancements to start-up procedures or proactive solutions can be implemented. Newington was considered a good internal resource because it is an intermediate and peaking unit and is dispatched as a peaking unit or for transmission system stability. Additionally, other resources were contacted including Siemens and Generation Maintenance's rotating equipment specialist / turbine engineer to understand the optimum ways to layup critical equipment to ensure readiness. While this is an ongoing effort, PSNH is providing a summary of the changes that were implemented based on the information gathered to this point. To support this assessment moving forward, the PSNH's engineering group has been assigned to continue to explore this effort to seek positive, cost effective value.

**Merrimack Station:**
Turbine: Keep the rotor on turning gear, keep turbine oil system in service, install temporary heating source to the exciter, cycle turbine throttle valves. Merrimack's start-up procedure was modified to ensure the temporary exciter heating system is removed prior to start-up.

Bulk material handling systems: Routinely run system belts (units & FGD) and clean coal, limestone and gypsum feed systems to avoid hardening or agglomeration. Prepare bunkers for extended layup by managing level of coal.

Scrubber: Rotate ball mills, ensure motor heaters are in service, routinely operate mill pumps and manage the limestone silo level.

Boiler: Currently, the practice at Merrimack is to lay-up the boiler and boiler system using what is known as a "dry" method. This method entails draining the boiler and boiler system and adding nitrogen gas which creates a blanket of inert gas to inhibit

corrosion. There are other methods to lay-up the boiler system including a "wet" method which is when the boiler is left full and chemicals are added to inhibit corrosion. Both methods have pros and cons; Merrimack is currently exploring the benefits of both as they pertain to extended lay-up of the units.

**Schiller:**

Turbine: Keep turbine oil system in service, install heating source to the exciter, cycle turbine throttle valves.

Bulk Material Fuel Handling: Routinely operate fuel system belts; prepare bunkers for extended layup by managing level of coal and clean coal feed system to prevent hardening or agglomeration.

Boiler: The boiler layup at Schiller is different than the one at Merrimack and Newington. Schiller must keep auxiliary steam capacity for the tank farm, so the boiler and boiler systems are left full with auxiliary steam pressure on the drum and deaerator.

## Recommendation No. 2

***PSNH management should be notified by any contractor or company personnel, when they suspect that gasket installations are problematic, to allow management to evaluate the need for rework at that time within the confines of the existing outage schedule rather than potentially impede the maintenance schedule at the conclusion of the outage. This recommendation should be implemented at all plants.***

**Response:**
Recognizing the importance of quality workmanship during outages, PSNH management identifies liaisons for each contractor and begins preparing for planned maintenance outages several months in advance. This preparation includes ordering materials, preparing scope documents, identifying all work and meeting with the various service contractors that will be on site throughout the outage performing work. During the pre-outage planning process, PSNH expresses the importance of quality work.

Each job, regardless of whether it is during a planned or unplanned outage, is assigned a PSNH liaison. The purpose of the liaison is to oversee the work and to facilitate communication between contractor and station management on safety, quality and productivity.

In an effort to reinforce the importance of quality workmanship and proper communication, PSNH has instituted a specific action with contractors, during pre-outage planning and ongoing during the work, to discuss these issues during the daily outage meetings at each station once the outage has started. This has become a practice at all plants.

## Recommendation No. 3 & 4

**Recommendation 3:**
***A vegetation inspection of the 355 and 355x main line 4.5kV circuits be performed, and that the results be filed with the 2012, reconciliation filing; and that a final determination of recoupment of replacement power costs associated with these outages be deferred to the ES/SCRC 2012 filing. (Canaan Outages 1- C,1-D,1-E,1-F,1-G,1-K and1- M)***

**Recommendation 4:**
***A vegetation inspection of the 335/332 main line 34.5 kV circuit (including the Hooksett tap to Hooksett Hydro) be performed, and that the results be filed with ES/SCRC 2012 reconciliation filing; and that a final determination of recoupment of replacement power costs associated with these outages be deferred to the ES/SCRC 2012 filing. (Garvin's Falls Outages M-A and Hooksett Outages 1-A, 1B, 1C)***

**Response:**
PSNH Vegetation Management has a comprehensive program in place to maintain vegetation growth and tree clearances, as well as respond to tree related outages. PSNH utilizes a number of different tree trimming techniques to manage tree growth surrounding PSNH's circuits. These include scheduled tree trimming, enhanced tree trimming, maintenance enhanced tree trimming, mid-cycle tree trimming and hazard tree removal. In addition, PSNH implemented a multi-phase Reliability Enhancement Program (REP) on July 1, 2007. The REP is a multiphase program aimed to increase system reliability a component of this program focuses on tree trimming practices and reclaiming full width of the right-of-way.

Below is a summary of how these techniques were utilized and how Vegetation Management responded to tree related outages at the Canaan, Hooksett and Garvin's Falls hydro stations.

### Canaan Hydro

355 ROW – Canaan outages C, D, E resulted from tree events on the 355 line.

Note that Canaan outage F was not specifically identified as a tree related outage. This outage may have resulted from a momentary disturbance caused by a tree, but this was never confirmed.

For the other outages, PSNH responded to each of these events on 2/26/10 (C and D), and 5/6/10 (E) respectively. In response to these outages, PSNH and PSNH's tree service contractor performed the following activities:

- Damage assessment
- Localized inspection
- Necessary tree work
- Restoration

Also of note is the Reliability Enhancement Program (REP) of which there is a PSNH Vegetation Management component. REP is a multi-phase program that focuses on improving reliability. One of the objectives of phase I was to reduce the standard tree trimming cycle to no longer than 5 years and increase hazard tree removal. REP phase II is focused on regaining the full width of ROWs. The research and patrolling activities associated with phase II started in 2010. In February 2010, Vegetation Management identified the 355 line as a focus area for the REP phase II effort. As part of this program the entire ROW (approximately 33 miles) was inspected by PSNH Vegetation Management interns from UNH's Thompson School of Forestry. During the inspection, the existing tree line was mapped using GPS. This information was then used to determine if the full width of the ROW was cleared. This was done to assess the work and cost associated with reclaiming the full width of the ROW. During the inspection, 36 hazard trees were identified and marked using GPS; these trees either have been removed or are scheduled to be removed. Most of the offending trees causing the outages were outside of the tree trimming zone. Regaining the full width of the right of way under REP II was not commenced until after the normal tree trimming cycle had treated the 355 line.

355X10 Distribution Circuit – Canaan outages G, K, and M resulted from tree events on the 355X10 line. PSNH responded to each of these events on 5/7/10 (G), 8/23/10 (K), and 12/1/10 (M), respectively. In response to these outages, PSNH and PSNH's tree removal contractor performed the following activities:

- Damage assessment
- Full Line patrol
- Necessary tree work and
- Restoration

Because distribution circuits are more accessible, a full patrol of the line is done prior to energizing the circuit for each tree related outage. The patrol is completed to identify any issues or potential hazard trees. During this patrol, not only are trees that pose an imminent threat identified, but also trees that could develop into a problem are also identified regardless if they are inside or outside the trimming area. Once the circuit is restored, PSNH directs the tree service company to the trees identified during the patrol. This circuit is scheduled for maintenance trimming in 2012. Most of the offending trees causing the outages were outside of the tree trimming zone. Regaining the full width of the right of way under REP II was not commenced until after the normal tree trimming cycle had treated the 355X10 line.

## Hooksett/Garvin's Hydro

335/332 Garvin's/Hooksett ROW –Hooksett outages A, B, C and Garvins M-A resulted from tree events on the 335/332 line. PSNH responded to each of these events on 2/26/10 (Hooksett A and Garvins M-A), 4/29/10 (Hooksett B), and 7/26/10 (Hooksett C),

respectively. In response to these outages, PSNH and PSNH's tree service contractor performed the following activities:

- Damage assessment
- Localized inspection
- Necessary tree work and
- Restoration

This line was scheduled for trimming in 2010. This entails mowing under and adjacent to the line and then performing side trimming with an off road skidder bucket or with tree climbers. This is done to allow easier access for equipment working in the ROW. Mowing on this line was completed on 4/24/10; after the mowing was completed the side trimming commenced. On 4/29/10, Hooksett tripped offline. This outage did not occur in the vicinity of the active trimming area. In fact, the tree trimming contractor needed to mobilize a crew from the active side trimming area to address the tree damage which caused the Hooksett outage. During the damage assessment, it was noted the tree that caused the outage was outside the trim zone and was growing in a direction away from the line and broke in an unusual manner. On 7/26/10, Hooksett tripped again for a tree related event. In response to this event, Vegetation Management patrolled the 335/332 line with focus on other hazard trees; any trees that were identified were marked and removed. The outage on 7/26/10 occurred after the trimming was completed. The tree that caused the outage was not identified by the vegetation management crew, because it did not appear to be a threat based on the fact the tree was outside the trim zone and it was leaning/growing away from the line.

PSNH initiated a patrol of the circuit on 11/28/11 and completed it on 12/30/2011; hazard trees or other potential threats to the line were removed or have been scheduled to be removed.

Additionally, the 335/332 line is currently scheduled for REP phase II research and patrol in 2012. Similar to the Canaan 355 line, the entire line will be walked by PSNH and PSNH's tree service contractor. GPS mapping will be used to map the current width of the ROW. The information gathered during this effort will be used to develop a cost estimate and scope of work detail to reclaim the full width of the ROW. Additionally, during the patrol, hazard trees will be identified and marked using GPS, and these trees will then be scheduled for removal.

