

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-002
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Baumann testimony, Attachment RAB-2. Please provide a schedule in the same format as the response to STAFF-01, Q-STAFF-001 in DE 09-091 detailing the calculation of replacement power costs. Please specifically detail any changes in the calculation method as compared to prior years.

Response:

There were no differences in calculation methodology as compared to previous submittals.

The replacement power costs were calculated hourly. For each hour, all supply resources (owned units, IPPs, bilateral purchases and ISO-NE spot purchases) were ordered based on their estimated dispatch prices from lowest cost to highest cost. The hour's actual energy expense was estimated by adding up the expenses of the resources whose output added up to the load. In a subsequent analysis, the unit out of service was placed back into the supply stack at an assumed availability and at the appropriate place in the dispatch order. The hour's energy expense was then recalculated as if the unit had been available. The replacement power cost was the difference in the cost to serve load between the two analyses.

The attached table summarizes by day the replacement power cost for each outage reported in RAB-2. The table lists each day's total replacement power costs, replacement power costs attributable to ISO-NE spot market purchases, replacement power costs attributable to bilateral purchases, replacement power costs attributable to PSNH generation and the avoided fuel expense attributable to the unit out of service.

	Date	Total RPC (\$)	Spot Purchases (\$)	Bilateral Purchases (\$)	PSNH Gen (\$)	Avoided Fuel (\$)	
Merrimack 1	04/20/2009	(40)	0	0	0	(40)	
	04/21/2009	1,239	0	0	1,350	(110)	
	04/22/2009	6,505	26,261	0	3,049	(22,804)	
	04/23/2009	8,420	21,857	0	2,485	(15,922)	
	<u>04/24/2009</u>	<u>328</u>	<u>0</u>	<u>0</u>	<u>329</u>	<u>(1)</u>	
	Total	16,452	48,118	0	7,213	(38,879)	
	07/21/2009	(3,790)	30,516	0	0	(34,306)	
	07/22/2009	(1,324)	46,691	41,577	106	(89,699)	
	07/23/2009	31,435	11,638	0	22,554	(2,758)	
	<u>07/24/2009</u>	<u>6,884</u>	<u>564</u>	<u>0</u>	<u>6,352</u>	<u>(32)</u>	
	Total	33,204	89,410	41,577	29,012	(126,796)	
	10/26/2009	19,133	20,098	0	7,766	(8,730)	
	10/27/2009	43,095	29,302	0	30,621	(16,827)	
	10/28/2009	44,619	32,281	0	29,267	(16,930)	
	10/29/2009	44,139	20,527	0	35,724	(12,112)	
	<u>10/30/2009</u>	<u>38,213</u>	<u>6,835</u>	<u>0</u>	<u>35,250</u>	<u>(3,872)</u>	
	Total	189,199	109,043	0	138,627	(58,471)	
	12/01/2009	17,277	47,210	0	0	(29,933)	
	12/02/2009	30,144	105,554	0	9,177	(84,586)	
	12/03/2009	21,174	57,370	58,702	0	(94,898)	
12/04/2009	17,738	73,423	40,605	0	(96,290)		
<u>12/05/2009</u>	<u>(651)</u>	<u>11,341</u>	<u>0</u>	<u>0</u>	<u>(11,991)</u>		
Total	85,682	294,897	99,308	9,177	(317,699)		
Merrimack 2	02/12/2009	36,151	99,851	19,559	0	(83,258)	
	02/13/2009	98,370	98,916	213,626	0	(214,172)	
	02/14/2009	96,761	154,272	148,089	0	(205,600)	
	02/15/2009	99,619	141,200	146,820	0	(188,401)	
	02/16/2009	78,894	302,398	0	0	(223,504)	
	<u>02/17/2009</u>	<u>14,875</u>	<u>57,095</u>	<u>0</u>	<u>0</u>	<u>(42,221)</u>	
	Total	424,670	853,733	528,094	0	(957,157)	
	02/25/2009	25,031	114,496	0	0	(89,465)	
	02/26/2009	60,361	164,104	124,268	0	(228,011)	
	<u>02/27/2009</u>	<u>23,444</u>	<u>77,572</u>	<u>97,840</u>	<u>0</u>	<u>(151,968)</u>	
	Total	108,836	356,172	222,107	0	(469,444)	
	04/02/2009	468	3,389	0	0	(2,921)	
	04/03/2009	48,201	54,800	0	9,320	(15,920)	
	04/04/2009	43,407	112,901	0	4,367	(73,861)	
	<u>04/05/2009</u>	<u>36,847</u>	<u>100,654</u>	<u>0</u>	<u>2,663</u>	<u>(66,470)</u>	
	Total	128,923	271,745	0	16,350	(159,173)	
	05/11/2009	26,460	45,861	0	2,463	(21,864)	
	05/12/2009	64,109	131,653	0	1,373	(68,917)	
	05/13/2009	61,499	129,440	0	1,726	(69,666)	
	05/14/2009	63,562	143,329	0	2,573	(82,340)	
05/15/2009	79,908	150,406	0	234	(70,733)		
<u>05/16/2009</u>	<u>46,480</u>	<u>78,527</u>	<u>0</u>	<u>1,829</u>	<u>(33,876)</u>		
Total	342,017	679,216	0	10,197	(347,397)		
06/26/2009	73,294	24,108	0	64,641	(15,455)		
06/27/2009	49,675	54,563	0	22,328	(27,217)		
<u>06/28/2009</u>	<u>23,071</u>	<u>21,261</u>	<u>0</u>	<u>12,323</u>	<u>(10,512)</u>		
Total	146,040	99,932	0	99,292	(53,184)		
Newington	<u>10/06/2009-10/11/2009</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
	Total	0	0	0	0	0	
Schiller 4	01/05/2009	(649)	4,802	0	89	(5,540)	
	01/06/2009	(4,117)	49,002	0	0	(53,118)	
	01/07/2009	(1,788)	48,050	0	0	(49,837)	
	01/08/2009	4,950	31,818	0	4,185	(31,053)	
	01/09/2009	9,995	50,987	0	2,441	(43,433)	
	<u>01/10/2009</u>	<u>20,313</u>	<u>0</u>	<u>0</u>	<u>20,313</u>	<u>0</u>	
	Total	28,704	184,658	0	27,028	(182,982)	
	12/08/2009	(4,303)	13,374	0	0	(17,677)	
	12/09/2009	2,700	2,072	0	3,705	(3,077)	
	12/10/2009	(1,058)	5,978	0	0	(7,036)	
	12/11/2009	769	8,971	0	0	(8,201)	
	12/12/2009	6,160	0	0	6,160	0	
	<u>12/13/2009</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
	Total	4,267	30,395	0	9,864	(35,992)	
	Schiller 5	01/26/2009	20,272	0	0	20,272	0
		01/27/2009	31,189	0	0	31,189	0
		01/28/2009	23,491	12,803	0	20,814	(10,126)
		01/29/2009	1,419	14,311	29,139	135	(42,165)
		01/30/2009	8,184	5,048	22,265	3,141	(22,269)
		<u>01/31/2009</u>	<u>106</u>	<u>0</u>	<u>0</u>	<u>106</u>	<u>0</u>
Total		84,661	32,162	51,404	75,656	(74,561)	
<u>10/01/2009-10/06/2009</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total		0	0	0	0	0	
<u>11/20/2009-11/25/2009</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total		0	0	0	0	0	
12/13/2009		3,766	13,422	0	1,638	(11,294)	
12/14/2009		2,833	7,062	0	1,064	(5,294)	
12/15/2009		1,243	9,450	0	107	(8,315)	
12/16/2009		7,198	6,129	0	4,355	(3,286)	
<u>12/17/2009</u>		<u>7,267</u>	<u>0</u>	<u>0</u>	<u>7,267</u>	<u>0</u>	
Total		22,306	36,063	0	14,431	(28,187)	
Schiller 5		<u>05/04/2009-05/08/2009</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
		Total	0	0	0	0	0
Total All Units 2009		1,614,964	3,085,545	942,490	436,849	(2,849,920)	

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Bauman testimony, Attachment RAB-2. Please supply the replacement power costs associated with the planned outages at:

- a. Merrimack-2 from 8/1/09 to 12/6/09;
- b. Newington from 3/6/09 to 3/18/09;
- c. Schiller-5 from 3/29/09 to 4/21/09; and
- d. Schiller-6 from 8/28/09 to 10/4/09.

Response:

Below are the replacement power costs for the subject planned outages using the same methodology used to calculate replacement power costs for forced outages.

<u>Unit</u>	<u>Start Date</u>	<u>End Date</u>	<u>PSNH RPC</u>
MK2	08/01/2009	12/06/2009	\$13,800,175
Newington	03/06/2009	03/18/2009	\$0
SR5	03/29/2009	04/21/2009	\$583,225
SR6	08/28/2009	10/04/2009	\$0

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Mr. Cannata's testimony in Docket DE 09-091, Exhibit MDC-2. Please provide the 2009 data necessary to update the following tables included in that exhibit:

- a. "Historical Supplemental Purchases and Source"
- b. "PSNH Historical FTR Costs and Savings"
- c. "Actual and Projected Annual Capacity Factors for PSNH Major Units"

Response:

Following are the requested information.

a.

Historical PSNH Supplemental Purchases and Source

	Sup. Purchases (GWH)	LT Bilateral (%)	ST Bilateral (%)	ISO-NE Spot (%)
On-Peak				
2009	1,703	90%	3%	7%
Off-Peak				
2009	1,139	85%	2%	13%

b.

PSNH Historical FTR Costs and Savings (\$)

Year	Auction Cost \$	Avoided Congestion Cost \$	Net Cost \$
2009	9,590	121,850	-112,260

c.

**2009 Actual and Projected Annual Capacity Factors
for PSNH Major Units
(Annual Generation/Winter Rating/8760)**

	Actual	Forecasted *
MK1	83.14%	88.27%
MK2	55.82%	77.15%
SR4	58.15%	76.36%
SR5	79.46%	75.73%
SR6	54.87%	70.44%
Newington	5.18%	6.91%

* as forecast in December 2, 2008 filing, Newington was revised downward in mid-year rate revision filing.

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**Dated: 06/16/2010
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 1, lines 16-19. Please describe PSNH's 2009 strategies to a) procure each energy product from the market to supplement PSNH resources, b) procure capacity to supplement PSNH resources, and c) acquire FTRs for each unit to manage congestion. If those strategies have changed from 2008, please explain the changes and reasoning for those changes.

Response:

The supplemental energy, supplemental capacity and FTRs purchase strategies for 2009 were not materially different from what was done for 2008.

PSNH's supplemental energy purchase strategy for 2009 was consistent the supplemental energy purchase strategy described in Section V.B.6 of the 2007 Least Cost Integrated Resource Plan, filed Sep 28, 2007 as supplemented on March 28, 2008 in Docket DE 07-108. A supplemental energy purchase plan was developed prior to 2009, and the plan was reviewed and executed while remaining flexible to account for changing conditions. 2009 supplemental energy purchases differed from 2008 in three areas: 1) supplemental energy purchases started in the fourth quarter of 2007 instead of the first quarter of 2008; 2) the last of the supplemental energy purchases for 2009 were made in early August 2008 because the depth and implications of the recession became apparent before the next set of energy purchases were to be made instead of continuing into the fall; and 3) replacement energy for the fall 2009 Merrimack 2 outage was purchased in January 2009 prior to the mid-year rate review but after the start of the year rate review. Details of the supplemental energy procured for 2009 are provided in response to STAFF-01, Q-STAFF-014.

During 2009, supplemental capacity was procured via the ISO-NE administered transition period capacity market. Exhibit DAE-5 summarizes the purchase activity.

PSNH procures FTRs to hedge the potential for congestion between significant supply resources (Merrimack, Schiller, Newington, and the delivery location for bilateral purchases, (e.g. the Mass. HUB) and the New Hampshire load zone. See responses to STAFF-01, Q-STAFF-023, Q-STAFF-024 and Q-STAFF-025 for additional information on 2009 FTR activity.

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**Dated: 06/16/2010
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 3, lines 13-17. Please supply the customer migration assumptions (MW and MWH) used by PSNH by month in its 2009 capacity and energy purchases. As part of your response, please also supply the actual customer migration MW and MWH by month.

Response:

The first attachment titled "2009 Forecast and Actual Load and Migration Used in ES Rate Setting" shows the forecast load and migration levels assumed in setting ES rates in 2009 and actual load and migration levels. These forecast total energy requirements and migration levels are what were last assumed in rate setting. Energy purchases for 2009 started prior to these final assumptions and reflected different total energy requirements and migration levels over time. As noted in the response to Staff-01, Q-Staff-009, energy purchases, other than replacement energy purchases for the Fall 2009 Merrimack outage, started in late 2007 and ended in early August, 2008. The energy purchase activity ended primarily because total forecast sales were being lowered due to the recession and not because of migration concerns before the next set of energy purchases were to be made. The second attachment titled "Migration Applicable to Capacity Market Cost Allocation" shows actual migration through much of 2008 was not a key decision driver.

As noted in the response to Staff-01, Q-Staff-009 supplemental capacity was procured via the ISO-NE administered transition period capacity market and thus no capacity was purchased in advance.

<u>2009</u>	<u>Rate Setting</u>								<u>Actual</u>							
	<u>Obligation - MW</u>				<u>Energy - MWhs</u>				<u>Obligation - MW</u>				<u>Energy - MWhs</u>			
	<u>Total PSNH</u>	<u>ES</u>	<u>Migrated</u>	<u>%</u>	<u>Total PSNH</u>	<u>ES</u>	<u>Migrated</u>	<u>%</u>	<u>Total PSNH</u>	<u>ES</u>	<u>Migrated</u>	<u>%</u>	<u>Total PSNH</u>	<u>ES</u>	<u>Migrated</u>	<u>%</u>
Jan	2,325	2,183	142	6%	769,199	721,251	47,948	6%	2,358	2,148	210	9%	775,674	701,584	74,090	10%
Feb	2,325	2,183	142	6%	683,442	640,600	42,842	6%	2,371	2,124	247	10%	654,167	581,033	73,134	11%
Mar	2,403	2,256	147	6%	710,445	662,767	47,678	7%	2,503	2,212	291	12%	676,282	591,835	84,447	12%
Apr	2,403	2,256	147	6%	646,077	598,812	47,265	7%	2,502	2,159	343	14%	611,733	522,574	89,159	15%
May	2,403	2,256	147	6%	650,434	601,434	49,000	8%	2,509	2,125	384	15%	618,092	513,986	104,107	17%
Jun	2,190	1,798	392	18%	679,576	548,792	130,784	19%	2,322	1,893	429	18%	636,653	519,438	117,216	18%
Jul	2,190	1,798	392	18%	785,815	647,219	138,596	18%	2,296	1,834	462	20%	703,406	569,736	133,670	19%
Aug	2,190	1,798	392	18%	762,839	621,383	141,456	19%	2,292	1,790	502	22%	782,988	624,539	158,449	20%
Sep	2,190	1,798	392	18%	648,109	524,039	124,070	19%	2,299	1,752	547	24%	632,684	482,653	150,031	24%
Oct	2,406	1,975	431	18%	672,652	544,585	128,067	19%	2,532	1,888	644	25%	652,126	488,587	163,539	25%
Nov	2,406	1,975	431	18%	675,580	554,553	121,027	18%	2,528	1,854	674	27%	638,022	475,602	162,420	25%
Dec	2,329	1,912	417	18%	736,005	612,892	123,113	17%	2,462	1,779	683	28%	756,119	581,605	174,514	23%

Migration Applicable to Capacity Market Cost Allocation

Day	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
1	2.8%	3.0%	3.0%	4.1%	3.8%	3.7%	2.5%	2.1%	1.5%	2.6%	4.7%	6.8%
2	2.8%	3.0%	3.0%	4.1%	3.8%	3.7%	2.5%	2.1%	1.5%	3.0%	4.7%	7.0%
3	2.8%	3.0%	3.0%	4.1%	3.8%	3.7%	2.4%	2.1%	1.5%	3.0%	5.0%	7.0%
4	2.7%	3.0%	2.7%	4.1%	3.8%	3.7%	2.4%	2.1%	1.5%	3.0%	5.1%	7.2%
5	2.7%	3.0%	2.7%	4.1%	3.8%	3.7%	2.4%	2.1%	1.5%	3.0%	5.1%	7.2%
6	2.7%	3.0%	2.9%	4.1%	3.8%	3.7%	2.4%	2.1%	1.5%	3.0%	5.1%	7.2%
7	2.7%	3.0%	3.0%	4.1%	3.8%	3.4%	2.4%	2.1%	1.5%	3.1%	5.4%	7.2%
8	2.8%	3.0%	3.0%	4.1%	3.8%	3.4%	2.4%	2.0%	2.1%	3.4%	5.4%	7.2%
9	3.0%	3.0%	3.0%	4.1%	3.7%	3.4%	2.4%	2.0%	2.1%	3.4%	5.4%	7.2%
10	3.0%	3.0%	3.0%	3.9%	3.7%	3.4%	2.4%	2.0%	2.4%	3.5%	5.4%	7.2%
11	3.0%	3.0%	3.0%	3.9%	3.7%	3.4%	2.4%	2.0%	2.3%	3.5%	5.4%	7.2%
12	3.0%	3.0%	3.0%	3.9%	3.7%	3.4%	2.4%	1.9%	2.3%	3.5%	5.6%	7.8%
13	3.0%	3.0%	3.1%	3.9%	3.7%	3.3%	2.4%	1.8%	2.3%	3.5%	6.0%	7.8%
14	3.0%	3.0%	3.6%	3.9%	3.7%	2.9%	2.4%	1.8%	2.3%	3.5%	6.4%	7.8%
15	2.9%	3.0%	3.6%	3.9%	3.7%	2.9%	2.4%	1.6%	2.3%	3.5%	6.4%	7.8%
16	2.9%	3.0%	3.6%	3.9%	3.7%	2.9%	2.1%	1.6%	2.4%	3.8%	6.4%	7.7%
17	2.9%	3.0%	3.6%	3.9%	3.7%	2.8%	2.1%	1.6%	2.4%	3.8%	6.6%	7.7%
18	2.9%	3.0%	3.8%	3.9%	3.7%	2.6%	2.1%	1.6%	2.4%	3.8%	6.6%	7.5%
19	2.9%	3.0%	3.8%	3.9%	3.7%	2.6%	2.1%	1.6%	2.6%	3.8%	6.7%	7.7%
20	2.9%	3.0%	4.0%	3.9%	3.7%	2.6%	2.1%	1.6%	2.6%	4.2%	6.7%	7.7%
21	3.0%	3.0%	4.0%	3.9%	3.7%	2.6%	2.1%	1.6%	2.6%	4.3%	6.7%	7.7%
22	3.0%	3.0%	4.0%	3.9%	3.6%	2.6%	2.1%	1.6%	2.6%	4.3%	6.7%	7.8%
23	3.0%	3.0%	4.0%	3.9%	3.6%	2.6%	2.1%	1.6%	2.6%	4.4%	6.7%	7.8%
24	3.0%	3.0%	4.0%	3.8%	3.6%	2.5%	2.1%	1.6%	2.6%	4.6%	6.7%	7.7%
25	3.0%	3.0%	4.1%	3.8%	3.6%	2.5%	2.1%	1.5%	2.6%	4.6%	6.7%	7.7%
26	3.0%	3.0%	4.1%	3.8%	3.6%	2.5%	2.1%	1.5%	2.6%	4.6%	6.7%	7.7%
27	3.0%	3.0%	4.1%	3.8%	3.6%	2.5%	2.1%	1.5%	2.6%	4.6%	6.7%	7.7%
28	3.0%	3.0%	4.1%	3.8%	3.6%	2.5%	2.1%	1.5%	2.6%	4.6%	6.7%	7.7%
29	3.0%	3.0%	4.1%	3.8%	3.6%	2.5%	2.1%	1.5%	2.6%	4.6%	6.7%	7.6%
30	3.0%		4.1%	3.8%	3.6%	2.5%	2.1%	1.5%	2.6%	4.7%	6.7%	7.6%
31	3.0%		4.1%		3.6%		2.1%	1.5%		4.7%		7.7%

**Public Service Company of New
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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-011
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 2-3. Please explain and reconcile why the on-peak bilateral purchased energy dropped from 1795 GWH in 2008 to 1189 GWH in 2009. As part of your response, please include the impact of how the Merrimack-2 outage from August to December 2009 influenced on-peak bilateral purchases.

Response:

In comparing Attachments DAE-2 and DAE-3 in the 2009 filing to Attachments RCL-2 and RCL-3 in the 2008 filing an inconsistency was discovered. The bilateral on-peak purchases reported in DAE-3 are those that went to serve load and tie out to the percentages shown in DAE-2 rather than total bilateral on-peak purchases as was reported in RCL-3. The correct comparable 2009 value to RCL-3's 1,795 GWH is 1,589 GWH. The difference between 1,589 GWH and 1,189 GWH, 400 GWH, are bilateral purchases that ended up being on-peak energy sales and are further discussed in Staff-01, Q-Staff-016. Thus on-peak bilateral purchases in 2009 were lower than 2008 by 206 GWH, but would have been lower by 472 GWH had 266 GWH not been purchased to cover the long Merrimack 2 outage. See Staff-01, Q-Staff-009, for a discussion of PSNH's 2009 supplemental energy purchases.

Please find attached a comparison of Attachment DAE-2 in the 2009 filing with Attachment RCL-2 in the 2008 filing for the on-peak period. It shows that the primary reason for reducing on-peak bilateral energy purchases was due to lower ES loads, column (a). The lower loads are attributable to both the recession and migration. The drop in on-peak bilateral energy purchases would have been even greater but for the bilateral purchases made for August through November to cover the extended Merrimack 2 outage, see columns (r) and (v). Absent the extended outage at Merrimack 2 generation from owned and long-term resources in 2009 would have been greater than in 2008, see column (u). However, as noted in Staff-1, Q-Staff-009 the cessation of bilateral energy purchases in August 2008 was solely attributable to PSNH taking into account the implications of the recession and not as a result of forecasting migration.

A revised Attachment DAE-3 and the corresponding testimony Q and As consistent with the 2008 filing will be provided in a Testimony Supplement.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)
Attachment DAE-2 from 2009 Filing												2009 On Peak Resources to Serve Load									
												PSNH									
	ES Load	IPP	Buyout Contracts	Vermont Yankee	Hydro	Merrimack and Schiller	Newington and Wyman	Combustion Turbines	Resource Sub-total	Bilateral Purchase	ISO-NE Spot Purchases	IPP	Buyout Contracts	Vermont Yankee	Hydro	Merrimack and Schiller	Newington and Wyman	Combustion Turbines	Resource Sub-total	Bilateral Purchase	ISO-NE Spot Purchases
Jan-09	353,075	6%	0%	2%	4%	50%	15%	0.00%	77%	19%	4%	19,967	360	6,618	13,917	178,161	52,517	0	271,540	67,144	14,391
Feb-09	295,226	6%	1%	2%	4%	48%	4%	0.00%	65%	28%	7%	16,872	2,747	6,258	11,209	142,668	10,973	0	190,726	83,520	20,979
Mar-09	303,286	9%	1%	2%	6%	60%	0%	0.00%	79%	20%	1%	26,169	3,360	7,023	19,428	182,511	423	0	238,914	61,908	2,464
Apr-09	290,318	9%	1%	2%	7%	54%	0%	0.00%	74%	25%	1%	25,948	3,520	7,015	21,344	155,827	61	0	213,716	73,315	3,288
May-09	257,824	7%	1%	3%	7%	52%	0%	0.00%	69%	26%	5%	16,911	3,200	6,489	17,287	133,676	0	0	177,564	67,592	12,668
Jun-09	291,889	7%	1%	2%	6%	55%	1%	0.00%	72%	28%	0%	19,057	3,520	6,633	17,108	159,455	3,864	0	209,637	80,864	1,388
Jul-09	327,057	7%	1%	2%	6%	48%	2%	0.00%	68%	29%	3%	24,393	2,988	7,480	20,571	158,217	7,947	13	221,609	94,736	10,713
Aug-09	317,525	5%	1%	2%	5%	20%	3%	0.07%	36%	54%	10%	17,242	1,912	6,310	15,883	64,898	8,108	227	114,580	171,020	31,925
Sep-09	260,609	6%	1%	3%	3%	21%	0%	0.00%	34%	66%	0%	15,547	3,040	6,831	7,443	54,977	0	0	87,837	171,961	811
Oct-09	262,830	7%	1%	3%	5%	24%	2%	0.03%	42%	57%	2%	17,929	3,520	7,310	12,710	63,112	4,901	73	109,555	148,833	4,442
Nov-09	240,824	9%	1%	3%	7%	26%	14%	0.00%	59%	40%	1%	22,738	3,200	6,265	16,159	62,107	32,620	0	143,089	96,417	1,317
Dec-09	308,955	9%	1%	2%	6%	52%	3%	0.00%	74%	23%	3%	27,454	3,377	7,341	18,541	161,270	9,446	0	227,430	71,726	9,800
2,009	3,509,419	7%	1%	2%	5%	43%	4%	0.01%	63%	34%	3%	250,226	34,744	81,572	191,602	1,516,879	130,862	313	2,206,197	1,189,036	114,185
Attachment RCL-2 from 2008 Filing												2008 On Peak Resources to Serve Load									
												PSNH									
Jan-08	391,615	8%	1%	2%	4%	45%	4%	0.03%	64%	30%	5%	32,135	2,160	7,346	17,346	177,930	15,325	105	252,347	119,145	20,123
Feb-08	364,528	9%	0%	2%	5%	48%	0%	0.04%	64%	30%	6%	32,228	1,107	6,978	18,412	175,972	116	158	234,971	109,313	20,244
Mar-08	347,295	8%	1%	2%	6%	46%	1%	0.02%	63%	34%	3%	28,423	3,360	6,803	19,780	159,230	1,843	55	219,494	116,834	10,967
Apr-08	337,827	6%	1%	2%	6%	21%	1%	0.00%	37%	62%	0%	21,058	3,520	6,698	20,256	70,847	3,744	0	126,123	210,680	1,024
May-08	320,488	5%	1%	2%	5%	31%	0%	0.00%	44%	55%	1%	16,889	3,200	6,861	16,193	98,796	168	0	142,108	176,711	1,669
Jun-08	374,450	3%	1%	2%	3%	39%	3%	0.03%	51%	47%	3%	10,946	3,360	6,273	12,551	145,717	10,368	109	189,324	174,979	10,147
Jul-08	438,297	3%	1%	1%	3%	34%	10%	0.00%	53%	39%	8%	13,681	3,120	5,725	13,945	149,990	45,573	17	232,051	169,975	36,271
Aug-08	375,717	4%	1%	2%	4%	48%	3%	0.07%	62%	34%	4%	15,234	2,110	6,455	15,782	181,876	10,296	276	232,030	127,197	16,490
Sep-08	348,268	4%	1%	2%	3%	39%	0%	0.01%	50%	40%	10%	13,782	3,040	6,390	12,092	137,060	0	42	172,405	140,965	34,898
Oct-08	355,340	5%	1%	1%	4%	45%	0%	0.02%	56%	29%	15%	16,059	3,680	3,779	15,648	159,034	0	73	198,273	103,499	53,569
Nov-08	299,481	6%	1%	1%	5%	48%	0%	0.02%	61%	30%	9%	16,794	3,040	4,258	15,247	144,206	335	55	183,934	89,282	26,264
Dec-08	354,119	7%	1%	2%	6%	52%	2%	0.04%	69%	25%	6%	23,925	3,520	7,298	19,606	184,793	5,651	145	244,937	89,259	19,923
2,008	4,307,426	6%	1%	2%	5%	41%	2%	0.02%	56%	38%	6%	241,154	35,217	74,865	196,857	1,785,450	93,420	1,035	2,427,997	1,627,839	251,589
												2009 from 2008									
Jan	(38,540)	(0.0)	(0.0)	(0.0)	(0.0)	0.1	0.1	(0.0)	0.1	(0.1)	(0.0)	(12,168)	(1,800)	(728)	(3,428)	231	37,192	(105)	19,192	(52,001)	(5,732)
Feb	(69,302)	(0.0)	0.0	0.0	(0.0)	0.0	0.0	(0.0)	0.0	(0.0)	0.0	(15,356)	1,640	(720)	(7,203)	(33,304)	10,857	(158)	(44,244)	(25,793)	735
Mar	(44,009)	0.0	0.0	0.0	0.0	0.1	(0.0)	(0.0)	0.2	(0.1)	(0.0)	(2,254)	0	220	(352)	23,281	(1,420)	(55)	19,420	(54,926)	(8,503)
Apr	(47,508)	0.0	0.0	0.0	0.0	0.3	(0.0)	0.0	0.4	(0.4)	0.0	4,890	0	317	1,089	84,981	(3,683)	0	87,593	(137,365)	2,264
May	(62,665)	0.0	0.0	0.0	0.0	0.2	(0.0)	0.0	0.2	(0.3)	0.0	23	0	(373)	1,094	34,880	(168)	0	35,456	(109,119)	10,999
Jun	(82,561)	0.0	0.0	0.0	0.0	0.2	(0.0)	(0.0)	0.2	(0.2)	(0.0)	8,111	160	360	4,557	13,739	(6,505)	(109)	20,313	(94,115)	(8,759)
Jul	(111,240)	0.0	0.0	0.0	0.0	0.1	(0.1)	0.0	0.1	(0.1)	(0.0)	10,711	(132)	1,755	6,626	8,227	(37,625)	(4)	(10,442)	(75,239)	(25,558)
Aug	(58,192)	0.0	0.0	0.0	0.0	(0.3)	(0.0)	(0.0)	(0.3)	0.2	0.1	2,008	(198)	(145)	101	(116,978)	(2,188)	(49)	(117,450)	43,823	15,435
Sep	(87,659)	0.0	0.0	0.0	(0.0)	(0.2)	0.0	(0.0)	(0.2)	0.3	(0.1)	1,765	0	442	(4,649)	(82,083)	0	(42)	(84,568)	30,996	(34,087)
Oct	(92,510)	0.0	0.0	0.0	0.0	(0.2)	0.0	0.0	(0.1)	0.3	(0.1)	1,870	(160)	3,531	(2,938)	(95,922)	4,901	(0)	(88,718)	45,335	(49,127)
Nov	(58,657)	0.0	0.0	0.0	0.0	(0.2)	0.1	(0.0)	(0.0)	0.1	(0.1)	5,944	160	2,007	913	(82,099)	32,285	(55)	(40,844)	7,135	(24,947)
Dec	(45,164)	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.0	(0.0)	(0.0)	3,529	(143)	43	(1,065)	(23,523)	3,795	(145)	(17,508)	(17,533)	(10,123)
Period	(798,007)	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.1	(0.0)	(0.0)	9,073	(473)	6,707	(5,255)	(268,571)	37,441	(722)	(221,800)	(438,803)	(137,404)

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Errichetti testimony, page 4, lines 2-8. Please provide a schedule, by month, supporting how the 1189 GWH of on-peak bilateral purchased energy breaks down into the components listed with an average price for each and total.

Response:

As noted in Staff-01, Q-Staff-011, in comparing Attachments DAE-2 and DAE-3 in the 2009 filing to Attachments RCL-2 and RCL-3 in the 2008 reconciliation filing an inconsistency was discovered. The bilateral on-peak purchases reported in DAE-3 are those that went to serve load and tie out to the percentages shown in DAE-2 rather than total bilateral on-peak purchases as was reported in RCL-3. The correct comparable 2009 value to RCL-3's 1,795 GWH is 1,589 GWH.

Please see the table below for the requested information consistent with Supplemental Attachment DAE-3 which reflects total bilateral energy purchases.

	2009 On-Peak Bilateral Energy Purchases							
	Monthly		Unit-Contingent		Short-Term		Total	
	MWh	Avg \$/MWh	MWh	Avg \$/MWh	MWh	Avg \$/MWh	MWh	Avg \$/MWh
Jan	67,200	\$149	10,717	\$83	9,600	\$63	87,517	\$132
Feb	60,800	\$149	10,087	\$83	24,800	\$52	95,687	\$117
Mar	84,000	\$114	11,002	\$71	0	\$0	95,002	\$109
Apr	140,800	\$100	9,793	\$71	0	\$0	150,593	\$98
May	80,000	\$114	10,210	\$71	0	\$0	90,210	\$109
Jun	123,200	\$110	11,706	\$71	3,200	\$40	138,106	\$105
Jul	110,400	\$112	12,705	\$83	4,800	\$39	127,905	\$107
Aug	160,000	\$88	11,638	\$83	4,800	\$50	176,438	\$87
Sep	184,800	\$89	11,729	\$71	0	\$0	196,529	\$88
Oct	158,400	\$86	12,265	\$71	0	\$0	170,665	\$85
Nov	144,000	\$86	10,908	\$71	0	\$0	154,908	\$85
Dec	88,000	\$114	11,772	\$71	5,600	\$49	105,372	\$105
Total	1,401,600	\$103	134,533	\$75	52,800	\$51	1,588,933	\$99

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Errichetti testimony, page 4, lines 12-17. Please provide a schedule, by month, supporting how the 696 GWH of off-peak bilateral purchased energy breaks down into the components listed with an average price for each and total.

Response:

As noted in Staff-01, Q-Staff-011, in comparing Attachments DAE-2 and DAE-3 in the 2009 filing to Attachments RCL-2 and RCL-3 in the 2008 reconciliation filing an inconsistency was discovered. The bilateral purchases reported in DAE-3 are those that went to serve load and tie out to the percentages shown in DAE-2 rather than total bilateral purchases as was reported in RCL-3. The correct comparable 2009 value to RCL-3's 831 GWH is 994 GWH.

Please see the table below for the requested information consistent with Supplemental Attachment DAE-3 which reflects total bilateral energy purchases.

	2009 Off-Peak Bilateral Energy Purchases							
	Monthly		Unit-Contingent		Short-Term		Total	
	MWh	Avg \$/MWh	MWh	Avg \$/MWh	MWh	Avg \$/MWh	MWh	Avg \$/MWh
Jan	56,800	\$108	13,222	\$61	1,600	\$55	71,622	\$99
Feb	51,200	\$111	12,161	\$61	8,800	\$55	72,161	\$96
Mar	37,950	\$114	12,368	\$54	0	\$0	50,318	\$99
Apr	68,000	\$100	9,989	\$54	0	\$0	77,989	\$94
May	38,800	\$114	13,232	\$54	0	\$0	52,032	\$98
Jun	31,200	\$114	12,899	\$54	9,600	\$41	53,699	\$86
Jul	31,600	\$113	13,309	\$61	0	\$0	44,909	\$98
Aug	126,000	\$72	14,798	\$62	4,800	\$35	145,598	\$70
Sep	110,400	\$71	13,602	\$54	0	\$0	124,002	\$69
Oct	112,400	\$64	13,815	\$54	0	\$0	126,215	\$63
Nov	116,250	\$64	12,366	\$54	0	\$0	128,616	\$63
Dec	34,000	\$110	13,205	\$54	0	\$0	47,205	\$94
Total	814,600	\$86	154,965	\$56	24,800	\$46	994,365	\$80

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-014
Page 1 of 2**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 19-20. Please combine the total of the above two requests and add the ISO-NE hourly spot purchases to that total to support the combined expenses of \$183 million.

Response:

As noted in Staff-01, Q-Staff-011, in comparing Attachments DAE-2 and DAE-3 in the 2009 filing to Attachments RCL-2 and RCL-3 in the 2008 reconciliation filing an inconsistency was discovered. The bilateral purchases reported in DAE-3 are those that went to serve load and tie out to the percentages shown in DAE-2 rather than total bilateral purchases as was reported in RCL-3. The correct comparable DAE-3 2009 value to RCL-3 in 2008 is \$248.8 million.

Please see the attached table for the requested information consistent with Supplemental Attachment DAE-3 which reflects total bilateral energy purchases.

Composition and Summation of Total 2009 Supplemental Energy Purchases

	2009 Total Bilateral Energy Purchases								ISO-NE Spot		Total Supplemental Purchases		
	Monthly		Unit-Contingent		Short-Term		Total		MWh	Avg \$/MWh	MWh	Cost \$000	Avg \$/MWh
	MWh	Avg \$/MWh	MWh	Avg \$/MWh	MWh	Avg \$/MWh	MWh	Avg \$/MWh					
Jan	124,000	\$130	23,938	\$71	11,200	\$62	159,138	\$117	21,170	\$70.38	180,308	20,059	\$111.25
Feb	112,000	\$132	22,248	\$71	33,600	\$52	167,848	\$108	42,595	\$49.98	210,444	20,207	\$96.02
Mar	121,950	\$114	23,370	\$62	0	\$0	145,320	\$105	5,304	\$67.34	150,624	15,658	\$103.95
Apr	208,800	\$100	19,782	\$62	0	\$0	228,582	\$97	11,018	\$40.36	239,599	22,514	\$93.97
May	118,800	\$114	23,441	\$61	0	\$0	142,241	\$105	24,500	\$40.51	166,741	15,930	\$95.54
Jun	154,400	\$111	24,606	\$62	12,800	\$41	191,806	\$100	7,442	\$34.16	199,248	19,375	\$97.24
Jul	142,000	\$113	26,014	\$72	4,800	\$39	172,814	\$104	21,659	\$36.87	194,473	18,853	\$96.94
Aug	286,000	\$81	26,436	\$71	9,600	\$43	322,036	\$79	67,766	\$43.37	389,802	28,480	\$73.06
Sep	295,200	\$82	25,332	\$62	0	\$0	320,532	\$81	12,868	\$31.35	333,400	26,239	\$78.70
Oct	270,800	\$77	26,080	\$62	0	\$0	296,880	\$76	13,060	\$41.83	309,940	23,011	\$74.24
Nov	260,250	\$76	23,274	\$62	0	\$0	283,524	\$75	6,638	\$49.81	290,162	21,623	\$74.52
Dec	122,000	\$113	24,978	\$62	5,600	\$49	152,578	\$102	25,079	\$50.45	177,656	16,830	\$94.74
Total	2,216,200	\$97	289,499	\$65	77,600	\$50	2,583,299	\$92	259,099	\$46.12	2,842,397	248,781	\$87.53

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-015
Page 1 of 2**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 12-13. Please explain and reconcile why the off peak bilateral purchased energy dropped from 831 GWH in 2008 to 696 GWH in 2009. As part of your response, please include the impact of how the Merrimack-2 outage from August to December 2009 influenced off-peak bilateral purchases.

Response:

As noted in Staff-01, Q-Staff-011, in comparing Attachments DAE-2 and DAE-3 in the 2009 filing to Attachments RCL-2 and RCL-3 in the 2008 filing an inconsistency was discovered. The bilateral purchases reported in DAE-3 are those that went to serve load and tie out to the percentages shown in DAE-2 rather than total bilateral purchases as was reported in RCL-3. The correct comparable 2009 value to RCL-3's 831 GWH is 994 GWH. The difference between 696 GWH and 994 GWH, 298 GWH, are bilateral energy purchases that ended up being off-peak energy sales and are further discussed in Staff-01, Q-Staff-017. Thus off-peak bilateral energy purchases in 2009 were higher than 2008 GWH, but would have been lower by 157 GWH had 320 GWH not been purchased to cover the long Merrimack 2 outage. See Staff-01, Q-Staff-009, for a discussion of PSNH's 2009 supplemental energy purchases.

Please find attached attachment DAE-2 in the 2009 filing with Attachment RCL-2 in the 2008 filing for the off-peak period. It shows that the primary reason for reducing bilateral off peak energy purchases was lower ES loads, column (a). The lower loads are attributable to both the recession and migration. Bilateral off peak energy purchases would have been lower in 2009 than 2008 but for the bilateral purchases made for August through November to cover the extended Merrimack 2 outage, see columns (r) and (v). Absent the extended outage at Merrimack 2 generation from owned and long-term resources in 2009 would have been greater than in 2008, see column (u). However, as noted in Staff-1, Q-Staff-009 the cessation of bilateral energy purchases in August 2008 was solely attributable to PSNH taking into account the implications of the recession and not as a result of forecasting migration.

A revised Attachment DAE-3 and the corresponding testimony Q and As consistent with the 2008 filing will be provided in a Testimony Supplement.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)			
Attachment DAE-2 from 2009 Filing												2009 Off Peak Resources to Serve Load												
			Buyout	Vermont		Merrimack	Newington	Combustion	PSNH				Buyout	Vermont		Merrimack	Newington	Combustion	PSNH			ISO-NE		
	ES Load	IPP	Contracts	Yankee	Hydro	and Schiller	and Wyman	Turbines	Resource	Bilateral	ISO-NE Spot	Sub-total	Purchase	Purchases	IPP	Contracts	Yankee	Hydro	and Schiller	and Wyman	Turbines	Resource	Bilateral	Spot
Jan-09	348,510	7%	1%	2%	5%	62%	10%	0.00%	88%	10%	2%	25,170	2,580	8,327	16,364	217,124	35,910	0	305,474	36,257	6,779			
Feb-09	285,807	7%	1%	3%	5%	58%	1%	0.01%	74%	18%	8%	20,926	2,496	7,687	13,494	165,516	2,573	17	212,708	51,484	21,616			
Mar-09	288,549	11%	1%	3%	8%	69%	0%	0.00%	92%	7%	1%	31,884	3,920	8,504	23,310	197,771	86	0	265,475	20,234	2,840			
Apr-09	232,255	12%	2%	3%	10%	56%	0%	0.00%	82%	14%	3%	28,381	3,680	6,513	22,204	130,391	8	0	191,176	33,349	7,730			
May-09	256,162	9%	1%	3%	9%	63%	0%	0.00%	86%	10%	5%	23,534	3,760	8,699	22,428	160,862	0	0	219,283	25,047	11,831			
Jun-09	227,548	9%	2%	3%	8%	61%	0%	0.00%	83%	15%	3%	20,154	3,680	7,142	18,137	138,744	0	0	187,857	33,637	6,054			
Jul-09	242,678	11%	1%	3%	9%	61%	0%	0.00%	85%	11%	5%	25,778	3,440	7,603	21,131	147,679	32	0	205,662	26,070	10,946			
Aug-09	307,014	8%	1%	3%	7%	25%	0%	0.00%	44%	44%	12%	23,389	3,121	8,470	21,781	77,537	278	12	134,588	136,584	35,841			
Sep-09	222,044	8%	2%	4%	4%	28%	0%	0.02%	45%	50%	5%	17,776	3,680	7,774	7,814	62,536	0	52	99,632	110,354	12,057			
Oct-09	225,757	9%	2%	4%	6%	30%	0%	0.01%	50%	46%	4%	20,801	3,920	8,117	13,533	66,879	602	24	113,877	103,261	8,618			
Nov-09	234,778	12%	2%	3%	9%	30%	1%	0.05%	57%	41%	2%	28,129	4,010	8,150	20,472	69,647	2,506	123	133,036	96,421	5,320			
Dec-09	272,650	11%	1%	3%	7%	62%	2%	0.00%	86%	8%	6%	30,513	2,570	8,182	19,864	168,172	4,987	0	234,288	23,083	15,279			
2,009	3,143,751	9%	1%	3%	7%	51%	1%	0.01%	73%	22%	5%	296,435	40,857	95,166	220,533	1,602,858	46,981	228	2,303,058	695,780	144,914			
Attachment RCL-2 from 2008 Filing												2008 Off Peak Resources to Serve Load												
Jan-08	342,691	10%	1%	2%	6%	60%	2%	0.03%	81%	10%	9%	35,959	2,640	8,181	19,530	204,096	5,884	89	276,379	35,660	30,653			
Feb-08	307,333	11%	1%	2%	6%	56%	0%	0.01%	77%	13%	10%	34,649	2,310	7,491	19,690	171,951	60	38	236,188	40,796	30,350			
Mar-08	335,029	10%	1%	3%	7%	60%	0%	0.00%	81%	13%	6%	34,247	2,836	8,405	23,907	200,911	173	0	270,479	43,807	20,744			
Apr-08	270,386	8%	1%	3%	8%	26%	0%	0.00%	46%	45%	9%	22,841	3,680	7,324	20,789	69,682	147	0	124,462	122,331	23,593			
May-08	294,591	7%	1%	3%	7%	45%	0%	0.02%	62%	35%	3%	20,196	3,760	8,264	19,372	131,150	16	61	182,820	104,293	7,478			
Jun-08	315,614	4%	1%	2%	4%	49%	3%	0.00%	65%	22%	13%	12,304	3,840	7,440	13,813	155,640	10,979	0	204,016	70,300	41,298			
Jul-08	350,226	4%	1%	2%	4%	44%	2%	0.00%	57%	23%	19%	15,244	3,280	6,035	15,220	154,642	6,814	0	201,234	81,710	67,282			
Aug-08	342,947	5%	1%	2%	6%	65%	0%	0.00%	79%	16%	5%	17,864	2,951	7,097	19,323	222,010	427	0	269,671	54,479	18,796			
Sep-08	302,040	5%	1%	2%	5%	51%	0%	0.00%	64%	15%	22%	15,533	3,680	7,446	13,758	152,841	0	12	193,270	43,807	64,962			
Oct-08	270,495	6%	1%	1%	6%	58%	0%	0.00%	72%	15%	13%	16,270	3,760	3,257	15,316	155,966	0	0	194,567	41,369	34,559			
Nov-08	318,884	7%	1%	2%	7%	64%	0%	0.00%	81%	12%	7%	23,791	4,160	5,605	21,459	202,558	155	0	257,728	37,672	23,484			
Dec-08	304,090	9%	1%	3%	7%	66%	0%	0.00%	85%	9%	5%	26,957	2,870	8,012	21,426	199,188	489	0	258,941	28,625	16,523			
2,008	3,754,325	7%	1%	2%	6%	54%	1%	0.01%	71%	19%	10%	275,855	39,767	84,555	223,601	2,020,634	25,143	199	2,669,755	704,849	379,721			
2009 from 2008																								
Jan	5,818	(0.0)	(0.0)	0.0	(0.0)	0.0	0.1	(0.0)	0.1	(0.0)	(0.1)	(10,789)	(60)	146	(3,166)	13,028	30,026	(89)	29,096	597	(23,874)			
Feb	(21,526)	(0.0)	0.0	0.0	(0.0)	0.0	0.0	(0.0)	(0.0)	0.0	(0.0)	(13,723)	186	196	(6,196)	(6,435)	2,513	(21)	(23,480)	10,688	(8,734)			
Mar	(46,481)	0.0	0.0	0.0	0.0	0.1	(0.0)	0.0	0.1	(0.1)	(0.1)	(2,363)	1,084	99	(597)	(3,140)	(87)	0	(5,004)	(23,573)	(17,904)			
Apr	(38,131)	0.0	0.0	0.0	0.0	0.3	(0.0)	0.0	0.4	(0.3)	(0.1)	5,540	0	(811)	1,415	60,709	(139)	0	66,714	(88,982)	(15,863)			
May	(38,429)	0.0	0.0	0.0	0.0	0.2	(0.0)	(0.0)	0.2	(0.3)	0.0	3,338	0	435	3,056	29,711	(16)	(61)	36,463	(79,246)	4,354			
Jun	(88,066)	0.0	0.0	0.0	0.0	0.1	(0.0)	0.0	0.2	(0.1)	(0.1)	7,850	(160)	(298)	4,324	(16,896)	(10,979)	0	(16,158)	(36,664)	(35,244)			
Jul	(107,547)	0.1	0.0	0.0	0.0	0.2	(0.0)	0.0	0.3	(0.1)	(0.1)	10,533	160	1,568	5,912	(6,963)	(6,782)	0	4,428	(55,640)	(56,335)			
Aug	(35,933)	0.0	0.0	0.0	0.0	(0.4)	(0.0)	0.0	(0.3)	0.3	0.1	5,525	170	1,373	2,458	(144,473)	(149)	12	(135,083)	82,105	17,045			
Sep	(79,996)	0.0	0.0	0.0	(0.0)	(0.2)	0.0	0.0	(0.2)	0.4	(0.2)	2,243	0	328	(5,944)	(90,305)	0	40	(93,638)	66,547	(52,905)			
Oct	(44,738)	0.0	0.0	0.0	0.0	(0.3)	0.0	0.0	(0.2)	0.3	(0.1)	4,532	160	4,861	(1,782)	(89,086)	602	24	(80,690)	61,892	(25,940)			
Nov	(84,106)	0.0	0.0	0.0	0.0	(0.3)	0.0	0.0	(0.2)	0.3	(0.1)	4,338	(150)	2,544	(987)	(132,911)	2,351	123	(124,692)	58,749	(18,164)			
Dec	(31,440)	0.0	(0.0)	0.0	0.0	(0.0)	0.0	0.0	0.0	(0.0)	0.0	3,556	(300)	170	(1,562)	(31,016)	4,498	0	(24,653)	(5,542)	(1,245)			
Period	(610,574)	0.0	0.0	0.0	0.0	(0.0)	0.0	0.0	0.0	0.0	(0.1)	20,580	1,090	10,611	(3,068)	(417,776)	21,838	28	(366,697)	(9,070)	(234,808)			

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-016
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 21-28. Please provide a schedule, by month, by facility, supporting how the 401 GWH of on-peak energy was sold and the average price received.

Response:

Please see the attached table for the requested information. In this analysis energy sales were met in the following order: ICUs, bilateral energy purchases, Newington/Wyman, Schiller 6, Schiller 4, Merrimack 1, Merrimack 2, Schiller 5 and other.

2009 On-Peak

	<u>Total ISO-NE Spot Sales</u> MWh	<u>Surplus Sales from ICU</u> MWh	<u>Surplus Sales from Bilateral</u> MWh	<u>Surplus Sales from Newington/Wyman</u> MWh	<u>Surplus Sales from SCH6</u> MWh	<u>Surplus Sales from SCH 4</u> MWh	<u>Surplus Sales from MK1</u> MWh	<u>Surplus Sales from MK2</u> MWh	<u>Surplus Sales from SCH 5</u> MWh	<u>Surplus Sales from other</u> MWh	<u>Total ISO-NE Spot Sales</u> \$000	<u>Avg Sale</u> \$/MWh
Jan	20,803	244	20,373	186	0	0	0	0	0	0	1,757	84.44
Feb	12,284	60	12,167	56	0	0	0	0	0	0	696	56.67
Mar	33,128	8	33,094	0	25	0	0	0	0	0	1,286	38.82
Apr	77,314	16	77,278	0	21	0	0	0	0	0	2,924	37.82
May	22,618	0	22,618	0	0	0	0	0	0	0	899	39.76
Jun	57,277	0	57,243	35	0	0	0	0	0	0	2,155	37.62
Jul	33,215	46	33,169	0	0	0	0	0	0	0	1,169	35.21
Aug	5,444	26	5,418	0	0	0	0	0	0	0	332	60.92
Sep	24,644	76	24,568	0	0	0	0	0	0	0	809	32.82
Oct	22,008	176	21,832	0	0	0	0	0	0	0	1,048	47.62
Nov	58,756	0	58,491	265	0	0	0	0	0	0	2,351	40.02
<u>Dec</u>	<u>33,855</u>	<u>0</u>	<u>33,647</u>	<u>194</u>	<u>14</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2,236</u>	<u>66.06</u>
Totals	401,346	652	399,897	737	60	0	0	0	0	0	17,662	44.01

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-017
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 21-28. Please provide a schedule, by month, by facility, supporting how the 389 GWH of off-peak energy was sold and the average price received.

Response:

Please see the attached table for the requested information. In this analysis energy sales were met in the following order: ICUs, bilateral energy purchases, Newington/Wyman, Schiller 6, Schiller 4, Merrimack 1, Merrimack 2, Schiller 5 and other.

2009 Off-Peak

	<u>Total ISO-NE Spot Sales</u> MWh	<u>Surplus Sales from ICU</u> MWh	<u>Surplus Sales from Bilateral</u> MWh	<u>Surplus Sales from Newington/Wyman</u> MWh	<u>Surplus Sales from SCH6</u> MWh	<u>Surplus Sales from SCH 4</u> MWh	<u>Surplus Sales from MK1</u> MWh	<u>Surplus Sales from MK2</u> MWh	<u>Surplus Sales from SCH 5</u> MWh	<u>Surplus Sales from other</u> MWh	<u>Total ISO- NE Spot Sales</u> \$000	<u>Avg Sale</u> \$/MWh
Jan	41,042	39	35,365	5,616	23	0	0	0	0	0	2,794	68.07
Feb	23,552	42	20,677	1,651	572	427	182	0	0	0	996	42.28
Mar	44,209	0	30,084	4	4,852	3,585	5,669	14	0	0	1,526	34.51
Apr	56,158	0	44,640	18	4,059	3,400	3,607	433	0	0	1,586	28.25
May	45,043	0	26,984	0	4,445	4,379	8,642	592	0	0	1,406	31.20
Jun	32,390	0	20,063	0	3,107	1,707	7,392	120	0	0	899	27.76
Jul	28,846	0	18,839	2	1,538	342	7,790	334	0	0	712	24.70
Aug	9,013	0	9,013	0	0	0	0	0	0	0	172	19.10
Sep	13,648	0	13,648	0	0	0	0	0	0	0	287	21.05
Oct	22,958	4	22,954	0	0	0	0	0	0	0	712	31.00
Nov	32,195	0	32,195	0	0	0	0	0	0	0	903	28.04
<u>Dec</u>	<u>39,805</u>	<u>0</u>	<u>24,122</u>	<u>2,023</u>	<u>5,537</u>	<u>3,417</u>	<u>4,631</u>	<u>75</u>	<u>0</u>	<u>0</u>	<u>2,078</u>	<u>52.21</u>
Totals	388,859	84	298,586	9,313	24,134	17,258	37,914	1,569	0	0	14,071	36.19

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Errichetti testimony, page 4, line 28. Please combine the results of the two previous requests to support the combined revenue of \$31.8 million.

Response:

The table below provides the requested information. The difference between \$31.8 million in the testimony and \$31.7 million in the table is a result of rounding the on peak and off peak values to 1 decimal place before adding.

	Total ISO-NE Spot Sales MWh	Surplus Sales from Generation MWh	Surplus Sales from Bilateral MWh	Total ISO-NE Spot Sales (\$000)	Average Sale \$/MWh
Jan 09	61,845	6,107	55,738	4,550	73.58
Feb	35,835	2,991	32,844	1,692	47.21
Mar	77,337	14,159	63,178	2,812	36.36
Apr	133,472	11,554	121,918	4,510	33.79
May	67,661	18,059	49,602	2,305	34.07
Jun	89,667	12,362	77,305	3,054	34.06
Jul	62,062	10,053	52,009	1,882	30.32
Aug	14,457	26	14,431	504	34.85
Sep	38,292	76	38,216	1,096	28.62
Oct	44,966	180	44,786	1,760	39.14
Nov	90,951	265	90,686	3,254	35.78
Dec	73,660	15,891	57,769	4,315	58.57
Totals	790,205	91,722	698,483	31,733	40.16

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-019
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 25-26. Please explain and reconcile why the on-peak energy sales increased from 169 GWH in 2008 to 401 GWH in 2009. As part of your response, please include the impact of how the Merrimack-2 outage from August to December 2009 influenced on-peak energy sales.

Response:

On-peak energy sales occur in hours when generation committed to PSNH plus bilateral purchases exceed ES load. 2009 on-peak energy sales increased over 2008 primarily because ES loads decreased significantly due to the recession and migration while committed generation, but for the extended Merrimack 2 outage, was strong and even though bilateral purchases were reduced somewhat from 2008. Staff-01, Q-Staff-016 shows the breakdown of surplus energy sales between PSNH generation and bilateral energy purchases.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-020
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 4, lines 26-28. Please explain and reconcile why the off-peak energy sales increased from 145 GWH in 2008 to 389 GWH in 2009. As part of your response, please include the impact of how the Merrimack-2 outage from August to December 2009 influenced off-peak bilateral purchases.

Response:

Off-peak energy sales occur in hours when generation committed to PSNH plus bilateral purchases exceed ES load. 2009 off-peak energy sales increased over 2008 primarily because ES loads decreased significantly due to the recession and migration while committed generation, but for the extended Merrimack 2 outage, was strong and off peak bilateral energy sales were higher than 2008 in part to manage the Merrimack 2 extended outage. See Staff-01, Q-Staff-017 shows the breakdown of surplus energy sales between PSNH generation and bilateral energy purchases.

Witness: David A. Errichetti, Robert A. Baumann
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Errichetti testimony, page 5, lines 10-13. Please take the months of January, February, November, and December of 2009 and calculate the total cost to customers on an average cents per kWh basis assuming that all PSNH resource energy supply was procured from the market at ISO-NE spot prices. As part of your response, please compare the resultant prices to the prices actually paid by PSNH customers. Also as part of your response, please convert customer savings to total dollars.

Response:

The following table provides the requested information. Nodal locational marginal prices, LMPs, were used so as to avoid needing to add to actual variable costs the congestion and loss price differentials that would need to be considered if New Hampshire Zone LMPs were used.

Cost and Savings If Own Generation Were Bought in Day Ahead Energy Market

	Own Generation	Variable Costs		Cost at D.A. LMPs		Savings from Own Generation	
	MWh	\$000	¢/kWh	\$000	¢/kWh	\$000	¢/kWh
Jan-09	520,100	25,106	4.83	36,583	7.03	11,477	2.21
Feb-09	349,440	15,805	4.52	17,083	4.89	1,278	0.37
Nov-09	203,900	8,981	4.40	7,378	3.62	(1,603)	(0.78)
Dec-09	398,172	16,485	4.14	23,028	5.78	6,543	1.64
Four Months	1,471,612	66,377	4.51	84,072	5.71	17,695	1.20

Variable costs are sum of Fossil Energy costs and RGGI costs, lines 29 and 40 of Attachment R AB-3 page 1 of 2 and 2 of 2

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-022
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**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 6, lines 12-16. Please explain what PSNH is doing to maximize its claimed capacity as measured by the ISO-NE rules at all of its generating facilities by facility. Include in your response efficiency and other programs that would allow PSNH to claim maximum credit for their capacity.

Response:

PSNH fulfills ISO-NE capacity audit tests for both the summer and winter capacity demonstration. Each required unit conducts winter and summer tests to demonstrate continuous MW capability in each period. Values that each unit demonstrates are based on knowledge and experience of each unit's capability including limitations of equipment and systems. The objective in these tests is to seek to sustain prior values or increase them, even if by small amounts. Depending on where a unit is in its 5 or 6-year maintenance cycle, turbine efficiency is one example of a factor that could contribute to the rating.

It is an ongoing effort to sustain or pursue opportunities to improve the overall capacity value of each unit. Q-STAFF-59 identifies typical efficiency efforts made at the stations.

When a major project, like the MK2 HP/IP turbine replacement is completed, there is a net increase to the unit's capacity. In the case of MK2, the unit demonstrated a net energy increase of 12 MW due to equipment efficiency gains. An additional unit capability of just over 5 MW was also demonstrated, which further added capacity value for customers.

PSNH is continuously seeking cost effective ways to improve performance ratings or efficiency of its equipment, whether by repair or replacement. Every positive gain in this area helps customers.

**Public Service Company of New
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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-023
Page 1 of 2**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 8, lines 1-6. Please individually list by month the FTR amounts procured for Merrimack, Schiller, and Newington stations, their cost, and the congestion savings realized.

Response:

Attached please find the requested information.

2009 FTR Activity and Valuation for Merrimack, Schiller and Newington

Source	Month	FTR MW Quantity		Corresponding Cost and Value of FTRs		
		On-Peak	Off-Peak	FTR Auction \$	FTR Value \$	Net FTR \$
Merrimack	Jan - Dec	75	50			
	Jan	325	275	(39,354)	26,144	(13,211)
	Feb	325	309	(25,860)	(1,934)	(27,794)
	Mar	225	250	(20,569)	619	(19,950)
	Apr	225		(19,614)	135,405	115,791
	May	225	230	(15,650)	(2,776)	(18,426)
	Jun	225	150	(17,343)	5,480	(11,863)
	Jul	225	150	(19,739)	(591)	(20,330)
	Aug		25	(7,296)	214	(7,082)
	Sep	25	25	(7,604)	1,051	(6,553)
	Oct	25	25	(7,335)	2,223	(5,113)
	Nov	25	25	(7,292)	1,162	(6,130)
	Dec	275	207	(13,685)	(946)	(14,631)
	Total			(201,343)	166,051	(35,292)
Schiller	Jan - Dec					
	Jan	105	45	(8,955)	6,133	(2,822)
	Feb	105	75	(4,902)	5,402	500
	Mar	60	75	(3,845)	2,096	(1,749)
	Apr	40	30	(3,022)	1,637	(1,386)
	May	60	75	(1,836)	650	(1,187)
	Jun	60	75	(3,011)	1,788	(1,223)
	Jul	85	75	(3,211)	447	(2,763)
	Aug	55	25	(2,064)	(113)	(2,177)
	Sep	80	65	(1,139)	1,393	254
	Oct	80	65	(1,081)	(12,914)	(13,995)
	Nov	55	86	(1,874)	718	(1,156)
	Dec	120	100	(864)	(369)	(1,234)
	Total			(35,805)	6,869	(28,936)
Newington	Jan - Dec					
	Jan	150		(14,903)	8,397	(6,506)
	Feb	200		(12,816)	13,742	926
	Mar			0	0	0
	Apr			0	0	0
	May			0	0	0
	Jun			0	0	0
	Jul			0	0	0
	Aug			0	0	0
	Sep			0	0	0
	Oct			0	0	0
	Nov			0	0	0
	Dec			0	0	0
	Total			(27,719)	22,139	(5,580)
	Total Above			(264,866)	195,059	(69,807)

Notes:

Jan.-Dec. FTR cost and value are allocated monthly as per ISO-NE Billing methodology.

FTR Auction \$ - this is the amount paid to (-) or received from (+) ISO based on the auction clearing price of awarded FTRs

FTR Value \$ - this is the amount paid to (-) or received from (+) ISO based on the realized value of the awarded FTRs

Net FTR \$ - the sum of the auction dollars and market value of the awarded FTRs

[FTR Value includes partial refund of under-funded target allocations via the ISO-NE Congestion Revenue Fund]

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Errichetti testimony, page 8, lines 12-15. Using information from the response to question 1-23, please demonstrate that the net FTR savings decreased the energy service expenses by \$112,260.

Response:

As discussed in testimony, PSNH acquires FTRs for resources it expects to operate during the applicable period. Thus PSNH's strategy is to convert a variable congestion value into a fixed FTR auction value. Put another way, PSNH purchases FTRs primarily to provide cost certainty and thus reduce risk rather than to achieve savings. The variable congestion value is what PSNH avoided or gave up in exchange for having a fixed FTR auction value. The \$112,260 is the difference between the fixed FTR auction value of the FTRs PSNH acquired and what the variable congestion value would have been. The table below builds on the information provided in Staff-01, Q-Staff-23 to show the derivation of the \$112,260.

Derivation of 2009 FTR Net Value

Source	Month	FTR MW Quantity		Corresponding Cost and Value of FTRs		
		On-Peak	Off-Peak	FTR Auction \$	FTR Value \$	Net FTR \$
Total of Merrimack, Schiller & Newington				(264,866)	195,059	(69,807)
Other	Jan - Dec	150				
	Jan	28	28	23,630	3,304	26,934
	Feb	10	10	17,418	(17,715)	(297)
	Mar	10	10	19,242	(20,476)	(1,235)
	Apr	10	10	18,863	3,528	22,391
	May	10	10	19,625	(14,855)	4,770
	Jun	10	10	18,845	(6,560)	13,295
	Jul	60	10	22,669	(23,069)	(401)
	Aug	114	10	26,285	(2,985)	23,300
	Sep	60		23,204	4,725	27,928
	Oct	35	10	21,858	3,849	25,707
	Nov	43	18	23,644	(4,509)	19,135
	Dec	10	10	19,993	545	20,538
Total				255,276	(73,209)	182,067
Total All Above				(9,590)	121,850	112,260

Notes:

Other FTR MWs include those that were purchased to address bilateral and Vermont Yankee purchases.

Jan.-Dec FTR Auction and Value dollars are allocated monthly as per ISO-NE Billing methodology.

FTR Auction \$ - this is the amount paid to (-) or received from (+) ISO based on the auction clearing price of awarded FTRs

FTR Value \$ - this is the amount paid to (-) or received from (+) ISO based on the realized value of the awarded FTRs

Net FTR \$ - the sum of the auction dollars and market value of the awarded FTRs

[FTR Value includes partial refund of under-funded target allocations via the ISO-NE Congestion Revenue Fund]

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-025
Page 1 of 2**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, page 8, lines 14-15. Please explain the factors that resulted in a difference in the FTR net cost of \$590,153 in 2008 and the \$112,260 net savings in 2009.

Response:

As noted in testimony and in Staff-01, Q-Staff-024, PSNH's FTR strategy is to convert a variable congestion value to a fixed FTR auction value by buying FTRs for a path starting from resources it expects to operate and ending at the NH load zone where PSNH ES load is priced. Put another way, PSNH purchases FTRs primarily to provide cost certainty and thus reduce risk rather than to achieve savings. The prices PSNH pays for FTRs is driven by market expectations, while the value of the FTRs are a function of how the energy markets perform. In 2008 the net variable congestion value of the FTRs acquired by PSNH was less than net fixed FTR auction value seen by PSNH through the FTR auctions. In 2009 the net variable congestion value was greater than the net fixed FTR auction value seen by PSNH through the FTR auctions.

The table below shows by the month the aggregate FTR valuation for 2009 and 2008 and how fixing exposure saved in 2009 and cost in 2008. PSNH continues to believe that purchasing FTRs to convert variable congestion exposure to fixed congestion exposure is desirable.

In hindsight numerous observations can be made about how pursuing FTRs turned out differently in 2009 than 2008. The FTR auction is the market's prediction of what FTRs are worth, including whether the path chosen will have positive or negative congestion. The FTR value is what turns out to be the case in actual. In a perfect world there would be little difference between the two, but in reality the two seldom match up. The most significant difference between 2008 and 2009 is that in 2008 a significant number of purchased FTRs' actual congestion flows were opposite to what the market expected in the auction. This effect can be seen in June 2008 where PSNH paid \$160,173 and where under perfect conditions it should have received an equal amount in value it actually paid almost the same amount again because the FTR value reversed. May and July are examples of this not happening where FTRs are purchased in auction and then value is received in the month. This reversal of FTR value did not recur in a significant way 2009.

Cost and Value of FTRs

Month	2009			Month	2008		
	FTR Auction \$	FTR Value \$	Net FTR \$		FTR Auction \$	FTR Value \$	Net FTR \$
Jan	(39,582)	43,978	4,396	Jan	(92,803)	(9,389)	(102,192)
Feb	(26,161)	(505)	(26,665)	Feb	(55,895)	20,523	(35,172)
Mar	(5,173)	(17,761)	(22,934)	Mar	(44,076)	6,057	(38,019)
Apr	(3,773)	140,570	136,797	Apr	3,553	(12,871)	(9,318)
May	2,138	(16,981)	(14,843)	May	(20,405)	108,089	87,685
Jun	(1,510)	1,719	209	Jun	(160,173)	(140,781)	(300,954)
Jul	(281)	(23,213)	(23,494)	Jul	(156,914)	219,298	62,384
Aug	16,925	(2,884)	14,041	Aug	(163,006)	11,895	(151,111)
Sep	14,460	7,169	21,629	Sep	(62,923)	13,558	(49,365)
Oct	13,442	(8,843)	6,599	Oct	13,777	(30,654)	(16,877)
Nov	14,479	(2,630)	11,850	Nov	(46,805)	44,852	(1,953)
Dec	5,443	(770)	4,673	Dec	(41,657)	6,396	(35,261)
Total	(9,590)	121,850	112,260	Total	(827,127)	236,974	(590,153)

Notes

FTR Auction \$ - this is the amount paid to (-) or received from (+) ISO based on the auction clearing price of awarded FTRs

FTR Value \$ - this is the amount paid to (-) or received from (+) ISO based on the realized value of the awarded FTRs

Net FTR \$ - the sum of the auction dollars and market value of the awarded FTRs

[FTR Value includes partial refund of under-funded target allocations via the ISO-NE Congestion Revenue Fund]

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-026
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, Attachment DAE-1. Please explain why the capacity values for Bethlehem, Tamworth, Lempster Wind, and Hydro Quebec are not included in this attachment. Please provide the respective capacity values for those units/entitlements.

Response:

Attachment DAE-1 shows the current ratings of resources available to meet PSNH's ES energy needs. The various resources identified were excluded from Attachment DAE-1 for the following reasons.

- In 2009 Bethlehem and Tamworth were being purchased under short-term unit contingent purchase arrangements. As such they were viewed as bilateral arrangements not IPPs and not unlike bilateral energy strips. Since bilateral energy strips are not included in Attachment DAE-1, Bethlehem and Tamworth were also excluded.
- While Lempster Wind is a long-term arrangement and available to meet PSNH's ES energy needs, it was excluded primarily because its rating is not indicative of its energy contribution and thus its inclusion would have distorted the MW tally.
- PSNH receives a proportionate share of Hydro Quebec Interconnection Capacity Credits but no energy. Since, as noted above, Attachment DAE-1 is intended to identify energy resources, Hydro Quebec is excluded.

The capacity credits for these resources are provided in response to Staff-01, Q-STAFF-028.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-027
Page 1 of 7**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Errichetti testimony, Attachments DAE-1 and DAE-2. Please provide, by month, for on-peak, off-peak, and total values and in the form provided in previous dockets:

- a. Information on bilateral purchases and costs, spot purchases and costs, and sales on surplus purchases.
- b. Actual bilateral and spot purchase quantities compared to those in the rate request in both tabular and graphic form.
- c. Total supplemental purchases and percent breakdown by monthly bilateral, short term bilateral and spot purchases.
- d. Spot sale energy and value to ISO-NE from PSNH units and bilateral surplus sales.

Response:

The attached file provides the requested information consistent with the Supplemental Testimony of David A. Errichetti which reflects total bilateral supplemental energy purchases, not just those that served ES load as was reflected in his original testimony:

- Q27-a bilateral and spot market purchase and sale details.
Q27-b compares actual 2009 bilateral and spot market purchase quantities with the forecasted quantities in the December 2008 rate request filing. Includes data and two charts.
Q27-c breaks total supplemental purchase quantities into "monthly bilateral", "short-term bilateral" (i.e. less than one month), and "spot market".
Q27-d breaks total surplus sale quantities into surplus generation vs surplus bilateral purchases.