## Recommendation No. 5

***Pertaining to outages at small hydro units- PSNH should obtain the in-house ability to perform transient stability analysis to aid in the resolution of inadvertent generator over trips caused by faults on the distribution system, and to aid in the determination of proper time delays of under voltage relays to maintain stability for properly cleared faults.***

**Response:**
PSNH has undertaken the steps necessary to develop this in-house capability. Company engineers have recently completed, through Worcester Polytechnic Institute (WPI), the courses Transients in Power Systems and Fundamentals of Power Transmission. In addition, a PSNH engineer will be attending the course PSS/E – Dynamic Simulation at Siemens Power Academy TD in Schenectady, NY in June 2012. Descriptions of the courses follow.

Transients in Power Systems covered fundamentals of the electrical transient problems in power systems. The course was focused on modeling and building tools for analyzing the effects of electrical transients in power systems.

Fundamentals of Power Transmission covered basic aspects of power system transmission characteristics, in particular those that affect system stability and voltage control. The course focused on modeling, analyzing and mitigating power system voltage and stability problems.

PSS/E – Dynamic Simulation will cover how to use dynamic simulation to analyze how the power system transitions from one status state to another. The course will cover data development and input for dynamics, initial system setup and checkout, running dynamic simulations, and plotting results.

In early 2012, PSNH's Transmission group began working on an upgrade to the Webster Substation (115kV). Localized IPP's and PSNH Hydro Generation were identified by PSNH's Transmission group as stakeholders and requested GSU and generator data. The information request was to support a transient system study. Ultimately, PSNH's Transmission group made a determination that the modification would not impact generation on the 34.5 kV.

## Recommendation No. 6

***Planning for emergent issues at small hydro stations- PSNH should focus its non-destructive examinations (NDE) on major hydro components (runners, draft tubes, etc) and develop a comprehensive plan to address the results of NDE examinations, and to specifically address items such as exciters, runners, set-up transformers, rotors, stators and draft tubes.***

**Response:**
Since 2010, hydro has performed several NDE analyses, with many focused on the components identified in the recommendation. PSNH hydro has created a Project Plan, in response to this recommendation, to evaluate the NDE effort specific to hydro and equipment identified. This plan will focus on evaluating industry standards, collection of existing data and reviewing annual inspection reports. The intent of the plan is to assess all aspects of implementing a comprehensive NDE plan.

The scope of this assessment may vary but at a minimum include the following:

- Review Hydro Industry Standards
- Review Existing NDE practices
- Review Hydro annual inspection reports
- Review of existing NDE data
- Discuss NDE with Hydro personal familiar with equipment
- Review historical hydro outages or extended outages that resulted from the equipment identified above.
-

Discuss NDE practices with other sources including PSNH steam plant personal

## Recommendation No. 7 (Follow-up from DE 09-091 and DE 10-121)

***Address and complete the open time of litigation over $1,000,000 insurance deductible associated with Merrimack 2 Turbine problems.***

**Response:**
PSNH has joined a lawsuit against The Babcock and Wilcox Company. This lawsuit was initiated by NU/PSNH's insurance carriers claiming that The Babcock and Wilcox Company supplied boiler tubing during the 2008 Merrimack Unit 2 overhaul that contained foreign material left in the boiler tubes. They further claimed that the foreign material left in the boiler tubes caused the damage to the newly installed high pressure/intermediate pressure (HP/IP) turbine. PSNH has joined the law suit to seek reimbursement of the $1 million deductible for our customers. The litigation is currently in the discovery phase and a conclusion date is currently undetermined.

## Recommendation No. 8 (Follow-up from DE 09-091 and DE 10-121)

***Address and complete the open item of the interconnection of PSNH Generating Units to PSNH Distribution System.***

**Response:**
Throughout 2011, PSNH performed a study focusing on the adequacy of the overspeed protection scheme for hydro units. The report was finalized on February 15, 2012. In summary, the findings were that the hydro settings are adequate based on the following:

- Settings are consistent with industry standards (i.e. IEEE, NPCC guidance).
- Settings are set similar to other utilities

During the study PSNH found that the two PSNH high head hydro stations, Jackman and Canaan, have reported more overspeed trips than other hydro units. PSNH concluded that it is likely the majority, if not all, of the overspeed trips at these stations was the result of a system or generator fault (i.e. resulting in over frequency trip, or out-of-step).

In an effort to understand these events better, PSNH has installed additional monitoring equipment at Jackman and will be installing similar equipment at Canaan during the annual inspection in.

In addition to further evaluating overspeed trips at Jackman and Canaan, PSNH will be completing a coordination study of Smith, Gorham, Canaan and Lost Nation in 2012. The intent of this study is to ensure that the generator protection systems properly sync with the distribution/transmission system. The scope of the study will include a review of overcurrent relays, voltage relays, frequency relays and other protection systems that overlap the distribution/transmission and generating units.

# ATTACHMENT WHS-1

# LIST OF UNIT OUTAGES
# AND
# SCHEDULED OUTAGE PERIODS

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
MERRIMACK 1 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 1/4 | 1655 | 1/7 | 1255 | 2.8 | Furnace Wall Tube Leak |
| 1/24 | 0750 | 1/24 | 0955 | 0.1 | No Load Steam Flow |
| 4/12 | 1523 | 5/15 | 0905 | 32.7 | Scheduled Maintenance Overhaul |
| 5/17 | 0925 | 5/17 | 1252 | 0.1 | Turbine Hydraulic Oil Pressure Control |
| 5/29 | 2129 | 5/30 | 1410 | 0.7 | Turbine Steam Pressure Sensing Line |
| 6/10 | 1537 | 6/11 | 1053 | 0.8 | 1A Condensate Pump |
| 6/14 | 1738 | 6/15 | 0100 | 0.3 | Floor tube leaks |
| 6/16 | 0250 | 6/16 | 2125 | 0.8 | Floor tube leaks |
| 7/13 | 2300 | 7/15 | 1530 | 1.7 | Turbine Throttle Valve |
| 9/6 | 1431 | 9/25 | 1518 | 19.0 | FGD Tie in Outage |
| 9/30 | 2248 | 10/1 | 1630 | 0.7 | FGD Pressure Relay Trip |
| 10/4 | 0820 | 10/4 | 1300 | 0.2 | FGD Absorber Inspection |
| 10/31 | 0500 | 11/13 | 1608 | 13.5 | FGD Bypass and Duct work |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 8.3 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
MERRIMACK 2 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 1/25 | 1353 | 1/29 | 1209 | 3.9 | Front Wall Tube Leak |
| 3/5 | 0737 | 3/7 | 2342 | 2.7 | 2A Condensate Pump |
| 3/8 | 0038 | 3/8 | 0253 | 0.1 | Wet Coal |
| 4/21 | 0043 | 4/29 | 0027 | 8.0 | Transmission Outage |
| 5/13 | 1913 | 5/16 | 0055 | 2.2 | Turbine Drain Leak |
| 6/22 | 2244 | 6/23 | 0040 | 0.1 | Cyclone Furnace |
| 8/15 | 1700 | 8/17 | 1420 | 1.9 | Furnace Leaks |
| 8/20 | 1556 | 8/22 | 0855 | 1.7 | Generator Hydrogen Leak |
| 10/12 | 1200 | 11/14 | 0955 | 32.9 | Scheduled Maintenance/Tie-in Overhaul |
| 12/7 | 0335 | 12/12 | 1610 | 5.5 | Flue Gas Recirculating Fan |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 18.1 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
MERRIMACK CT1 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 4/14 | 0519 | 4/21 | 2030 | 7.6 | Scheduled Maintenance Overhaul |
| 7/22 | 1325 | 7/26 | 2101 | 4.3 | Turbine Fuel System Problems |
| 8/3 | 1353 | 8/3 | 1536 | 0.1 | Engine Fuel Leak |
| 9/6 | 1328 | 9/6 | 1415 | 0.0 | Fire Protection System |
| 9/8 | 0505 | 9/22 | 1740 | 14.5 | Switchyard Circuit Breakers |
| 10/3 | 0527 | 10/7 | 2100 | 4.6 | Switchyard Circuit Breakers |
| 10/19 | 0930 | 10/19 | 1600 | 0.3 | Circuit Breakers |
| 12/20 | 0950 | 12/20 | 1045 | 0.0 | Fuel Piping and Valves |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 23.9 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
MERRIMACK CT2 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 3/30 | 1250 | 3/30 | 1346 | 0.0 | Jet Engine Inlet Air Filters |
| 4/14 | 0740 | 4/22 | 1245 | 8.2 | Scheduled Maintenance Overhaul |
| 5/5 | 0737 | 5/5 | 1252 | 0.2 | Planned Jet Engine Inlet Air Filter Replacement |
| 7/22 | 1433 | 7/27 | 1540 | 5.0 | Generator Voltage Control |
| 9/8 | 0505 | 9/22 | 1740 | 14.5 | Planned MT3 Breaker Installation |
| 10/3 | 0527 | 10/7 | 2100 | 4.6 | Planned MT3 Breaker Installation |
| 10/19 | 0830 | 10/19 | 1600 | 0.3 | Switchyard Circuit Breakers |
| 12/20 | 0950 | 12/20 | 1548 | 0.2 | Fuel Piping and Valves |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 5.9 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
NEWINGTON - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 1/14 | 0843 | 1/15 | 0347 | 0.8 | Furnace Wall Tube Leak |
| 3/9 | 0945 | 3/9 | 1345 | 0.2 | Low Furnace Pressure Trip |
| 3/26 | 0000 | 4/10 | 1124 | 15.5 | Scheduled Maintenance Overhaul |
| 7/23 | 1611 | 7/23 | 1839 | 0.1 | Low Drum Level Trip |
| 9/21 | 0700 | 9/23 | 1200 | 2.2 | Planned Maintenance Outage |
| 9/24 | 1215 | 9/24 | 1545 | 0.1 | Main Steam Leak |
| 9/25 | 1519 | 9/25 | 1656 | 0.1 | Delayed Phase |
| 10/13 | 0750 | 10/13 | 0850 | 0.0 | Delayed Phase |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 3.5 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
SCHILLER 4 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 5/17 | 0025 | 5/17 | 1500 | 0.6 | Main Steam Stop Packing Valve |
| 6/1 | 2055 | 6/4 | 0107 | 2.2 | Superheater Tube Leak |
| 6/8 | 1406 | 6/8 | 1510 | 0.0 | Drum Level Trip |
| 6/8 | 1518 | 6/8 | 1839 | 0.1 | Drum Level Trip |
| 7/6 | 0900 | 7/6 | 1010 | 0.0 | Motoring Relay |
| 7/18 | 0800 | 7/18 | 0855 | 0.0 | Motoring Relay |
| 10/1 | 0001 | 11/5 | 0843 | 35.4 | Scheduled Maintenance Overhaul |
| 11/5 | 0930 | 11/5 | 1027 | 0.0 | Logic Update and Adjustment |
| 11/9 | 0000 | 11/9 | 2300 | 1.0 | Hydrogen Cooler Leaks |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 4.1 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
SCHILLER 5 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 2/28 | 1710 | 3/3 | 0530 | 2.5 | Process Building Fire |
| 3/3 | 0925 | 3/3 | 1011 | 0.0 | Forced Draft Fan |
| 3/6 | 1007 | 3/6 | 1722 | 0.3 | Forced Draft Fan Motor RTD |
| 3/17 | 0701 | 3/17 | 0838 | 0.1 | Cyclone Furnace Slagging |
| 4/1 | 2355 | 5/18 | 1927 | 46.8 | Scheduled Maintenance Overhaul |
| 5/21 | 1704 | 5/21 | 1830 | 0.1 | Forced Draft Fan |
| 5/30 | 1331 | 5/30 | 1450 | 0.1 | High Furnace Pressure Trip |
| 6/20 | 1107 | 6/21 | 0235 | 0.6 | High Furnace Pressure Trip |
| 6/26 | 0227 | 6/28 | 0828 | 2.3 | Low Furnace Pressure Trip |
| 7/23 | 0745 | 7/23 | 0855 | 0.0 | High Furnace Pressure Trip |
| 11/12 | 2108 | 11/19 | 1000 | 6.5 | Plugged Cyclones |
| 11/19 | 1238 | 11/20 | 0046 | 0.5 | Drum Level |
| 11/20 | 0225 | 11/20 | 0334 | 0.0 | Drum Level |
| 11/20 | 0400 | 11/20 | 0558 | 0.1 | Drum Level |
| 11/25 | 1515 | 11/25 | 1801 | 0.1 | Wood Feeder Plug |
| 11/27 | 0618 | 11/27 | 1935 | 0.6 | Furnace Pressure Trip |
| 12/2 | 1626 | 12/2 | 1900 | 0.1 | Furnace Pressure Trip |
| 12/2 | 1921 | 12/2 | 2200 | 0.1 | Furnace Pressure Trip |
| 12/2 | 2234 | 12/3 | 0058 | 0.1 | Furnace Pressure Trip |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 14.1 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
SCHILLER 6 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 3/4 | 2152 | 3/25 | 1526 | 20.7 | Scheduled Maintenance Overhaul |
| 3/26 | 0205 | 3/27 | 0310 | 1.0 | Primary Air Valves |
| 5/5 | 2157 | 5/5 | 2254 | 0.0 | Turbine Trip |
| 5/8 | 1130 | 5/8 | 1235 | 0.0 | Drum Level Trip |
| 5/13 | 1010 | 5/14 | 1247 | 1.1 | Tube Leak |
| 7/5 | 1301 | 7/5 | 1348 | 0.0 | Low Drum Level Trip |
| 7/6 | 1633 | 7/9 | 2225 | 3.2 | Tube Leak |
| 7/11 | 0500 | 7/11 | 0600 | 0.0 | Delayed Phase |
| 8/8 | 0200 | 8/8 | 2200 | 0.8 | Hydrogen Leak |
| 9/26 | 0730 | 9/26 | 0808 | 0.0 | Low turbine steam flow trip |
| 10/1 | 0700 | 10/1 | 1500 | 0.3 | Planned Switchgear Replacement |
| 10/17 | 2117 | 10/17 | 2200 | 0.0 | Loss of Fuel |
| 10/19 | 1300 | 10/19 | 1625 | 0.1 | Induced Draft Fan |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 6.9 | |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
SCHILLER CT1 - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 1/20 | 1039 | 1/21 | 0931 | 1.0 | Fuel System Problem |
| 5/16 | 0445 | 5/20 | 1125 | 4.3 | Scheduled Maintenance Outage |
| 12/8 | 0700 | 12/8 | 0841 | 0.1 | Miscellaneous External Problems |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 1.0 | |

WYMAN IV - UNIT OUTAGE LIST
JANUARY TO DECEMBER 2011

| OUTAGE DATE | START TIME | OUTAGE DATE | STOP TIME | DAYS | REASON |
|---|---|---|---|---|---|
| 1/22 | 0600 | 1/22 | 0700 | 0.0 | 4A Gas Recirculation Fan Breaker |
| 5/13 | 0001 | 5/27 | 2029 | 14.9 | Transmission line OOS |
| 7/16 | 0806 | 7/17 | 1520 | 1.3 | Transmission line OOS |
| 7/21 | 1224 | 7/21 | 1318 | 0.0 | Generator coolant |
| 9/9 | 1727 | 9/9 | 1934 | 0.1 | Lost power from local utility |
| TOTAL FORCED OUTAGE DOWN TIME | | | | 16.3 | |

# PSNH Hydro Outage Record - January - December 2011

| | 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| A | Amoskeag | S | 7/14/11 7:46 | 7/14/11 9:07 | **1.35** | **0.06** | **Y** | **BS** | Black Start Test |
| B | Amoskeag | S | 9/8/11 9:52 | 9/8/11 11:23 | **1.52** | **0.06** | **Y** | **Trip** | Emergency Generator |
| | | | | | | | | | |
| A | Amoskeag | 1 | 1/10/11 7:04 | 1/18/11 13:50 | **198.77** | **8.28** | **N** | **AI** | Annual Inspection |
| B | Amoskeag | 1 | 6/7/11 14:53 | 6/7/11 17:48 | **2.92** | **0.12** | **N** | **Trip** | Unit failed to start |
| C | Amoskeag | 1 | 12/24/11 17:04 | 12/24/11 21:57 | **4.88** | **0.20** | **Y** | **Trip** | Coil failure |
| | | | | | | | | | |
| A | Amoskeag | 2 | 2/14/11 7:19 | 2/18/11 14:02 | **102.72** | **4.28** | **N** | **AI** | Annual Inspection |
| B | Amoskeag | 2 | 2/23/11 8:00 | 2/23/11 10:39 | **2.65** | **0.11** | **Y** | **EMO** | Testing brake system |
| C | Amoskeag | 2 | 6/23/11 7:20 | 6/23/11 14:45 | **7.42** | **0.31** | **N** | **EMO** | Oil leak on gate lock piston |
| D | Amoskeag | 2 | 7/7/11 7:37 | 7/7/11 14:27 | **6.83** | **0.28** | **N** | **EMO** | Trouble shooting gate lock problem. |
| E | Amoskeag | 2 | 7/8/11 7:20 | 7/8/11 11:30 | **4.17** | **0.17** | **N** | **EMO** | Replaced hydraulic valve on gate lock. |
| | | | | | | | | | |
| A | Amoskeag | 3 | 1/5/11 10:48 | 1/5/11 12:20 | **1.53** | **0.06** | **Y** | **EMO** | Cleaned exciter |
| B | Amoskeag | 3 | 2/22/11 7:21 | 3/1/11 8:20 | **168.98** | **7.04** | **N** | **AI** | Annual Inspection |
| C | Amoskeag | 3 | 8/15/11 9:18 | 8/15/11 11:25 | **2.12** | **0.09** | **N** | **EMO** | Oil in lower guide bearing |
| D | Amoskeag | 3 | 9/13/11 12:24 | 9/13/11 14:56 | **2.53** | **0.11** | **Y** | **EMO** | Replace flashboards |
| E | Amoskeag | 3 | 9/25/11 2:45 | 9/25/11 9:14 | **6.48** | **0.27** | **Y** | **Trip** | Bladder Transducer out of adjustment |
| F | Amoskeag | 3 | 10/30/11 7:19 | 10/31/11 8:15 | **24.93** | **1.04** | **Y** | **Trip** | Loss of power to the baldder compressor |