[Q-27a] Summary of 2009 PSNH Bilateral Purchases and ISO-NE Spot Purchases & Sales

Peak

	<u>Total Bilateral</u>			<u>Sales of Surplus</u>			<u>Total ISO-NE Spot</u>		<u>Total ISO-NE</u>	
	<u>Total Bilateral Purchases</u>	<u>Purchases</u>	<u>Avg Price</u>	<u>Purchases</u>	<u>Percent (%) Sold as</u>	<u>Profit / (Loss) on Sales</u>	<u>Purchases</u>	<u>Spot Purchases</u>	<u>Avg Price</u>	
	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>	<u>MWh</u>	<u>Surplus</u>	<u>\$000</u>	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>	
Jan	87,517	11,511	131.53	20,373	23%	(1,112)	14,391	1,030	71.57	
Feb	95,687	11,178	116.82	12,167	13%	(818)	20,979	1,101	52.49	
Mar	95,002	10,327	108.70	33,094	35%	(2,314)	2,464	194	78.88	
Apr	150,593	14,738	97.86	77,278	51%	(4,645)	3,288	154	46.80	
May	90,210	9,816	108.81	22,618	25%	(1,566)	12,668	537	42.40	
Jun	138,106	14,495	104.96	57,243	41%	(3,925)	1,388	61	43.99	
Jul	127,905	13,652	106.74	33,169	26%	(2,447)	10,713	445	41.50	
Aug	176,438	15,341	86.95	5,418	3%	(144)	31,925	1,531	47.94	
Sep	196,529	17,224	87.64	24,568	13%	(1,373)	811	37	45.34	
Oct	170,665	14,548	85.25	21,832	13%	(866)	4,442	193	43.38	
Nov	154,908	13,209	85.27	58,491	38%	(2,629)	1,317	74	56.33	
Dec	105,372	11,110	105.44	33,647	32%	(1,435)	9,800	569	58.06	
Totals	1,588,933	157,148	98.90	399,897	25%	(23,274)	114,185	5,925	51.89	

Off-Peak

	<u>Total Bilateral</u>			<u>Sales of Surplus</u>			<u>Total ISO-NE Spot</u>		<u>Total ISO-NE</u>	
	<u>Total Bilateral Purchases</u>	<u>Purchases</u>	<u>Avg Price</u>	<u>Purchases</u>	<u>Percent (%) Sold as</u>	<u>Profit / (Loss) on Sales</u>	<u>Purchases</u>	<u>Spot Purchases</u>	<u>Avg Price</u>	
	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>	<u>MWh</u>	<u>Surplus</u>	<u>\$000</u>	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>	
Jan	71,622	7,059	98.55	35,365	49%	(1,131)	6,779	460	67.87	
Feb	72,161	6,900	95.62	20,677	29%	(1,258)	21,616	1,028	47.54	
Mar	50,318	4,974	98.86	30,084	60%	(1,993)	2,840	163	57.33	
Apr	77,989	7,332	94.01	44,640	57%	(2,899)	7,730	291	37.62	
May	52,032	5,122	98.43	26,984	52%	(2,007)	11,831	455	38.49	
Jun	53,699	4,626	86.14	20,063	37%	(1,452)	6,054	193	31.91	
Jul	44,909	4,402	98.02	18,839	42%	(1,472)	10,946	354	32.34	
Aug	145,598	10,200	70.06	9,013	6%	(419)	35,841	1,408	39.29	
Sep	124,002	8,612	69.45	13,648	11%	(587)	12,057	367	30.41	
Oct	126,215	7,916	62.72	22,954	18%	(732)	8,618	354	41.04	
Nov	128,616	8,084	62.85	32,195	25%	(1,121)	5,320	256	48.19	
Dec	47,205	4,455	94.37	24,122	51%	(1,058)	15,279	696	45.56	
Totals	994,365	79,682	80.13	298,586	30%	(16,129)	144,914	6,025	41.58	

Total

	<u>Total Bilateral</u>			<u>Sales of Surplus</u>			<u>Total ISO-NE Spot</u>		<u>Total ISO-NE</u>	
	<u>Total Bilateral Purchases</u>	<u>Purchases</u>	<u>Avg Price</u>	<u>Purchases</u>	<u>Percent (%) Sold as</u>	<u>Profit / (Loss) on Sales</u>	<u>Purchases</u>	<u>Spot Purchases</u>	<u>Avg Price</u>	
	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>	<u>MWh</u>	<u>Surplus</u>	<u>\$000</u>	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>	
Jan	159,138	18,569	116.69	55,738	35%	(2,243)	21,170	1,490	70.38	
Feb	167,848	18,078	107.70	32,844	20%	(2,076)	42,595	2,129	49.98	
Mar	145,320	15,301	105.29	63,178	43%	(4,307)	5,304	357	67.34	
Apr	228,582	22,070	96.55	121,918	53%	(7,544)	11,018	445	40.36	
May	142,241	14,937	105.01	49,602	35%	(3,573)	24,500	993	40.51	
Jun	191,806	19,121	99.69	77,305	40%	(5,377)	7,442	254	34.16	
Jul	172,814	18,054	104.47	52,009	30%	(3,919)	21,659	799	36.87	
Aug	322,036	25,541	79.31	14,431	4%	(563)	67,766	2,939	43.37	
Sep	320,532	25,836	80.60	38,216	12%	(1,959)	12,868	403	31.35	
Oct	296,880	22,464	75.67	44,786	15%	(1,598)	13,060	546	41.83	
Nov	283,524	21,293	75.10	90,686	32%	(3,750)	6,638	331	49.67	
Dec	152,578	15,565	102.02	57,769	38%	(2,494)	25,079	1,265	50.45	
Totals	2,583,299	236,830	91.68	698,483	27%	(39,404)	259,099	11,950	46.12	

[Q-27b]

<u>Actual 2009 Purchase Quantities</u>	<u>Purchase Quantities Filed with Rate Request</u>
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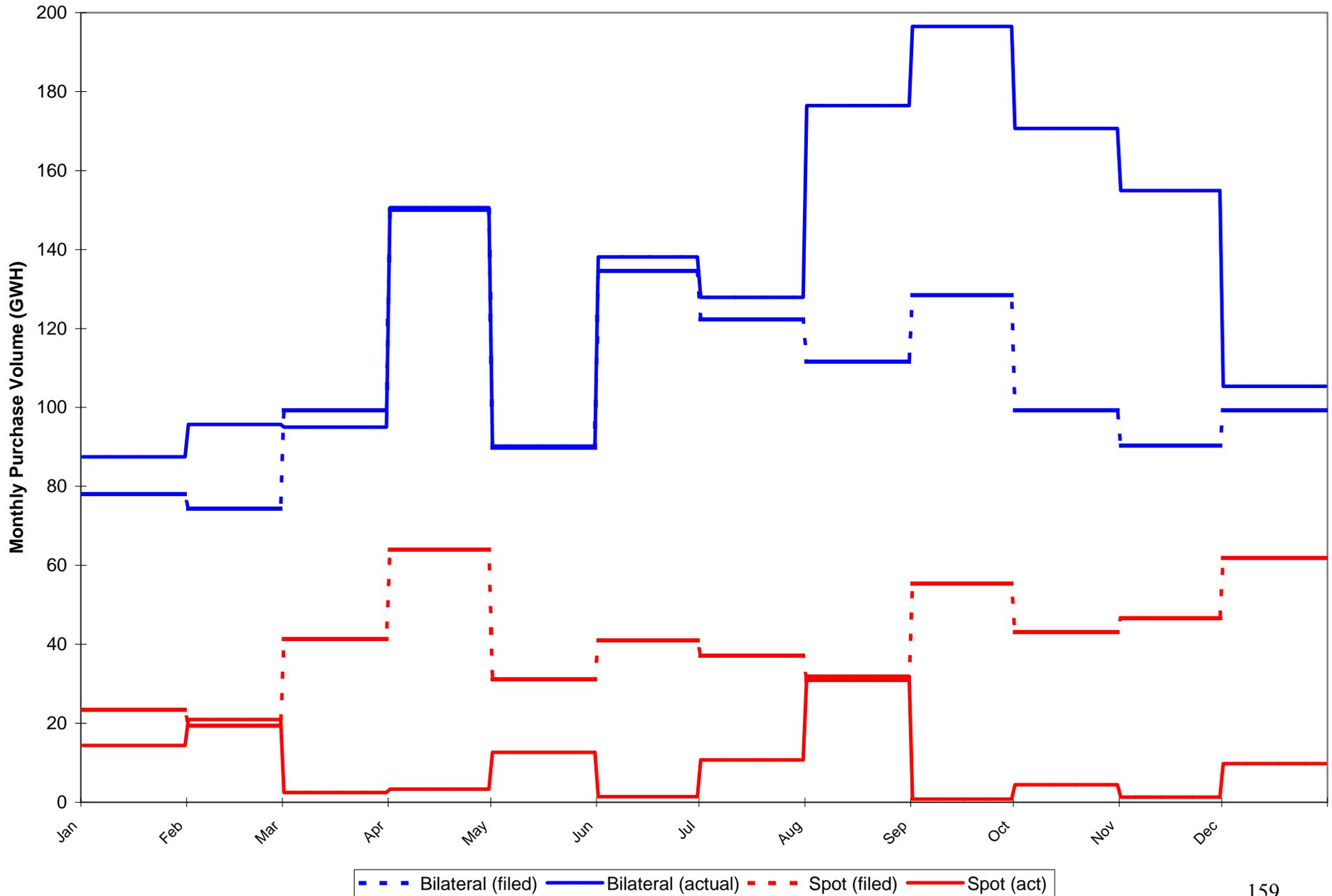
Peak

	<u>Total Bilateral</u> <u>Purchases</u> <u>MWh</u>	<u>Total ISO-NE Spot</u> <u>Purchases</u> <u>MWh</u>	<u>Total Bilateral</u> <u>Purchases</u> <u>MWh</u>	<u>Total ISO-NE Spot</u> <u>Purchases</u> <u>MWh</u>
1	87,517	14,391	78,019	23,460
2	95,687	20,979	74,304	19,441
3	95,002	2,464	99,334	41,360
4	150,593	3,288	150,074	63,950
5	90,210	12,668	89,789	31,187
6	138,106	1,388	134,534	40,908
7	127,905	10,713	122,250	37,110
8	176,438	31,925	111,619	31,013
9	196,529	811	128,419	55,448
10	170,665	4,442	99,334	43,021
11	154,908	1,317	90,304	46,524
12	105,372	9,800	99,334	61,832
Totals	1,588,933	114,185	1,277,315	495,254

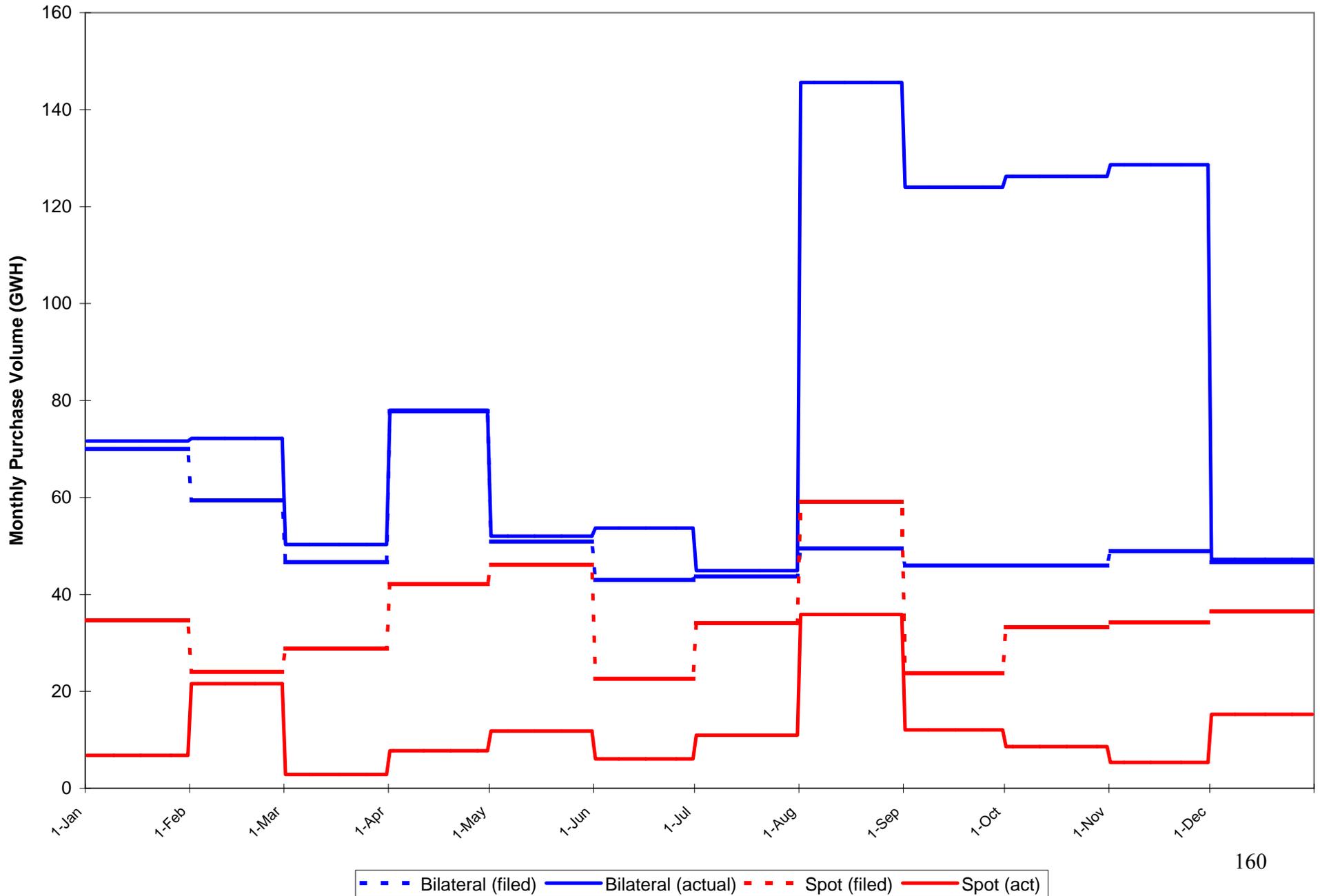
Off-Peak

	<u>Total Bilateral</u> <u>Purchases</u> <u>MWh</u>	<u>Total ISO-NE Spot</u> <u>Purchases</u> <u>MWh</u>	<u>Total Bilateral</u> <u>Purchases</u> <u>MWh</u>	<u>Total ISO-NE Spot</u> <u>Purchases</u> <u>MWh</u>
1	71,622	6,779	69,938	34,600
2	72,161	21,616	59,334	23,984
3	50,318	2,840	46,622	28,788
4	77,989	7,730	77,715	42,148
5	52,032	11,831	50,870	46,119
6	53,699	6,054	43,050	22,570
7	44,909	10,946	43,707	34,132
8	145,598	35,841	49,538	59,112
9	124,002	12,057	45,965	23,741
10	126,215	8,618	45,960	33,255
11	128,616	5,320	48,880	34,176
12	47,205	15,279	46,622	36,442
Totals	994,365	144,914	628,202	419,067

2009 On-Peak Bilateral and Spot Purchase Activity (Actual vs Originally Filed)



2009 Off-Peak Bilateral and Spot Purchase Activity (Actual vs Originally Filed)



Q-27c	Total Supplemental Purchases MWh	On-Peak Power			Total Supplemental Purchases MWh	Off-Peak Power		
		% Monthly Bilateral Purchases	% Short-Term Bilateral Purchases	% ISO-NE Spot Market Purchases		% Monthly Bilateral Purchases	% Short-Term Bilateral Purchases	% ISO-NE Spot Market Purchases
Jan-04	54,506	92%	0%	8%	13,455	0%	0%	100%
Feb-04	66,872	72%	11%	17%	23,539	0%	0%	100%
Mar-04	141,420	78%	8%	14%	63,115	0%	28%	72%
Apr-04	107,401	98%	0%	2%	49,482	0%	3%	97%
May-04	56,608	0%	42%	58%	23,996	0%	13%	87%
Jun-04	53,239	0%	8%	92%	25,283	0%	19%	81%
Jul-04	89,903	75%	12%	14%	27,426	0%	0%	100%
Aug-04	96,156	73%	12%	15%	39,364	0%	24%	76%
Sep-04	44,180	38%	13%	49%	32,448	0%	79%	21%
Oct-04	139,256	0%	78%	22%	78,562	0%	57%	43%
Nov-04	13,097	0%	18%	82%	40,255	0%	83%	17%
Dec-04	37,819	0%	36%	64%	13,814	0%	12%	88%
Jan-05	77,635	65%	24%	11%	20,082	0%	14%	86%
Feb-05	58,386	44%	32%	25%	25,207	0%	44%	56%
Mar-05	150,227	93%	6%	1%	67,053	85%	0%	15%
Apr-05	100,550	92%	0%	8%	58,987	94%	0%	7%
May-05	191,362	98%	0%	2%	141,334	91%	0%	9%
Jun-05	168,685	89%	2%	9%	105,184	81%	3%	16%
Jul-05	93,220	69%	2%	30%	54,264	68%	6%	26%
Aug-05	109,491	67%	1%	32%	47,339	48%	0%	52%
Sep-05	146,184	83%	2%	16%	71,578	90%	0%	10%
Oct-05	148,895	81%	4%	15%	112,187	78%	1%	21%
Nov-05	111,916	90%	0%	10%	65,306	94%	0%	6%
Dec-05	67,592	87%	0%	13%	78,757	92%	0%	8%
Jan-06	57,045	94%	0%	6%	57,578	81%	0%	19%
Feb-06	130,771	37%	58%	5%	79,510	0%	58%	42%
Mar-06	147,864	100%	0%	0.4%	47,472	81%	0%	19%
Apr-06	176,562	100%	0%	0.3%	126,109	95%	0%	5%
May-06	221,370	95%	1%	4%	129,261	68%	3%	29%
Jun-06	156,009	90%	5%	5%	75,531	91%	0%	9%
Jul-06	121,246	53%	30%	17%	121,614	88%	7%	5%
Aug-06	149,314	49%	28%	23%	92,702	95%	0%	5%
Sep-06	187,516	94%	4%	2%	104,375	57%	8%	35%
Oct-06	158,657	100%	0%	0.2%	70,868	96%	0%	4%
Nov-06	151,615	100%	0%	0.3%	87,183	99%	0%	1%
Dec-06	157,354	92%	4%	5%	114,077	87%	0%	13%
Jan-07	73,910	55%	23%	22.3%	75,638	90%	0%	10%
Feb-07	50,642	73%	11%	16.0%	70,540	87%	5%	9%
Mar-07	115,478	66%	26%	8.7%	58,315	81%	0%	19%
Apr-07	157,269	88%	1%	10.5%	78,215	59%	4%	37%
May-07	194,826	75%	6%	19.1%	112,347	76%	0%	24%
Jun-07	148,246	83%	9%	8.1%	72,858	64%	9%	27%
Jul-07	181,284	77%	14%	8.9%	89,081	79%	0%	21%
Aug-07	193,398	89%	2%	9.4%	92,606	67%	14%	19%
Sep-07	152,442	73%	17%	10.3%	103,988	51%	22%	27%
Oct-07	133,175	73%	10%	16.4%	57,284	75%	0%	25%
Nov-07	107,760	83%	0%	17.3%	54,579	86%	0%	14%
Dec-07	133,305	88%	0%	12.3%	79,321	68%	0%	32%
Jan-08	148,687	63%	24%	13.5%	71,454	56%	1%	43%
Feb-08	134,171	79%	6%	15.1%	75,806	47%	13%	40%
Mar-08	146,361	83%	10%	7.5%	78,824	71%	3%	26%
Apr-08	238,479	100%	0%	0.4%	150,309	84%	0%	16%
May-08	214,361	99%	0%	0.8%	153,132	95%	0%	5%
Jun-08	201,567	81%	14%	5.0%	118,042	50%	15%	35%
Jul-08	215,916	71%	13%	16.8%	151,912	39%	16%	44%
Aug-08	164,809	88%	2%	10.0%	84,180	78%	0%	22%
Sep-08	180,327	81%	0%	19.4%	111,527	42%	0%	58%
Oct-08	157,982	66%	0%	33.9%	78,611	56%	0%	44%
Nov-08	121,363	70%	8%	21.6%	74,481	68%	0%	32%
Dec-08	122,458	80%	3%	16.3%	62,054	73%	0%	27%
Jan-09	101,908	76%	9%	14.1%	78,400	89%	2%	9%
Feb-09	116,667	61%	21%	18.0%	93,777	68%	9%	23%
Mar-09	97,466	97%	0%	2.5%	53,158	95%	0%	5%
Apr-09	153,880	98%	0%	2.1%	85,719	91%	0%	9%
May-09	102,878	88%	0%	12.3%	63,863	81%	0%	19%
Jun-09	139,494	97%	2%	1.0%	59,754	74%	16%	10%
Jul-09	138,618	89%	3%	7.7%	55,855	80%	0%	20%
Aug-09	208,363	82%	2%	15.3%	181,439	78%	3%	20%
Sep-09	197,340	100%	0%	0.4%	136,060	91%	0%	9%
Oct-09	175,107	97%	0%	2.5%	134,834	94%	0%	6%
Nov-09	156,225	99%	0%	0.8%	133,936	96%	0%	4%
Dec-09	115,172	87%	5%	8.5%	62,484	76%	0%	24%
2004	900,457	52%	22%	26%	430,738	0%	33%	67%
2005	1,424,144	83%	4%	13%	847,280	79%	3%	16%
2006	1,815,322	85%	10%	5%	1,106,280	79%	6%	15%
2007	1,641,733	78%	9%	13%	944,774	73%	5%	22%

**[Q-27d]
2009 On-Peak**

	<u>Total ISO-NE Spot</u>	<u>Surplus Sales</u>	<u>Surplus Sales</u>	<u>Total ISO-NE Spot</u>	
	<u>Sales</u>	<u>from Generation</u>	<u>from Bilateral</u>	<u>Sales</u>	<u>Avg Sale</u>
	<u>MWh</u>	<u>MWh</u>	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>
Jan	20,803	430	20,373	1,757	84.44
Feb	12,284	116	12,167	696	56.67
Mar	33,128	34	33,094	1,286	38.82
Apr	77,314	36	77,278	2,924	37.82
May	22,618	0	22,618	899	39.76
Jun	57,277	35	57,243	2,155	37.62
Jul	33,215	46	33,169	1,169	35.21
Aug	5,444	26	5,418	332	60.92
Sep	24,644	76	24,568	809	32.82
Oct	22,008	176	21,832	1,048	47.62
Nov	58,756	265	58,491	2,351	40.02
<u>Dec</u>	<u>33,855</u>	<u>208</u>	<u>33,647</u>	<u>2,236</u>	<u>66.06</u>
Totals	401,346	1,449	399,897	17,662	44.01

2009 Off-Peak

	<u>Total ISO-NE Spot</u>	<u>Surplus Sales</u>	<u>Surplus Sales</u>	<u>Total ISO-NE Spot</u>	
	<u>Sales</u>	<u>from Generation</u>	<u>from Bilateral</u>	<u>Sales</u>	<u>Avg Sale</u>
	<u>MWh</u>	<u>MWh</u>	<u>MWh</u>	<u>\$000</u>	<u>\$/MWh</u>
Jan	41,042	5,677	35,365	2,794	68.07
Feb	23,552	2,874	20,677	996	42.28
Mar	44,209	14,125	30,084	1,526	34.51
Apr	56,158	11,517	44,640	1,586	28.25
May	45,043	18,059	26,984	1,406	31.20
Jun	32,390	12,327	20,063	899	27.76
Jul	28,846	10,007	18,839	712	24.70
Aug	9,013	0	9,013	172	19.10
Sep	13,648	0	13,648	287	21.05
Oct	22,958	4	22,954	712	31.00
Nov	32,195	0	32,195	903	28.04
<u>Dec</u>	<u>39,805</u>	<u>15,683</u>	<u>24,122</u>	<u>2,078</u>	<u>52.21</u>
Totals	388,859	90,274	298,586	14,071	36.19

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-028
Page 1 of 2**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:
Reference Errichetti testimony, Attachment DAE-5. Please break down PSNH MW capacity resources by month and by facility reconciling the figures stated in the table.

Response:
Please see the attached table for the requested information

PSNH Capacity Resources' Capacity Values by Resource by Month (MW)

Unit	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Period
AMOSKEAG	17.50	17.50	17.50	17.50	17.50	17.43	17.43	17.43	17.43	17.37	17.37	17.37	209.33
ASHUELOT HYDRO	0.75	0.74	0.87	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.10
AVERY DAM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.36	0.44	0.45	0.45	5.28
AYERS ISLAND	9.08	9.08	9.08	9.08	9.08	8.74	8.74	8.74	8.74	8.72	8.72	8.72	106.52
BATH ELECTRIC HYDRO	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.35	0.38	0.38	0.37	0.37	4.51
BELL MILL/ELM ST. HYDRO	0.07	0.07	0.07	0.07	0.07	0.05	0.02	0.03	0.05	0.07	0.07	0.07	0.71
BETHLEHEM	14.47	14.47	14.55	14.64	14.97	15.09	15.12	15.13	15.22	15.17	15.11	15.23	179.17
BRIAR HYDRO	2.91	3.54	4.69	4.69	4.69	2.69	1.25	0.81	0.75	1.29	3.81	4.66	35.78
CAMPTON DAM	0.06	0.07	0.15	0.44	0.44	0.18	0.09	0.07	0.08	0.13	0.18	0.13	2.02
CANAAN	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	13.20
CELLEY MILL U5	0.04	0.03	0.06	0.13	0.13	0.09	0.06	0.05	0.05	0.07	0.09	0.06	0.86
CHAMBERLAIN FALLS	0.08	0.11	0.12	0.12	0.12	0.07	0.03	0.03	0.04	0.06	0.09	0.09	0.96
CHINA MILLS DAM	0.45	0.50	0.84	0.84	0.69	0.29	0.12	0.07	0.11	0.23	0.53	0.67	5.34
CLEMENT DAM	2.20	2.14	2.25	2.25	2.25	1.74	1.23	1.04	0.69	1.02	1.62	2.07	20.50
COCHECO FALLS	0.34	0.29	0.55	0.66	0.43	0.23	0.12	0.10	0.16	0.34	0.40	0.40	4.02
DUNBARTON ROAD LANDFILL	0.51	0.51	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.44	0.44	5.50
EASTMAN BROOK U5	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	1.08
EASTMAN FALLS	6.46	6.46	6.46	6.46	6.46	6.47	6.47	6.47	6.47	6.47	6.47	6.47	77.59
ERROL	2.82	2.82	2.82	2.82	2.82	2.82	2.56	2.39	2.46	2.82	2.80	2.80	32.75
FISKE HYDRO	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	9.12
FOUR HILLS LANDFILL	0.35	0.35	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	1.80
FOUR HILLS LOAD REDUCER	0.94	0.94	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.41	1.41	16.22
FRANKLIN FALLS	0.75	0.75	0.75	0.75	0.75	0.75	0.63	0.53	0.35	0.52	0.75	0.75	8.03
FRESHWATER HYDRO	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	2.28
GARVINS/HOOKSETT	13.91	13.91	13.91	13.91	13.91	13.98	13.98	13.98	13.98	13.98	13.98	13.98	167.02
GOODRICH FALLS	0.06	0.00	0.09	0.32	0.31	0.16	0.09	0.08	0.07	0.11	0.14	0.09	1.52
GORHAM	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.03	24.27
GREAT FALLS LOWER	0.89	0.78	1.03	1.03	1.03	0.61	0.32	0.26	0.43	0.90	1.03	1.03	9.34
GREAT FALLS UPPER	1.85	1.62	1.95	1.95	1.95	1.26	0.67	0.53	0.88	1.85	1.93	1.93	18.37
GREGGS	1.41	1.66	3.10	3.10	2.57	1.07	0.46	0.28	0.24	0.92	1.77	2.11	18.69
HADLEY FALLS	0.23	0.23	0.23	0.23	0.23	0.20	0.08	0.05	0.04	0.17	0.23	0.23	2.15
HILLSBORO MILLS	0.44	0.43	0.53	0.53	0.53	0.44	0.26	0.22	0.18	0.33	0.53	0.53	4.95
HOSIERY MILL DAM	0.68	0.99	1.17	1.17	1.17	0.82	0.34	0.29	0.35	0.52	0.93	0.99	9.42
HQ ICC	-0.38	-0.38	128.86	128.86	128.86	128.86	128.86	128.86	128.86	128.86	128.86	0.00	1,158.98
INDECK ALEXANDRIA	0.00	12.96	12.96	12.96	12.96	11.78	11.78	11.78	11.78	8.11	8.11	8.11	123.29
JACKMAN	3.40	3.40	3.40	3.40	2.32	2.36	2.36	2.36	2.36	2.36	2.36	2.36	32.44
KELLEYS FALLS	0.38	0.38	0.38	0.38	0.38	0.31	0.13	0.08	0.00	0.26	0.37	0.37	3.42
LAKEPORT DAM	0.67	0.66	0.61	0.68	0.68	0.47	0.35	0.28	0.23	0.28	0.48	0.60	5.99
LEMPSTER WIND	22.06	9.33	9.43	9.29	9.26	9.01	8.55	8.21	7.67	7.33	7.25	7.16	114.55
LISBON HYDRO	0.26	0.25	0.63	0.75	0.75	0.51	0.23	0.18	0.19	0.35	0.48	0.36	4.94
LOCHMERE DAM	0.96	0.96	0.96	0.96	0.96	0.81	0.57	0.48	0.32	0.48	0.75	0.96	9.17
LOST NATION	18.08	18.08	18.08	18.08	18.08	14.07	14.07	14.07	14.07	18.08	18.08	18.08	200.92
LOWER ROBERTSON DAM	0.75	0.74	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.01
MERRIMACK 1	110.45	110.45	110.45	110.45	110.45	107.75	107.75	107.75	107.75	112.60	112.60	112.60	1,321.05
MERRIMACK 2	306.65	306.65	306.65	306.65	306.65	307.90	307.90	307.90	307.90	308.26	308.26	308.26	3,689.63
MERRIMACK CT1	21.13	21.13	21.13	21.13	21.13	16.42	16.42	16.42	16.42	21.68	21.68	21.68	236.37
MERRIMACK CT2	21.27	21.27	21.27	21.27	21.27	16.75	16.75	16.75	16.75	19.00	19.00	19.00	230.35
MIDDLETON BUILDING SUPPLY	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
MILTON MILLS HYDRO	1.34	1.17	1.42	1.42	1.42	0.90	0.45	0.34	0.61	1.34	1.41	1.41	13.23
MINE FALLS	1.68	1.93	2.82	2.82	2.23	1.53	0.00	0.00	0.00	0.97	1.55	1.92	17.45
MONADNOCK PAPER MILLS	0.88	1.01	1.83	1.83	1.74	0.80	0.36	0.28	0.29	0.44	1.04	1.38	11.88
NASHUA HYDRO	0.79	0.79	0.79	0.79	0.79	0.78	0.34	0.34	0.27	0.50	0.78	0.78	7.74
NEWFOUND HYDRO	1.22	1.30	1.18	1.31	1.28	1.18	0.66	0.87	0.63	0.91	1.18	1.22	12.94
NEWINGTON 1	385.95	385.95	385.95	385.95	385.95	397.46	397.46	397.46	397.46	388.81	388.81	388.81	4,686.02
NOONE FALLS	0.11	0.12	0.14	0.14	0.14	0.14	0.06	0.04	0.04	0.06	0.14	0.14	1.27
OLD NASH DAM	0.13	0.12	0.16	0.16	0.16	0.11	0.05	0.03	0.03	0.12	0.16	0.16	1.39
OTIS MILL HYDRO	0.09	0.09	0.16	0.19	0.11	0.05	0.00	0.00	0.05	0.07	0.12	0.11	1.04
OTTER LANE HYDRO	0.08	0.08	0.08	0.08	0.08	0.08	0.04	0.04	0.03	0.08	0.08	0.08	0.83
PEMBROKE	0.92	1.02	1.80	2.44	1.42	0.00	0.00	0.00	0.00	0.00	1.10	1.39	10.09
PENNACOOK FALLS LOWER	2.81	3.40	4.33	4.33	4.33	2.69	1.28	0.87	0.82	1.40	3.72	4.30	34.28
PENNACOOK FALLS UPPER	2.20	2.65	3.38	3.38	3.38	2.11	1.00	0.68	0.64	1.10	2.91	3.36	26.79
PETERBOROUGH LOWER HYDRO	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.26	0.26	3.22
PETERBOROUGH UPPER HYDRO	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37	4.54
RIVER BEND	1.68	1.68	1.68	1.68	1.68	1.65	1.10	0.91	0.53	0.89	1.53	1.67	16.68
ROLLINSFORD HYDRO	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.40	1.40	16.90
SALMON BROOK STATION 3	0.23	0.23	0.23	0.23	0.23	0.21	0.08	0.00	0.09	0.18	0.23	0.23	2.17
SALMON FALLS HYDRO	0.64	0.57	1.07	1.13	0.83	0.44	0.23	0.18	0.31	0.65	0.77	0.78	7.60
SCHILLER 4	46.90	46.90	46.90	46.90	46.90	46.05	46.05	46.05	46.05	46.65	46.65	46.65	558.65
SCHILLER 5	43.37	43.37	43.37	43.37	43.37	38.99	38.99	38.99	38.99	41.58	41.58	41.58	497.55
SCHILLER 6	47.89	47.89	47.89	47.89	47.89	46.97	46.97	46.97	46.97	44.16	44.16	44.16	559.81
SCHILLER CT 1	17.95	17.95	17.95	17.95	17.95	17.12	17.12	17.12	17.12	18.94	18.94	18.94	215.05
SES CONCORD	12.76	12.76	12.76	12.76	12.76	12.66	12.34	12.36	12.38	12.63	12.66	12.46	150.75
SMITH	16.07	16.49	17.60	17.60	17.60	17.60	13.89	12.77	13.06	14.36	16.67	16.19	189.90
STEELS POND HYDRO	0.62	0.65	0.89	0.92	0.92	0.49	0.17	0.14	0.18	0.55	0.91	0.91	7.35
STEVENS MILL	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	2.52
SUGAR RIVER HYDRO	0.14	0.14	0.14	0.14	0.14	0.14	0.08	0.06	0.05	0.12	0.14	0.14	1.43
SUNAPEE HYDRO	0.31	0.32	0.61	0.61	0.55	0.29	0.15	0.12	0.10	0.25	0.40	0.37	4.08
SUNNYBROOK HYDRO 1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.12
SUNNYBROOK HYDRO 2	0.04	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.57
SWANS FALLS	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	4.56
TAMWORTH	17.11	15.89	15.70	15.43	15.37	16.49	16.62	16.87	16.31	16.27	17.84	17.97	197.87
TURNKEY LANDFILL	2.91	2.91	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.79	2.79	33.88
VERMONT YANKEE	19.56	19.56	19.56	19.56	19.56	18.78	18.78	18.78	18.78	20.77	20.77	20.77	235.23
WATERLOO FALLS	0.06	0.06	0.11	0.11	0.08	0.03	0.00	0.00	0.04	0.05	0.08	0.08	0.70
WATSON DAM	0.23	0.23	0.23	0.23	0.23	0.19	0.10	0.08	0.14	0.23	0.23	0.23	2.35
WAUSAU COGEN U5	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
WEST HOPKINTON HYDRO	1.01	1.17	1.17	1.17	1.17	1.17	0.51	0.43	0.52	0.78	1.17	1.17	11.44
WESTON DAM	0.33	0.29	0.49	0.49	0.49	0.49	0.29	0.25	0.25	0.39	0.49	0.42	4.67
WHEELABRATOR CLAREMONT U5	4.59	4.59	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.93	3.93	48.72
WHITE LAKE JET	22.40	22.40	22.40										

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Please supply a breakdown in terms of FTE's of the various functions at the NU Regulated Wholesale Power Contracts department showing which positions PSNH is financially responsible for. If the response is different than in previous years, please show the differences and explain the reasons for the changes.

Response:

The table below compares what was reported for 2008 with what was recorded for productive hours in 2009. The drop in total FTEs reflects one open FTE during part of 2009. The open position was filled in January 2010; therefore, the number of FTE's is back to 16 in 2010.

	Wholesale Power Contracts Work Distribution					
	Total FTEs	2008		Total FTEs	2009	
		PSNH	Other		PSNH	Other
Bidding & Scheduling	2.00	1.75	0.25	2.00	1.99	0.01
Resource Planning / Analysis	4.00	2.00	2.00	3.25	1.45	1.9
Energy & Capacity Purchasing	2.00	0.50	1.50	2.00	0.74	1.26
Standard Offer & Default Service Procurement	3.00	0.00	3.00	3.00	0	2.93
Contract Administration	3.00	0.00	3.00	3.00	0	2.96
Administrative Support	1.00	0.25	0.75	1.00	0.33	0.67
<u>Management</u>	<u>1.00</u>	<u>0.25</u>	<u>0.75</u>	<u>1.00</u>	<u>0.11</u>	<u>0.89</u>
Total	16.00	4.75	11.25	15.25	4.62	10.62

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-030
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

In reference to the response to question 1-29, please specifically identify to which companies and business segments Mr. Errichetti's time was allocated during 2009.

Response:

36% of Mr. Errichetti's productive time was booked to the PSNH generation segment with the vast majority of the remaining time booked to the Connecticut Light and Power Company.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-031
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference STAFF-01, Q-STAFF-026 from Docket DE 09-091. Please specifically identify to which companies and business segments Mr. Labrecque's time was allocated for 2008 and, to the extent applicable, for 2009. As part of the response, please explain any differences in the time allocations between Mr. Errichetti and Mr. Labrecque.

Response:

In 2008 Mr. Labrecque spent 94% of his time on PSNH matters. While with Wholesale Power Contracts in 2009, he spent 76% percent of his time on PSNH work. In addition, after leaving Wholesale Power Contracts, Mr. Labrecque kept responsibility for forecasting and managing PSNH's ES renewable portfolio standard requirements, retained responsibility for Wholesale Power Contract's involvement in the 2008 Stranded Cost Reconciliation process, and provided consulting services to Wholesale Power Contracts. Mr. Errichetti spent 18% of his time in 2008 on PSNH matters and 36% of his time on PSNH matters in 2009. While Mr. Errichetti increased his direct involvement in PSNH matters in 2009, as evident in response to Staff-01, Q-Staff-029 other persons in Wholesale Power Contracts also shifted their efforts such that while total FTEs dropped 0.75, FTEs on PSNH matters dropped 0.13.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-032
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. Please provide and describe separately PSNH's efforts to mitigate customer costs related to outages MK-2-E, Newington 1-C, and Newington 1-D. As part of your response, please quantify the financial results of your efforts.

Response:

As a result of negotiations with Siemens on various contracts associated with the Merrimack HP/IP replacement and repair project, as well as the Newington exciter replacement, PSNH pursued various efforts to gain value for customers. Rather than negotiating individual items to provide value to customers, which would have produced multiple smaller credits on multiple contracts for work at both stations, PSNH and Siemens were able to reach a global agreement on a smaller number of key items that provided significant value in the form of lower cost. These negotiations resulted in a benefit to customers through reduced costs that reduced the Energy Service rate.