# PSNH Hydro Outage Record - January - December 2011

| | 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| A | Ayers Island | S | 6/2/11 14:58 | 6/2/11 16:55 | **1.95** | **0.08** | **Y** | **T or D** | Line Fault |
| B | Ayers Island | S | 8/19/11 17:01 | 8/19/11 17:30 | **0.48** | **0.02** | **Y** | **T or D** | Line Fault |
| C | Ayers Island | S | 8/28/11 0:19 | 8/28/11 17:24 | **17.08** | **0.71** | **Y** | **T or D** | Line Fault |
| D | Ayers Island | S | 11/23/11 11:01 | 11/23/11 11:23 | **0.37** | **0.02** | **Y** | **T or D** | Line Fault |
| | | | | | | | | | |
| A | Ayers Island | 1 | 1/17/11 7:56 | 1/21/11 18:17 | **106.35** | **4.43** | **N** | **AI** | Annual Inspection |
| B | Ayers Island | 1 | 2/3/11 10:13 | 2/3/11 10:23 | **0.17** | **0.01** | **Y** | **Trip** | High lower guide bearing oil |
| C | Ayers Island | 1 | 11/17/11 14:31 | 11/17/11 14:38 | **0.12** | **0.00** | **Y** | **Trip** | Testing RTU raise/lower circuit. |
| D | Ayers Island | 1 | 11/18/11 12:52 | 11/18/11 12:56 | **0.07** | **0.00** | **Y** | **Trip** | Testing RTU raise/lower circuit. |
| | | | | | | | | | |
| A | Ayers Island | 2 | 1/31/11 8:20 | 2/11/11 18:05 | **273.75** | **11.41** | **N** | **AI** | Annual Inspection |
| B | Ayers Island | 2 | 2/14/11 12:33 | 2/14/11 13:03 | **0.50** | **0.02** | **N** | **EMO** | Wiring Modification |
| C | Ayers Island | 2 | 2/14/11 14:12 | 2/14/11 18:32 | **4.33** | **0.18** | **N** | **EMO** | Overspeed Alarm |
| D | Ayers Island | 2 | 6/21/11 10:38 | 6/21/11 13:45 | **3.12** | **0.13** | **N** | **Trip** | Loss of flow through flow switch |
| | | | | | | | | | |
| A | Ayers Island | 3 | 1/21/11 1:29 | 1/21/11 3:55 | **2.43** | **0.10** | **Y** | **Trip** | Loss of DC Service |
| B | Ayers Island | 3 | 2/15/11 9:56 | 2/15/11 10:40 | **0.73** | **0.03** | **N** | **EMO** | Wiring modifications |
| C | Ayers Island | 3 | 2/16/11 8:37 | 2/16/11 14:00 | **5.38** | **0.22** | **Y** | **Trip** | Unit trip |
| D | Ayers Island | 3 | 8/21/11 17:27 | 8/21/11 18:30 | **1.05** | **0.04** | **N** | **Trip** | Power Card |
| E | Ayers Island | 3 | 8/23/11 3:23 | 8/23/11 15:00 | **11.62** | **0.48** | **Y** | **Trip** | Power Card |
| F | Ayers Island | 3 | 9/29/11 7:34 | 9/30/11 13:43 | **30.15** | **1.26** | **Y** | **EMO** | Took unit offline to inspect draft tube. |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | Canaan | 1 | 2/22/11 9:00 | 2/22/11 17:11 | **8.18** | **0.34** | **Y** | **EMO** | Auto phasing testing |
| B | Canaan | 1 | 3/18/11 11:54 | 3/18/11 13:54 | **2.00** | **0.08** | **Y** | **T or D** | Line Fault |
| C | Canaan | 1 | 4/21/11 11:25 | 4/21/11 15:03 | **3.63** | **0.15** | **Y** | **T or D** | Line Fault |
| D | Canaan | 1 | 5/26/11 20:32 | 5/26/11 22:09 | **1.62** | **0.07** | **Y** | **T or D** | Line Fault |
| E | Canaan | 1 | 5/27/11 20:04 | 5/27/11 20:11 | **0.12** | **0.00** | **Y** | **T or D** | Line Fault |
| F | Canaan | 1 | 6/1/11 14:36 | 6/1/11 16:39 | **2.05** | **0.09** | **Y** | **T or D** | Line Fault |
| G | Canaan | 1 | 6/3/11 10:09 | 6/3/11 10:14 | **0.08** | **0.00** | **Y** | **T or D** | Line Fault |
| H | Canaan | 1 | 8/1/11 8:58 | 8/11/11 18:35 | **249.62** | **10.40** | **Y** | **AI** | Annual Inspection |
| I | Canaan | 1 | 12/8/11 5:18 | 12/8/11 8:25 | **3.12** | **0.13** | **Y** | **T or D** | Line Fault |

# PSNH Hydro Outage Record - January - December 2011

| | 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| A | Eastman | 1 | 11/28/11 8:32 | 12/2/11 16:53 | **104.35** | **4.35** | Y | **AI** | Annual Inspection |
| B | Eastman | 1 | 12/19/11 5:57 | 12/19/11 12:20 | **6.38** | **0.27** | Y | **Trip** | Governor problem |
| | | | | | | | | | |
| A | Eastman | 2 | 6/6/11 8:27 | 7/19/11 15:29 | **1039.03** | **43.29** | Y | **AI** | Annual Inspection |
| B | Eastman | 2 | 8/18/11 0:38 | 8/18/11 1:56 | **1.30** | **0.05** | Y | **EMO** | Bestobell Seal |
| C | Eastman | 2 | 8/26/11 0:49 | 8/26/11 2:36 | **1.78** | **0.07** | Y | **EMO** | Bestobell Seal |
| D | Eastman | 2 | 9/3/11 6:37 | 9/3/11 8:29 | **1.87** | **0.08** | Y | **EMO** | Bestobell Seal |
| E | Eastman | 2 | 9/4/11 9:23 | 9/4/11 9:53 | **0.50** | **0.02** | Y | **EMO** | Bestobell Seal |
| F | Eastman | 2 | 9/10/11 22:00 | 9/10/11 22:32 | **0.53** | **0.02** | Y | **EMO** | Bestobell Seal |
| G | Eastman | 2 | 10/30/11 2:55 | 10/30/11 9:45 | **6.83** | **0.28** | Y | **T or D** | Unit trip |
| H | Eastman | 2 | 10/31/11 11:18 | 10/31/11 12:09 | **0.85** | **0.04** | Y | **EMO** | Bestobell Seal |
| I | Eastman | 2 | 11/15/11 22:36 | 11/15/11 23:03 | **0.45** | **0.02** | Y | **EMO** | Bestobell Seal |
| J | Eastman | 2 | 11/19/11 6:24 | 11/19/11 7:47 | **1.38** | **0.06** | Y | **EMO** | Bestobell Seal |
| K | Eastman | 2 | 11/23/11 6:21 | 11/23/11 10:05 | **3.73** | **0.16** | Y | **T or D** | Line Fault/Power Surge |
| L | Eastman | 2 | 11/27/11 18:33 | 11/27/11 18:56 | **0.38** | **0.02** | Y | **EMO** | Bestobell Seal |
| M | Eastman | 2 | 11/28/11 9:37 | 11/28/11 9:52 | **0.25** | **0.01** | Y | **Trip** | Unit trip |
| N | Eastman | 2 | 12/1/11 6:20 | 12/1/11 8:17 | **1.95** | **0.08** | Y | **EMO** | Water Intake |
| O | Eastman | 2 | 12/12/11 9:45 | 12/12/11 10:38 | **0.88** | **0.04** | Y | **EMO** | Bestobell Seal |

# PSNH Hydro Outage Record - January - December 2011

| | 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| A | Garvins | S | 1/12/11 18:45 | 1/12/11 18:52 | **0.12** | **0.00** | **Y** | **TRIP** | Pond Control |
| B | Garvins | S | 5/4/11 8:52 | 5/4/11 9:44 | **0.87** | **0.04** | **Y** | **EMO** | Fish louver line |
| C | Garvins | S | 6/3/11 9:41 | 6/3/11 12:14 | **2.55** | **0.11** | **Y** | **EMO** | Fish louver line |
| D | Garvins | S | 7/18/11 7:44 | 8/9/11 13:56 | **534.20** | **22.26** | **Y** | **AI** | Annual Inspection |
| E | Garvins | S | 9/5/11 18:58 | 9/5/11 22:34 | **3.60** | **0.15** | **Y** | **T or D** | Line Fault |
| F | Garvins | S | 10/13/11 8:24 | 10/13/11 9:17 | **0.88** | **0.04** | **Y** | **EMO** | Fish louver line |
| G | Garvins | S | 10/13/11 10:41 | 10/13/11 11:40 | **0.98** | **0.04** | **Y** | **EMO** | Fish louver line |
| H | Garvins | S | 10/13/11 15:11 | 10/13/11 16:44 | **1.55** | **0.06** | **Y** | **EMO** | Fish louver line |
| I | Garvins | S | 10/21/11 8:34 | 10/21/11 9:30 | **0.93** | **0.04** | **Y** | **OU** | Fish louver line |
| J | Garvins | S | 10/28/11 8:18 | 10/28/11 9:09 | **0.85** | **0.04** | **Y** | **OU** | Fish louver line |
| K | Garvins | S | 12/11/11 23:43 | 12/12/11 1:20 | **1.62** | **0.07** | **Y** | **OU** | Rack Alarm |
| L | Garvins | S | 12/21/11 11:13 | 12/21/11 11:53 | **0.67** | **0.03** | **Y** | **EMO** | Equipment removal |
| M | Garvins | S | 12/21/11 13:58 | 12/21/11 15:31 | **1.55** | **0.06** | **Y** | **EMO** | Fish louver line equipment |
| N | Garvins | S | 12/22/11 8:00 | 12/22/11 9:14 | **1.23** | **0.05** | **Y** | **BS** | Black start test |
| | | | | | | | | | |
| A | Garvins | 1 | 1/12/11 22:13 | 1/12/11 23:20 | **1.12** | **0.05** | **N** | **TRIP** | Unit failed to start |
| B | Garvins | 1 | 1/13/11 4:30 | 1/13/11 5:30 | **1.00** | **0.04** | **N** | **TRIP** | Unit failed to start |
| C | Garvins | 1 | 2/15/11 8:00 | 2/15/11 12:00 | **4.00** | **0.17** | **N** | **EMO** | Planned Outage |
| D | Garvins | 1 | 8/28/11 13:04 | 8/28/11 13:12 | **0.13** | **0.01** | **Y** | **TRIP** | Unit trip |
| | | | | | | | | | |
| A | Garvins | 2 | 6/1/11 8:57 | 6/1/11 9:35 | **0.63** | **0.03** | **Y** | **EMO** | Switching |
| B | Garvins | 2 | 8/9/11 8:00 | 8/24/11 13:11 | **365.18** | **15.22** | **Y** | **EMO** | Failed bearings |
| C | Garvins | 2 | 8/28/11 6:10 | 8/28/11 9:57 | **3.78** | **0.16** | **Y** | **TRIP** | Unit trip |
| | | | | | | | | | |

# PSNH Hydro Outage Record - January - December 2011

| | 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 |
|---|---|---|---|---|---|---|---|---|---|
| A | Garvins | 3 | 3/30/11 3:08 | 3/30/11 4:37 | **1.48** | **0.06** | **Y** | **Trip** | Unit Trip |
| B | Garvins | 3 | 4/10/11 17:30 | 4/10/11 19:25 | **1.92** | **0.08** | **Y** | **Trip** | Unit Trip |
| C | Garvins | 3 | 4/14/11 3:36 | 4/14/11 6:38 | **3.03** | **0.13** | **Y** | **Trip** | Unit Trip |
| D | Garvins | 3 | 7/5/11 22:51 | 7/6/11 0:34 | **1.72** | **0.07** | **N** | **Trip** | Failed Start |
| E | Garvins | 3 | 8/28/11 13:04 | 8/28/11 15:21 | **2.28** | **0.10** | **Y** | **Trip** | Unit Trip |
| | | | | | | | | | |
| A | Garvins | 4 | 1/1/11 0:01 | 2/2/11 13:30 | **781.48** | **32.56** | **Y** | **AI** | Continuation of g4 bearing |
| B | Garvins | 4 | 5/26/11 17:26 | 5/26/11 18:30 | **1.07** | **0.04** | **Y** | **Trip** | Unit trip |
| C | Garvins | 4 | 5/27/11 14:59 | 5/27/11 15:28 | **0.48** | **0.02** | **Y** | **Trip** | Automatic Shutdown |
| D | Garvins | 4 | 5/27/11 19:24 | 5/27/11 19:59 | **0.58** | **0.02** | **Y** | **Trip** | Automatic Shutdown |
| E | Garvins | 4 | 5/27/11 23:05 | 5/28/11 0:35 | **1.50** | **0.06** | **Y** | **Trip** | Automatic Shutdown |
| F | Garvins | 4 | 5/29/11 16:49 | 5/29/11 17:22 | **0.55** | **0.02** | **Y** | **Trip** | Automatic Shutdown |
| G | Garvins | 4 | 5/30/11 13:00 | 5/30/11 13:37 | **0.62** | **0.03** | **Y** | **Trip** | Automatic Shutdown |
| H | Garvins | 4 | 5/30/11 16:36 | 5/30/11 17:12 | **0.60** | **0.03** | **Y** | **Trip** | Automatic Shutdown |
| I | Garvins | 4 | 7/3/11 3:12 | 7/3/11 4:30 | **1.30** | **0.05** | **N** | **Trip** | Unit trip |
| J | Garvins | 4 | 8/18/11 16:20 | 8/18/11 16:37 | **0.28** | **0.01** | **Y** | **Trip** | Unit trip |
| K | Garvins | 4 | 9/15/11 16:29 | 9/15/11 18:16 | **1.78** | **0.07** | **Y** | **EMO** | Board work |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | Gorham | S | 8/8/11 7:48 | 9/7/11 11:56 | **724.13** | **30.17** | **Y** | **AI** | Annual Inspection |
| B | Gorham | S | 9/12/11 2:04 | 9/12/11 3:07 | **1.05** | **0.04** | **Y** | **T or D** | Line Fault |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | Hooksett | 1 | 2/18/11 19:56 | 2/18/11 20:55 | **0.98** | **0.04** | **Y** | **Tor D** | Line Fault |
| B | Hooksett | 1 | 2/22/11 9:06 | 2/22/11 12:26 | **3.33** | **0.14** | **Y** | **Tor D** | Line Fault |
| C | Hooksett | 1 | 9/3/11 22:57 | 9/4/11 0:51 | **1.90** | **0.08** | **Y** | **Trip** | Unit Trip |
| D | Hooksett | 1 | 11/1/11 16:27 | 11/1/11 17:50 | **1.38** | **0.06** | **Y** | **T or D** | Line Fault |
| E | Hooksett | 1 | 12/5/11 8:11 | 12/9/11 10:00 | **97.82** | **4.08** | **Y** | **AI** | Annual Inspection |
| F | Hooksett | 1 | 12/13/11 10:33 | 12/13/11 13:29 | **2.93** | **0.12** | **Y** | **EMO** | Faulty operation of governor |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | Jackman | 1 | 7/6/11 8:37 | 7/6/11 13:18 | **4.68** | **0.20** | **N** | **EMO** | EMO |
| B | Jackman | 1 | 9/29/11 23:57 | 9/30/11 0:01 | **0.07** | **0.00** | **N** | **T or D** | Line Fault |
| C | Jackman | 1 | 11/15/11 8:27 | 11/21/11 14:09 | **149.70** | **6.24** | **N** | **AI** | Annual Inspection |
| D | Jackman | 1 | 12/8/11 4:54 | 12/8/11 9:48 | **4.90** | **0.20** | **Y** | **T or D** | Line Fault |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | Lost Nation | 1 | 4/26/11 7:00 | 5/13/11 14:01 | **415.02** | **17.29** | **N** | **AI** | Annual Inspection |
| B | Lost Nation | 1 | 5/20/11 9:18 | 5/20/11 14:20 | **5.03** | **0.21** | **N** | **BS** | Black Start |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | Smith | 1 | 5/26/11 22:07 | 5/26/11 23:04 | **0.95** | **0.04** | Y | **Trip** | Unit Trip |
| B | Smith | 1 | 7/15/11 13:03 | 7/15/11 16:22 | **3.32** | **0.14** | Y | **T or D** | Line Fault |
| C | Smith | 1 | 9/1/11 9:49 | 12/30/11 10:15 | **2880.43** | **120.02** | Y | **Trip** | Breaker Failure |

| PSNH Hydro Outage Record - January - December 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| | | | | | | | | | |
| A | White Lake | 1 | 2/6/11 5:23 | 2/6/11 13:17 | **7.90** | **0.33** | **N** | **Trip** | Annunicator Alarm |
| B | White Lake | 1 | 3/6/11 11:29 | 3/6/11 11:42 | **0.22** | **0.01** | **N** | **Trip** | Fire system |
| C | White Lake | 1 | 4/4/11 8:00 | 4/21/11 14:02 | **414.03** | **17.25** | **N** | **AI** | Annual Inspection |
| D | White Lake | 1 | 4/27/11 14:14 | 4/27/11 14:45 | **0.52** | **0.02** | **N** | **Trip** | Dispatcher could not lower unit. |
| E | White Lake | 1 | 5/2/11 4:00 | 5/2/11 5:27 | **1.45** | **0.06** | **N** | **EMO** | Troubleshooting themocouples |
| F | White Lake | 1 | 5/5/11 12:59 | 5/5/11 13:39 | **0.67** | **0.03** | **N** | **EMO** | Air Pack |
| G | White Lake | 1 | 5/21/11 6:00 | 5/21/11 16:47 | **10.78** | **0.45** | **N** | **EMO** | Replaced fuel manifold |

# ATTACHMENT WHS-2

# PUC OUTAGE REPORTS

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.:** OR-2011-01 (MK1-01)

**Station/Unit:** Merrimack Station Unit No. 1

**Dates:** January 4 – January 7, 2011

**Duration:** 2.8 days

**Immediate Cause:** Furnace Wall Tube Leak

**Discussion / Remedy:** Unit 1 was removed from service due to excessive water usage. A boiler inspection was performed and identified leaks in the lower furnace. The failed tubes were numbers 5&6 from the front wall, (counting from west to east) on the south firebox wall (right hand sidewall). The failed wall tubes were a result of porosity in the original weld on tube five which in turn cut into tube six. The tube failure was at elevation 258' which is at "B" cyclone level. Due to the location of the leaks, staging needed to be installed to access the area, in this case staging inside and outside the fire box were necessary. A leak in a weld of tube five (counting from the front wall) caused the leak in tube number six. These 3" tangent tubes are without membrane and are some of the most time consuming weld repairs to perform. After the staging was erected removal of lagging, insulation, casing and refractory was completed. The wall tubes are tack welded to horizontal channels on the outside of the boiler. The tack welds needed to be cut free from the channels, refractory and studs removed on the inside, and the tubes needed to be pulled out of alignment with com-a-longs and wedges. Once the work area was accessible from the side, the tubes could be pad welded. After the weld repairs were performed, a successful pressure check and black light procedure was performed. The tubes were restored to the correct position and tack welded back to the channels. Studs and refractory were reinstalled on the firebox side. Refractory, casing, insulation and lagging were reinstalled on the outside, and finally the staging was removed.