Value was obtained from Siemens Power Corporation as follows:

- For the MK 2 Mobile Exciter, PSNH negotiated reduced rental payments from October 2008 to April 2009 totaling \$784,000 .
- PSNH negotiated the continuation of the 10 year warranty on the refurbished HP/IP turbine equivalent to what was to be provided on the originally installed, new HP/IP turbine. The continuation of this equivalent warranty was achieved at no additional cost. The value is subjective, but could be worth millions due to the high costs to companies for managing large risks.
- PSNH negotiated the reinstatement of the performance guarantees on the refurbished HP/IP turbine equivalent to those in place on the originally installed equipment. Again the value is subjective, but is worth many millions over the life of the equipment.
- PSNH retained performance payment to Siemens until actual demonstration was made. The payments to be made for demonstration of performance guarantees were requested by Siemens upon obtaining initial performance data on initial start-up in May 2008. PSNH insisted on retention of these funds totaling over \$7 Million, until actual demonstration was achieved in December 2009. Customers benefited by a 19 month delay in this payment without any interest fees. The value of this could approach \$1 million.

While it is not possible to specifically quantify the financial impact of the above, PSNH estimates that the value could be as much as \$10 million.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-033
Page 1 of 4**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. Please provide a copy of the PSNH evaluation regarding the need for isophase bus duct heaters at Merrimack and Schiller stations.

Response:

Merrimack and Schiller Stations have completed an evaluation of their bus duct configurations as recommended. Attached is a copy of the evaluation completed by PSNH regarding the need for bus duct heaters at Merrimack and Schiller Stations.

Interoffice Memorandum

To: Lynn Tillotson – Technical Business Manager
From: Dave Cribbie – Associate Engineer
Subject: Bus Duct Heater Evaluation at MK and SR
Cc: File 2009 – PUC Recommendation #2 Response
PUC Order 25060 (12/31/09)

PUC - Recommendation:

This second recommendation relates to the iso-phase bus duct failure at Wyman-4 due to malfunctioning heaters. Merrimack and Schiller stations do not have heaters in their iso-phase bus ducts due to their initial base load design and operation. Liberty recommends that due to shifting market conditions that can change the operation of both Merrimack and Schiller, that PSNH evaluate the need for heaters in their iso-phase bus ducts.

PSNH Investigation:

PSNH consulted with Eaton Electric. The purpose of the consultation was to evaluate the potential of a similar bus failure from occurring at Schiller or Merrimack Station. Eaton was familiar with the Wyman incident as they responded to the emergency call and made the necessary repairs to restore the bus. It was noted that the failure at Wyman occurred on a long run of non-segregated bus, not on the iso-phase. The repairs included, drying out the run of bus, locating the broken heater string, repairing the heaters, and re-energizing the bus. The root cause for the problem determined by Eaton was the heater string failed after the first section outside. The contributing cause was that the Wyman bus is configured such that there are very long runs (200 ft) of non-segregated bus. The bus bars associated with a non-segregated bus are all housed within a single enclosure.

Below is a description of the bus configurations at Schiller and Merrimack, as well as the findings of this evaluation. The determination supported below is that the investigation indicates that Merrimack and Schiller are low risk for bus duct failures similar to what occurred at Wyman for two reasons.

- 1) Merrimack and Schiller do not have long runs of non-segregated bus; and
- 2) Non-segregated bus is limited at the station and cleaned and tested periodically.

Schiller:

TB-1 breaker to the CT: This bus is mostly cable. There is a short section at either end of the cable run where a connection is made to non-segregated bus duct. The bus on the combustion turbine end is located in the heated CT compartment. The bus duct on the breaker end is within the plant.

TB-2: Is also mostly cable from the transformer to the breaker. There is a short section of non segregated bus duct on the breaker end of the cable run. The section of bus duct is within the plant.

TB-140: Feeds directly into the top of the switchgear house thru bushings in the roof.

Units 4, 5, and 6 have iso- phase bus from the generator output to the main transformer; these are short runs and are inspected and cleaned periodically. Iso- phase is extremely more robust and better than non-segregated bus. Non-segregated bus is inherently bad for parallel paths and tracking due to the many insulation systems. (phase to phase and phase to ground). Iso-phase is non insulated bus mounted on stand-off insulators. The iso- phase at Schiller leaves the generator and goes outside to the main transformer, the iso-phase bus duct also drops down and houses the potential transformers, lightning arresters, capacitors, and the load break switches on units 5 and 6. Unit 4 no longer has a load break switch. The load break switch acts as a disconnect switch for the running transformers. From the load side of the load break switch a cable runs out to a short piece of non-segregated bus between each RT-L and RT-H transformers.

Running transformer high side: Between each pair of transformers is a short section of non segregated bus work. The cables that feed the transformers leave the load break switches and run out through conduits that rise out of the ground where the cable then attaches to the non-segregated bus about in the middle of its span, except for unit 4 where the cables come from the top, but they still attach to the bus work about mid span.

Starting transformer high side: The high side of the starting transformers are configured much the same as the running transformers. The major difference is that the cables that feed them originate at a breaker rather than a load break switch.

Running and starting transformer low side: Cables leave the low sides of the running and starting transformers. These cables run most of the way to the switchgear. Near each section of switchgear the

cables transition to non-segregated bus duct. The running transformer low side bus ducts are very short. The starting transformer bus ducts are considerably longer as they run from unit 4 through unit 5 and end at unit 6.

The CT generator is connected to the generator breaker via a non-segregated bus duct. This duct is fairly short, maybe 10 feet in length. There is another non segregated bus duct between the breaker and the transformer. This bus duct is approximately 15 feet long.

Merrimack:

The bus duct configuration at Merrimack is similar in that there are limited sections non-segregated bus duct.

Determination:

The determination of the investigation is that Merrimack and Schiller Stations are low risk for bus duct failures similar to the Wyman failure for two reasons:

- 1) Merrimack and Schiller do not have long runs of non-segregated; and
- 2) Non-segregated bus is limited at the station and cleaned and tested periodically.

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Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-034
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**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. PSNH was to review its procedures regarding when a low oil alarm is received by the dispatcher. Please provide a copy of that review and a copy of any changes made to PSNH procedures in that regard.

Response:

Attached is the summary of the hydro personnel's review of the low oil alarm procedure when received by the dispatcher.

Interoffice Memorandum

To: Lynn Tillotson – Technical Business Manager

From: Dave Cribbie – Associate Engineer

Subject: Low Oil Condition

Cc: File 2009 – PUC Recommendation Response
PUC Order

PUC Request:

Reference Stipulated Settlement of Docket DE 09-091, Section IIA. PSNH was to review its procedures regarding when a low oil alarm is received by the dispatcher.

PSNH Response:

A review of this alarm/protection scheme associated with the lube oil system and associated equipment was completed by the Hydro Electrical Foreman. The determination was that no procedural changes will be implemented to this low oil alarm at this time.

However, the Hydro Electrical Group has been upgrading this protection system during major overhauls by installing thermal switches with dual sensing capability on the bearing. This effort started late in 2008. One sensor will trigger an alarm and prompt a field investigation and the second sensor if tripped will initiate a controlled shutdown. The current configuration is set up such there is no alarm for a no-oil condition, but there is double protection for the equipment associated with the lube oil system.

The double protection consists of the low oil alarm and high bearing temperature. The set points for the low oil alarm were reviewed and determined to be adequate. Both of these protection schemes are independent of one another and will initiate controlled shutdown of the unit if tripped. This configuration will reduce the possibility for a no oil situation which could result in equipment damage from occurring. For example if the low oil switch failed and resulted in a no oil condition the bearing temperature would reach its trip point and initiate a controlled shutdown.

In addition to the protection review a review of past outages for the period 2007 through 2009 was completed. There were three outages that could be attributed to a low oil condition.

- 1) 2007 – Amoskeag (2E);
- 2) 2007 – Amoskeag (F);and
- 3) 2008 Garvins Falls (4D).

The 2007, Amoskeag outages are related and the cause was identified as a faulty switch and repairs were made. The Garvins falls outage was caused by the return oil pump failing which resulted in a low oil condition the necessary repairs were made and a new pump was installed.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-035
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**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A and PSNH filing to the NHPUC dated May 7, 2010 regarding interconnection analyses for all hydro units and combustion turbines connected at lower voltages. Please make a copy of these studies available for review at PSNH's Manchester, NH office.

Response:

Consistent with PSNH's May 7, 2010 filing, analyses and studies are available for review at PSNH Energy Park in Manchester, NH. Please contact Lynn Tillotson at 634-2440 to arrange a date and time for reviewing the documents.

**Public Service Company of New
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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-036
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A and PSNH filing to the NHPUC dated May 7, 2010 regarding interconnection analyses for all hydro units and combustion turbines connected at lower voltages. Please explain why the Schiller CT was not included in your evaluation as it connects to the lower voltage PSNH system.

Response:

The CT at Schiller station is unique because the power generated has the capability to support three systems, each with a different a voltage capacity. The following is a brief description of the three systems the CT can support:

- 1) Feed TB-2 transformer and the voltage is stepped up to 115 kv (this is the normal set-up.); or
- 2) The CT generates 13.8 kv out of the generator and this can be fed directly into the station. From there it can either feed station service (black start); or
- 3) With switching, the power could be directed through TB-1 transformer and stepped up to 34.5 kv.

This referenced analysis evaluated the Schiller CT as a Bulk Power System asset, rather than a low voltage system asset. In May 2009, the NERC/ NPCC requirements changed. The changes required generation within NPCC that is greater than 20 MVA and connected to a substation with a voltage rating greater than 100 kv to be registered as a Bulk Power Asset and subject to NERC standards. This change required the CT to be registered as bulk power system asset because the CT has a 25 MVA capacity and the ability to tie into the 115 kv system. Registering as a bulk power system asset requires the facility to comply with NPCC standards including Directory III- Maintenance Criteria for BPS Protection. As required by this standard PSNH identified critical relays and implemented a comprehensive test program to comply with these standards. In March 2010, NPCC completed an audit of the NERC standards including Directory III and found no deficiencies. Reference document (GEN-8114).

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-037
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A and PSNH filing to the NHPUC dated May 7, 2010 regarding a relay testing program for all hydro units and combustion turbines connected at lower voltages. Please make a copy of PSNH Generation Protection System Maintenance and Testing (GEN-8114) and the PSNH Hydro Protective Relay Test Procedure available for review at PSNH's Manchester, NH office.

Response:

Consistent with PSNH's May 7, 2010 filing, a copy of PSNH Generation Protection System Maintenance and Testing (GEN-8114) and the PSNH Hydro Protective Relay Test Procedure are available for review at PSNH Energy Park in Manchester, NH. Please contact Lynn Tillotson at 634-2440 to arrange a date and time for reviewing the documents.

**Public Service Company of New
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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-038
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A and PSNH filing to the NHPUC dated May 7, 2010 regarding a relay testing program for all hydro units and combustion turbines connected at lower voltages. Please explain in detail all differences between the relay testing programs for the combustion turbines at Merrimack and Schiller and the relay testing program used for White Lake and Lost Nation.

Response:

The relay testing programs for the combustion turbines at Merrimack, Schiller, White Lake and Lost Nation are similar in that they all adequately verify the relays being tested are in good working order and the settings associated with the relay are within tolerance. The major difference is that the Merrimack and Schiller programs are required by NERC/NPCC and are set-up to demonstrate compliance with GEN -8114. Documentation of the test results is a controlled document and is required to be reviewed and signed – off by designated PSNH employees. This documentation is considered evidence and is auditable by NERC/NPCC. The Hydro relay test procedure is specific to the hydro units. Testing at the hydro facilities is generally completed by the hydro electrical group and the hydro procedure is set-up as a step by step procedure on how to test relays. These procedures are in reference documents - GEN-8114 and PSNH Hydro, Protective Relay Test Procedure.

Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. PSNH was to perform an evaluation of procuring spare critical generator and turbine components or entering into contractual arrangements with other parties to reduce outage risk. By unit, please identify what PSNH determined to be a critical generator or turbine component and how that determination was made.

Response:

PSNH believes its turbine and generator rotors are all very important and provide customer value. While some elements are operated in a base-load fashion, others cycle or are used for peaking service. Regardless of the role a unit plays in the fleet, each contributes to the goal of avoiding high cost exposure to customers, and therefore are considered critical.

To assess either the procurement of spare rotors or partnering with suppliers or other users, PSNH has had lengthy discussions with Siemens Power Corporation representatives. Based on that dialogue, we have confirmed that:

- Few utilities have spare steam turbine or generator elements; even some who do are upgrading them to newer design to gain efficiency.
- Costs can run into multi-million dollars and proper storage, in controlled atmospheres, would have to be a consideration.
- Some items are in "seed" programs where they can fit in many different units. These types of programs exist for certain design exciters, turbine extension shafts, and generation rotors.
- The industry and major suppliers are improving their ability to fabricate steam turbine blades (i.e. 2 weeks in an emergency situation versus 12 - 20 weeks otherwise), to provide on-site rapid repair of generator stators, etc.
- PSNH currently maintains these spare elements: MK2 extension shaft, Schiller LP rotor, and MK2 generator stator coils.
- PSNH has a machine shop to support its turbine, generator, and other plant needs. This modest size group provides high value to assist in quick shop and field work. This is not a typical resource with other utilities.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-040
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. PSNH was to perform an evaluation of procuring spare critical generator and turbine components or entering into contractual arrangements with others to reduce outage risk. Please make a copy of all evaluations or contractual arrangements available for review at PSNH's Manchester, NH office.

Response:

Based on technical and commercial discussions with Siemens Power Corporation representatives, the knowledge learned and details obtained is summarized in the response to Q-STAFF-039. No formal written evaluations or contracts were made or put in place.

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Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-041
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. PSNH agreed to adopt Mr. Cannata's recommendation that contracts with manufacturers of major components hold the manufacturer accountable for unreasonable delays and that transportation plans are in place prior to shipment. Please explain what actions PSNH has taken in that regard and make a copy of all such contractual arrangements available for review at PSNH's Manchester, NH office.

Response:

PSNH engaged Siemens Power Corporation representatives to review transportation practices and policies with the following points highlighting the outcome.

- Outage schedules are applied for and approved by ISO-NE. Once confirmed, the outage work plan and schedule is finalized. If major items are to be shipped off-site for repairs, each item's departure and return date is determined once the repair plan is committed to by each vendor.
- Each repair plan is subject to change, potentially changing the return date, based on actual condition of each item upon detailed shop inspection.
- Weights and widths are confirmed and historical knowledge is factored into the schedule and work plan.
- To the greatest extent possible, if certain tasks can be performed in the field vs. in a shop, the work is kept on-site.
- Professional and experienced logistical and transportation experts are used who know where shipping restriction risks may occur.
- PSNH does a very good job paying attention to this topic vs. other generators in New England.

•
As a result of these discussions, the following changes have been made:

- Planned major maintenance outages, where an item is planned to go off-site and where such items are either critical path or close to critical path, will have the start day of the work specifically selected to optimize transportation logistics. Rather than start, as is typical, on a Saturday, the transportation days will be targeted to minimize delays.
- Formal dialogue between PSNH and the vendor's transportation department, as warranted, will be conducted to seek a shortest schedule, with contingencies considered.

No contractual arrangements were necessary to be executed.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-042
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section II.A. PSNH was to perform its own analysis of extensions to maintenance cycles rather than relying solely on the manufacturer's recommendations associated with major components. Please make a copy of any evaluations made available for review at PSNH's Manchester, NH office.

Response:

PSNH continuously makes assessments of its maintenance needs associated with its generating stations. PSNH factors in equipment conditions based on last repairs, current condition, historical knowledge, non-destructive examination, etc. Manufacturer's technical input is also a key element in planning work, but does not necessarily dictate the timing of the scope. PSNH's managers and equipment specialists factor their experience into the decision of scope in any given year. Another element that also influences planned work is the amount of starts/stops, as well as the hours of operation of the unit or equipment under review. The target is to complete repairs when needed, not sooner or later, based on the full and ongoing knowledge of all data and technical analysis performed.

There are no written evaluations or analyses available.

**Public Service Company of New
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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-043
Page 1 of 3**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Stipulated Settlement of Docket DE 09-091, Section III.D. PSNH was to establish a protocol for transmission and distribution workers performing activities in substations containing PSNH generating units. Please provide a copy of that protocol and a listing of all the units to which it applies.

Response:

Attached is a copy of the updated work practices implemented at all hydro facilities.

Interoffice Memorandum

To: Lynn Tillotson – Technical Business Manager

From: Dave Cribbie – Associate Engineer

Subject: T&D Work Protocol

Cc: File 2009 – PUC Recommendation Response

PUC - Recommendation:

Establish a protocol for transmission and distribution workers performing activities in substations containing PSNH generating units

PSNH Response:

Beginning in 2009, PSNH Generation implemented new work practices to better control access to unmanned hydro facilities. The purpose of the new work practice is to put in place additional measures to ensure proper communication between the PSNH groups occurs prior to initiating work. Better controlling access to hydro generating facilities is relevant because in most cases substation controls are located in the powerhouse. Attached is a copy of the new work practices.

Hydro Generation Station Access

Access to the PSNH Hydro generation facilities is under the exclusive control of Hydro management. Card readers are in use at all hydro generation stations and the system is monitored continuously by Pelmac co. for unauthorized entry when station personnel are not present. If an NU employee requires unescorted access to a hydro, the employee must make a request for access to their supervision. The supervisor must then gain approval from the Hydro Station Manager, O&M manager or their designee. Reason for access must be stated. Access is typically granted to employees that need entry to service equipment located at shared facilities (substation controls located in a generation building) but each request will be decided on an individual basis. After receiving written notice that the approval has been granted the hydro security person will then, request a badge from the PSNH security officer, activate and deliver the access badge. Non-employees will not be considered for unescorted access.

In addition PSNH access to substations is strictly controlled in order to prevent unauthorized entry and to establish proper communication between entrants, ESCC and the control room. PSNH maintains the Substation Key and Access policy (SH-6036) this procedure is intended to control access to all PSNH substations including those located at generating stations. This policy affects all NU employees and indentifies three distinct work classifications each requiring a certain level of training:

Type I – Observation, Inspection and Simple Deliveries.

Type II – Non- Electrical physical work – Examples grounds maintenance & snow removal.

Type III – Electrical Work Physical & Non-Physical – Example electrical maintenance and testing

Regardless of the type of work to be performed, notification to the ESCC and the Generating Station's Control Room is required prior to entering and upon exiting the substation. The intent of the notification is to inform potentially affected personal of the scope of work to be performed within the substation. Better communication between the PSNH groups will reduce the potential for incidents.

In addition when tagging is necessary to perform work within a generation substation at or beyond the point of demarcation a Transmission Outage Application (TOA) needs to be submitted for thorough review to ensure safety and reliability are not compromised. The (TOA) process must be completed and approved in accordance with PSNH procedure OP-0003 prior performing work.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-044
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please make the 5-year and 10-year capital and O&M budgets for Merrimack, Schiller, and Newington stations and the hydro units and combustion turbines available for review at PSNH's Manchester, NH office.

Response:

The 5-year and 10-year capital and O&M budgets for Merrimack, Schiller and Newington Stations and the hydro units and combustion turbines are available for review at PSNH Energy Park in Manchester, NH. Please contact Lynn Tillotson at 634-2440 to arrange a date and time for reviewing the documents.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-045
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please make the 2009 budgeted and actual capital and O&M expenditures for Merrimack, Schiller, and Newington stations and the hydro units and combustion turbines as a group available for review at PSNH's Manchester, NH office.

Response:

The 2009 budgeted and actual capital and O&M expenditures for Merrimack, Schiller and Newington Stations and the hydro units and combustion turbines are available for review at PSNH Energy Park in Manchester, NH. Please contact Lynn Tillotson at 634-2440 to arrange a date and time for reviewing the documents.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-046
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please provide detailed outage summaries of the scheduled maintenance outages that took place for Merrimack, Schiller, and Newington stations in 2009 (Outage books). Please make this information available for review at PSNH's Manchester, NH office.

Response:

The outage summaries (outage books) for the scheduled maintenance outages that took place at Merrimack, Schiller and Newington Stations in 2009 are available for review at PSNH Energy Park in Manchester, NH. Please contact Lynn Tillotson at 634-2440 to arrange a date and time for reviewing the documents.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-047
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

For 2009, please list the events caused by PSNH/NU distribution and/or transmission personnel or their contractors which caused a trip of any generator. For each such event, please indicate whether replacement power was required or not, the date of occurrence, and the party responsible. If the event was caused by a contractor, please also indicate whether PSNH supervision was present. Do not list as part of your response events caused by equipment failure, faults, lightning, etc.

Response:

In 2009 there were no events caused by PSNH/NU distribution and/or transmission personnel or their contractors which caused a trip at Merrimack, Schiller, Newington Stations or at any hydro unit. However, the Jackman GSU failure which occurred in 2008, required a 9-day planned outage in 2009 to tie in new equipment. In addition to the outage, in some instances during 2009, Jackman hydro was running at a constrained capacity. The cost associated with both the lost generation due to the constrained capacity and the 9-day outage was reimbursed as part of an insurance settlement agreement.

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-048
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:
Reference Smagula testimony, page 2, lines 23-27. Please provide in tabular form the PSNH fleet generation from 2004 through 2009 calculated consistent with the 3,788,627 MWH stated for 2009.

Response:
Below is the PSNH fleet net generation from 2004 through 2009.

	2004	2005	2006	2007	2008	2009
Net Generation	6,197,017	5,637,286	4,579,261	4,890,326	4,366,468	3,788,627

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-049
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**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:
Reference Smagula testimony, page 2, lines 23-27. Please provide in tabular form the PSNH fleet generation availability for the 30 days of highest market prices from 2004 through 2009 consistent with the 97.4% stated for 2009.

Response:
Below is the PSNH fleet availability for the 30 days of highest market prices for 2004 - 2009.

	2004	2005	2006	2007	2008	2009
Availability	97.9	94.3	97.6	99.1	98.0	97.4

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-050
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**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Smagula testimony, page 2, lines 23-27. Please provide a listing of the units that PSNH used in its fleet calculations.

Response:

The fleet calculations for total generation include the 6 steam plants, as listed below, plus the 9 hydro stations and the 5 combustion turbines. The availability during the 30 highest priced days include the 6 steam plants listed below.:

Newington
Merrimack-1
Merrimack-2
Schiller-4
Schiller-5
Schiller-6

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-051
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:
Reference Smagula testimony, page 3, lines 16-17. Please provide in tabular form the PSNH fleet generation equivalent availability from 2004 through 2009 calculated consistent with the 84.4% value stated for 2009.

Response:
Below is the PSNH fleet equivalent availability from 2004 through 2009.

	2004	2005	2006	2007	2008	2009
PSNH Fleet EAF	89%	85%	88%	91%	85%	84%

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Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-052
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Smagula testimony, page 4, lines 8-11. Please explain how PSNH determines the balance between necessary spending in critical areas and the overall cost of production. Does this balancing mean that required capital or maintenance work would not be performed to meet cost goals? Please explain in detail what controls determine actual versus budgeted levels of expenditures.

Response:

PSNH Generation has goals that are consistent with providing customers low cost generation from reliable plants that are operated safely, efficiently and meet environmental requirements. Generation receives sufficient funds to satisfy those goals. An appropriate balance of these efforts is maintained by establishing not only cost goals, but also goals related to reliability, availability and other performance goals. If projects are delayed to meet cost goals, the reliability and availability goals can be negatively impacted. Therefore, PSNH maintains an appropriate focus on the collective goal of maximizing customer value.

PSNH Generation management reviews budget requests in the third quarter of each year for the upcoming calendar year as well as projections for future years. Budget requests associated with the repair or replacement of critical components are typically planned well in advance to the start of the project and are included in the 5 year plan. Budgeted expenditures are developed with the intent to cover the cost of the project as it is originally defined. Actual expenditures refer to the actual cost which may often vary from the budgeted value. The variances could be greater than or less than the original budgeted value due to updated pricing, change in scope, etc. When considering replacement or repair options for critical components a review is completed to determine which option is in the best interests of PSNH's customers. PSNH Generation makes budget determinations based on maintenance records, test data, consulting experts, past experiences, and other generating facilities' experiences. This process is a balanced approach and designed to maximize the use and value of each component. As the review and work plans are finalized, budget estimates get updated with vendor quotes and more refined details. Late in the year, budgets are finalized with the latest available information. During the following calendar year, planned work can still change if/when new information is obtained, or there is a change in priority as new work becomes identified, or other dynamics require the work plan to be updated. Also, refinement takes place on actual versus planned scope to focus on expending only what is needed to meet customer needs and goals.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-053
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:
Reference Smagula testimony, Bates page 142, PSNH Steam Unit Availability. Please supply annual figures for the units listed in the availability table.

Response:
Below are the annual availability numbers consistent with the Steam Unit Availability monthly availability table on page 142 of Mr. Smagula's testimony.

	Merrimack	Merrimack	Newington	Schiller	Schiller	Schiller
	Unit 1	Unit 2	Unit 1	Unit 4	Unit 5	Unit 6
2009	94.6%	59.4%	94.2%	94.8%	86.5%	84.8%

Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference Smagula testimony, Bates page 142, PSNH Steam Unit Availability. Please recalculate the availability table as shown but excluding the four planned maintenance outages. As part of your response, please also include annual figures for the units listed in the availability table.

Response:

Below is the Steam Unit Availability table provided in the Smagula testimony recalculated to exclude the four planned maintenance outages, specifically the Merrimack 2 outage in August to December, the Newington outage in March, the Schiller 5 outage in April, and the Schiller 6 outage in September/October. The corresponding annual figure has also been included.

**PSNH Fossil Steam Unit Availability
January 2009 through December 2009
WITH PLANNED MAINTENANCE OUTAGES REMOVED**

	Merrimack Unit 1	Merrimack Unit 2	Newington Unit 1	Schiller Unit 4	Schiller Unit 5	Schiller Unit 6
January	100.0%	100.0%	99.8%	83.4%	85.1%	100.0%
February	100.0%	75.4%	100.0%	100.0%	100.0%	100.0%
March	100.0%	100.0%	100.0%	87.3%	90.9%	100.0%
April	85.1%	86.4%	100.0%	100.0%	76.9%	98.4%
May	97.2%	84.0%	100.0%	100.0%	99.8%	86.1%
June	100.0%	93.1%	98.9%	91.8%	100.0%	96.7%
July	90.9%	94.7%	100.0%	96.7%	97.5%	85.9%
August	100.0%	99.5%	99.5%	100.0%	100.0%	76.5%
September	100.0%	NA	100.0%	100.0%	100.0%	100.0%
October	86.5%	NA	81.3%	100.0%	84.2%	97.5%
November	98.1%	NA	99.3%	100.0%	83.3%	93.0%
December	89.0%	99.8%	94.4%	83.2%	85.9%	99.9%
Annual	94.60%	91.30%	97.40%	94.80%	90.90%	94.40%

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-055
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference Smagula testimony, Bates page 145, PSNH Steam Unit Availability. Please explain separately the reason(s) for the decrease in unit capacity factor for Schiller-4 in 2009. Include in your response the fact that there was no annual maintenance outage for this unit in 2009.

Response:

Schiller #4 had an equivalent availability factor (EAF) of 95% in 2009. The unit typically completes scheduled outages on an 18 month cycle, which resulted in no annual overhaul scheduled for the unit in 2009. Schiller #4's capacity factor was just less than 60%. This capacity factor reflects the fact that the unit was available for the vast majority of the year with only 17.8 days of forced outage time and for the remainder of the year varied its load or was on stand-by consistent with lower electrical demand and energy costs in the region. Schiller #4 is able to operate efficiently between 25 - 45 MW and has a low load minimum of 13 MW.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-056
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please make available for review at PSNH's Manchester, NH office the 2009 NERC Generating Availability Data System (GADS) data for each unit for which PSNH compiles the data.

Response:

The 2009 NERC Generating Availability Data is available at PSNH Energy Park in Manchester, NH. Please contact Lynn Tillotson at 634-2440 to arrange a date and time for reviewing the documents.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-057
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:
Please supply the annual dollar value of rent received from the storage of Seabrook Station parts at Newington for the years 2005 through 2009.

Response:
Listed below is the annual dollar value of rent received from the storage of Seabrook Station parts at Newington Station for the years 2005 through 2009.

	2005	2006	2007	2008	2009
Rent (\$)	\$25,565.52	\$25,565.52	\$25,565.52	\$29,619.12	\$32,452.64

Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff

Question:

Please identify any discovery response PSNH filed in DE 09-180 that relates to the topics of capacity or energy planning, unit operation, or unit outages.

Response:

The listed data requests were filed in DE 09-180 by witnesses Errichetti, White, and Smagula and relate to topics of capacity, energy planning, unit operation or unit outages:

<u>SET</u>	<u>Question</u>
Staff 01	Staff 009
Staff 01	Staff 010
Staff 01	Staff 012
Staff 01	Staff 013
Staff 01	Staff 016
Staff 01	Staff 019
Staff 01	Staff 020
OCA 01	OCA 010
OCA 01	OCA 013
OCA 02	OCA 003
Trans 01	TC 001
Trans 01	TC 006
Trans 01	TC 009
Trans 01	TC 013
Trans 01	TC 016
Trans 01	TC 022
Trans 01	TC 023
Trans 01	TC 024
Trans 01	TC 025
Trans 01	TC 026
Trans 02	TC 009
Trans 02	TC 010
Trans 03	TC 004
Trans 03	TC 005
HD-01	RR 002

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-01

**Dated: 06/16/2010
Q-STAFF-059
Page 1 of 2**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

For each of the fossil units, please provide the heat rates for the years 2005 – 2009. Please also describe actions taken during those years to improve the heat rates and/or otherwise improve operational efficiencies.

Response:

Below are the average annual heat rates for years 2005 - 2009. The full load heat rate, often a better indicator of efficiency improvements, is also provided for 2009. Efforts taken to maintain and improve heat rates over the years include the following:

- Routinely completing boiler tuning and optimization
- Installing more efficient boiler control systems
- Installing more efficient air conditioning at MK and NT
- Installing new high pressure feedwater heaters
- Instituting a new condenser cleaning procedure at MK2
- Increasing the generator H2 purity from 95 to 97% at MK2
- Adding capacitors to the SBAC motor at MK2
- Increasing the generator H2 purity from 97 to 98.5% at MK2
- Increasing Merrimack's compressed air system efficiency by adding a new 100 psi air compressor and 100 & 300 psi receiver tanks.
- Improving lighting efficiency by changing out lights at Newington, Merrimack, and Schiller Stations.
- Reducing MK2 air heater leakage by retubing portions of the air heater.
- Replacing the MK 2 HP/IP turbine
- Reducing the MK2 air heater cold end average to improve overall efficiency
- Reducing SBAC energy consumption by 5% by upgrading the SBAC controls
- Installing new air compressors
- Replacing the air ejector at Schiller 6

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-002
Page 1 of 3**

**Witness: David A. Errichetti, Jody J. TenBrock
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to STAFF 1-3. Please explain why the Newington and Schiller-6 outages have a \$0 replacement power cost (RPC). Does an outage with \$0 RPC mean that the outage actually had an economic benefit? If so, please provide the economic benefit of the outages in this response with \$0 RPC as well as in the response to STAFF 1-2. If there was not an economic benefit, please explain the circumstances that cause there to be \$0 RPC. Please confirm that the methodology used is valid.

Response:

The planned Newington 3/6-18/09 and planned Schiller 6 8/28-10/4/09 outages have \$0 RPCs because the analysis showed that, on balance, the units would not have run during those outages because there were less expensive alternatives available to serve ES load, such as spot purchases. With respect to Newington this assessment is simplified by comparing Newington's dispatch price to LMPs prior to determining whether Newington's generation would be below or above the load line. As such, there is no explicit estimate of how much was saved by not running Newington instead of taking the planned outage. For the coal units and Schiller 5 the unit is assumed to operate and the cost to serve ES load is calculated with and without the unit in question running. Thus we estimate that had Schiller 6 operated instead of being on its planned outage the cost to serve ES load would have been higher by \$761k.

The following table is the same as that provided in response to Staff-01, Q-Staff-002 expanded to show the negative replacement power costs for the Schiller 5 and 6 (note the May 4 through May 8 outage should have been labeled Schiller 6) consistent with the foregoing discussion. Also, consistent with the Newington discussion above the Newington 10/6-11/09 outage still indicates \$0 RPC.

The methodology for the calculation of replacement power costs for outages as explained in Staff-01, Q-Staff-002 and further detailed above is valid and is consistent with the how replacement power costs have been calculated since the FPPAC was in effect.

Merrimack 1					
<u>Date</u>	<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
04/20/2009	(40)	0	0	0	(40)
04/21/2009	1,239	0	0	1,350	(110)
04/22/2009	6,505	26,261	0	3,049	(22,804)
04/23/2009	8,420	21,857	0	2,485	(15,922)
04/24/2009	328	0	0	329	(1)
Total	16,452	48,118	0	7,213	(38,879)
07/21/2009	(3,790)	30,516	0	0	(34,306)
07/22/2009	(1,324)	46,691	41,577	106	(89,699)
07/23/2009	31,435	11,638	0	22,554	(2,758)
07/24/2009	6,884	564	0	6,352	(32)
Total	33,204	89,410	41,577	29,012	(126,796)
10/26/2009	19,133	20,098	0	7,766	(8,730)
10/27/2009	43,095	29,302	0	30,621	(16,827)
10/28/2009	44,619	32,281	0	29,267	(16,930)
10/29/2009	44,139	20,527	0	35,724	(12,112)
10/30/2009	38,213	6,835	0	35,250	(3,872)
Total	189,199	109,043	0	138,627	(58,471)
12/01/2009	17,277	47,210	0	0	(29,933)
12/02/2009	30,144	105,554	0	9,177	(84,586)
12/03/2009	21,174	57,370	58,702	0	(94,898)
12/04/2009	17,738	73,423	40,605	0	(96,290)
12/05/2009	(651)	11,341	0	0	(11,991)
Total	85,682	294,897	99,308	9,177	(317,699)

Merrimack 2					
<u>Date</u>	<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
02/12/2009	36,151	99,851	19,559	0	(83,258)
02/13/2009	98,370	98,916	213,626	0	(214,172)
02/14/2009	96,761	154,272	148,089	0	(205,600)
02/15/2009	99,619	141,200	146,820	0	(188,401)
02/16/2009	78,894	302,398	0	0	(223,504)
02/17/2009	14,875	57,095	0	0	(42,221)
Total	424,670	853,733	528,094	0	(957,157)
02/25/2009	25,031	114,496	0	0	(89,465)
02/26/2009	60,361	164,104	124,268	0	(228,011)
02/27/2009	23,444	77,572	97,840	0	(151,968)
Total	108,836	356,172	222,107	0	(469,444)
04/02/2009	468	3,389	0	0	(2,921)
04/03/2009	48,201	54,800	0	9,320	(15,920)
04/04/2009	43,407	112,901	0	4,367	(73,861)
04/05/2009	36,847	100,654	0	2,663	(66,470)
Total	128,923	271,745	0	16,350	(159,173)
05/11/2009	26,460	45,861	0	2,463	(21,864)
05/12/2009	64,109	131,653	0	1,373	(68,917)
05/13/2009	61,499	129,440	0	1,726	(69,666)
05/14/2009	63,562	143,329	0	2,573	(82,340)
05/15/2009	79,908	150,406	0	234	(70,733)
05/16/2009	46,480	78,527	0	1,829	(33,876)
Total	342,017	679,216	0	10,197	(347,397)
06/26/2009	73,294	24,108	0	64,641	(15,455)
06/27/2009	49,675	54,563	0	22,328	(27,217)
06/28/2009	23,071	21,261	0	12,323	(10,512)
Total	146,040	99,932	0	99,292	(53,184)

Newington					
<u>Date</u>	<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
10/06/2009	0	0	0	0	0
10/07/2009	0	0	0	0	0
10/08/2009	0	0	0	0	0
10/09/2009	0	0	0	0	0
10/10/2009	0	0	0	0	0
10/11/2009	0	0	0	0	0
Total	0	0	0	0	0

Schiller 4					
<u>Date</u>	<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
01/05/2009	(649)	4,802	0	89	(5,540)
01/06/2009	(4,117)	49,002	0	0	(53,118)
01/07/2009	(1,788)	48,050	0	0	(49,837)
01/08/2009	4,950	31,818	0	4,185	(31,053)
01/09/2009	9,995	50,987	0	2,441	(43,433)
01/10/2009	20,313	0	0	20,313	0
Total	28,704	184,658	0	27,028	(182,982)
12/08/2009	(4,303)	13,374	0	0	(17,677)
12/09/2009	2,700	2,072	0	3,705	(3,077)
12/10/2009	(1,058)	5,978	0	0	(7,036)
12/11/2009	769	8,971	0	0	(8,201)
12/12/2009	6,160	0	0	6,160	0
12/13/2009	0	0	0	0	0
Total	4,267	30,395	0	9,864	(35,992)

Schiller 5

<u>Date</u>	<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
01/26/2009	20,272	0	0	20,272	0
01/27/2009	31,189	0	0	31,189	0
01/28/2009	23,491	12,803	0	20,814	(10,126)
01/29/2009	1,419	14,311	29,139	135	(42,165)
01/30/2009	8,184	5,048	22,265	3,141	(22,269)
01/31/2009	106	0	0	106	0
<u>Total</u>	84,661	32,162	51,404	75,656	(74,561)
10/01/2009	(4,976)	11,337	0	0	(16,313)
10/02/2009	(15,515)	15,651	0	496	(31,663)
10/03/2009	(11,397)	22,495	0	1,197	(35,089)
10/04/2009	(14,146)	14,482	0	738	(29,366)
10/05/2009	(2,827)	9,846	0	2,004	(14,677)
10/06/2009	(568)	1,631	0	912	(3,112)
<u>Total</u>	(49,430)	75,442	0	5,347	(130,219)
11/20/2009	0	0	0	0	0
11/21/2009	(166)	13,795	0	800	(14,760)
11/22/2009	(7,663)	13,535	0	0	(21,198)
11/23/2009	(840)	8,040	0	485	(9,365)
11/24/2009	(2,029)	9,684	0	421	(12,134)
11/25/2009	0	0	0	0	0
<u>Total</u>	(10,697)	45,054	0	1,705	(57,456)
12/13/2009	3,766	13,422	0	1,638	(11,294)
12/14/2009	2,833	7,062	0	1,064	(5,294)
12/15/2009	1,243	9,450	0	107	(8,315)
12/16/2009	7,198	6,129	0	4,355	(3,286)
12/17/2009	7,267	0	0	7,267	0
<u>Total</u>	22,306	36,063	0	14,431	(28,187)

Schiller 6

<u>Date</u>	<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
05/04/2009	0	0	0	0	0
05/05/2009	(528)	555	0	0	(1,083)
05/06/2009	0	0	0	0	0
05/07/2009	0	0	0	0	0
05/08/2009	0	0	0	0	0
<u>Total</u>	(528)	555	0	0	(1,083)

Total All Units 2009

<u>Total RPC (\$)</u>	<u>Spot Purchases (\$)</u>	<u>Bilateral Purchases (\$)</u>	<u>PSNH Gen (\$)</u>	<u>Avoided Fuel (\$)</u>
1,554,308	3,206,595	942,490	443,902	(3,038,679)

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-003
Page 1 of 2**

**Witness: Robert A. Baumann, Jody J. TenBrock
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to STAFF 1-6. Please provide the supporting calculations for the Schiller coal monthly fuel costs (\$/MWH) and explain why there can be large changes in the monthly fuel costs. Are large swings in the monthly \$/MWH fuel costs due mainly to changes in generation levels? Please also provide the entire table on a \$/MMBtu basis as requested in the original question.