While the repairs were being performed, an air heater wash was done along with an inspection of the circumferential and radial seals. No seal replacements needed. Critical path was the water wall repair, with the backlog of jobs being performed by the maintenance department and vendors.

**Additional routine work was completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.:** OR-2011-02 (MK2-01)

**Station/Unit:** Merrimack Station Unit No. 2

**Dates:** January 25 – January 29, 2011

**Duration:** 3.9 days

**Immediate Cause:**
The unit was taken off line due to a front wall tube leak in the gas recirculation duct.

**Discussion/Remedy:**
Unit 2 was removed from service on January 25, 2011 for front wall tube leaks in the gas recirculation duct. The tubes that failed were the second and third from the south recirculation view port, located at the floor level of the duct. The tube failures also caused damage to the gas recirculation duct floor, refractory and metal expansion joint. After the unit cooled down a boiler inspection was completed. During the inspection a tube leak was found in "F" cyclone, measuring down 18" from the elbows (by the secondary air damper) and 18" from the neck. Both cyclone and front wall tube leaks were caused by erosion. The tubes were repaired and a pressure check performed. During the pressure check two additional tube leaks were discovered. One was in the wind box at the 3 o'clock position, on the south side of "G" cyclone. In this area the tubes are boxed in a 2" by 12" seal welded casing. The boxed area was cut open and barrel tube #9 (counting from the re-entrant throat side), was found to be the source of the leak. A thorough inspection of the area found that tubes 6, 7, and 8 also needed to be pad welded back to original wall thickness. An additional leak was identified and was on a cracked weld of a furnace supply tube. This tube was the third tube down on the west part of the horizontal furnace supply tube bundle, elevation 223', located directly across from the cyclone drain valves. The insulation, lagging and metal frame had to be removed to access the leak. One of the hangers that support the tubes together was cut to allow the tubes to be separated for repair.

Once all the tube leaks were repaired, a final waterside pressure test was performed and no other tube leaks were found.

**Additional work completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.:** OR-2011-03 (MK2-02)

**Station/Unit:** Merrimack Station Unit No. 2

**Dates:** March 5 – March 7, 2011

**Duration:** 2.7 days

**Immediate Cause:**
The unit was removed from service due the 2A condensate pump.

**Discussion/Remedy:**
MK2 was taken off line on 3/5/11 at 07:37 due to failed bushing on the 2A Condensate Pump. The upper guide bushing had become worn which caused excessive vibration and ultimately the unit needed to be removed from service. In this case the pump and motor were replaced with spares from the station inventory. The failed pump and motor were sent out for re-build to restock the inventory for future use.

The Unit was declared available to ISO at 23:42 on 3/7/11.

**Additional work completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.:** OR-2011-04 (MK2-03)

**Station/Unit:** Merrimack Station Unit No. 2

**Dates:** May 13 – May 16, 2011

**Duration:** 2.2 days

**Immediate Cause:**
Steam leak in the HP/IP turbine governor valve loop-pipe drain line.

**Discussion/Remedy:**
Operators conducting equipment rounds in the turbine area noticed a steam leak coming from the underside of the turbine. Access to the area was restricted to ensure safety. The leak was monitored and ultimately the determination was made to remove the unit from service to make the necessary repair. With the unit off line, the steam leak was traced to the HP/IP turbine governor valve loop-pipe drain line.

The steam was leaking from a crack in an old weld. The leak was caused by a failed weld that was attributed to low cycle fatigue. The entire drain line was removed and replaced. The new welds were stress relieved and non-destructive examination was completed per the power piping code.

**Additional work completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.:** OR-2011-05 (NT1-01)

**Station/Unit:** Newington Unit No. 1

**Dates:** September 21 – September 23, 2011

**Duration:** 2.2 days

**Immediate Cause:** Preventative Maintenance Outage

**Discussion / Remedy:**
The unit was scheduled out of service beginning September 21, 2011 @ 07:00 for a Planned Maintenance Outage. The outage was scheduled to allow for a number of backlog maintenance activities to be completed prior to the winter season. The critical job of the outage was the replacement of the rebuilt Main Boiler Feed Pump/Turbine 1B Lube Oil Pump. The pump had been inspected during the 2011, Scheduled Annual Overhaul, during the inspection a crack in the pump's outlet flange was identified. The original pump manufacturer no longer manufactured or provided parts for the pump. A new pump casing was fabricated by PSNH's Generation Maintenance group prior to the Planned Outage. Generation Maintenance reversed engineered the housing and installed the original rotating element in the new casing prior to the Planned Outage. A technical representative from the original pump manufacturer was called and mobilized to the site to perform a full inspection of the rebuilt pump. The manufacturer's representative determined the pump as within the original specifications and concluded that it suitable for continued operation.

**Additional work completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.**: OR-2011-06 (SR5-01)

**Station/Unit**: Schiller Station No. 5

**Dates**: November 12 – November 19, 2011

**Duration:** 6.5 days

**Immediate Cause:**
Schiller Unit No. 5 was removed from service due to plugged cyclones.

**Discussion/Remedy:**
Unit 5 was taken offline due to plugged cyclones. PSNH notified the vacuum contractor and the boilermakers to mobilize to the site for outage support and established day and night shifts.

The Unit was vented and cooled to prepare for the outage. PSNH completed a boiler and ash system inspection. The cyclones were found plugged and cleaned. The perforated plate distribution baffles in all eight bag house modules were inspected and repaired as necessary. The dip legs also showed significant pluggage and the material was noted as hard. The pluggage was cleaned from the dip legs.

In addition to the cyclone and bag house work the condenser water-boxes were opened and cleaned. The protective coating and zincs were inspected and determined to be in good condition. The moly guard coolers were also opened, inspected, and cleaned of debris.

During the start-up, heavy leaf loading caused the inlet tunnel of the condenser to become plugged. The condenser was opened and leaves cleaned from the tube sheet. In addition divers were mobilized to the site to remove leaves from the trash racks.

During start-up the drum trip level control setting was adjusted after the boiler tripped. Once the adjustment was completed, start-up commenced and progressed successfully.

**Additional work completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# PSNH

# FOSSIL STATION OUTAGE REPORT

**Outage Report No.:** OR-2011-7 (MK2-04)

**Station/Unit:** Merrimack Station Unit No. 2

**Dates:** December 7 – December 12, 2011

**Duration:** 5.5 days

**Immediate Cause:**
Merrimack Station Unit No. 2 was removed from service due to problems with the gas recirculation fans.

**Discussion/Remedy:**
MK2 was taken off line on December 7th, to address problems with the Gas Recirculation Fans. The 2A Fan was experiencing high vibration and the 2B outboard fan bearing temperature was running high. A contractor was utilized to mill and hone the 2B rotors on both ends of the fan. The bearings were sent out to be re-babbitted and bored to the design dimensions. In addition, the drive couplings were replaced, the motors were cleaned, and the seals and internals were inspected.

The Unit was declared available to ISO at 16:10 on 12/12/11.

**Additional work completed during the outage.**
Other work performed during the outage included jobs that were in the priority outage backlog, jobs that were found during the inspection of the boiler at the beginning of the outage, and other corrective and preventative work in an effort to avoid future forced outages and support an extended unit run.

# ATTACHMENT WHS – 3

# PSNH FOSSIL STEAM UNIT AVAILABILITY

# PSNH FOSSIL STEAM UNIT AVAILABILITY

## January 2011through December 2011

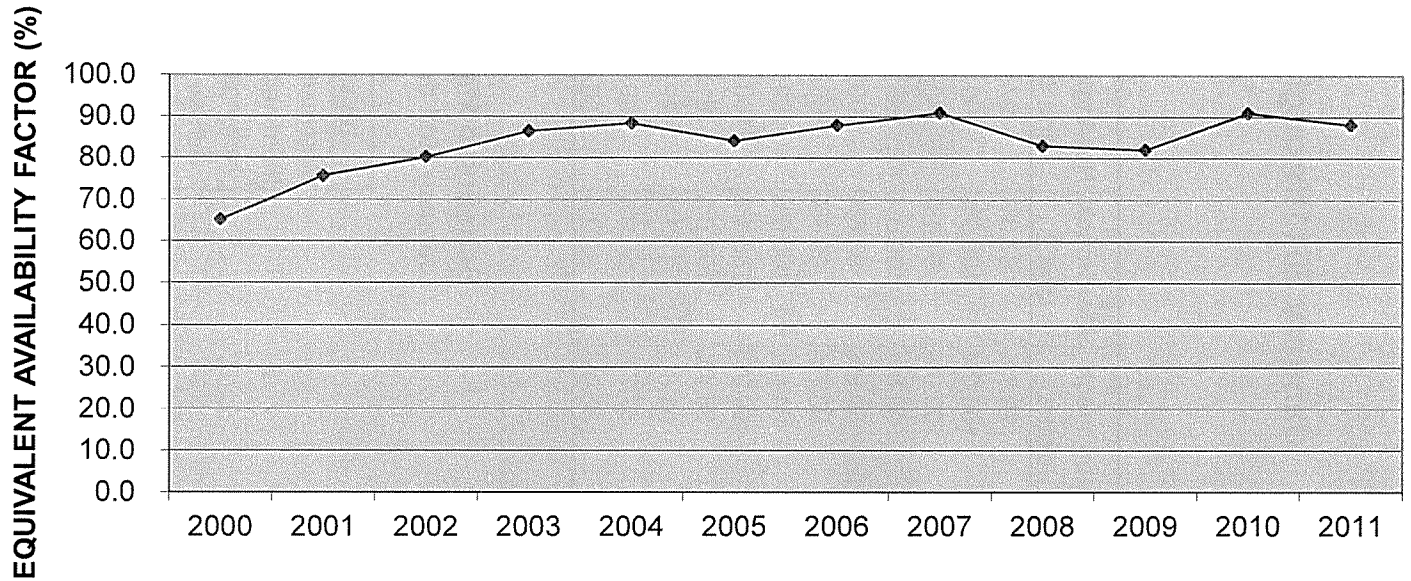
| | Merrimack Unit 1 | Merrimack Unit 2 | Newington Unit 1 | Schiller Unit 4 | Schiller Unit 5 | Schiller Unit 6 |
|---|---|---|---|---|---|---|
| January | 99.7% | 87.3% | 97.4% | 100.0% | 100.0% | 100.0% |
| February | 100.0% | 100.0% | 100.0% | 100.0% | 99.0% | 100.0% |
| March | 100.0% | 91.1% | 80.1% | 100.0% | 91.4% | 29.8% |
| April | 38.8% | 100.0% | 68.4% | 100.0% | 3.3% | 100.0% |
| May | 50.9% | 92.8% | 100.0% | 98.0% | 44.9% | 96.0% |
| June | 93.7% | 99.7% | 100.0% | 92.1% | 97.0% | 100.0% |
| July | 94.6% | 100.0% | 99.7% | 99.7% | 99.8% | 89.3% |
| August | 100.0% | 88.4% | 100.0% | 100.0% | 100.0% | 97.3% |
| September | 36.4% | 100.0% | 91.9% | 100.0% | 100.0% | 100.0% |
| October | 94.6% | 37.1% | 99.9% | 0.0% | 100.0% | 98.7% |
| November | 57.7% | 55.2% | 100.0% | 82.2% | 73.3% | 100.0% |
| December | 100.0% | 82.2% | 100.0% | 100.0% | 99.0% | 100.0% |

### Scheduled Maintenance Outages

**January 2011 through December 2011**

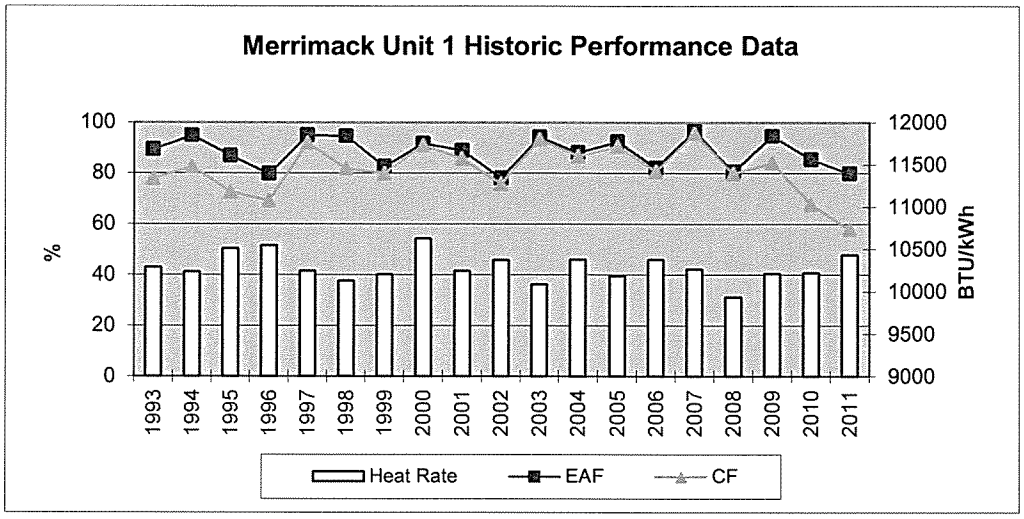
| Unit | Month(s) |
|---|---|
| Merrimack 1 | Apr-May |
| Merrimack 2 | Oct-Nov |
| Newington | Mar-Apr |
| Schiller 4 | Oct-Nov |
| Schiller 5 | Apr-May |
| Schiller 6 | Mar |

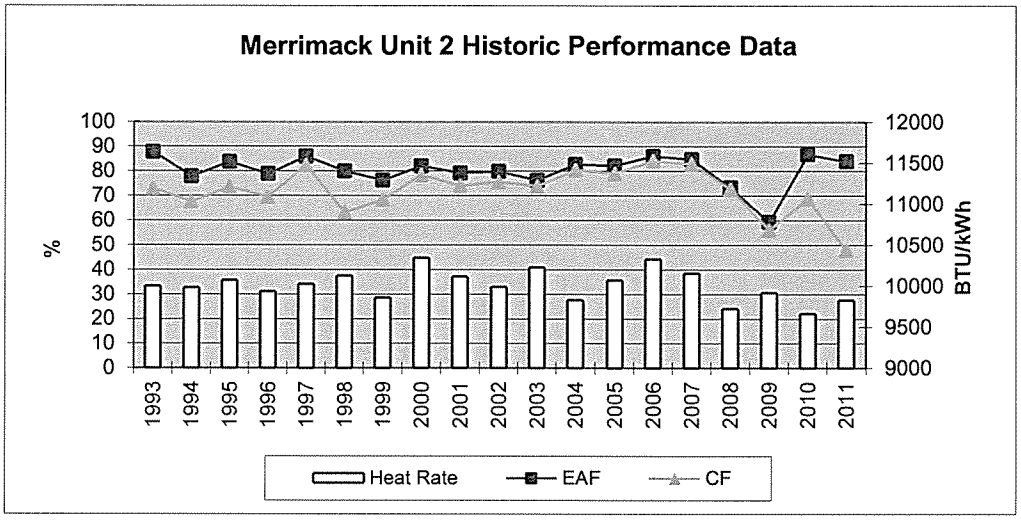
## PSNH FOSSIL SYSTEM WEIGHTED EAF
## 2011

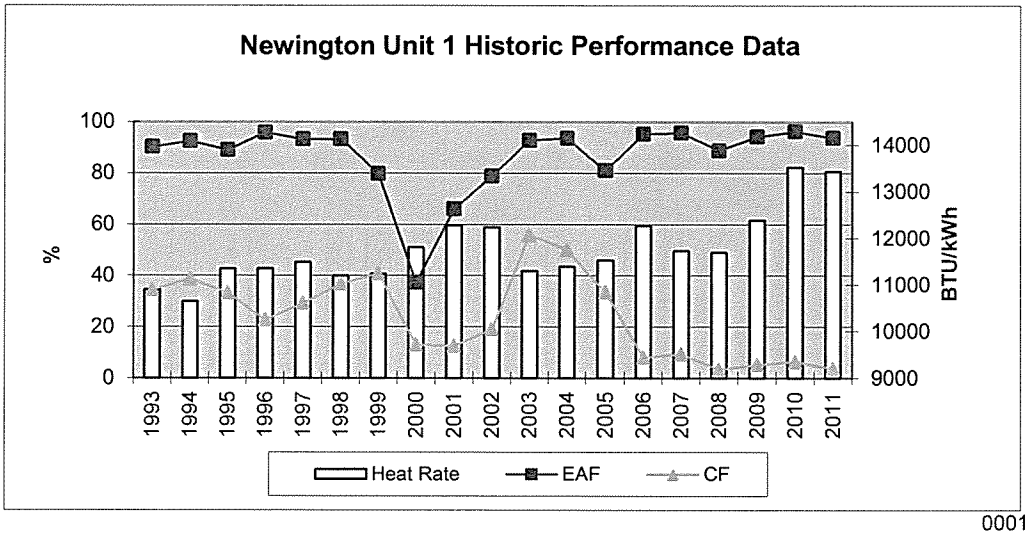



000120

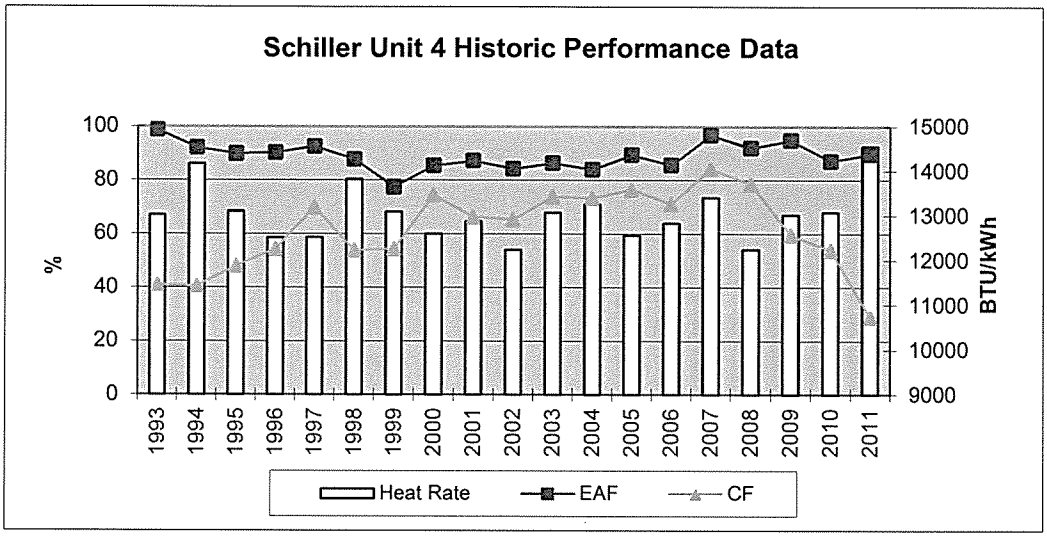
# Fossil Plant Graphs – Planned Outages Included