Response:

The attached schedule provides the requested supporting calculations for the monthly fuel costs (excluding wood).

The primary drivers of the swings in fuel costs are the generation levels and the cost of coal that was purchased in 2008.

During 2008, when coal and power markets were at much higher levels, PSNH's coal supplier in Venezuela failed to deliver under the contract. PSNH subsequently solicited for replacement coal using a RFP process. This coal was delivered in June 2009 and was burned, by itself, or as a blend with the existing inventory, primarily in June and August through October 2009. The cost of the RFP replacement contract coal was higher than the average cost of coal in the existing Schiller fuel inventory.

PSNH does not track its fuel cost data in the \$/MMBtu format. Accordingly, that data is not available.

2009 Schiller Fossil Fuel Costs (excl Wood)

	January	February	March	April	May	June	July	August	September	October	November	December
In 000's												
Coal	\$ 2,631	\$ 2,252	\$ 1,892	\$ 2,366	\$ 1,713	\$ 1,737	\$ 911	\$ 2,405	\$ 1,293	\$ 3,284	\$ 1,616	\$ 2,956
Other Fossil Fuels (1)	666	13	161	228	110	1	2	43	151	168	77	24
Allowances	116	114	99	112	86	48	38	77	40	95	92	105
Handling/Residual Costs	408	464	520	734	298	381	230	347	424	660	302	715
Total Schiller Costs excl-wood	\$ 3,821	\$ 2,843	\$ 2,673	\$ 3,440	\$ 2,207	\$ 2,167	\$ 1,181	\$ 2,871	\$ 1,907	\$ 4,207	\$ 2,087	\$ 3,799
Generation MWH	51,610	48,890	51,310	45,297	42,158	26,977	18,937	38,951	19,784	44,423	44,009	54,925
\$ per MWH	\$ 74.05	\$ 58.16	\$ 52.09	\$ 75.95	\$ 52.34	\$ 80.33	\$ 62.38	\$ 73.70	\$ 96.40	\$ 94.71	\$ 47.43	\$ 69.16
Coal in 000's of Tons	25.9	24.2	25.1	22.9	23.0	14.4	10.4	21.3	11.1	22.3	22.7	27.7
Unit Cost of Coal	\$ 101.51	\$ 93.03	\$ 75.43	\$ 103.50	\$ 74.56	\$ 120.32	\$ 87.91	\$ 113.02	\$ 115.97	\$ 147.46	\$ 71.08	\$ 106.65

Note 1-- Oil, gas, and jet fuel

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-004
Page 1 of 2**

**Witness: David A. Errichetti, William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to STAFF 1-8, Supplemental-I. The forecasted capacity factors stated in the response appear to be significantly lower than the historical capacity factors stated in the testimony of Mr. Smagula. Please reconcile the differences by unit. In addition, please explain in detail how PSNH models unit capacity factor between planned outages for supplemental purchases and how it makes supplemental purchases for that unit during the period between planned outages.

Response:

Forecasted capacity factors are based on an historical average of between outage capacity factors. Any specific operational scenarios during the year are reflected and noted as appropriate. Planned overhaul schedules are then included to forecast the annual capacity factor. The table attached illustrates the elements of the 2009 forecast.

For purposes of estimating supplemental energy purchase requirements prior to the start of year, PSNH assumes 100% availability between planned outages, and operation consistent with forecast unit dispatch prices as compared to energy market prices. Historically, supplemental energy purchases have been a function of the gap between the forecast ES load requirement and expected economic generation. All other things being equal planned outages of otherwise economic generation increases supplemental energy purchase requirements. For outages that occur during the year with forewarning, supplemental purchases can be made prior to or during the outage if system conditions warrant such action. For outages that occur during the year without forewarning, supplemental purchases can be made during the outage if system conditions warrant such action but can be limited by uncertainty including outage duration.

Data Request STAFF-02

Dated: 08/13/2010

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	Avg CF Between Outages 2000-08	CF for ES planning in 2009	COMMENT	2009 Planned outage durations	# of between outage weeks	between outage weeks w/ avg CF	equiv annual CF calculated for ES	CF as forecasted
				wks	wks	wks		(%)
MK1	91.2	89	2nd year of 2 yr overhaul cycle	0	52	46.28	89%	88.27
MK2	85.4	86		18	34	29.24	56%	55.66
SR4	77.9	77	no overhaul during the year	0	52	40.04	77%	76.36
SR5	78.0	85	New boiler, early years not indicative of going forward operation	5.5	46.5	39.525	76%	75.73
SR6	79.2	79		5	47	37.13	71%	70.44

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Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-005
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to STAFF 1-9. Please verify that STAFF 1-9 describes the purchases shown in TC 1-2 correctly. If not, please explain any differences.

Response:

Staff-01, Q-Staff-009 correctly describes the purchases shown in TC-01, Q-TC-002 but for one exception: Staff-01, Q-Staff-009 missed an energy purchase made in November, 2008 noted in TC-01, Q-TC-002.

Staff-01, Q-Staff-009 SP01 corrects this oversight in the narrative of 2008 energy purchases for the 2009 ES power supply.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-007
Page 1 of 1**

**Witness: Erica L. Menard
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please supply all economic forecast updates received by PSNH or NU from 1/1/08 through 12/31/09 regarding the health/growth of the US economy.

Response:

As part of a subscription with Moody's Analytics, Inc., PSNH/NU receives copyrighted Precis reports published by Moody's Economy.com for the state of New Hampshire. These reports are prepared by Moody's three times per year.

Copies of these copyrighted materials will be available for inspection at Energy Park in Manchester.

**Public Service Company of New
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Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-008
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please detail all efforts taken by PSNH to mitigate (unwind) continuing downward expectations in energy sales with respect to its committed portfolio during 2009 by month.

Response:

Through the final ES rate setting filing in early December 2008 PSNH's analyses indicated that the supplemental energy purchases already made were, for the most part, still likely going to serve load. Please see the response to Staff-02, Q-Staff-009 for a discussion of how PSNH manages energy purchases surplus to ES energy needs.

In late 2008 PSNH sold 200 MW of supplemental energy purchases for January and February and relied on Newington to meet ES energy requirements during high load / high priced periods. PSNH purchased from the spot market supplemental energy requirements to the extent there were low priced periods where Newington could be utilized as a reserve generation asset

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-009
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

With respect to supplemental purchases that have previously been made, please describe PSNH's strategy(ies) regarding the potential sale of that energy and/or capacity. Does PSNH attempt to sell those commodities in light of changing load requirements or does it prefer to retain them? Please provide the reasoning supporting all strategies.

Response:

With respect to supplemental purchases that have been previously made, PSNH does not have a specific strategy to either retain them or sell them in light of changing load requirements. PSNH retains the flexibility to utilize both approaches. The key items which influence whether existing supplemental purchases should be retained or sold prospectively are:

- Forecasted ES customer load requirements including customer migration levels, historical migration patterns and load uncertainty due to weather, and
- PSNH's generation availability and economics including generation outage uncertainty and utilization of Newington generation in place of supplemental purchases

Ultimately excess energy (relative to PSNH's ES customer load requirements) will be sold either bilaterally or in the spot market. There is no certainty that a decision to make a prospective bilateral sale will result in a higher price than a decision to rely on a spot market sale.

Wholesale Power Contracts department policy, in part, prohibits selling energy purchases if it is done with the expectation that it will be repurchased at a later date at a lower price. Thus energy purchases can only be unwound if PSNH is highly certain that the ES requirement that the purchase was meant to serve no longer exists.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-010
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

At any time during 2009, did PSNH refrain from making additional purchases of supplemental energy to meet its forecasted load requirements as supported by its then current sales forecast? If so, and if the answer to the previous question is that PSNH's strategy is not to resell its supplemental purchases, please reconcile why PSNH is willing to forgo purchases justified by its current sales forecast, but is reluctant to entertain sales regarding same.

Response:

In 2009 PSNH entered into one long term bilateral purchase to provide price certainty during the Merrimack Unit #2 turbine repair outage. The total initial forecasted purchase requirement was 300 MW. PSNH entered into the one bilateral arrangement for 200 MW on January 29, 2009 and planned to make a subsequent additional purchase of 100 MW. However, due to customer migration uncertainty, PSNH did not purchase the additional 100 MW.

Additionally, PSNH reviews its day ahead sales forecast and determines whether next day supplemental purchases are needed. These purchases can, and have been, made from the bilateral markets and from the spot markets.

Please see the response to Staff-02, Q-Staff-009 as to PSNH management of energy purchases surplus to ES requirements.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-011
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please explain in detail the administrative decision process regarding additional supplemental energy purchases including identification of the person that makes the ultimate decision to purchase additional resources or to sell existing supplemental resources already purchased. In both cases, please identify the individual that is responsible for the final decision. If the individual is an NU employee rather than a PSNH employee, please provide the reasoning. Also as part of your response, please detail when in the process PSNH's input is sought and the weight that PSNH's input is given.

Response:

The Wholesale Power Contracts department has primary responsibility for the analysis of PSNH's supplemental energy requirements. In addition to market information obtained directly by Wholesale Power Contracts the analysis incorporates inputs from various departments, mainly PSNH generation, PSNH fuel purchasing and NUSCo/PSNH economic and load forecasting. The resulting analysis results are reviewed jointly by NUSCo and PSNH staffs and both are involved in the subsequent development of supplemental energy purchasing plans and strategies. These reviews and development of consequent plans and strategies have included the following personnel over time: Gary Long, President - PSNH; John MacDonald, Vice-President Generation - PSNH; Paul Ramsey, Vice-President Energy Delivery - PSNH; Terrence large, Director - Business Planning and Customer Support Services; Stephen Hall, Rate and Regulatory Services Manager; William Smagula, Director- PSNH Generation; Elizabeth Tillotson, Technical Business manager Fossil/Hydro ; Gerald Eaton, Senior Counsel; Robert Baumann, Director Revenue Regulation and Load Resources; James Shuckerow, Director Wholesale Power Contracts; Stan Puzio, Manager Revenue Regulation and Load Resources; Wayne Chapman, Team leader Revenue Regulation and Load Resources; Richard Labrecque, Supplemental Energy Sources Manager; David Errichetti, Manager Generation Resource Planning; Patrick Smith, Manager Wholesale Power Contracts; Frederick White, Senior Engineer Wholesale Power Contracts. The President - PSNH approves such plans prior to execution, in accordance with established procedures.

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Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-012
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please describe in the same form (i.e., same groupings in terms of months) used in the response to TC 2-9 in Docket DE 09-180 the bilateral strip purchases made for 2009.

Response:

The timing of the firm bilateral strip purchases made for 2009 delivery consistent with the response to TC 2 - 9 in Docket DE 09-180 was as follows:

- 38.4 percent was executed less than 6 months prior to contract delivery date
- 57.2 percent was executed between 6 and 9 months prior to contract delivery date
- 3.0 percent was executed between 9 and 12 months prior to contract delivery date
- 1.4 percent was executed greater than 12 months prior to contract delivery date
- 0 percent was executed greater than 15 months prior to contract delivery date

This schedule includes the firm bilateral strips made in January 2009 for August through November 2009.

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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-013
Page 1 of 1**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to OCA 1-4. Please quantify how PSNH accounted for the planned 4-week outage of Merrimack-2 that was scheduled to occur in the spring of 2009 in the determination of requested insurance proceeds regarding the fall turbine repair outage.

Response:

To account for the 4-week annual outage scheduled for 2009, in the replacement power calculation associated with the 18-week outage beginning August 1 and ending December 6, it was assumed that Merrimack Unit 2 would have taken its annual maintenance outage from September 18 through October 19. There were no replacement energy costs during that time period that were requested from the insurance company. See the responses to CLF-2, Q-005 and OCA-2, Q-001 for additional information concerning the insurance claims.

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Docket No. DE 10-121**

Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-014
Page 1 of 2**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to OCA 1-14. Please explain the variances between the budgeted capital expenditures and budgeted O&M expenses and the actual expenditures and expenses by the plants listed.

Response:

Attached is a discussion of the variances between budgeted and actual costs for both Capital and O&M.

2009 Budget		
CAPITAL		Variances
Merrimack Station	\$12.8M	Cancelled/postponed jobs (i.e. reclaim hoppers, coal handling vac, homeland security, etc.) (-\$1.2M)
		ACI project - on-hold significantly reducing the budgeted cost of sorbents, etc. (-\$2.2M)
		Number of projects coming in under budget(i.e. MK1 480V breakers and the 200 and 203 valves) (-\$1.0M)
Schiller Station	\$11.9M	Reduction in wood yard expansion work, as well as a number of other smaller project changes during the year. (-\$0.8M)
Newington Station	\$2.1M	Number of proposed capital projects cancelled/postponed(-\$1.1M)
Hydro	\$5.3M	FERC Site costs (-\$500K), Jackman GSU (-\$412K), other jobs postponed or under budget
O&M		Variances
Merrimack Station	\$39.1M	Mainly due to the lower cost of ammonia (-\$3.6M)
Schiller Station	\$19.0M	On-Budget, slightly less maintenance during the SR6 overhaul
Newington Station	\$8.5M	Reduced scope during the overhaul consistent with the lower capacity factor, also less chemicals and contractor labor during the year. (-\$1.3M)
Hydro	\$5.5M	On-Budget

**Public Service Company of New
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Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-016
Page 1 of 2**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

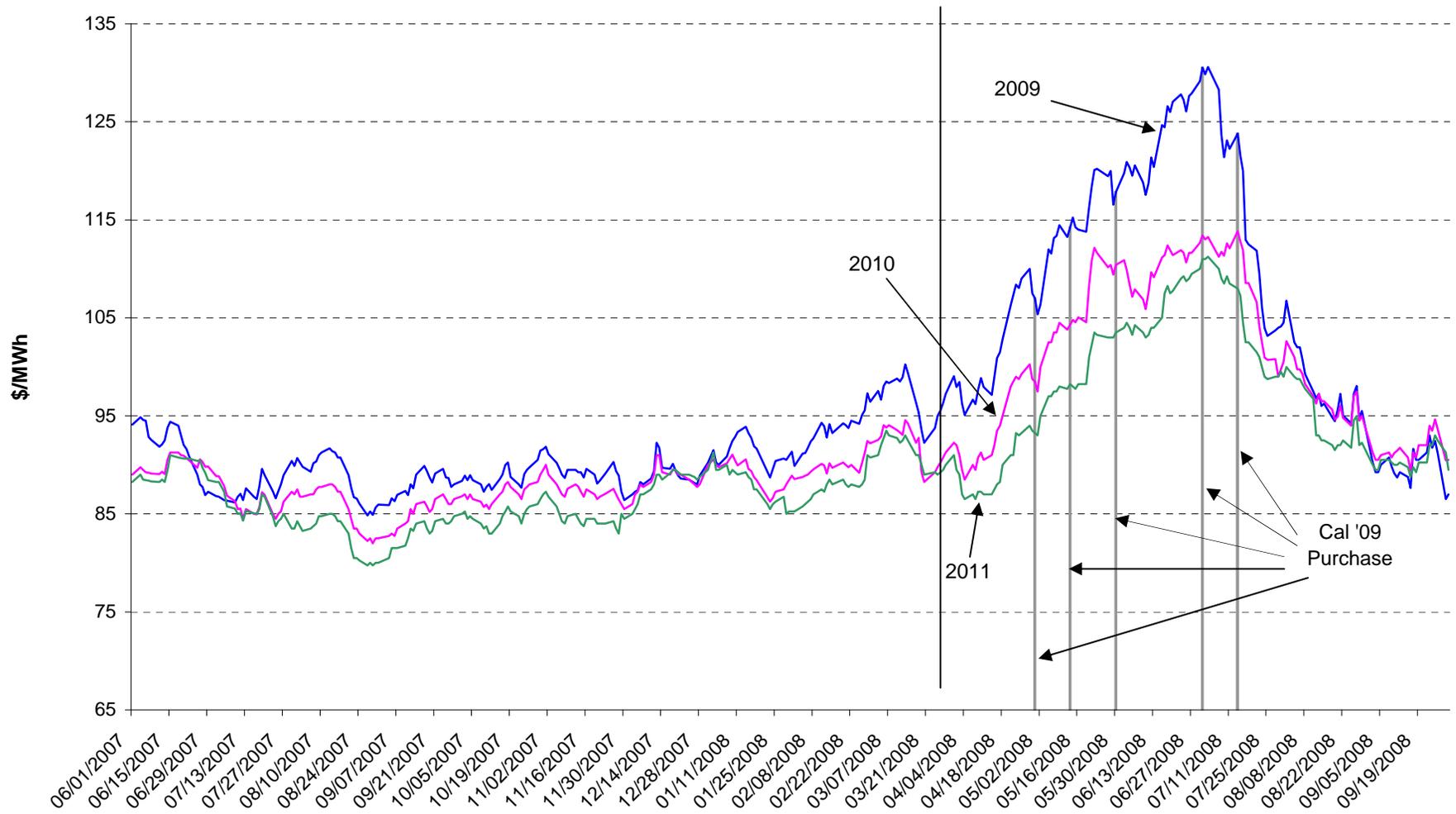
Reference responses to TC 1-2 and TC 1-14. Please explain why PSNH waited until July 2008 to start making the majority of its supplemental purchases when indications were that the market price for 2009 purchases was rising long before that time.

Response:

PSNH did not wait until July 2008 to start making the majority of its 2009 supplemental energy purchases. In total 1,762 GWhs of 2009 purchases were executed during 2008. 1,432 GWhs (81% of total) were calendar '09 purchases, of which 702 GWhs (40%) were purchased prior to 6/1/08. Although these purchases were made at market prices during a general upward price trend, they were made during temporary troughs over that time. The remaining 730 GWhs (41%) of calendar '09 purchases were made at market prices by 7/14/08, by which time a downward price trend had begun. The remaining 330 GWhs (19%) were made at market prices between July and November, 2008 during a general downward price trend. Thus, 1,032 GWh of the 1,762 GWh (59%) were made either before the continuing price run up in June 2008 or well after prices peaked in early July.

The attached graph shows forward annual peak energy prices from mid-spring 2007 through summer 2008. The vertical lines show the start of the supplemental purchase plan (April 1, 2008) and the days when calendar 2009 purchases were made. This graph is meant to be indicative of prices when the purchases were made and not what the purchase prices were as not all the purchases were peak strips or priced at the MA Hub.

NYMEX Daily Peak Period Prices for Calendar Year Electricity Delivered at the Massachusetts Hub



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Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-017
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to CLF 1-6. How often does PSNH normally perform "subsequent iterations" of its supplemental energy purchase forecast in a typical year? How many subsequent iterations were performed for 2009 and when were they performed?

Response:

For 2009 ES supplemental energy requirements there were five (5) assessments that resulted in published target quantities: in April, early and late July, September, and December, 2008. The April and early July assessments resulted in requests for authorization to make purchases. The late July assessment revised targets downward as it incorporated new load information and did not result in a request for new purchases. The September and December assessments were part of the initial and final ES rate setting filings and served as status reports. The Assessments are not performed on a prescribed "normal" schedule. In addition to the iterations outlined above, informal ongoing conversations about supplemental power purchasing needs take place among NUSCO and PSNH staffs through the normal course of business.

**Public Service Company of New
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Data Request STAFF-02

**Dated: 08/13/2010
Q-STAFF-018
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Reference response to CLF 1-7. Given that reserve shutdowns began in 2009 for the Merrimack and Schiller units that were forecasted as running as baseload units for the purpose of supplemental energy purchases, please explain how those reserve shutdowns were reflected in purchasing decisions for 2009.

Response:

The supplemental energy purchase requirements analyses done throughout 2008 for 2009 invariably showed the Merrimack and Schiller units to be economic, so no reserve shutdowns were forecast and consequently supplemental energy purchases were less than would have otherwise been the case. No supplemental energy purchases were made during 2009 when the reserve shutdowns referenced occurred because energy prices were low during these periods and the units were available for economic dispatch had energy prices gone back up.

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Data Request STAFF-02
Dated: 08/13/2010
Q-STAFF-015
Page 1 of 2

Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff

Question:

Reference response to TC 1-2. Consistent with the last sentence of the response, please provide the table including contracting parties and pricing information for 2009.

Response:

Please see the attached table for the requested information.

** The requested information is being filed under the Motion for Protective Order dated August 26, 2010.

CONFIDENTIAL

Standardized Contracts

<u>Execution Date</u>	<u>Contracting Party</u>	<u>Duration</u>	<u>Size (MW)</u>	<u>Price (\$/MWh)</u>	<u>Product</u>
04/30/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 12/31/2009	50	\$107.50	5X16
05/13/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 12/31/2009	50	\$113.75	5X16
05/30/2008	H.Q. Energy Serv. (US) Inc.	01/01/2009 - 12/31/2009	50	\$109.00	7X16
07/01/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 12/31/2009	50	\$127.50	7X16
07/14/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 12/31/2009	50	\$110.25	7X24
07/22/2008	Constellation Power Source	06/01/2009 - 06/30/2009	100	\$100.50	5X16
07/22/2008	Constellation Power Source	09/01/2009 - 09/30/2009	100	\$99.25	5X16
07/22/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 02/28/2009	100	\$127.50	5X16
07/23/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 02/28/2009	50	\$99.00	OFFPEAK
07/29/2008	PSEG Energy Resources & Trade	04/01/2009 - 04/30/2009	100	\$74.00	OFFPEAK
08/07/2008	Constellation Power Source	04/01/2009 - 04/30/2009	50	\$91.25	5X16
08/07/2008	FPL Energy Power Mktg. Inc.	01/01/2009 - 02/28/2009	50	\$119.00	5X16
08/08/2008	FPL Energy Power Mktg. Inc.	07/01/2009 - 08/31/2009	50	\$106.50	5X16
11/17/2008	FPL Energy Power Mktg. Inc.	04/01/2009 - 04/30/2009	100	\$69.25	5X16
01/21/2009	FPL Energy Power Mktg. Inc.	01/22/2009 - 01/22/2009	50	\$67.50	5X16
01/21/2009	FPL Energy Power Mktg. Inc.	01/23/2009 - 01/23/2009	100	\$63.00	5X16
01/21/2009	Hess Corporation	01/22/2009 - 01/22/2009	50	\$68.00	5X16
01/28/2009	Hess Corporation	01/30/2009 - 01/30/2009	100	\$62.00	5X16
01/28/2009	Hess Corporation	01/29/2009 - 01/29/2009	200	\$62.00	5X16
01/29/2009	FPL Energy Power Mktg. Inc.	01/30/2009 - 01/30/2009	100	\$61.00	5X16
01/29/2009	FPL Energy Power Mktg. Inc.	08/01/2009 - 11/30/2009	200	\$52.25	7X24
01/30/2009	Hess Corporation	01/31/2009 - 02/01/2009	50	\$54.75	2X16
01/30/2009	Hess Corporation	01/31/2009 - 02/01/2009	50	\$54.50	2X16
01/30/2009	Hess Corporation	02/02/2009 - 02/02/2009	150	\$54.50	5X16
02/02/2009	Hess Corporation	02/03/2009 - 02/03/2009	100	\$60.00	5X16
02/06/2009	FPL Energy Power Mktg. Inc.	02/10/2009 - 02/13/2009	100	\$52.50	5X16
02/06/2009	FPL Energy Power Mktg. Inc.	02/09/2009 - 02/09/2009	100	\$55.00	5X16
02/12/2009	FPL Energy Power Mktg. Inc.	02/13/2009 - 02/13/2009	200	\$56.00	5X16
02/12/2009	FPL Energy Power Mktg. Inc.	02/14/2009 - 02/15/2009	200	\$54.00	2X16
02/25/2009	FPL Energy Power Mktg. Inc.	02/26/2009 - 02/26/2009	100	\$44.75	5X16
02/25/2009	FPL Energy Power Mktg. Inc.	02/27/2009 - 02/27/2009	100	\$43.50	5X16
02/25/2009	FPL Energy Power Mktg. Inc.	02/26/2009 - 02/26/2009	150	\$44.75	5X16
02/25/2009	FPL Energy Power Mktg. Inc.	02/27/2009 - 02/27/2009	150	\$43.50	5X16
06/24/2009	Hess Corporation	06/27/2009 - 06/28/2009	300	\$41.00	2X16
06/26/2009	Hess Corporation	06/29/2009 - 06/29/2009	200	\$39.50	5X16
07/21/2009	Hess Corporation	07/22/2009 - 07/22/2009	300	\$39.25	5X16
08/18/2009	Mirant Energy Trading, LLC	08/19/2009 - 08/19/2009	150	\$57.50	5X16
08/20/2009	Mirant Energy Trading, LLC	08/21/2009 - 08/21/2009	150	\$43.25	5X16
08/21/2009	H.Q. Energy Serv. (US) Inc.	08/22/2009 - 08/23/2009	150	\$35.25	2X16
12/02/2009	FPL Energy Power Mktg. Inc.	12/03/2009 - 12/03/2009	200	\$48.75	5X16
12/03/2009	Hess Corporation	12/04/2009 - 12/04/2009	150	\$49.75	5X16

Structured and/or Unit-Contingent Contracts

<u>Execution Date</u>	<u>Description</u>	<u>Duration</u>	<u>Size (MW)</u>	<u>Price (\$/MWh)</u>	<u>Power Delivery Period</u>
10/19/2007	Pinetree - Bethlehem & Tamworth	01/01/2008 - 12/31/2010	36	65.02	as produced

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Data Request OCA-01

**Dated: 07/16/2010
Q-OCA-004
Page 1 of 1**

**Witness: William H. Smagula
Request from: Office of Consumer Advocate**

Question:

Please explain PSNH's efforts since the Settlement in DE 09-091 to recover outage costs related to the replacement of the Merrimack Unit 2 turbine due to foreign material damage, whether from insurers or other Parties.

Response:

Two outages have been taken associated with the Merrimack 2 turbine foreign material event. The 3 week inspection outage taken in June/July 2008 occurred during the 60 day waiting period (deductible period). The maintenance (cleaning, inspecting, etc.) costs associated with this inspection outage have been submitted and fully reimbursed by the insurance company. The 18 week repair outage began August 1, 2009 and ended December 6, 2009. The replacement power costs associated with this 18 week outage have been submitted to the insurance company for reimbursement. Over 95% of the repair costs for this outage have been submitted. Final documentation for the last small portion is being assembled for submittal, while the insurance company continues to review the previously submitted documentation. The source of the foreign material remains under investigation by the insurance company and at this point no responsible 3rd party has been identified. PSNH continues to support the investigative efforts.

Public Service Company of New Hampshire
Docket No. DE 10-121

Data Request OCA-01
Dated: 07/16/2010
Q-OCA-005
Page 1 of 1

Witness: William H. Smagula
Request from: Office of Consumer Advocate

Question:

Please provide a schedule showing the amount of costs and insurance proceeds in 2009 related to Replacement power, O & M, and Boiler/Machinery related to the Merrimack Unit 2 turbine outage due to foreign material damage.

Response:

Below is the amount of costs and insurance proceeds in 2009 specific to the boiler and machinery claim and the replacement power claim.

2009	Boiler and Machinery (O&M Costs)	Replacement Power Costs (RPC)
Costs	\$ 18,016,085	\$ 10,843,635
Proceeds	\$ 10,000,000	\$ -

**Public Service Company of New
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Data Request OCA-01

**Dated: 07/16/2010
Q-OCA-008
Page 1 of 1**

**Witness: William H. Smagula
Request from: Office of Consumer Advocate**

Question:

Page 7 (Bates p. 000068) of Mr. Smagula's testimony includes a discussion of the OR-2009-03 Merrimack Unit 2 planned outage of 4.6 days. Line 11 on that page refers to a "portable rental unit." Why does PSNH use a "rental unit" as opposed to owning the equipment? What is the lead time to acquire another "rental unit" as opposed to one PSNH owned?

Response:

An irreparable crack was found on the MK2 generator exciter rotor during an inspection performed as part of the planned 2008 annual outage. The lead time for a refurbished rotor would have been approximately 16 to 24 weeks. As a result, an available rental exciter was obtained to avoid a lengthy extension of the outage. This rental unit was replaced with a permanent exciter during the 2009 planned annual outage.

**Public Service Company of New
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Data Request OCA-01

**Dated: 07/16/2010
Q-OCA-010
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Office of Consumer Advocate**

Question:

Page 2 of the response to Staff 01-002 shows negative Replacement Power Costs (RPC) related to several outage dates. Please explain. For example, why would Merrimack Unit I have been dispatched on 7/21/09 and 7/22/09 if the RPC was lower than the Avoided Fuel Costs?

Response:

For the coal units in the first pass at estimating replacement power costs there are a number of reasons why it makes sense to leave the unit running when the unit is placed back in-service even though it would appear, in hindsight, to be an uneconomic option in some hours. These reasons include:

- 1) Day ahead bilateral energy prices which signal projected system load, potential unit outages, fuel supply infrastructure upsets among other factors support not backing down or cycling the unit;
- 2) Unit operational conditions that factor into the dispatch decision argue for not backing down or cycling the unit. These conditions include equipment status, minimum load values, duration of possible reduced load operation, coal type being burned, and shut-down and start-up time durations; and
- 3) Managing fuel both in the bunkers and yard as well as projected deliveries and expected inventory support not backing down or cycling the unit.

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Data Request OCA-01

**Dated: 07/16/2010
Q-OCA-011
Page 1 of 1**

**Witness: Robert A. Baumann
Request from: Office of Consumer Advocate**

Question:

The response to Staff 01-004 shows the coal inventory adjustments dated 5/20/09 and 10/29/09 as \$5,047,780 and \$986,510 respectively. Footnote 2 on Attachment RAB-4 page 8 indicates that the adjustments weren't booked until August and December 2009. Please provide the reduction to carrying costs had the adjustments been recognized for ES purposes as of 5/20/09 and 10/29/09 respectively.

Response:

The physical to book inventory adjustments were booked as soon as the results were known. As noted below, the coal inventory process is quite complex and takes about 2-3 months before the results are known.

The physical coal inventory is performed by PSNH Generation with the assistance by a vendor, L. R. Kimball & Associates. The services provided by Kimball include density testing, moisture content, obtaining ground survey of fly-over services, obtaining adequate support assistance for the actual audit and issuing a report of all findings. Kimball normally takes 1-2 months to translate the aerial photos, ground survey, density and moisture data and provides the coal tonnage results to PSNH. At that time, PSNH needs to review the report and make any necessary adjustments, such as coal in route that is reflected in the book inventory but which was not part of the physical inventory and to investigate any other discrepancies. As soon as the results are received by the Fuel Accounting Department, they are reviewed and compared to the book inventories and the appropriate adjustment is booked within a couple of days.

The coal physical versus book inventory journal entry recorded on PSNH's books in August and December 2009 increased both the fuel inventory and the deferred regulatory obligation accounts by \$5.0 and 1.0 million respectively. Customers have received a benefit in that the coal prematurely expensed would have been included in rate base, thus earning a return, over the two month period between when the physical inventory was taken and when it was booked. The return on rate base is calculated using PSNH's weighted average cost of capital, including an allowed ROE of 9.81%. The ES over/under recovery deferral earns a return at the Prime Rate of 3.25%, which results in a lower return over the time period. Therefore, the delay in recognizing the physical inventory results by about two months resulted in lower overall carrying costs to customers in the ES, as the prime rate is lower than the allowed return on rate base.

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Data Request OCA-01

**Dated: 07/16/2010
Q-OCA-012
Page 1 of 1**

**Witness: David A. Errichetti, William H. Smagula
Request from: Office of Consumer Advocate**

Question:

Staff 01-007 requested Newington Station cost and revenue information for 2008.
Please provide similar information for 2009.

Response:

Even though Staff-01, Q-Staff-007 asked for 2008, PSNH provided 2009 data in its response.
Please see the response to Staff-01, Q-Staff-007 for the requested information.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request OCA-01

**Dated: 07/16/2010
Q-OCA-013
Page 1 of 1**

**Witness: David A. Errichetti, Robert A. Baumann
Request from: Office of Consumer Advocate**

Question:

In the response to Staff 01-021, PSNH compared the variable costs/kWh for its own generation with ISO spot market prices. Please recreate the Table to include the total cost/kWh for PSNH's own generation. The total cost should include O&M, depreciation, taxes, return, etc. Please explain if capacity values and costs should also be recognized on either or both sides of the comparison for purposes of consistency. If yes, please include those values/costs.

Response:

PSNH does not maintain the total cost information requested above in the cents/kWh format requested. Moreover, the analysis requested would require speculation regarding the monthly allocation of the various price components specified in the question. Because of the foregoing concerns with respect to cost allocation, PSNH can not perform a valid analysis for the selected months identified.

Witness: William H. Smagula
Request from: Office of Consumer Advocate

Question:

Staff data requests 44 and 45 in Set 1 requested that information be provided for review at PSNH's Manchester office. Please also provide this information electronically.

Response:

Staff-1 Q-Staff-044 requested the capital and O&M budgets for Merrimack, Schiller and Newington Stations and the hydro units and combustion turbines. With the recent Commission order defining the scope of this proceeding, this request is outside of the scope; therefore, PSNH respectively declines to provide this information electronically. However, the OCA and the PUC staff may review this information at Energy Park.

Staff-1 Q-Staff-045 requested the 2009 budgeted and actual capital and O&M expenditures for Merrimack, Schiller and Newington Stations and the hydro units and combustion turbines.

Below is the 2009 Capital budgeted and actual expenditures.

GENERATION SUMMARY
As of YTD December 2009

		YTD ACTUALS
MERRIMACK STATION*	BUDGET	12,800.2
	ACTUAL	8,379.0
	VARIANCE	-4,421.2
SCHILLER STATION	BUDGET	11,922.5
	ACTUAL	11,432.6
	VARIANCE	-489.9
NEWINGTON STATION	BUDGET	2,142.8
	ACTUAL	1,012.9
	VARIANCE	-1,129.9
HYDRO	BUDGET	5,265.1
	ACTUAL	3,333.1
	VARIANCE	-1,932.0
Total GENERATION	BUDGET	32,496.9
	ACTUAL	24,304.5
	VARIANCE	-8,192.5

*(Excluding CLEAN AIR PROJECT)

This second table provides the 2009 budgeted and actual O&M expenditures for Merrimack, Schiller and Newington Stations separately and the hydro units and combustion turbines as a group.

December 2009 O&M		YEAR-TO-DATE			
Station		Budget (Latest Approved)	Actual	Over/ (Under) Budget	Percent Over/Under Budget
		(\$000)	(\$000)	(\$000)	
Merrimack		39,153	35,528	(3,625)	-9.3%
Schiller		18,986	18,788	(198)	-1.0%
Newington		8,509	7,198	(1,311)	-15.4%
Hydro		5,534	5,468	(66)	-1.2%

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request OCA-02

**Dated: 08/13/2010
Q-OCA-001
Page 1 of 1**

**Witness: William H. Smagula
Request from: Office of Consumer Advocate**

Question:

Referencing OCA 01-004 and 005, please provide the total costs, net of insurance proceeds, included in this filing related to the 18 week outage of August 1, 2009 - December 6, 2009. For what portion of these costs is PSNH seeking insurance recovery? What is the status of those recoveries?

Response:

Costs related to the MK 2 18-week outage include the routine station annual outage maintenance costs, the turbine repair costs, and the incremental outage replacement energy costs. The costs and their status are below.

MK2 annual outage maintenance costs \$9.0 M

These costs are not associated with the turbine repair and therefore not part of the insurance claim.

MK2 turbine repair costs \$18.0M

100% of these costs are part of the insurance claim. To date, \$10M has been received.

Replacement energy costs \$7.2M

100% of these cost are part of the insurance claim.

The insurance company remains in the review process. It is expected that reimbursement will be made after the final settlement is determined.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request OCA-02

**Dated: 08/13/2010
Q-OCA-008
Page 1 of 1**

**Witness: David A. Errichetti, Robert A. Baumann
Request from: Office of Consumer Advocate**

Question:

In the response to Staff 01-021, PSNH compared the variable costs/kWh for its own generation with ISO spot market prices. Please recreate the Table to include the total cost/kWh (fixed and variable costs) for each of PSNH's fossil units on an annual basis for 2009 compared to the average ISO spot market price for 2009. Please explain if capacity values and costs should also be recognized in either or both sides of the comparison for purposes of consistency. If so, please include those values/costs.

Response:

PSNH does not maintain fixed and all variable costs on a unit specific basis. Moreover, the analysis requested would require arbitrary speculation regarding the monthly allocation of various cost components that PSNH does not perform. In any attempt to do so, shared costs such as accounting, human resources and planning, would need to be allocated to stations and shared station costs would need to be allocated to units. In addition, ISO spot market costs for capacity and energy are only a subset of the costs of serving full requirements load which includes costs such as ISO-NE expenses, operating reserves, forward reserves, management of load and price uncertainty, and profit.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request OCA-02

**Dated: 08/13/2010
Q-OCA-010
Page 1 of 1**

**Witness: David A. Errichetti, Robert A. Baumann
Request from: Office of Consumer Advocate**

Question:

Please expand the response to Staff 01-021 to include similar information related to total costs to customers and market prices for each month of 2009 for each generating plant.

Response:

Please find below the response to Staff-01, Q-Staff-021 expanded to include similar information related to total costs to customers for each month of 2009. PSNH does not maintain fixed and all variable costs on a unit specific basis.

	Own Generation	Variable Costs		Cost at DA LMPs		Savings from Own Generation	
	MWh	\$000	¢/kWh	\$000	¢/kWh	\$000	¢/kWh
Jan-09	520,095	25,106	4.83	36,352	6.99	11,246	2.16
Feb-09	349,436	15,805	4.52	17,096	4.89	1,291	0.37
Mar-09	437,688	17,870	4.08	17,793	4.07	(77)	(0.02)
Apr-09	341,389	14,266	4.18	11,293	3.31	(2,973)	(0.87)
May-09	352,314	13,119	3.72	12,124	3.44	(995)	(0.28)
Jun-09	349,671	14,763	4.22	11,698	3.35	(3,065)	(0.88)
Jul-09	365,643	14,191	3.88	11,648	3.19	(2,543)	(0.70)
Aug-09	188,750	3,552	1.88	6,808	3.61	3,256	1.73
Sep-09	132,901	6,166	4.64	3,786	2.85	(2,380)	(1.79)
Oct-09	162,060	8,373	5.17	6,561	4.05	(1,812)	(1.12)
Nov-09	203,900	8,981	4.40	7,572	3.71	(1,409)	(0.69)
Dec-09	398,172	16,485	4.14	23,109	5.80	6,624	1.66
Total	3,802,017	158,677	4.17	165,841	4.36	7,164	0.19

Variable costs are sum of Fossil Energy costs and RGGI costs, lines 29 and 40 of Attachment

RAB-3 page 1 of 2 and 2 of 2

In preparing this response it was determined that in Staff-01, Q-Staff-021 the generation data for a couple of units did not reflect the last set of ISO-NE 90 day true ups and that the hourly day-ahead LMPs for a few units were incorrect. Staff-01, Q-Staff-021 will be supplemented to show the values in the table above.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request OCA-02

**Dated: 08/13/2010
Q-OCA-011
Page 1 of 10**

**Witness: Stephen R. Hall
Request from: Office of Consumer Advocate**

Question:

Please provide both the out-migration to competitive suppliers and the in-migration back to default service for PSNH on a monthly basis for each month in 2009.

Response:

Attached are the quarterly migration reports PSNH has filed with the Commission since 2009. As of the third quarter of 2009, PSNH stopped tracking the number of customers who returned to default service. Tracking that number was a manual calculation, and with the increase in migration activity, it became very time consuming to provide that information (see cover letter dated November 3, 2009).



**Public Service
of New Hampshire**

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The Northeast Utilities System

July 31, 2009

Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

Re: 2nd Quarter 2009 Customer Migration Report and
Revised 1st Quarter 2009 Customer Migration Report

Dear Ms. Howland:

In its Order No. 24,714 - Order Approving Energy Service Rate in Docket DE 06-125, the Commission directed PSNH to provide monthly data regarding the migration of its customers to the competitive market on a quarterly basis. Enclosed for filing with the Commission is a Customer Migration Report for the 2nd quarter of 2009 and a revised Customer Migration Report for the 1st quarter of 2009. The Customer Migration Report for the 1st quarter of 2009 filed on April 14, 2009 incorrectly reported the estimated demand at the time of PSNH's system peak in megawatts rather than in kilowatts. The revised 1st Quarter 2009 report correctly states the demand at the time of PSNH's system peak in kilowatts. These reports are being filed electronically with one paper copy being sent to the Commission.

We would be pleased to respond to any questions the Commission may have on this report.

Sincerely,

A handwritten signature in black ink that reads "Rhonda J. Bisson".

Rhonda J. Bisson
Senior Analyst

RJB:kn
Enclosures
cc: M.A.Hatfield, OCA

Public Service Company of New Hampshire
Migration of Customers To and From the Competitive Energy Supply Market
1st Quarter 2009 Report (Revised)
to the New Hampshire Public Utilities Commission

	Customers Receiving Energy Service From the Competitive Market			Number of Customers Entering the Competitive Market Based on Enrollment Transactions	Number of Customers Returning to PSNH's Energy Service Based on Drop Transactions
	Number of Customers Not Billed for PSNH's Energy Service	Total Kilowatt-hours Delivered (KWH)	Estimated Demand at the Time of PSNH's System Peak Reported to the ISO-NE (KW)		
January					
Residential	20	10,286		0	0
Small C&I Rate G	109	658,934		50	2
Medium C&I Rate GV	82	11,936,926		35	2
Large C&I Rate LG	39	37,797,140		10	1
Lighting	<u>1</u>	<u>476,440</u>		<u>1</u>	<u>0</u>
Total	251	50,879,726	119,332	96	5
February					
Residential	20	13,576		0	0
Small C&I Rate G	156	1,442,553		35	0
Medium C&I Rate GV	115	18,572,968		39	2
Large C&I Rate LG	50	53,212,491		3	0
Lighting	<u>2</u>	<u>397,499</u>		<u>2</u>	<u>0</u>
Total	343	73,639,087	118,074	79	2
March					
Residential	20	10,838		0	0
Small C&I Rate G	197	1,975,813		9	0
Medium C&I Rate GV	153	21,047,270		17	2
Large C&I Rate LG	52	50,662,014		2	0
Lighting	<u>3</u>	<u>381,595</u>		<u>0</u>	<u>0</u>
Total	425	74,077,530	91,121	28	2

Public Service Company of New Hampshire
Migration of Customers To and From the Competitive Energy Supply Market
2nd Quarter 2009 Report
to the New Hampshire Public Utilities Commission

	Customers Receiving Energy Service From the Competitive Market			Number of Customers Entering the Competitive Market Based on Enrollment Transactions	Number of Customers Returning to PSNH's Energy Service Based on Drop Transactions
	Number of Customers Not Billed for PSNH's Energy Service	Total Kilowatt-hours Delivered (KWH)	Estimated Demand at the Time of PSNH's System Peak Reported to the ISO-NE (KW)		
April					
Residential	20	9,902		0	1
Small C&I Rate G	205	2,248,608		112	1
Medium C&I Rate GV	168	24,618,145		43	0
Large C&I Rate LG	54	55,311,032		8	0
Lighting	<u>4</u>	<u>336,258</u>		<u>0</u>	<u>0</u>
Total	451	82,523,945	169,079	163	2
May					
Residential	20	9,289		0	0
Small C&I Rate G	322	3,684,807		116	0
Medium C&I Rate GV	211	29,497,750		34	0
Large C&I Rate LG	62	58,721,165		5	0
Lighting	<u>9</u>	<u>276,139</u>		<u>0</u>	<u>0</u>
Total	624	92,189,150	188,518	155	0
June					
Residential	19	5,177		5	1
Small C&I Rate G	462	5,044,609		772	1
Medium C&I Rate GV	245	31,765,232		61	3
Large C&I Rate LG	67	64,284,890		4	3
Lighting	<u>12</u>	<u>304,059</u>		<u>4</u>	<u>0</u>
Total	805	101,403,967	215,064	846	8

November 3, 2009

Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

Re: 3rd Quarter 2009 Customer Migration Report

Dear Secretary Howland:

In its Order No. 24,714 - Order Approving Energy Service Rate in Docket DE 06-125, the Commission directed PSNH to provide monthly data regarding the migration of its customers to the competitive market on a quarterly basis. Enclosed for filing with the Commission is a Customer Migration Report for the 3rd quarter of 2009. Due to the increased volume in the number of customers receiving energy service from the competitive market, PSNH will no longer include in this report the number of customers entering the competitive market based on enrollment transactions and the number of customers returning to PSNH's energy service based on drop transactions. Determining the number of customers by rate category based on enrollment and drop transactions is currently a manual process that would take a considerable effort to either continue or to automate. PSNH will continue to include the number of customers and kilowatt-hours delivered to customers receiving energy service from the competitive market by rate category based on reports generated by PSNH's billing system, since this information is readily available from existing reports. This data meets the Commission's directive to PSNH to report the level of migration to the competitive energy market by rate category and month on a quarterly basis. This report is being filed electronically with one paper copy being sent to the Commission.

We would be pleased to respond to any questions the Commission may have on this report.

Sincerely,

Rhonda J. Bisson
Senior Analyst

RJB:kn
Enclosures
cc: Meredith A. Hatfield, OCA

Public Service Company of New Hampshire
Migration of Customers To and From the Competitive Energy Supply Market
3rd Quarter 2009 Report
to the New Hampshire Public Utilities Commission

	Customers Receiving Energy Service From the Competitive Market		
	Number of Customers	Total Kilowatt-hours Delivered (KWH)	Estimated Demand at the Time of PSNH's System Peak Reported to the ISO-NE (KW)
<u>July</u>			
Residential	65	22,602	
Small C&I Rate G	1,252	8,091,707	
Medium C&I Rate GV	305	40,781,210	
Large C&I Rate LG	68	69,434,107	
Lighting	<u>22</u>	<u>311,265</u>	
Total	1,712	118,640,891	258,726
<u>August</u>			
Residential	345	145,136	
Small C&I Rate G	1,634	11,152,388	
Medium C&I Rate GV	339	52,504,755	
Large C&I Rate LG	71	81,239,355	
Lighting	<u>39</u>	<u>351,000</u>	
Total	2,428	145,392,634	352,436
<u>September</u>			
Residential	506	209,276	
Small C&I Rate G	1,907	12,611,250	
Medium C&I Rate GV	425	60,445,879	
Large C&I Rate LG	72	78,425,471	
Lighting	<u>25</u>	<u>468,482</u>	
Total	2,935	152,160,358	235,655



**Public Service
of New Hampshire**

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The Northeast Utilities System

February 2, 2010

Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

Re: 4th Quarter 2009 Customer Migration Report

Dear Ms. Howland:

In its Order No. 24,714 - Order Approving Energy Service Rate in Docket DE 06-125, the Commission directed PSNH to provide monthly data regarding the migration of its customers to the competitive market on a quarterly basis. Enclosed for filing with the Commission is a Customer Migration Report for the 4th quarter of 2009. This report is being filed electronically with one paper copy being sent to the Commission.

We would be pleased to respond to any questions the Commission may have on this report.

Sincerely,

A handwritten signature in black ink that reads "Rhonda J. Bisson". The signature is written in a cursive, flowing style.

Rhonda J. Bisson
Senior Analyst

RJB:kn
Enclosures
cc: Meredith A. Hatfield, OCA

Public Service Company of New Hampshire
Migration of Customers To and From the Competitive Energy Supply Market
4th Quarter 2009 Report
to the New Hampshire Public Utilities Commission

	Customers Receiving Energy Service From the Competitive Market		
	Number of Customers Not Billed for PSNH's Energy Service	Total Kilowatt-hours Delivered (KWH)	Estimated Demand at the Time of PSNH's System Peak Reported to the ISO-NE (KW)
<u>October</u>			
Residential	493	230,068	
Small C&I Rate G	2,130	13,404,093	
Medium C&I Rate GV	473	60,504,915	
Large C&I Rate LG	74	82,073,699	
Lighting	<u>27</u>	<u>558,480</u>	
Total	3,197	156,771,255	224,634
<u>November</u>			
Residential	549	259,286	
Small C&I Rate G	2,410	14,624,144	
Medium C&I Rate GV	517	60,692,483	
Large C&I Rate LG	79	79,349,745	
Lighting	<u>36</u>	<u>660,860</u>	
Total	3,591	155,586,518	235,168
<u>December</u>			
Residential	555	326,869	
Small C&I Rate G	2,900	17,148,437	
Medium C&I Rate GV	544	65,033,951	
Large C&I Rate LG	82	87,791,990	
Lighting	<u>48</u>	<u>741,765</u>	
Total	4,129	171,043,012	264,334



**Public Service
of New Hampshire**

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The Northeast Utilities System

April 23, 2010

Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

Re: 1st Quarter 2010 Customer Migration Report

Dear Ms. Howland:

In its Order No. 24,714 - Order Approving Energy Service Rate in Docket DE 06-125, the Commission directed PSNH to provide monthly data regarding the migration of its customers to the competitive market on a quarterly basis. Enclosed for filing with the Commission is a Customer Migration Report for the 1st quarter of 2010. This report is being filed electronically with one paper copy being sent to the Commission.

We would be pleased to respond to any questions the Commission may have on this report.

Sincerely,

A handwritten signature in cursive script that reads "Rhonda J. Bisson".

Rhonda J. Bisson
Senior Analyst

RJB:kn
Enclosures
cc: Meredith A. Hatfield, OCA

**Public Service Company of New Hampshire
Migration of Customers To and From the Competitive Energy Supply Market
1st Quarter 2010 Report
to the New Hampshire Public Utilities Commission**

	Customers Receiving Energy Service From the Competitive Market			Estimated Demand at the Time of PSNH's System Peak Reported to the ISO-NE (KW)
	Number of Customers Not Billed for PSNH's Energy Service	Kilowatt-hours Delivered (KWH)	Total	
January				
Residential	678	380,113		
Small C&I Rate G	3,072	19,246,250		
Medium C&I Rate GV	548	75,700,226		
Large C&I Rate LG	83	78,209,489		
Lighting	<u>71</u>	<u>977,547</u>		
Total	4,452	174,513,625		277,261
February				
Residential	1,136	492,275		
Small C&I Rate G	3,259	20,457,577		
Medium C&I Rate GV	553	71,873,697		
Large C&I Rate LG	84	82,073,056		
Lighting	<u>47</u>	<u>795,989</u>		
Total	5,079	175,692,594		268,061
March				
Residential	1,181	448,687		
Small C&I Rate G	3,883	20,937,799		
Medium C&I Rate GV	596	71,551,515		
Large C&I Rate LG	86	83,591,867		
Lighting	<u>54</u>	<u>764,590</u>		
Total	5,800	177,294,458		268,630

Public Service Company of New
Hampshire
Docket No. DE 10-121

Data Request OCA-02

Dated: 08/13/2010
Q-OCA-012
Page 1 of 1

Witness: David A. Errichetti
Request from: Office of Consumer Advocate

Question:

Referencing the response to TC 01-002, for the first 14 contracts listed, as well as the 21st and the last one, please provide what the price/MWh would have been if the execution date had been the day prior to the start of the supply commitment.

Response:

Please find the requested information below.

Standardized Contracts

<u>Execution Date</u>	<u>Contracting Party</u>	<u>Duration</u>	<u>Size [MW]</u>	<u>Price if Executed on Last Trading Day Prior to Period (\$/MWh)</u>	<u>Product</u>
04/30/2008		01/01/2009 - 12/31/2009	50	\$68.86	5X16
05/13/2008		01/01/2009 - 12/31/2009	50	\$68.86	5X16
05/30/2008		01/01/2009 - 12/31/2009	50	\$67.09	7X16 *
07/01/2008		01/01/2009 - 12/31/2009	50	\$67.09	7X16 *
07/14/2008		01/01/2009 - 12/31/2009	50	\$61.34	7X24 *
07/22/2008		06/01/2009 - 06/30/2009	100	\$41.84	5X16
07/22/2008		09/01/2009 - 09/30/2009	100	\$31.25	5X16
07/22/2008		01/01/2009 - 02/28/2009	100	\$73.73	5X16
07/23/2008		01/01/2009 - 02/28/2009	50	\$61.78	OFFPEAK
07/29/2008		04/01/2009 - 04/30/2009	100	\$34.30	OFFPEAK
08/07/2008		04/01/2009 - 04/30/2009	50	\$41.30	5X16
08/07/2008		01/01/2009 - 02/28/2009	50	\$73.73	5X16
08/08/2008		07/01/2009 - 08/31/2009	50	\$43.16	5X16
11/17/2008		04/01/2009 - 04/30/2009	100	\$41.30	5X16
01/29/2009		08/01/2009 - 11/30/2009	200	\$37.47	7X24 *

Structured and/or Unit-Contingent Contracts

<u>Execution Date</u>	<u>Description</u>	<u>Duration</u>	<u>Size [MW]</u>	<u>Power Delivery Period</u>
10/19/2007		01/01/2008 - 12/31/2010	36	\$79.26 as produced

Note

* These products are not explicitly priced. The represented prices are calculated based on closing Peak and Off-Peak prices.

Public Service Company of New Hampshire
Docket No. DE 10-121

Data Request OCA-02
Dated: 08/13/2010
Q-OCA-013
Page 1 of 2

Witness: David A. Errichetti
Request from: Office of Consumer Advocate

Question:

Referencing the response to TC 01-002, please add 2 additional columns with the first one showing the total MWhs acquired under each contract, and the second column showing the total amount paid by PSNH.

Response:

Attached, please find the requested information.

** The requested information is being filed under the Motion for Protective Order dated August 26, 2010.

Standardized Contracts

<u>Execution Date</u>	<u>Contracting Party</u>	<u>Duration</u>	<u>Size (MW)</u>	<u>Price (\$/MWh)</u>	<u>Product</u>	<u>MWhs</u>	<u>Cost (\$000)</u>
04/30/2008		01/01/2009 - 12/31/2009	50		5X16	204,800	\$22,016
05/13/2008		01/01/2009 - 12/31/2009	50		5X16	204,800	\$23,296
05/30/2008		01/01/2009 - 12/31/2009	50		7X16	292,000	\$31,828
07/01/2008		01/01/2009 - 12/31/2009	50		7X16	292,000	\$37,230
07/14/2008		01/01/2009 - 12/31/2009	50		7X24	438,000	\$48,290
07/22/2008		06/01/2009 - 06/30/2009	100		5X16	35,200	\$3,538
07/22/2008		09/01/2009 - 09/30/2009	100		5X16	33,600	\$3,335
07/22/2008		01/01/2009 - 02/28/2009	100		5X16	65,600	\$8,364
07/23/2008		01/01/2009 - 02/28/2009	50		OFFPEAK	38,000	\$3,762
07/29/2008		04/01/2009 - 04/30/2009	100		OFFPEAK	36,800	\$2,723
08/07/2008		04/01/2009 - 04/30/2009	50		5X16	17,600	\$1,606
08/07/2008		01/01/2009 - 02/28/2009	50		5X16	32,800	\$3,903
08/08/2008		07/01/2009 - 08/31/2009	50		5X16	35,200	\$3,749
11/17/2008		04/01/2009 - 04/30/2009	100		5X16	35,200	\$2,438
01/21/2009		01/22/2009 - 01/22/2009	50		5X16	800	\$54
01/21/2009		01/23/2009 - 01/23/2009	100		5X16	1,600	\$101
01/21/2009		01/22/2009 - 01/22/2009	50		5X16	800	\$54
01/28/2009		01/30/2009 - 01/30/2009	100		5X16	1,600	\$99
01/28/2009		01/29/2009 - 01/29/2009	200		5X16	3,200	\$198
01/29/2009		01/30/2009 - 01/30/2009	100		5X16	1,600	\$98
01/29/2009		08/01/2009 - 11/30/2009	200		7X24	585,800	\$30,608
01/30/2009		01/31/2009 - 02/01/2009	50		2X16	1,600	\$88
01/30/2009		01/31/2009 - 02/01/2009	50		2X16	1,600	\$87
01/30/2009		02/02/2009 - 02/02/2009	150		5X16	2,400	\$131
02/02/2009		02/03/2009 - 02/03/2009	100		5X16	1,600	\$96
02/06/2009		02/10/2009 - 02/13/2009	100		5X16	6,400	\$336
02/06/2009		02/09/2009 - 02/09/2009	100		5X16	1,600	\$88
02/12/2009		02/13/2009 - 02/13/2009	200		5X16	3,200	\$179
02/12/2009		02/14/2009 - 02/15/2009	200		2X16	6,400	\$346
02/25/2009		02/26/2009 - 02/26/2009	100		5X16	1,600	\$72
02/25/2009		02/27/2009 - 02/27/2009	100		5X16	1,600	\$70
02/25/2009		02/26/2009 - 02/26/2009	150		5X16	2,400	\$107
02/25/2009		02/27/2009 - 02/27/2009	150		5X16	2,400	\$104
06/24/2009		06/27/2009 - 06/28/2009	300		2X16	9,600	\$394
06/26/2009		06/29/2009 - 06/29/2009	200		5X16	3,200	\$126
07/21/2009		07/22/2009 - 07/22/2009	300		5X16	4,800	\$188
08/18/2009		08/19/2009 - 08/19/2009	150		5X16	2,400	\$138
08/20/2009		08/21/2009 - 08/21/2009	150		5X16	2,400	\$104
08/21/2009		08/22/2009 - 08/23/2009	150		2X16	4,800	\$169
12/02/2009		12/03/2009 - 12/03/2009	200		5X16	3,200	\$156
12/03/2009		12/04/2009 - 12/04/2009	150		5X16	2,400	\$119

Structured and/or Unit-Contingent Contracts

<u>Execution Date</u>	<u>Description</u>	<u>Duration</u>	<u>Size (MW)</u>	<u>Price (\$/MWh)</u>	<u>Power Delivery Period</u>	<u>MWhs</u>	<u>Cost (\$000)</u>
10/19/2007		01/01/2008 - 12/31/2010	36		as produced	289,499	\$18,823

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-001
Page 1 of 2**

**Witness: William H. Smagula
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please reconcile the forecasted capacity factors in STAFF-01, Q-STAFF-008, Supplement 1 with the capacity factors appearing in Bill Smagula's testimony.

Response:

Attached are 3 tables providing the capacity factors for years 2001 through 2008. The information in Table 1 is provided in William Smagula's testimony (Attachment WHS-3, Steam Plant Graphs- Planned outages omitted). The information in Table 2, which was included in the response to STAFF-01, Q-STAFF-008, Supplement 1, was used to forecast the Energy Service assumptions for unit operations at Merrimack and Schiller Stations.

During the review of this data, a small number of differences was identified. These differences occurred due to errors in cell equations or, in a few instances in earlier years, due to different treatment of planned maintenance outages. These errors did not result in any significant difference to the final average capacity factors between outages as shown in Table 3, which corrects the data in Table 2.

Finally, it should be noted the Schiller 5 capacity factor averages consider the re-powering of the boiler at the end of 2006.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	avg
Table 1										
MK1	92.9	91.4	93.3	95.3	90.6	87.2	95.7	92.3		92.34
Mk2	83.1	84.7	80.0	88.0	86.2	92.6	91.6	84.6		86.35
SR4	71.5	72.5	82.0	81.6	80.6	78.5	84.2	82.0		79.10
SR5	61.9	73.8	76.4	76.4	72.4	65.6	82.5	82.0		73.88
SR6	67.8	76.3	82.8	85.3	83.5	77.8	82.9	84.3		80.08

Table 1 contains the data used to create the charts in WHS-3, Capacity factor between planned outages.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	avg
Table 2										
MK1	84.3	88.5	90.0	93.3	97.6	90.6	86.9	95.7	94.1	91.2
MK2	73.8	81.6	84.7	87.8	88.7	86.2	92.7	92.8	80.5	85.4
SR4	74.2	71.7	70.7	81.8	82.4	80.6	70.0	84.2	85.3	77.9
SR5								79.8	76.2	78.0
SR6	75.7	69.0	77.1	82.8	85.4	83.5	78.0	83.0	78.5	79.2

Table 2 is the data used to determine the between outage capacity factor used to forecast Energy Service assumption.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	avg
Table 3										
MK1	84.3	92.9	91.4	93.3	95.3	90.6	87.2	95.7	92.3	91.4
MK2	73.8	83.1	84.7	87.8	88.0	86.2	92.6	91.5	84.7	85.8
SR4	74.2	71.5	75.6	81.3	81.6	80.6	81.6	84.2	82.0	79.2
SR5								82.5	81.9	82.2
SR6	75.7	67.8	76.3	82.8	85.3	83.5	77.6	82.9	84.3	79.6

Table 3 is an updated version of Table 2 with cells corrected.

Note Schiller Unit 5 considers the repowering of the boiler at the end of 2006.

**Public Service Company of New
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Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-002
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**Witness: Erica L. Menard, Robert A. Baumann
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Re: STAFF-02, Q-STAFF-006, why doesn't PSNH make an adjustment for recent economic events and use that information to forecast short-term sales?

Response:

The premise to this question is incorrect. PSNH uses the latest available economic forecast when developing the energy sales forecast. These sales forecasts are then used as one of the important reference points in PSNH's operational decision making processes. Those operational processes do take into account recent economic events if warranted in each individual circumstance.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-003
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**Witness: Erica L. Menard, David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Taking into account more recent information discussed in the previous question, would PSNH's purchases during 2009 have been any different?

Response:

The attachment shows the differences between sequential sales forecasts covering the period through the end of 2008. But for the last set of differences, these changes were captured in the supplemental ES energy purchase process for 2009. In view of the small differences between the last two forecasts, it is unlikely that PSNH's Supplemental ES energy purchases would have been different.

Comparison of Sequential Sales Forecasts as a Gauge on ES Supplemental Energy Requirements

Release Date		Residential	Commercial	Industrial	Street Lighting	Total Retail	Change from Prior		Comment
		Sales MWh	Sales MWh	Sales MWh	Sales MWh	Sales MWh	MWh	MWh/hr	
October 25, 2007	JAN	325,837	298,149	116,248	2,630	742,864			used in initial assessment through late July
	FEB	279,786	286,589	108,647	2,251	677,274			
	MAR	283,019	289,595	125,269	2,104	699,987			
	APR	245,057	276,586	119,305	1,886	642,834			
	MAY	236,436	271,185	129,425	1,636	638,682			
	JUN	255,917	280,543	129,947	1,526	667,933			
	JUL	302,926	311,773	136,979	1,619	753,297			
	AUG	303,234	321,799	140,603	1,782	767,417			
	SEP	257,253	296,534	134,084	2,053	689,924			
	OCT	263,310	293,581	137,296	2,280	696,467			
	NOV	270,761	283,299	129,648	2,372	686,080			
	DEC	311,075	296,229	121,489	2,633	731,427			
TOTAL	3,334,613	3,505,861	1,528,939	24,774	8,394,186				
May 13, 2008	JAN	319,877	299,402	114,923	2,622	736,824	(6,040)	(8)	used in late July assessment and initial ES rate setting filing
	FEB	268,186	282,814	106,251	2,253	659,504	(17,770)	(26)	
	MAR	277,102	287,670	123,620	2,096	690,488	(9,499)	(13)	
	APR	237,999	275,729	116,967	1,872	632,567	(10,267)	(14)	
	MAY	234,514	275,534	127,330	1,588	638,966	284	0	
	JUN	256,055	284,278	127,552	1,553	669,438	1,505	2	
	JUL	305,318	314,906	134,888	1,602	756,714	3,417	5	
	AUG	291,163	319,481	138,261	1,768	750,673	(16,744)	(23)	
	SEP	236,262	291,161	130,751	2,036	660,210	(29,714)	(41)	
	OCT	254,075	293,369	133,969	2,257	683,670	(12,797)	(17)	
	NOV	265,931	281,031	125,818	2,347	675,127	(10,953)	(15)	
	DEC	304,629	296,159	119,118	2,622	722,528	(8,899)	(12)	
TOTAL	3,251,111	3,501,534	1,499,448	24,616	8,276,709	(117,477)	(13)		
October 22, 2008	JAN	306,414	293,593	123,505	2,612	726,124	(10,700)	(14)	used in final ES rate setting filing
	FEB	254,852	274,999	113,072	2,246	645,169	(14,335)	(21)	
	MAR	266,273	281,936	120,360	2,091	670,660	(19,828)	(27)	
	APR	226,615	267,000	114,414	1,868	609,897	(22,670)	(31)	
	MAY	224,523	267,721	120,182	1,584	614,010	(24,956)	(34)	
	JUN	244,761	278,944	121,882	1,548	647,135	(22,303)	(31)	
	JUL	293,532	311,837	129,169	1,602	736,140	(20,574)	(28)	
	AUG	279,842	313,014	131,880	1,773	726,509	(24,164)	(32)	
	SEP	225,541	283,327	125,667	2,048	636,583	(23,627)	(33)	
	OCT	244,373	286,715	125,891	2,261	659,240	(24,430)	(33)	
	NOV	255,887	273,477	118,731	2,353	650,448	(24,679)	(34)	
	DEC	293,158	288,963	119,579	2,624	704,324	(18,204)	(24)	
TOTAL	3,115,771	3,421,526	1,464,332	24,610	8,026,239	(250,470)	(29)		
December 17, 2008	JAN	299,912	291,020	120,066	2,608	713,606	(12,518)	(17)	
	FEB	250,318	273,092	110,564	2,243	636,217	(8,952)	(13)	
	MAR	263,740	279,930	118,622	2,089	664,381	(6,279)	(8)	
	APR	224,683	265,201	112,980	1,866	604,730	(5,167)	(7)	
	MAY	223,469	265,855	119,108	1,582	610,014	(3,996)	(5)	
	JUN	243,794	277,061	121,038	1,547	643,440	(3,695)	(5)	
	JUL	293,139	309,717	128,667	1,601	733,124	(3,016)	(4)	
	AUG	279,680	311,091	131,621	1,772	724,164	(2,345)	(3)	
	SEP	225,092	281,801	125,487	2,047	634,427	(2,156)	(3)	
	OCT	243,936	282,638	125,907	2,260	654,741	(4,499)	(6)	
	NOV	255,094	267,768	118,822	2,352	644,036	(6,412)	(9)	
	DEC	292,315	285,617	119,889	2,624	700,445	(3,879)	(5)	
TOTAL	3,095,172	3,390,791	1,452,771	24,591	7,963,325	(62,914)	(7)		

**Public Service Company of New
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Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-004
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**Witness: Erica L. Menard
Request from: New Hampshire Public Utilities Commission Staff**

Question:

When did PSNH change to quarterly sales forecasts? Is PSNH adopting quarterly sales forecasts on a permanent basis, or are the quarterly forecasts only being done during periods of significant economic change?

Response:

PSNH/NU generally produces two sales forecasts per year - a long-term (5 year) sales forecast used during the corporate strategic planning process and a short-term (1-2 year) sales forecast used for corporate budgeting purposes. Beginning in 2008 with the downturn in the economy and its impact on the company's sales, it was decided by senior management that a mid-point update to the sales forecast would be performed. This update incorporates the latest economic forecast, additional months of actual data, and any other known changes that would impact the sales forecast. The updated sales forecast is analyzed to determine the financial impact to the company. At this point, it is anticipated the mid-point update to the sales forecast process will continue.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-006
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**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Re: STAFF-02, Q-STAFF-010, please describe PSNH's decision making regarding its purchasing strategy. Describe PSNH's general purchasing strategy, the factors PSNH considered when purchases were made, and actions PSNH took in 2009 with respect to purchases that it made earlier.

Response:

The following three pages of tables provide a chronological summary of supplemental ES bilateral energy strip purchase activity for 2009 along with how the needs assessment changed. The chronology starts with the needs assessment and purchase plan released around April 1, 2008 that was approved by the president - PSNH and then in turn shows what was purchased prior to the next assessment and what that next assessment showed. The tables conclude with the assessment as it stood at the final ES rate setting filing and what the total set of bilateral energy strip purchases were as reflected in the final ES rate setting filing. The notes at the end of the tables provide some observations on the final assessment.

Over time PSNH has developed a general ES rate setting principal that over / under recoveries should be minimized as much as possible in order to provide for rate certainty for customers. To this end, over the years, the supplemental energy requirement purchase strategy evolved to the point where prior to submitting the final ES rate filing, the vast majority of forecasted supplemental energy requirements were covered either through unit contingent purchases, bilateral energy strips or options. While PSNH maintained flexibility to address changing circumstances, as discussed in its 2007 Least Cost Integrated Resource Plan (LCIRP) as filed and supplemented in March 2008, the objective was to cover most of the forecasted need. This ES rate setting principal was built on the premise that: 1) PSNH's sales forecast was reasonably accurate; and 2) migration was relatively low and seasonal in nature such that the volume of ES supplemental energy requirements was known with a high degree of certainty.

Data Request Staff-01, Q-Staff-009 and Staff-01, Q-Staff-009 SP01 compares 2009's ES supplemental energy purchase activity with the 2007 ES supplemental energy purchase narrative in the March 2008 Supplemental LCIRP filing. However, it bears repeating that both the original LCIRP and the Supplemental filing stress that PSNH continually reviews its approach to managing the ES supplemental energy requirements and that the 2007 ES supplemental energy requirement purchase narrative was not prescriptive but rather illustrative of how one year was managed. This same prescriptive versus illustrative concern was part of the 2010 ES rate setting docket.