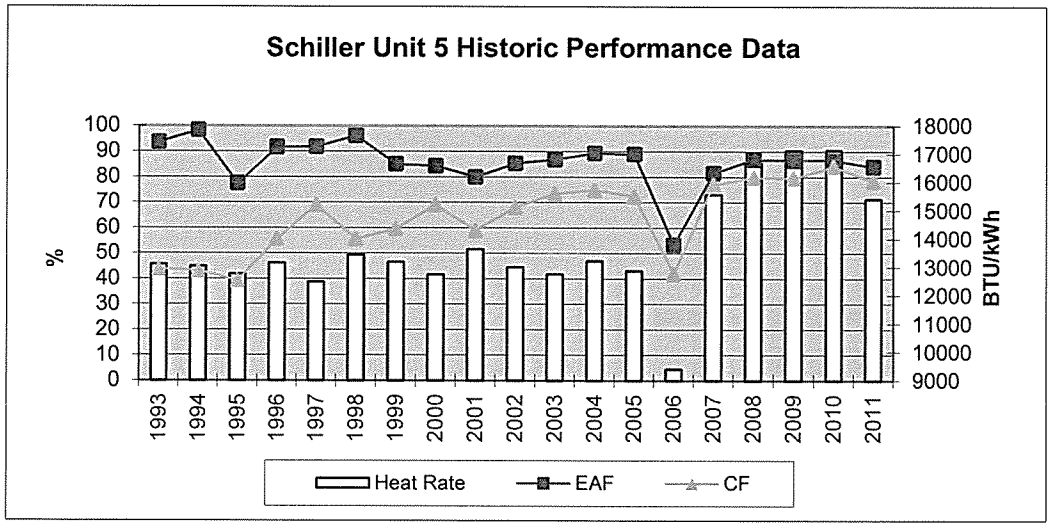


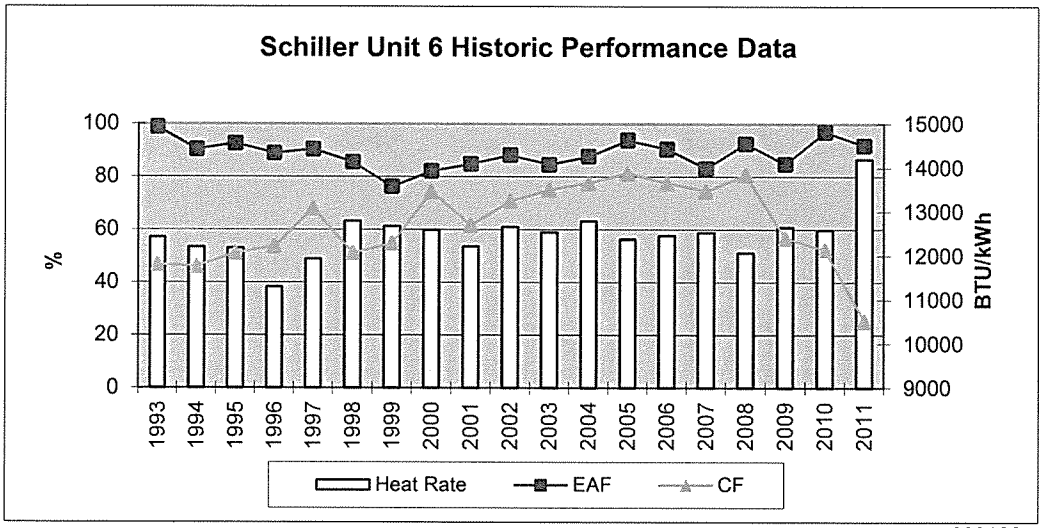



# Fossil Plant Graphs – Planned Outages Included



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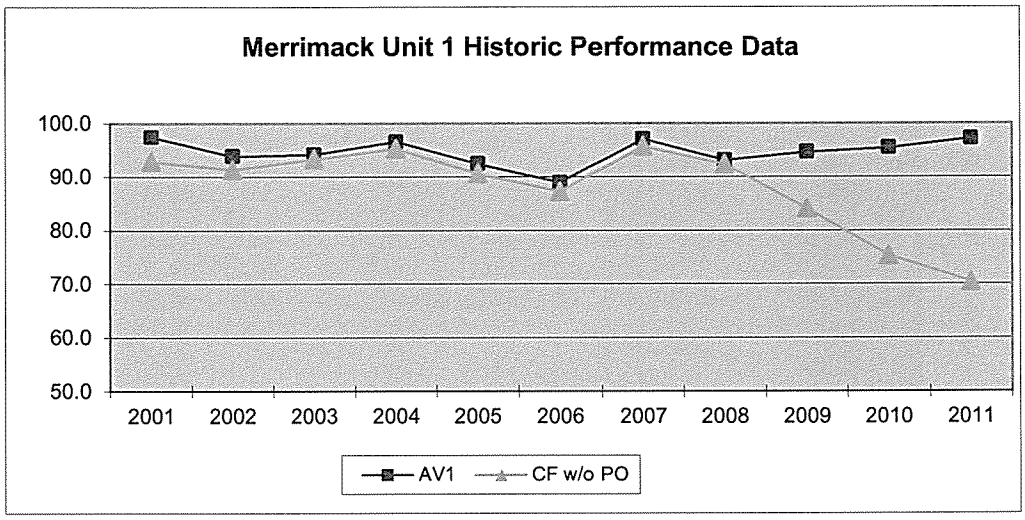


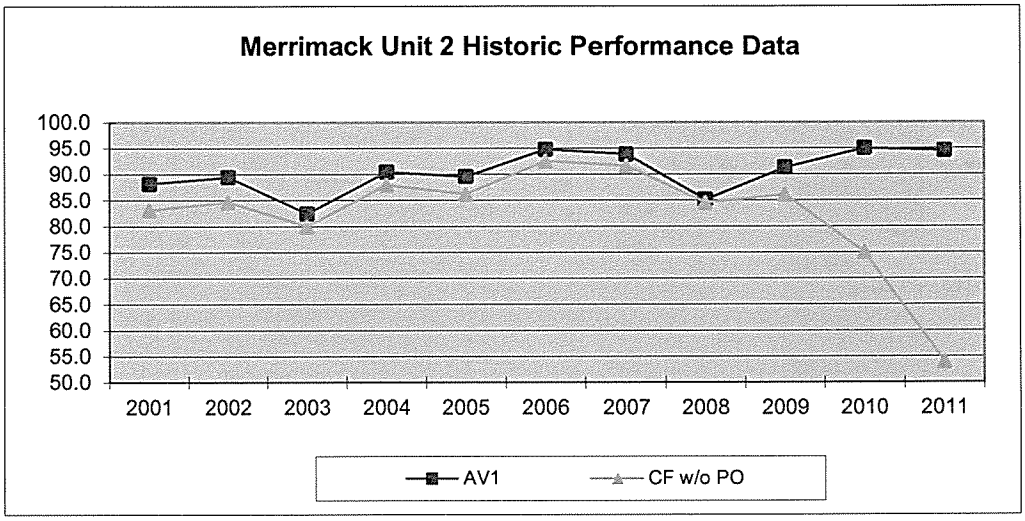


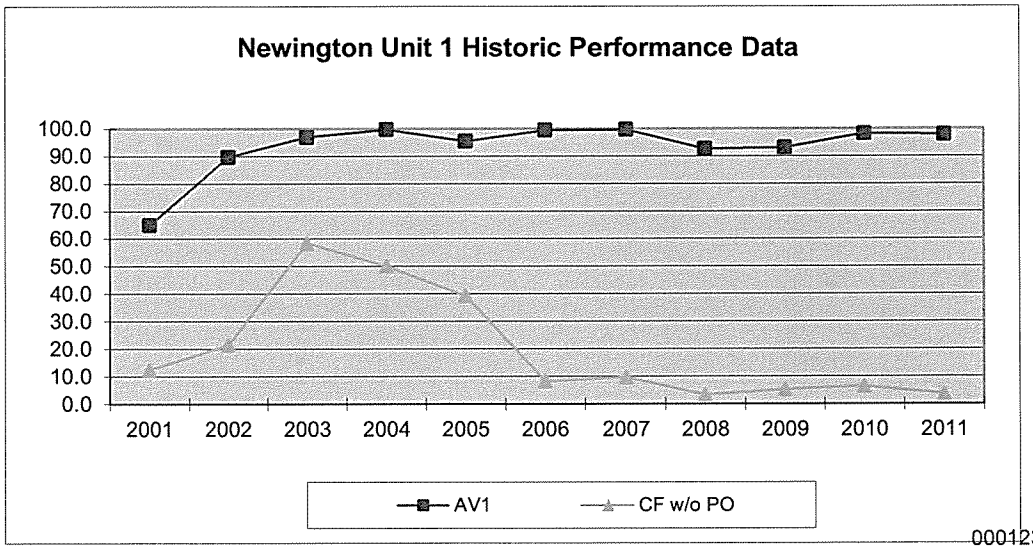

# Fossil Plant Graphs – Planned Outages Omitted