Supplemental ES Energy Strip Requirements at Start of Bilateral Strip Purchasing Effort (April 1, 2008)

	Underlying ES Load GWh	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW
Jan-09	787,455	154,165	51,478	28,726	234,368	459	322	116
Feb-09	717,893	149,047	40,560	25,485	215,092	466	317	114
Mar-09	741,987	101,221	20,789	14,097	136,107	288	144	57
Apr-09	681,398	191,281	43,449	64,946	299,676	543	339	271
May-09	676,991	87,168	31,377	32,751	151,296	272	178	132
Jun-09	708,012	130,167	21,879	(25,374)	126,673	370	171	(106)
Jul-09	798,497	191,782	26,836	(10,677)	207,941	521	210	(43)
Aug-09	813,461	161,299	55,404	8,369	225,072	480	346	34
Sep-09	731,316	161,109	30,884	(3,848)	188,146	479	214	(16)
Oct-09	738,251	112,687	29,647	37,332	179,666	320	206	151
Nov-09	727,239	103,762	32,166	32,627	168,555	324	201	136
Dec-09	775,311	121,809	28,468	22,579	172,856	346	198	91
Grand Total	8,897,811	1,665,497	412,937	227,013	2,305,447			

Loads tie to preliminary 2009 business plan (AKA 2008 Budget)

Reflects zero migration, needs reduced by Bethlehem, Tamworth, Lempster and HQ Call Option in Mar-Dec

Bilateral Energy Strip Transactions Made Between 1st Assessment and 2nd Assessment (early July)

	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW
Jan-09	67,200	16,000	0	83,200	200	100	0
Feb-09	64,000	12,800	0	76,800	200	100	0
Mar-09	70,400	14,400	0	84,800	200	100	0
Apr-09	70,400	12,800	0	83,200	200	100	0
May-09	64,000	17,600	0	81,600	200	100	0
Jun-09	70,400	12,800	0	83,200	200	100	0
Jul-09	73,600	12,800	0	86,400	200	100	0
Aug-09	67,200	16,000	0	83,200	200	100	0
Sep-09	67,200	14,400	0	81,600	200	100	0
Oct-09	70,400	14,400	0	84,800	200	100	0
Nov-09	64,000	16,000	0	80,000	200	100	0
Dec-09	70,400	14,400	0	84,800	200	100	0
Grand Total	819,200	174,400	0	993,600			

Remaining Supplemental ES Bilateral Energy Strip Requirements at 2nd Assessment (early July)

	ES Load GWh	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW	Peak 5 x 16 % met	Weekend 2 x 16 % met	Offpeak 7 x 8 % met
Jan-09	787,455	86,965	35,478	28,726	151,168	259	222	116			
Feb-09	717,893	85,047	27,760	25,485	138,292	266	217	114			
Mar-09	741,987	30,821	6,389	14,097	51,307	88	44	57			
Apr-09	681,398	120,881	30,649	64,946	216,476	343	239	271			
May-09	676,991	23,168	13,777	32,751	69,696	72	78	132			
Jun-09	708,012	59,767	9,079	(25,374)	43,473	170	71	(106)			
Jul-09	798,497	118,182	14,036	(10,677)	121,541	321	110	(43)			
Aug-09	813,461	94,099	39,404	8,369	141,872	280	246	34			
Sep-09	731,316	93,909	16,484	(3,848)	106,546	279	114	(16)			
Oct-09	738,251	42,287	15,247	37,332	94,866	120	106	151			
Nov-09	727,239	39,762	16,166	32,627	88,555	124	101	136			
Dec-09	775,311	51,409	14,068	22,579	88,056	146	98	91			
Grand Total	8,897,811	846,297	238,537	227,013	1,311,847				49	42	0

Loads tie to preliminary 2009 business plan (AKA 2008 Budget)

Reflects zero migration, requirement reduced by Bilateral Energy Purchases, Bethlehem, Tamworth, Lempster, HQ Call Option in Mar-Dec

Bilateral Energy Strip Transactions Made Between 2st Assessment and 3rd Assessment (late July)

	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW
Jan-09	50,400	16,000	24,800	91,200	150	100	100
Feb-09	48,000	12,800	22,400	83,200	150	100	100
Mar-09	17,600	7,200	12,400	37,200	50	50	50
Apr-09	17,600	6,400	12,000	36,000	50	50	50
May-09	16,000	8,800	12,400	37,200	50	50	50
Jun-09	52,800	6,400	12,000	71,200	150	50	50
Jul-09	18,400	6,400	12,400	37,200	50	50	50
Aug-09	16,800	8,000	12,400	37,200	50	50	50
Sep-09	50,400	7,200	12,000	69,600	150	50	50
Oct-09	17,600	7,200	12,400	37,200	50	50	50
Nov-09	16,000	8,000	12,000	36,000	50	50	50
Dec-09	17,600	7,200	12,400	37,200	50	50	50
Grand Total	339,200	101,600	169,600	610,400			

Remaining Supplemental ES Energy Strip Requirements at 3rd Assessment (late July)

	ES Load GWh	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW	Peak 5 x 16 % met of original need	Weekend 2 x 16 % met of original need	Offpeak 7 x 8 % met of original need	Peak 5 x 16 % met of revised need	Weekend 2 x 16 % met of revised need	Offpeak 7 x 8 % met of revised need
Jan-09	781,365	34,608	17,760	1,488	53,856	103	111	6						
Feb-09	699,365	25,280	11,648	(448)	36,480	79	91	(2)						
Mar-09	732,240	3,520	(2,304)	3,224	4,440	10	(16)	13						
Apr-09	670,810	96,448	22,528	51,120	170,096	274	176	213						
May-09	677,591	6,080	5,280	21,824	33,184	19	30	88						
Jun-09	709,898	5,984	3,072	(34,800)	(25,744)	17	24	(145)						
Jul-09	802,456	96,048	7,680	(15,376)	88,352	261	60	(62)						
Aug-09	796,044	69,216	28,160	(9,920)	87,456	206	176	(40)						
Sep-09	700,129	31,584	3,600	(29,520)	5,664	94	25	(123)						
Oct-09	715,610	13,728	3,456	17,856	35,040	39	24	72						
Nov-09	713,299	17,600	5,120	15,840	38,560	55	32	66						
Dec-09	766,202	26,048	5,760	9,920	41,728	74	40	40						
Grand Total	8,765,009	426,144	111,760	31,208	569,112				70	67	75	73	71	84

Loads tie to 2009 business plan

Reflects zero migration, requirement reduced by Bilateral Energy Purchases, Bethlehem, Tamworth, Lempster, HQ Call Option in Mar-Dec

Bilateral Energy Strip Transactions Made Between 3rd Assessment and Initial ES Filing (early September)

	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW
Jan-09	16,800	0	0	16,800	50	0	0
Feb-09	16,000	0	0	16,000	50	0	0
Mar-09	0	0	0	0	0	0	0
Apr-09	17,600	12,800	24,000	54,400	50	100	100
May-09	0	0	0	0	0	0	0
Jun-09	0	0	0	0	0	0	0
Jul-09	18,400	0	0	18,400	50	0	0
Aug-09	16,800	0	0	16,800	50	0	0
Sep-09	0	0	0	0	0	0	0
Oct-09	0	0	0	0	0	0	0
Nov-09	0	0	0	0	0	0	0
Dec-09	0	0	0	0	0	0	0
Grand Total	85,600	12,800	24,000	122,400			

Remaining Supplemental ES Energy Strip Requirements at Initial ES Rate Filing (early September)

	ES Load GWh	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW	Peak 5 x 16 % met of original need	Weekend 2 x 16 % met of original need	Offpeak 7 x 8 % met of original need	Peak 5 x 16 % met of revised need	Weekend 2 x 16 % met of revised need	Offpeak 7 x 8 % met of revised need
Jan-09	769,256	759	17,364	354	18,476	2	109	1						
Feb-09	688,079	(3,791)	11,610	(975)	6,844	(12)	91	(4)						
Mar-09	719,954	34,461	11,003	1,057	46,521	98	76	4						
Apr-09	658,831	107,703	20,947	23,754	152,404	306	164	99						
May-09	664,966	33,406	21,607	19,370	74,383	104	123	78						
Jun-09	696,882	40,289	16,339	(34,337)	22,291	114	128	(143)						
Jul-09	788,668	85,051	21,975	(12,889)	94,137	231	172	(52)						
Aug-09	782,383	79,788	46,547	(6,643)	119,693	237	291	(27)						
Sep-09	687,197	55,405	15,409	(35,203)	35,612	165	107	(147)						
Oct-09	702,334	44,199	19,316	16,857	80,372	126	134	68						
Nov-09	700,859	47,204	20,794	14,956	82,953	148	130	62						
Dec-09	754,838	56,923	19,073	7,693	83,690	162	132	31						
Grand Total	8,614,247	581,397	241,984	(6,006)	817,376				75	70	85	68	54	103

loads tie to 2009 business plan

Reflects 22 MW of migration as measured at prior year peak, requirement reduced by Bilateral Energy Purchases, Bethlehem, Tanworth, Lempster, HQ Call Option dropped

Bilateral Energy Strip Transactions Made Between Initial and Final ES Rate Filings

	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW
Jan-09	(67,200)	0	0	(67,200)	(200)	0	0
Feb-09	(64,000)	0	0	(64,000)	(200)	0	0
Mar-09	0	0	0	0	0	0	0
Apr-09	35,200	0	0	35,200	100	0	0
May-09	0	0	0	0	0	0	0
Jun-09	0	0	0	0	0	0	0
Jul-09	0	0	0	0	0	0	0
Aug-09	0	0	0	0	0	0	0
Sep-09	0	0	0	0	0	0	0
Oct-09	0	0	0	0	0	0	0
Nov-09	0	0	0	0	0	0	0
Dec-09	0	0	0	0	0	0	0
Grand Total	(96,000)	0	0	(96,000)			

Between initial and final ES rate filings, oil was purchased for Newington at a price that allowed a portion of January and February energy purchases to be unwound

Remaining Supplemental ES Energy Strip Requirements at Final ES Rate Filing (early December)

	ES Load GWh	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW	Peak 5 x 16 % met of original need	Weekend 2 x 16 % met of original need	Offpeak 7 x 8 % met of original need	Peak 5 x 16 % met of revised need	Weekend 2 x 16 % met of revised need	Offpeak 7 x 8 % met of revised need
Jan-09	721,251	(6,397)	7,873	(16,417)	(14,940)	(19)	49	(66)						
Feb-09	640,600	(9,192)	3,337	(17,765)	(23,620)	(29)	26	(79)						
Mar-09	662,767	7,365	821	(19,684)	(11,498)	21	6	(79)						
Apr-09	598,813	(46,561)	(19,882)	(57,372)	(123,815)	(132)	(155)	(239)						
May-09	601,433	(26,057)	(13,050)	(29,562)	(68,670)	(81)	(74)	(119)						
Jun-09	632,752	4,905	5,569	(53,013)	(42,539)	14	44	(221)						
Jul-09	723,126	3,862	11,805	(28,331)	(12,664)	10	92	(114)						
Aug-09	714,913	108,190	82,324	63,328	253,841	322	515	255						
Sep-09	623,976	130,092	49,562	22,620	202,275	387	344	94						
Oct-09	637,174	126,315	53,477	72,906	252,698	359	371	294						
Nov-09	639,652	122,978	58,972	69,558	251,507	384	369	290						
Dec-09	697,556	50,439	8,620	(2,576)	56,482	143	60	(10)						
Grand Total	7,894,012	465,939	249,427	3,691	719,057				69	70	85	71	54	98

Loads tie to October 22, 2008 2009 budget forecast

Reflects 102 MW of migration as measured at prior year peak, requirement reduced by Bilateral Energy Purchases, Bethlehem, Tanworth, and Lempster, HQ Option dropped and Newington runs in Jan - Feb with sales displacing purchases

Final Bilateral Purchases Modeled in ES Dec Update from above

	Peak 5 x 16 GWh	Weekend 2 x 16 GWh	Offpeak 7 x 8 GWh	All hours GWh	Peak 5 x 16 MW	Weekend 2 x 16 MW	Offpeak 7 x 8 MW
Jan-09	67,200	32,000	24,800	124,000	200	200	100
Feb-09	64,000	25,600	22,400	112,000	200	200	100
Mar-09	88,000	21,600	12,400	122,000	250	150	50
Apr-09	140,800	32,000	36,000	208,800	400	250	150
May-09	80,000	26,400	12,400	118,800	250	150	50
Jun-09	123,200	19,200	12,000	154,400	350	150	50
Jul-09	110,400	19,200	12,400	142,000	300	150	50
Aug-09	100,800	24,000	12,400	137,200	300	150	50
Sep-09	117,600	21,600	12,000	151,200	350	150	50
Oct-09	88,000	21,600	12,400	122,000	250	150	50
Nov-09	80,000	24,000	12,000	116,000	250	150	50
Dec-09	88,000	21,600	12,400	122,000	250	150	50
Grand Total	1,148,000	288,800	193,600	1,630,400			

Observations on final ES filing situation

- (1) Energy purchased as a percent of original purchase plan was 71%.
- (2) As sales forecast declined and migration at peak increased purchases as a % of revised need tentatively increased.
- (3) Merrimack 2 outage was not finally settled until around December 25, 2008, so April surplus and August through early December shortfalls were tentative in early December.
- (4) Putting Merrimack outage back in April would make energy purchases look more aligned but would not have captured latest thinking and would have understated second half ES costs.
- (5) Overall, taking into account weather uncertainty, potential forced outages and migration uncertainty at the time it was still considered likely that most purchases would go to serve load.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-007
Page 1 of 1**

**Witness: David A. Errichetti
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Please describe how you alter your supplemental purchases due to the impact of reserve shutdowns.

Response:

The supplemental ES energy purchase requirements forecast is the difference between forecasted hourly ES load requirements and forecasted economic generation where the availability between planned outages on steam units is assumed to be 100%. Thus, to the extent a unit's dispatch price is above the forecasted market price, the unit is either operated at less than full load or cycled off (i.e. put in reserve shutdown). Whether operated at less than full load or put in reserve shutdown, the impact is to increase the supplemental ES energy purchase requirement forecast.

With respect to 2009, throughout the period when 2009 supplemental ES energy requirement forecasts were being performed, but for Newington, the steam units were found to be economic to dispatch at their full output in non-planned outage periods. Thus, there were no forecasted reserve shutdowns, and supplemental ES energy purchase requirements did not increase due to reserve shutdowns.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Technical Session TECH-01

**Dated: 09/09/2010
Q-TS-008
Page 1 of 3**

**Witness: Erica L. Menard
Request from: New Hampshire Public Utilities Commission Staff**

Question:

Referring to page 2 of 3 of the response to STAFF 02, Q-STAFF-006, why are the two forecasts shown there for 2009 identical even though one was made in October, 2008 and the other in March, 2009?

Response:

Please see the revised response to STAFF-02, Q-STAFF-006. The second forecast labeled "2009 ES June 19, 2009 Filing" which was developed in April 2009 was incorrectly displayed.

2009 ES December 2, 2008 Filing

MWH Sales Forecast: October 2008 (Not part of the official 2009 Budget Forecast which was released mid Dec 2008)
 Economic Forecast Date: August 2008

	Residential <u>Sales</u>	Commercial <u>Sales</u>	Industrial <u>Sales</u>	Street Lighting <u>Sales</u>	Total Retail <u>Sales</u>	Competitive Supply <u>Sales</u>	Default Energy Service <u>Sales</u>	Default Energy Service <u>Energy</u>	DE
2009									
JAN	306,414	293,593	123,505	2,612	726,124	45,918	680,206	721,251	0.943
FEB	254,852	274,999	113,072	2,246	645,169	41,029	604,140	640,600	0.943
MAR	266,273	281,936	120,360	2,091	670,660	45,660	625,000	662,767	0.943
APR	226,615	267,000	114,414	1,868	609,897	45,264	564,633	598,812	0.943
MAY	224,523	267,721	120,182	1,584	614,010	46,926	567,084	601,434	0.943
JUN	244,761	278,944	121,882	1,548	647,135	50,539	596,596	632,751	0.943
JUL	293,532	311,837	129,169	1,602	736,140	54,283	681,857	723,127	0.943
AUG	279,842	313,014	131,880	1,773	726,509	52,379	674,130	714,913	0.943
SEP	225,541	283,327	125,667	2,048	636,583	48,238	588,345	623,976	0.943
OCT	244,373	286,715	125,891	2,261	659,240	58,456	600,784	637,173	0.943
NOV	255,887	273,477	118,731	2,353	650,448	47,256	603,192	639,652	0.943
DEC	293,158	288,963	119,579	2,624	704,324	46,496	657,828	697,556	0.943
Total	3,115,771	3,421,526	1,464,332	24,610	8,026,239	582,445	7,443,794		

2009 ES June 19, 2009 Filing

MWH Sales Forecast: April 2009 (2010 Business Plan Sales Forecast)
 Economic Forecast Date: March 2009

	Residential <u>Sales</u>	Commercial <u>Sales</u>	Industrial <u>Sales</u>	Street Lighting <u>Sales</u>	Total Retail <u>Sales</u>	Competitive Supply <u>Sales</u>	Default Energy Service <u>Sales</u>	Default Energy Service <u>Energy</u>	DE
2009									
JAN	347,073	310,973	102,737	2,653	763,436	56,587	706,849		
FEB	262,032	256,774	105,964	1,859	626,629	77,675	548,954		
MAR	266,433	269,630	112,155	2,075	650,293	84,151	566,142		
APR	223,973	254,770	103,228	1,866	583,837	83,391	500,446		
MAY	212,726	262,045	110,182	1,500	586,453	99,133	487,320		
JUN	248,175	279,160	112,646	1,539	641,520	125,239	516,280	548,792	0.941
JUL	302,600	316,590	121,027	1,592	741,809	132,737	609,072	647,219	0.941
AUG	286,724	307,603	124,031	1,762	720,120	135,468	584,651	621,383	0.941
SEP	225,592	266,673	117,515	2,036	611,816	118,814	493,001	524,039	0.941
OCT	242,078	281,697	108,954	2,254	634,984	122,647	512,337	544,585	0.941
NOV	253,429	273,082	108,890	2,348	637,748	115,911	521,837	554,553	0.941
DEC	290,943	288,784	112,439	2,622	694,788	117,912	576,876	612,892	0.941
Total	3,161,778	3,367,781	1,339,768	24,105	7,893,432	1,269,666	6,623,765		

2010 ES September, 2009 Filing

MWH Sales Forecast: April 2009 (2010 Business Plan Sales Forecast)
 Economic Forecast Date: March 2009

	Residential Sales	Commercial Sales	Industrial Sales	Street Lighting Sales	Total Retail Sales	Competitive Supply Sales	Default Energy Service Sales	Default Energy Service Energy	DE
2010									
JAN	301,035	292,154	109,922	2,620	705,731				
FEB	250,348	261,992	100,590	2,194	615,124				
MAR	261,185	283,455	108,646	2,084	655,370				
APR	222,039	266,472	104,220	1,863	594,594				
MAY	221,442	274,431	109,733	1,579	607,185				
JUN	246,747	283,284	111,223	1,543	642,797				
JUL	301,853	320,933	119,748	1,596	744,131				
AUG	285,783	311,573	122,279	1,766	721,402				
SEP	223,828	269,889	115,740	2,040	611,497				
OCT	239,632	275,759	115,906	2,258	633,555				
NOV	250,668	273,243	109,221	2,352	635,483				
DEC	287,704	291,190	109,652	2,626	691,172				
Total	3,092,263	3,404,375	1,336,880	24,521	7,858,039				

The following forecast was not included in any ES Rate Filing, but was performed by PSNH

MWH Sales Forecast: September 2009 (2010 Business Plan Update Sales Forecast)
 Economic Forecast Date: July 2009

	Residential Sales	Commercial Sales	Industrial Sales	Street Lighting Sales	Total Retail Sales	Competitive Supply Sales	Default Energy Service Sales	Default Energy Service Energy	DE
2010									
JAN	299,538	294,936	103,331	2,620	700,425				
FEB	249,206	264,551	94,142	2,194	610,094				
MAR	260,230	286,324	102,372	2,084	651,009				
APR	221,375	269,258	98,170	1,863	590,666				
MAY	220,956	277,387	103,895	1,579	603,817				
JUN	246,426	286,408	105,623	1,543	640,000				
JUL	301,546	324,572	114,453	1,596	742,168				
AUG	285,568	315,190	117,328	1,766	719,853				
SEP	223,714	273,115	111,154	2,040	610,023				
OCT	239,573	279,142	111,676	2,258	632,650				
NOV	250,669	276,677	105,358	2,352	635,056				
DEC	287,788	294,923	106,148	2,626	691,484				
Total	3,086,591	3,442,483	1,273,649	24,521	7,827,244				

2010 ES December 2009 Filing

MWH Sales Forecast: December 2009 (2010 Budget Sales Forecast)
 Economic Forecast Date: September 2009

	Residential Sales	Commercial Sales	Industrial Sales	Street Lighting Sales	Total Retail Sales	Competitive Supply Sales	Default Energy Service Sales	Default Energy Service Energy	DE
2010									
JAN	304,020	293,446	103,872	2,615	703,953				
FEB	277,193	259,230	97,331	2,239	635,993				
MAR	256,758	274,564	105,116	2,080	638,518				
APR	234,012	255,924	99,897	1,857	591,690				
MAY	224,567	268,516	104,961	1,567	599,611				
JUN	242,150	279,225	106,381	1,536	629,292				
JUL	297,638	307,970	114,968	1,586	722,162				
AUG	295,405	300,100	121,065	1,759	718,329				
SEP	242,665	268,107	113,181	2,033	625,986				
OCT	236,705	266,547	112,603	2,254	618,109				
NOV	246,566	262,924	105,978	2,348	617,816				
DEC	287,481	287,653	106,034	2,622	683,790				
Total	3,145,160	3,324,206	1,291,387	24,496	7,785,249				

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-001
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

As set forth in PSNH's Direct Testimony of David A. Errichetti, page 3, lines 9 through 25, regarding PSNH's supplemental purchase requirements being heavily influenced by the economics of Newington, please describe if and how PSNH's supplemental purchase requirements are influenced by the economics of Merrimack Station Unit 1.

Response:

Yes. PSNH's 2009 forecasted supplemental energy requirements to serve forecast ES load obligations were lower than they would otherwise have been due to Merrimack unit 1's forecasted economic operation.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-002
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

As set forth in PSNH's Direct Testimony of David A. Errichetti, page 3, lines 9 through 25, regarding PSNH's supplemental purchase requirements being heavily influenced by the economics of Newington, please describe if and how PSNH's supplemental purchase requirements are influenced by the economics of Merrimack Station Unit 2.

Response:

Yes. PSNH's 2009 forecasted supplemental energy requirements to serve forecast ES load obligations were lower than they would otherwise have been due to Merrimack unit 2's forecasted economic operation.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-003
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

As set forth in PSNH's Direct Testimony of David A. Errichetti, page 3, lines 9 through 25, regarding PSNH's supplemental purchase requirements being heavily influenced by the economics of Newington, please describe if and how PSNH's supplemental purchase requirements are influenced by the economics of Schiller Unit 4.

Response:

Yes. PSNH's 2009 forecasted supplemental energy requirements to serve forecast ES load obligations were lower than they would otherwise have been due to Schiller unit 4's forecasted economic operation.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-004
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

As set forth in PSNH's Direct Testimony of David A. Errichetti, page 3, lines 9 through 25, regarding PSNH's supplemental purchase requirements being heavily influenced by the economics of Newington, please describe if and how PSNH's supplemental purchase requirements are influenced by the economics of Schiller Unit 5.

Response:

Yes. PSNH's 2009 forecasted supplemental energy requirements to serve forecast ES load obligations were lower than they would otherwise have been due to Schiller unit 5's forecasted economic operation.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-005
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

As set forth in PSNH's Direct Testimony of David A. Errichetti, page 3, lines 9 through 25, regarding PSNH's supplemental purchase requirements being heavily influenced by the economics of Newington, please describe if and how PSNH's supplemental purchase requirements are influenced by the economics of Schiller Unit 6.

Response:

Yes. PSNH's 2009 forecasted supplemental energy requirements to serve forecast ES load obligations were lower than they would otherwise have been due to Schiller unit 6's forecasted economic operation.

**Public Service Company of New
Hampshire
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Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-006
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

Referring to PSNH's Direct Testimony of David A. Errichetti, page 3, lines 16-18, please provide the process used by PSNH to assess the need for market purchases with respect to the cost of generating power for each of Merrimack Station Units 1 and 2, and Schiller Station Units 4, 5, and 6 in comparison to the cost of purchasing power.

Response:

At the time PSNH prepares its initial supplemental energy purchase forecast and during subsequent iterations, the forecasted dispatch prices of each of the aforementioned units are compared to then current forward bilateral energy prices for peak and off peak hours. To the extent that a unit's dispatch price is less than or equal to the forward bilateral energy prices, it is assumed to operate when not on scheduled maintenance, thus reducing the amount of supplemental energy purchases needed to serve forecasted ES load obligations.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-007
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

Referring to PSNH's Response of David A. Errichetti to NHPUC Staff data request 01-008, please explain whether and how the actual annual capacity factors in 2009 for each of Merrimack Station Units 1 and 2, and Schiller Station Units 4, 5, and 6 were affected by economic outages. Please explain whether there were any periods in 2009 in which the foregoing units did not operate because the cost of purchasing power was less than the cost of operating each unit including the fixed and variable cost for each unit. Please identify any such periods.

Response:

Each of the coal plants did modify its operation due to the economic/energy prices and had economic reserve outages as noted below. Schiller's biomass unit, Unit 5, had no economic reserve-outages.

Merrimack #1 had two, short reserve-outages over weekend periods occurring at the end of forced outages. These impacted MK1 capacity factor 1.38%. Similarly, Merrimack Unit 2 has two short reserve outages and a 9 hour window at the end of forced outages. These impacted MK2 capacity factor 1.03%.

Schiller Unit 4 had 7 reserve-outages of varying lengths that impacted capacity factor by 12.2% and Schiller Unit 6 had 8 reserve-outages of varying lengths that impacted capacity factor by 8%.

Note that fixed costs including depreciation, property taxes, debt service and return on equity do not play a role in the daily dispatch of the unit.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-008
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

Referring to PSNH's Direct Testimony of William H. Smagula, page 3, lines 3 and 4, what were the dates during which Merrimack Station's Unit 1 had its 125.65 day run in 2009?

Response:

Merrimack Unit 1 achieved its 3rd longest run on April 20, 2009. This run began on December 16, 2008.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-009
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

For each day of that 125.65 day period, please provide the average hourly cost and average daily cost of purchasing power at spot market pricing.

Response:

The average hourly cost and average daily cost of purchasing power at spot market is available from the ISO-NE web site.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-010
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

Please identify any and all hours during that 125.65 day period when the hourly cost of generating power at Merrimack Station's Unit 1 including both variable and fixed costs was higher than the cost of purchasing power at spot market pricing. Please identify any and all days during that 125.65 day period when the average cost of generating power at Merrimack Station's Unit 1 including both variable and fixed costs was lower than the average cost of purchasing power at spot market pricing.

Response:

PSNH does not use forecasted or actual fixed costs in its daily dispatch decision process and thus does not have the information necessary to respond to this question. Also, day-ahead cleared energy prices are after the fact values and are the result of many individual decisions by market participants reacting in part to next day bilateral energy prices. Moreover, such day-ahead cleared energy prices would be different had any particular generating station, such as Merrimack 1, not operated. In addition, the operating characteristics of base-load generating stations such as Merrimack 1 do not allow the unit to cycle on and off hourly so dispatch decisions are not made hourly.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-011
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

Referring to PSNH's Direct Testimony of William H. Smagula, page 3, lines 4 and 5, what were the dates during which Schiller Unit 6 had its 124 consecutive day run in 2009?

Response:

Schiller Unit 6 achieved its record run on April 2, 2009. This run began on November 25, 2008.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-01

**Dated: 07/16/2010
Q-CLF-013
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

Please identify any and all hours during that 124 day period when the hourly cost of generating power at Schiller Unit 6 including both variable and fixed costs was higher than the cost of purchasing power at spot market pricing. Please identify any and all days during that 124 day period when the average cost of generating power at Schiller Unit 6 including both variable and fixed costs was lower than the average cost of purchasing power at spot market pricing.

Response:

PSNH does not use forecast or actual fixed costs in its daily dispatch decision process and thus does not have the information necessary to respond to this question. Also, day-ahead cleared energy prices are after the fact values and are the result of many individual decisions by market participants reacting in part to next day bilateral energy prices. Moreover, such day-ahead cleared energy prices would be different had any particular generating station, such as Schiller Unit 6, not operated. In addition, the operating characteristics of base-load generating stations such as Schiller Unit 6 do not allow the unit to cycle on and off hourly so dispatch decisions are not made hourly.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-02

**Dated: 08/13/2010
Q-CLF-001
Page 1 of 1**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

With regard to PSNH's Response of David A. Errichetti, Q-CLF-006, please explain the process used by PSNH to schedule operations for each of Merrimack Station Units 1 and 2, and Schiller Station Units 4, 5, and 6 when subsequent iterations of PSNH's supplemental energy purchase forecast concludes that a unit's dispatch price is greater than forward bilateral energy prices. Please explain how frequently PSNH updated its initial supplemental energy purchase forecast to assess the extent that PSNH's units dispatch price was predicted to be less than or equal to bilateral energy prices in 2009. Please explain and provide any process and/or protocols in place for updating the initial supplemental energy purchase forecast.

Response:

With respect to the forecast process the only consideration missing from the original response is that once the unit is determined to be economic to operate, the forecast is adjusted to reflect planned maintenance outages and the operation between planned maintenance outages is reduced to allow for forced outages. The latter adjustment is spread across all intervening hours because forced outages are by their nature not predictable.

During 2009, subsequent to the initial supplemental energy purchase forecast done around April 1, 2008, there were four published assessments of supplemental ES energy requirements: two before the initial ES rate setting filing, the initial ES rate setting filing, and the final ES rate setting filing. Between these there were conversations but no formal assessments.

There is no prescriptive process or set of protocols on updating the initial supplemental energy purchase forecast. PSNH monitors the forecast and updates it to the extent necessary to account for changing circumstances.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-02

**Dated: 08/13/2010
Q-CLF-002
Page 1 of 2**

**Witness: David A. Errichetti
Request from: Conservation Law Foundation**

Question:

With regard to PSNH's response of William Smagula, Q-CLF-007, please provide and explain the reasons and duration (including time and dates) for each reserve outage referenced in said response. Please provide the amount saved by PSNH due to each such reserve outage, along with calculation methodology for each such reserve outage.

Response:

Below are the times that each reserve outage referenced in Q-CLF-007 occurred and a rough estimate of the resulting savings. Reserve outages occur because the combination of operating characteristics and offered prices result in the unit not being dispatched. PSNH does not believe that savings or costs can explicitly be calculated for reserve outages. This is because there are numerous variables that can not be accurately taken into account such as changes in subsequent hot and cold starts and changes in mechanical wear and fuel inventory carrying costs or changed delivery schedules. However, the table below provides a sense of the savings realized by comparing the theoretical hourly avoided generation multiplied by the difference between the average yearly \$/MWh cost for each unit and the corresponding day-ahead hourly nodal LMP. The theoretical hourly avoided generation represents the units' rating adjusted for a between outage availability factor unless the units' dispatch price is above the hourly LMP in which case the theoretical hourly generation is the unit's minimum rating.

Merrimack 1		
<u>Start Time</u>	<u>End Time</u>	<u>Savings</u>
04/24/2009 15:55	04/27/2009 6:00	\$ 56,753
07/24/2009 11:50	07/25/2009 2:01	\$ 5,836

Merrimack 2		
<u>Start Time</u>	<u>End Time</u>	<u>Savings</u>
05/16/2009 14:55	05/18/2009 5:00	\$ 21,936
06/28/2009 17:22	06/30/2009 11:25	\$ 47,782
07/22/2009 6:30	07/22/2009 16:27	\$ (3,265)

Schiller 4		
<u>Start Time</u>	<u>End Time</u>	<u>Savings</u>
05/30/2009 23:50	06/10/2009 1:59	\$ 114,289
06/12/2009 13:10	06/14/2009 16:00	\$ 25,627
06/20/2009 0:31	06/21/2009 23:30	\$ 20,263
07/03/2009 0:05	07/21/2009 14:29	\$ 219,625
07/22/2009 15:21	07/28/2009 5:04	\$ 62,117
07/30/2009 0:20	08/03/2009 0:10	\$ 46,917
08/08/2009 0:27	08/10/2009 5:00	\$ 26,078

Schiller 6		
<u>Start Time</u>	<u>End Time</u>	<u>Savings</u>
06/13/2009 0:20	06/24/2009 23:26	\$ 130,348
07/01/2009 0:00	07/06/2009 5:00	\$ 61,946
07/11/2009 0:12	07/13/2009 5:55	\$ 28,677
07/18/2009 0:07	07/18/2009 10:29	\$ 5,446
07/21/2009 14:31	07/21/2009 23:52	\$ 4,097
10/06/2009 17:01	10/07/2009 7:00	\$ 7,452
11/21/2009 0:15	11/23/2009 11:00	\$ 30,012
11/23/2009 22:20	11/27/2009 8:59	\$ 36,393
11/29/2009 11:36	12/01/2009 23:59	\$ 22,594

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-02

**Dated: 08/13/2010
Q-CLF-003
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

With regard to PSNH's Response of David A. Errichetti, Q-CLF-010, please state and explain the time period (and operational basis for the time period) for which dispatch decisions can prudently be made with regard to allowing units to cycle on and off, based on the operating characteristics for each of Merrimack Station Units 1 and 2, and Schiller Station Units 4, 5, and 6. Please include in your response the economic factors, such as the cost difference between the variable cost for each such unit and the forecasted spot market pricing, at which it was or would have been prudent for PSNH to purchase energy from the energy market rather than self-supply.

Response:

Merrimack Station Units 1 and 2, and Schiller Station Unit 5 are operated as base load units with low load minimums and on/off constraints. Schiller Units 4 and 6 are operated as base load units as well with similar minimums but have additional flexibility with the option to come off line daily. The specific dispatching criteria including Hot Notification Time (hrs.), Minimum Run Time (hrs.), Minimum Shutdown Time (hrs.), Manual Response Rate (MW/min.), and Minimum Load (MW) are market-sensitive, confidential business information as part of our bidding strategy. However, the daily bidding of each unit is a reflection of the above criteria, the condition of the units, other potential operational considerations, etc. An assessment of these criteria is the basis for the daily bidding; rather than a presumption that a single cost difference on a daily basis between variable cost and forecasted spot market pricing will always be the prudent answer.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request CLF-02

**Dated: 08/13/2010
Q-CLF-004
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

Please explain the process used by PSNH for notifying ISO-NE that PSNH's units were operated to self-supply rather than being subject to ISO-NE dispatch control on the merits. Please explain the wholesale market status of such units during periods for which the units were operating to supply energy for PSNH's customer load. Please provide the dates and times and explain the basis for any periods during 2009 when PSNH notified ISO-NE that PSNH-owned units were available for merit-based dispatch by ISO-NE.

Response:

Self supply requests are made as part of PSNH's daily process of offering its resources into the ISO-NE Day-Ahead or Real-Time energy markets. Self-scheduling is not an all or nothing proposition. It is possible to self-schedule all or a portion of a unit for all or part of the upcoming day. To the extent a unit is not fully self-scheduled for the entire day, the balance of available hourly capability is offered at a price. The self-scheduled portion of a unit's dispatch, once accepted by ISO-NE, is flagged in the ISO-NE energy market as self-scheduled. There is no mechanism in the ISO-NE wholesale energy market to indicate that you are dispatching a resource to serve load.

With respect to non-intermittent power resources, non-hydro units, merit offers are made for available capability for each hour and self-schedule requests override the merit offers. Thus ISO-NE is notified of merit offers for available capacity in all hours.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-02

**Dated: 08/13/2010
Q-CLF-005
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

With regard to PSNH's response of William Smagula, Q-OCA-004, please explain and provide the details of the operational consequences to Merrimack unit 2 and economic consequences to PSNH which resulted from the "foreign material event" including impacts to output (such as total reduction in energy generated in 2009) and net unit generating capability. Please explain and provide a breakdown of the basis for the \$10,843,635 of replacement power costs provided in response to Q-OCA-005 including sums attributable to diminished capacity and/or output.

Response:

In 2009, Merrimack Unit 2 operated at an output level of approximately 320 MW until the beginning of the turbine repair outage on August 1. The expected higher output associated with the turbine replacement was not obtained until after the repair outage (August- December) was completed. To make the necessary repairs associated with the foreign material event, a repair outage was taken from August 1 to December 6. This outage was approximately 18 weeks long, rather than the scheduled 4 week annual outage. The incremental generation between 320 MW and the current 332 MW, an associated capacity value, as well as the additional 14 weeks of outage, will have no economic impact on customers with the expected reimbursement from insurance because PSNH expects those costs to be fully covered by insurance.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request CLF-02

**Dated: 08/13/2010
Q-CLF-006
Page 1 of 1**

**Witness: William H. Smagula
Request from: Conservation Law Foundation**

Question:

With regard to PSNH's response of William Smagula, Q-OCA-008, please provide the details of the operational consequences to Merrimack unit 2 and economic consequences to PSNH which resulted from the "crack found on the MK2 generator exciter rotor" including impacts to output (such as total reduction in energy generated in 2009) and net unit generating capability. Please explain and provide a breakdown of all costs for addressing and repairing the generator including sums attributable to diminished capacity and/or output. Please explain whether any market purchases were made by PSNH due to the exciter rotor crack and repairs.

Response:

There was no impact to output and net unit generating capability associated with the MK2 generator exciter rotor. PSNH obtained a rental unit and installed it during the 2008 scheduled outage. A permanent replacement was installed during the 2009 annual outage. A monthly charge of approximately \$120,000 was paid for the rented portable exciter, yet this cost was significantly less than an extended outage of as much as 16 - 24 weeks to obtain a replacement exciter. PSNH also negotiated a waiver of a portion of the total rental fees. The cost for replacing the exciter rotor was \$247,700.

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Docket No. DE 10-121**

Data Request SCNH-01

**Dated: 07/16/2010
Q-SCNH-005
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

Have the heat rate and efficiency projects described by the William H. Smagula response to Data Request Q-STAFF-059 caused the Merrimack Station firing rate to increase? Have the projects caused NOx emission rates to increase in tons per year [TPY]? By how much? Will the increases require increased O&M and capital budget costs? Please specifically detail the basis of the costs. Are other heat rate and efficiency projects planned? What effect will these projects have on budgeting?

Response:

No. The heat rate and efficiency projects do not increase the firing rate. These projects do not increase NOx emission rates.

PSNH objects to the remainder of this question. Please see PSNH's Objections to Sierra Club's Data Requests filed July 23, 2010.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request SCNH-01

**Dated: 07/16/2010
Q-SCNH-012
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

The Stipulated Settlement Agreement in Docket DE 09-091, provided that there would be an opportunity, during the 2009 reconciliation process, to review the investigation of third party liability for costs of the foreign material outage. \$13,200,000 of purchased power costs were passed on to ratepayers in the 2008 reconciliation process. What is the status of that investigation? Why wasn't a report of the investigation part of the filing and testimony in the current docket?? What proposed adjustments, if any, were made in the 2009 reconciliation presentation to account for any recovery of the 2008 purchased power costs from third parties? The reconciliation testimony and Attachments of William H. Smagula, MK2-Unit Outage List, state that MK2 was down from August 1, 2009, until December 6, 2009, as a "Planned Annual Outage". The reconciliation testimony and Attachments presented by Robert A. Baumann provide no specific detail of the costs attributable to the foreign material outage. Was the August 1, 2009, to December 6, 2009, outage attributable to the foreign material damage? If yes, please specifically detail the work done; who did the work; the total cost of the work; and, any costs that are included in the reconciliation presentation intended for ratepayer recovery, including damage replacement and repair, purchased power costs and all other costs caused by or attributable to the foreign material damage, including PSNH personnel and overhead costs.

Response:

As stated in Set OCA-1, Q-OCA-004, the source of the foreign material remains under investigation by the insurance company and at this point no responsible 3rd party has been identified. PSNH continues to support the investigative efforts. The outage from August 1, 2009 to December 6, 2009 was taken to repair the turbine damage associated with the foreign material event. Siemens completed the turbine repair work. Outage costs, related to work on the turbine, associated with this 18 week outage have been submitted to the insurance company for reimbursement. Also see response to OCA-01, Q-OCA-005.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request SCNH-02

**Dated: 08/13/2010
Q-SCNH-001
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

A third party vendor/contractor was responsible for the foreign material damage to the Merrimack 2 turbine. The significant purchased power costs for 2008 were not reimbursed by insurance or third party vendor/contractors as no adjustments were booked in the 2009 reconciliation presentation. In answer to OCA Data Request 005, PSNH stated that \$28,859,720 was the 2009 cost for the turbine damage and \$10,000,000 insurance proceeds were received. Please specifically describe PSNH efforts to investigate the responsible party and to recover the costs of the damage. Please identify the PSNH employee[s] responsible for the investigation. Please provide each and every document regarding the investigation, including, but not limited to, investigative reports, correspondence, email and memoranda.

Response:

The investigation associated with the foreign material event was reviewed as part of the 2008 ES/SCRC Docket No. DE 09-091. Please see the responses to CLF-2, Q-005 and OCA-2, Q-001 for additional information concerning the insurance claims.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request SCNH-02

**Dated: 08/13/2010
Q-SCNH-002
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

Which, if any, Merrimack 2 turbine contractor/vendor has contractual or indemnification liability [independent of fault] for the foreign material damage? Please provide the names and addresses of such contractor/vendor. Please provide any such contractual language. Please specifically describe PSNH efforts to pursue any such contractually responsible party to recover the costs of the damage. Please identify the PSNH employee[s] responsible for pursuing the contractual claim. Please provide each and every document regarding the claim, including, but not limited to, investigative reports, correspondence, email and memoranda.

Response:

The foreign material event occurred and was reviewed as part of the 2008 ES/SCRC Docket No. DE 09-091. Please see the responses to CLF-2, Q-005 and OCA-2, Q-001 for additional information concerning the insurance claims.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request SCNH-02

**Dated: 08/13/2010
Q-SCNH-003
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

William H. Smagula, Director-Generation, PSNH, in response to Q-Staff-032, described negotiations with Siemens regarding the replacement and repair project. Mr. Smagula described the negotiations as an effort to “mitigate costs” and “gain value” for customers. Was third party liability for the foreign material damage discussed during the Siemens negotiations? If yes, please describe the discussion and provide the documentation that supports the answer. Mr. Smagula further stated that it is not possible to specifically quantify the financial impact of the Siemens negotiations because it is “subjective”. Please provide, as accurately as possible, an explanation of the \$10,000,000 estimate that Mr. Smagula did provide.

Response:

No, third party liability was not discussed during the Siemens negotiations.

An explanation of the negotiated value obtained from Siemens Power Corporation approaching as much as \$10 million is discussed below.

- \$0.78M for the negotiated reduction in rental payments for the MK 2 Mobile Exciter from October 2008 to April 2009.
- \$3M or greater estimated with the continuation of the 10 year warranty on the refurbished HP/IP turbine equivalent to what was to be provided on the originally installed, new HP/IP turbine. The continuation of this equivalent warranty was achieved at no additional cost.
- >\$5M as an estimated avoided cost associated with the opening, repairing and closing of the turbine on a lesser frequency due to a reinstatement of the performance guarantees on the refurbished HP/IP turbine equivalent to those in place on the originally installed equipment.

\$0.9M estimated for the 19 month interest free retention of the over \$7 million payment for the performance guarantees requested by Siemens upon obtaining initial performance data on initial start-up in May 2008, until the actual demonstration was achieved in December 2009.

**Public Service Company of New
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Data Request SCNH-02

**Dated: 08/13/2010
Q-SCNH-004
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

William H. Smagula, Director-Generation, PSNH, in response to Q-Staff-059, listed a number of projects that improved the fossil unit heat rates, including the HP/IP turbine project. In response to Q-Staff-022, Mr. Smagula stated that the net energy of 12 MW was due to equipment gains. Mr. Smagula also stated that an additional unit capacity of just over 5 MW was demonstrated. He did not attribute the 5MW+ increase to efficiency gains. Please provide the documentation that supports Mr. Smagula's responses, both as to the efficiency gains and the additional unit capacity.

Response:

Merrimack Unit 2 receives capacity credit for 338 MW associated with the turbine project efficiency gains as shown on the ISO web page.

The unit operates at approximately 332 MW (12 MW above the previous 320 MW net operation) due to efficiency gains associated with the turbine project as shown below.

Historical operation at 320 MW			Increased output at 332 MW (Improved turbine efficiency)		
date	hour	Net Gen MW	date	hour	Net Gen MW
01 Jan 10	01	321.15	06 Jan 10	13	332.35
01 Jan 10	02	320.95	06 Jan 10	14	332.25
01 Jan 10	03	320.60	06 Jan 10	15	331.65
01 Jan 10	04	320.70	06 Jan 10	16	332.90
01 Jan 10	05	320.70	06 Jan 10	17	333.10
01 Jan 10	06	320.50	06 Jan 10	18	331.95
01 Jan 10	07	320.60	06 Jan 10	19	332.15
01 Jan 10	08	320.55	06 Jan 10	20	331.85
01 Jan 10	09	320.85	06 Jan 10	21	331.40
01 Jan 10	10	320.90	06 Jan 10	22	331.20
01 Jan 10	11	321.00	06 Jan 10	23	331.60
01 Jan 10	12	320.70	06 Jan 10	24	332.20

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Data Request SCNH-02

**Dated: 08/13/2010
Q-SCNH-005
Page 1 of 1**

**Witness: William H. Smagula
Request from: Sierra Club, New Hampshire Chapter**

Question:

William H. Smagula, Director-Generation, PSNH, was asked, in Q-Staff-052, about the PSNH-Generation decision making process between necessary spending in critical areas and overall cost of production; and, whether or not that balancing means that required capital or maintenance would not be performed to meet cost goals. Staff Data Request Q-Staff-052 dovetails exactly with NHSC Data Requests 4, 6, 9 and 13 which were calculated to examine the prudence of any deferred maintenance on pollution control equipment. In PSNH response to the NHSC Data Requests, PSNH stated that it “did not track operating and maintenance costs associated with specific pieces of equipment”. PSNH, in response to the Staff Data Request, provided the general answer that it: “[M]akes budget determinations based on maintenance records, test data, consulting experts, past experiences and other generating facilities experiences”. Please explain in detail how PSNH determines the maintenance/cost balance if it does not track the costs associated with specific pieces of pollution control equipment.

Response:

PSNH consistently repairs, maintains or performs preventative maintenance on equipment at its generating facilities. This work is based on the maintenance records of the equipment, test data, etc. Performance of equipment can also be an indicator of necessary maintenance, as is the case with pump performance, turbine performance or pollution control equipment performance, as examples. Specific costs to perform these on-going efforts are not tracked to unique pieces of equipment, but rather included as part of the overall O&M (operations and maintenance) budget for the year.

In addition to the on-going, periodic maintenance there can also be targeted maintenance projects to address safety, reliability, environmental compliance, etc. Once identified, maintenance projects are planned to maximize value to customers. For example, it might be more cost effective to replace a piece of equipment, rather than repairing it depending on the cost of labor and parts. The length of outage time required for the maintenance project is also considered, as well as any future maintenance anticipated based on the maintenance approach taken. Again, for example, grouping longer maintenance projects together to be completed during a single longer outage is a more cost-effective option considered, avoiding multiple longer outages and saving customers money. This review and analysis allows management to assess the maintenance/cost benefit balance to insure customer value. This type of work is more likely to be tracked to specific pieces of equipment. Finally, any maintenance necessary to insure compliance would not be considered discretionary, and would be recognized in the planning and cost/benefit analysis.

**Public Service Company of New
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Data Request TC-01

**Dated: 07/16/2010
Q-TC-001
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

Please explain why you believe that the portion of the costs incurred to serve PSNH's default service customers during 2009 related to energy and capacity purchases and sales were prudent. Please state the basis for this conclusion.

Response:

We believe the costs referred to were prudent because we exercised the standard of care which qualified utility management would be expected to exercise under the circumstances that existed at the time the decision in question had to be made. See the response to TC-01, Q-TC-017.

**Public Service Company of New
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Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-002
Page 1 of 2**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

With reference to page 5, lines 10-22 of Mr. Baumann's prefiled testimony in this docket, please provide specific information about the energy purchases that were made to supply PSNH's default service customers during 2009, including the dates the contracts were executed, the duration of the contracts, the contracting party, the quantity purchased and the purchase prices.

Response:

The attached table provides the following information for bilateral energy and short term unit contingent purchases made for 2009: execution date, duration, size, price and power delivery period. PSNH believes providing contracting party and pricing is commercially sensitive information and not needed for purposes of this review. PSNH will provide the table with contracting parties and pricing to Staff and the OCA, if requested, under a motion for protective order.

Standardized Contracts

<u>Execution Date</u>	<u>Contracting Party</u>	<u>Duration</u>	<u>Size (MW)</u>	<u>Price (\$/MWh)</u>	<u>Power Delivery Period</u>
04/30/2008		01/01/2009 - 12/31/2009	50		5X16
05/13/2008		01/01/2009 - 12/31/2009	50		5X16
05/30/2008		01/01/2009 - 12/31/2009	50		7X16
07/01/2008		01/01/2009 - 12/31/2009	50		7X16
07/14/2008		01/01/2009 - 12/31/2009	50		7X24
07/22/2008		06/01/2009 - 06/30/2009	100		5X16
07/22/2008		09/01/2009 - 09/30/2009	100		5X16
07/22/2008		01/01/2009 - 02/28/2009	100		5X16
07/23/2008		01/01/2009 - 02/28/2009	50		OFFPEAK
07/29/2008		04/01/2009 - 04/30/2009	100		OFFPEAK
08/07/2008		04/01/2009 - 04/30/2009	50		5X16
08/07/2008		01/01/2009 - 02/28/2009	50		5X16
08/08/2008		07/01/2009 - 08/31/2009	50		5X16
11/17/2008		04/01/2009 - 04/30/2009	100		5X16
01/21/2009		01/22/2009 - 01/22/2009	50		5X16
01/21/2009		01/23/2009 - 01/23/2009	100		5X16
01/21/2009		01/22/2009 - 01/22/2009	50		5X16
01/28/2009		01/30/2009 - 01/30/2009	100		5X16
01/28/2009		01/29/2009 - 01/29/2009	200		5X16
01/29/2009		01/30/2009 - 01/30/2009	100		5X16
01/29/2009		08/01/2009 - 11/30/2009	200		7X24
01/30/2009		01/31/2009 - 02/01/2009	50		2X16
01/30/2009		01/31/2009 - 02/01/2009	50		2X16
01/30/2009		02/02/2009 - 02/02/2009	150		5X16
02/02/2009		02/03/2009 - 02/03/2009	100		5X16
02/06/2009		02/10/2009 - 02/13/2009	100		5X16
02/06/2009		02/09/2009 - 02/09/2009	100		5X16
02/12/2009		02/13/2009 - 02/13/2009	200		5X16
02/12/2009		02/14/2009 - 02/15/2009	200		2X16
02/25/2009		02/26/2009 - 02/26/2009	100		5X16
02/25/2009		02/27/2009 - 02/27/2009	100		5X16
02/25/2009		02/26/2009 - 02/26/2009	150		5X16
02/25/2009		02/27/2009 - 02/27/2009	150		5X16
06/24/2009		06/27/2009 - 06/28/2009	300		2X16
06/26/2009		06/29/2009 - 06/29/2009	200		5X16
07/21/2009		07/22/2009 - 07/22/2009	300		5X16
08/18/2009		08/19/2009 - 08/19/2009	150		5X16
08/20/2009		08/21/2009 - 08/21/2009	150		5X16
08/21/2009		08/22/2009 - 08/23/2009	150		2X16
12/02/2009		12/03/2009 - 12/03/2009	200		5X16
12/03/2009		12/04/2009 - 12/04/2009	150		5X16

Structured and/or Unit-Contingent Contracts

<u>Execution Date</u>	<u>Contracting Party</u>	<u>Duration</u>	<u>Size (MW)</u>	<u>Price (\$/MWh)</u>	<u>Power Delivery Period</u>
10/19/2007		01/01/2008 - 12/31/2010	36		as produced

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Data Request TC-01

**Dated: 07/16/2010
Q-TC-005
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

Please list the employees of PSNH or NUSCo who engaged in power trading activities to supply PSNH's default service customers during 2009 and what their background and qualifications are.

Response:

The following persons provide support for PSNH's ES supply portfolio:

Patrick Smith is a Manager in the Wholesale Power Contracts group. He is employed by Northeast Utilities Service Company. Mr. Smith has been an employee of Northeast Utilities since 1992 holding various positions in generation, transmission and has been with the Wholesale Power Contracts group for 10 years.

David Errichetti is Manager Generation Resource Planning in the Wholesale Power Contracts group. He is employed by Northeast Utilities Service Company. Mr. Errichetti has been an employee of Northeast Utilities since 1982 holding various positions in generation resource planning and has been with the Wholesale Power Contracts group for 10 years.

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Data Request TC-01

**Dated: 07/16/2010
Q-TC-007
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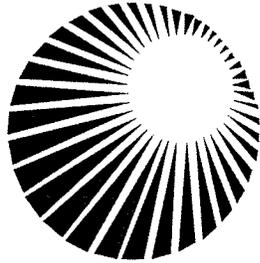
**Witness: David A. Errichetti
Request from: TransCanada**

Question:

Please explain the factors that were considered by the employees of NUSCo or PSNH in making the power purchases that were necessary to serve PSNH's default service customers during 2009. Provide any and all documentation that was relied upon to make these decisions, including internal procedures or protocols and outside sources that were relied upon.

Response:

Please see the response to Staff-01, Q-Staff-009. In addition please see the response to TC-01, Q-TC-014. Lastly, attached is the redacted information provided in response to TRANSCANADA-01, Q-TC-013 in Docket DE 09-180 providing procedures that touch on PSNH ES supplemental procurement.



**Northeast
Utilities System**

**Wholesale Marketing
Policy**

PSNH Load Asset Management

Approved By:

**Gary A. Long
President & Chief Operating Officer - PSNH**

Effective Date: June 3, 2008

Revision: 1

1 Overview

- 1.1 The Regulated Wholesale Marketing ("RWM" or also known as Wholesale Power Contracts) Department's Policies and Procedures (P&P) will ensure a level of oversight and control which is commensurate with the business undertakings and risks associated with a regulated electric utility company.

2 Departmental Policies and Procedures

- 2.1 RWM will maintain detailed and accessible procedures to control and manage the work process. The RWM Policies and Procedures (P&P) will be maintained as a controlled document. Each procedure will have a designated process owner who will be responsible for maintaining such procedure. Procedures can be incorporated by reference into the RWM P&P.
- 2.2 The Director – Wholesale Power Contracts will be responsible for obtaining approval for P&P. Policies will be approved by the PSNH President and the Director – Wholesale Power Contracts.
- 2.3 RWM Procedures will include:
 - PSNH Energy Service Power Supply Planning and Development.
 - Annual power supply portfolio planning process
 - PSNH Portfolio Management
 - Planning process for load obligation fulfillment.
 - Hedging, including Financial Transmission Rights (FTR)
 - Bidding and Scheduling of load/generation
 - Contract Administration
 - Details for the development, approval and administration of contracts with marketing and trading counterparties
 - Transaction execution and reporting
 - Transaction execution
 - Deal capture, accounting designation and reporting

- Controls, including independent confirmation
- Exceptions

3 Authorized Activities

3.1 RWM is authorized to conduct activities associated with power related products in support of PSNH load obligation activities and Renewable Energy Certificate (REC) purchases and sales. The conduct and scope of these activities is limited to the ISO-NE power pool and adjoining power pools. Adjoining power pools include New York ISO, New Brunswick and Hydro-Quebec.

3.2



3.3 Power related products are defined as:

- Energy (Day Ahead spot market, Real Time spot market and bilateral contracts).
- Capacity (Unforced Capacity, Locational Installed Capacity, Installed Capacity).
- Ancillary services, such as spinning reserve requirements, operating reserves.
- Structured products (ex. Financial Transmission Rights, Generation Outage Insurance, Put Options, Call Options, Transmission wheeling arrangements, etc.)
- Renewable Energy Certificates

4 Departmental Policies and Procedures

4.1 **Transactional limits** are based on PSNH power supply strategy (Annual, Monthly, Day to Day).

- Annual – An annual evaluation of power supply requirements will be performed as part of the PSNH Energy Service (ES) filing. Transactions associated with this annual review will require written authorization from

the President – PSNH. These transactions will include energy, capacity and other power related products.

- Monthly – Transactions which were not addressed in the annual ES evaluation and which may be of duration from one month to one year will require written authorization from the President- PSNH.
- Day to Day – Transactions of one month or less will require written authorization from Manager – Wholesale Marketing or designee, or the Director –Wholesale Power Contracts, or the President-PSNH. Manager – Wholesale Marketing is authorized to enter into transactions of this duration up to a dollar limit of [REDACTED]. If transaction value will exceed this limit, authorization is required from Director –Wholesale Power Contracts. Additionally, any sales of option contracts must be approved by Director – Wholesale Power Contracts.
- Once authorization for the transactions is received the Manager – Wholesale Marketing, or designee, will be responsible to execute transactions in accordance with RWM P&P.

4.2 Volumetric Limits

4.2.1 Capacity – PSNH ES capacity needs are met thru owned generation resources and purchased from the ISO-NE. The ES costs associated with the provision of capacity are forecasted and incorporated into the ES rate filing approved by NH PUC. Thru June, 2010 ISO-NE capacity markets have been established which allow generation to receive a fixed price (per Mega-Watt-month). Bilateral transactions are not expected to occur during this time period. Commencing with June, 2010 ISO-NE has implemented a FERC approved Forward Capacity market where price is derived from an ISO-NE administered auction. [REDACTED]

[REDACTED]
Contract quantities will be limited to [REDACTED]
[REDACTED]

If RWM is unable to execute bilateral contracts on terms considered favorable to PSNH customers, the ISO-NE auctions will be utilized for the net ES requirement..

4.2.4 Renewable Energy Certificates (“RECs”) purchased for ES rate customers – Commencing with Calendar Year 2008, the state of New Hampshire has implemented a Renewable Portfolio Standard (“RPS”) which requires that a portion of the power supply services provided to PSNH ES rate customers be derived from generation compliant with NH RPS. Compliance is exhibited annually through a filing to NHPUC and can be met with either NH compliant RECs or through an Alternate Compliance Payment (“ACP”). An ACP is provided in lieu of compliant RECs [REDACTED]

5 Renewable Energy Certificate Sales

5.1 RWM is authorized to sell RECs derived from PSNH owned and operated generation, in particular, Northern Wood Power Project, generation entitlement contracts and IPPs. REC’s may be marketed and sold which are not required to meet NH RPS for ES rate customer load. The following process will be utilized for control of REC sales transactions:

5.1.1 [REDACTED]

5.1.2 [REDACTED]

[REDACTED]

5.1.3 Sales Contract Signatures: Forward Sales contracts will be signed by President – PSNH or designee. Inventory Sales contracts will be signed by Director – Wholesale Power Contracts or designee.

6 Credit and Contract Requirements

6.1 RWM shall transact all business activities in accordance with:

- Contract requirements as detailed in the RWM “Contract Administration” procedure.
- Counterpart creditworthiness and controls as detailed in the “Credit Risk Management” procedure.

7 Reporting

7.1 RWM will be responsible to provide accurate and timely reporting of all transaction information in accordance with approved RWM P&P. As a minimum, RWM will participate in the development and/or report the following:

[REDACTED]

7.2



8 Systems

8.1 Information Technology (IT) systems will be controlled in accordance with Corporate IT standards.

8.2 RWM critical business processes will be designed such that security of data, disaster recovery and business continuity have been addressed.

9 Revision History

Version Number	Date	Modified By	Revision Description
0	08/24/2004	P. Smith	First issuance.
1	12/22/05	P. Smith	Incorporated allowance for REC transactions.



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT PORTFOLIO MANAGEMENT		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 2
DATE APPROVED Nov. 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 2	APPLICABLE TO PSNH	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

PURPOSE

This document defines Regulated Wholesale Marketing's ("RWM") procedures regarding the PSNH Load Management activities including:

- Planning process for load obligation fulfillment
- Hedging
- Bidding and Scheduling for PSNH Generation and Load Obligations

GENERAL INFORMATION

RWM, along with various PSNH functional groups, has an important role in the PSNH Energy Service ("ES") Rate development and management process. The Energy Service provides generation service to the PSNH customers who have not chosen a competitive retail supplier.

PROCEDURE

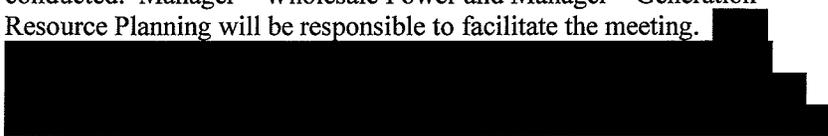
Annual ES Strategy

Procedure RWM-1 entitled "Regulated Wholesale Marketing's Role in PSNH's Energy Service Associated with Power Supply Planning and Development," details the process of developing the annual PSNH ES rate. At an appropriate point in the development of the ES rate, a hedging strategy team will be assembled to explore options available to achieve greater price certainty in the area of power procurement. The strategy team must coordinate with PSNH Generation to ensure that the hedge plan incorporates the appropriate level of reliance on fossil-hydro generation. This team will develop a recommendation for power hedging activity to be utilized in the next ES rate year.

The recommended hedge plan should be discussed with PSNH Regulatory and PSNH Generation departments. Final submittal of the plan to President – PSNH is required to obtain authorization. Once authorization is received all transactions will be performed in accordance with applicable RWM Policies and Procedures.

Monthly ES Strategy Assessment

A Monthly meeting to Review ES Performance vs Forecast will be conducted. Manager – Wholesale Power and Manager – Generation Resource Planning will be responsible to facilitate the meeting.





**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT PORTFOLIO MANAGEMENT		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 2
DATE APPROVED Nov. 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 2	APPLICABLE TO PSNH	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

[REDACTED]

Additionally, it is recognized that market conditions may change such that modifications to the annual hedge plan may be warranted. Any modifications to the annual hedging strategy will be submitted to the appropriate entity for authorization prior to execution. Authorization limits will be in accordance with RWM Policies and Procedures.

Daily Strategy

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Northeast Utilities System

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SUBJECT PORTFOLIO MANAGEMENT		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 2
DATE APPROVED Nov. 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 2	APPLICABLE TO PSNH	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

[REDACTED]

[REDACTED]

Contract Scheduling:

Contracts which require physical delivery (Energy, Capacity) will be scheduled in the appropriate Independent System Operator ("ISO") market system. These schedules must be submitted by one party (typically the seller) and approved by the other (typically the buyer). Mgr – WP or designee is responsible to schedule and confirm physical deliveries in the market system in accordance with the timing requirements of the applicable market rules.

Financial Transmission Rights

[REDACTED]



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT CONTRACT ADMINISTRATION		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 3
DATE APPROVED November 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

PURPOSE

This document defines Regulated Wholesale Marketing's ("RWM") procedures for the following activities:

1. Development, approval and administration of contracts with wholesale marketing, trading and merchant energy counterparties
2. Approval and contract development for a new product.

RWM is authorized, per departmental policies, to transact various power related products. This procedure is intended to provide the guidelines which will ensure that these business activities are done in accordance with approved policy.

GENERAL INFORMATION

The power related products which RWM is authorized to transact for purposes of this procedure are categorized as one of the following:

1. Structured Products: Financial Transmission Rights, Congestion Hedges, Generation Outage Insurance, Put Options, Call Options, Transmission Wheeling Arrangements.
2. Standard Products: Energy (including Day Ahead and Real Time) and Capacity (including Unforced Capacity, Locational Installed Capacity and Installed Capacity) and Renewable Energy Certificates ("REC") contracts

Contracts associated with CL&P Full Requirements Service (FRS) and WMECO Default Service (DS) are not included in this procedure. These contracts and the associated processes are covered in procedure RWM-7 (CL&P FRS Solicitation) and RWM-8 (WMECO Default Service Solicitation). In addition, long term contracts entered into as a result of a DPUC order or legislative requirement are not included in this procedure.

PROCEDURE

Contracts / Confirmations

Contracts entered into by the RWM group are valuable company resources. These contracts should clearly document the terms and conditions under which business arrangements have been made with counterparties. These contracts will, at all times, remain in compliance with all applicable laws, regulations and tariffs. Contracts will be



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT CONTRACT ADMINISTRATION		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 3
DATE APPROVED November 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

executed in accordance with approved departmental policies and corporate governance.

It is the preference of RWM to transact with approved counterparties under master enabling agreements. The existing, accepted master enabling agreements include the NUSCO Tariff #7 (“T7”) agreements and Edison Electric Institute Master Purchased Power and Sales Agreement. The list of executed T7 agreements is included as Attachment 2 to this procedure. To the extent a master enabling agreement is not available transactions will be executed via a Long Form Contract or Letter Agreement. Manager – Wholesale Power (“Mgr – WP”) will ensure that contracts and confirmations are executed by the appropriate individual, as identified in Appendix A.

Development of New Contracts / Confirmations

From time to time a transaction may require the development of a new Long Form Contract, Letter Agreement or execution of a new master enabling agreement.

A new Long Form Contract or Letter Agreement will require review by Legal and Credit Risk Management, as well as, Manager – Wholesale Power (“Mgr – WP”). Once all concerns are addressed and the Long Form Contract or Letter Agreement is suitable for execution, Mgr – WP will forward the agreement to the appropriate person, as identified in Appendix A, for signature.

Where a new master enabling agreement is desired or required. The following base contracts are considered acceptable for a new enabling agreement:

1. Edison Electric Institute Master Power Purchase and Sale Agreement (EEI MPPSA) for the purchase or sale of electric capacity, energy or other power related products.
2. International Swap Dealers Association, Inc. (ISDA) for financial transactions.

These base contracts are industry standard templates and as such no



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Utilities System**

BUSINESS PROCEDURE

SUBJECT CONTRACT ADMINISTRATION		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 3
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REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

changes are allowed to the base contract. The enabling agreements which are finally executed with a counterparty will include specific modifications to an attachment, schedule or annex which have received approval from Legal, Credit Risk Management, Accounting and Contract Administration – Revenue Services, as appropriate.

The Mgr – WP is responsible to prioritize the development of new contracts with counterparties and will coordinate the review by the various functional areas (including Legal, Credit Risk Management and Accounting). Legal, Credit and Accounting are accountable for the enforceability of the contract terms pertaining to their areas of responsibility.

New Product Approval

If a transaction is contemplated for a power related product which has not been authorized by RWM Departmental Policies and Procedures the following product approval process will be utilized:

- The new product “initiator” will review the product concept with Mgr – WP and Director – Wholesale Power Contracts. If the concept is supported an assessment of product pricing, deal structure and risk will be developed and forwarded to the appropriate operating company president or senior officer for review and approval.
- If approval is obtained from the appropriate operating company president or senior officer a contract will be developed with input from the appropriate functional areas. At a minimum Legal, Credit and RWM will review and concur with the new product contract.
- RWM Policies and Procedures will be updated, as required, to incorporate the approved new product.

FASB 133, as amended, Procedures

The requirements of Accounting for FASB 133, as amended, compliance are noted in the Regulated Derivative Accounting Procedure.



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT CONTRACT ADMINISTRATION		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 3
DATE APPROVED November 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

REVISION HISTORY

Version Number	Date	Modified By	Revision Description
0	08/24/2004	P. Smith	First issuance.
1	12/22/05	P. Smith	Incorporated allowance for REC transactions.
2	June 1, 2008	P. Smith M. Paquette	Include RECs; eliminate reference to risk roundtable; minor conforming updates
3	June 1, 2009	L. Harris, P. Smith	<u>Update Procedure Owner to Manager, Wholesale Power,</u> <u>Remove T6 from Contracts section and remove</u> <u>Attachment 1</u>



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT PORTFOLIO MANAGEMENT		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 2
DATE APPROVED Nov. 1, 2009	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 2	APPLICABLE TO PSNH	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

REVISION HISTORY

Revision Number	Date	Modified By	Revision Description
1.0	6/1/08	P. Smith M. Paquette	Incorporates change in designation of Full Requirements to Energy Service; clarified FTR information by referencing Procedures RWM-4 and RWM-12
2.0	11/1/09	L. Harris M. Paquette	Update Procedure Owner to Manager, Wholesale Power; TS/DS updated to ES



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT TRANSACTION, EXECUTION, CONFIRMATION AND REPORTING FOR POWER RELATED PRODUCTS		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 4
DATE APPROVED June 1, 2008	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Marketing
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

PURPOSE

This document defines Regulated Wholesale Marketing's ("RWM") procedures for transaction execution, confirmation and reporting. RWM is authorized, per departmental policies, to transact various power related products. This procedure is intended to provide the guidelines which will ensure that such business activity is done in accordance with approved policy.

GENERAL INFORMATION

The power related products which RWM is authorized to transact for purposes of this procedure are categorized as one of the following:

1. Structured Products: Financial Transmission Rights, Congestion Hedges, Generation Outage Insurance, Put Options, Call Options, Transmission Wheeling Arrangements.
2. Standard Products: Energy (including Day Ahead and Real Time) and Capacity (including Unforced Capacity, Locational Installed Capacity and Installed Capacity) and Renewable Energy Certificates ("REC") contracts.

Contracts associated with CL&P Full Requirements Service (FRS) and WMECO Default Service (DS) are not included in this procedure. These contracts and the associated processes are covered in procedure RWM-7 (CL&P FRS Solicitation) and RWM-8 (WMECO Default Service Solicitation). In addition, long term contracts entered into as a result of a DPUC order or legislative requirement are not included in this procedure.

PROCEDURE

Transaction Authorization

The Manager – Wholesale Power Marketing ("Mgr – WPM") is responsible to monitor all transactions and ensure that authorization is in accordance with the limits established by departmental policy. Authorization must be provided in writing. It is, however, recognized that verbal authorization will be adequate for transaction execution so long as written authorization is provided within a reasonable period of time.



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT TRANSACTION, EXECUTION, CONFIRMATION AND REPORTING FOR POWER RELATED PRODUCTS		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 4
DATE APPROVED June 1, 2008	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Marketing
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

Transaction Execution and Capture

Once authorization for a transaction is received the Mgr – WPM, or designee, is responsible to execute the transactions.

Transactions must be performed in accordance with applicable departmental policy and procedures. Contracts will be utilized which adhere to the guidance provided in the “Contract Administration” (RWM-3) procedure and transaction counterparties will be listed on the Authorized Counterparty List or exceptions list as provided by the Credit Risk Management group.

To the extent that a transaction can not be performed in accordance with policy and procedure, an exception report must be generated and provided to Director – Wholesale Power Contracts (“Director-WPC”). This report will include the reasons therefore and actions being taken.

Transactions for Standard Products

- Will be executed, when possible, over recorded lines.
- Will be recorded in a trader’s notebook by the Mgr – WPM and will indicate the date of the transaction.
- Will be checked by the end of business day with the broker, if applicable.
- Will be entered into the Regulated Wholesale Internal Bilateral Transaction System (“RWITS”) by the end of business day. All relevant details of the transaction will be recorded in RWITS, including an initial transaction designation as required by Accounting for compliance with the requirements of FASB Number 133, as amended.

Transactions for Structured Products:

Guidelines for the execution and reporting of specific Structured Products is provided in Appendix A to this procedure.

Transaction Confirmation and Reporting

Once transactions have been executed and entered, as appropriate, into RWITS, the Mgr – WPM, or designee, is responsible to ensure that transaction information is correct and provided to the appropriate NU organizations.



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT TRANSACTION, EXECUTION, CONFIRMATION AND REPORTING FOR POWER RELATED PRODUCTS		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 4
DATE APPROVED June 1, 2008	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Marketing
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

Mgr – WPM will review all confirmations / contracts received to ensure that all parties to the transaction (NUSCO, broker and counterpart) have correctly identified all transaction terms and conditions. This review will be conducted as confirmations / contracts are received. Confirmations and contracts will be executed in accordance with the requirements of the “Contract Administration” procedure RWM-3.

Additionally, if a transaction confirmation for a purchase is not received Mgr – WPM or designee will send a confirmation to the counterpart. In the case of a sale to a counterpart, Mgr – WPM or designee will generate and send a confirmation. All transactions confirmations will be available for review by Mgr – GRP or designee.

A copy of contracts for Structured Products will be provided to the Contract Administration, Revenue Services group for billing and recording.

Contracts for RECs will be stored electronically in a Lotus Notes database which is accessible to the contract administration revenue services group. REC contracts will be placed in the Lotus Notes database within two weeks from final execution.

Several transaction reports will be provided:

[REDACTED]

[REDACTED]



**Northeast
Utilities System**

BUSINESS PROCEDURE

SUBJECT TRANSACTION, EXECUTION, CONFIRMATION AND REPORTING FOR POWER RELATED PRODUCTS		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 4
DATE APPROVED June 1, 2008	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Marketing
REVISION 3	APPLICABLE TO CL&P, PSNH, WMECO	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts



REVISION HISTORY

Revision Number	Date	Modified By	Revision Description
1.0			
2.0	June 1, 2008	P. Smith M. Paquette	Update for RECs; eliminate reports to risk roundtable and biweekly report to operating company president; minor conforming updates
3.0			

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-008
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

Please provide a detailed budget that explains all of the administrative costs of purchasing power to service PSNH's default service customers in 2009 that were charged to PSNH, including direct charges, employee costs and company overheads.

Response:

There is no specific budget item for power trading activities. However, information related to the services provided by the Northeast Utilities Wholesale Power Contracts group for 2009 has been provided in responses to Staff-01, Q-Staff-029 through Q-Staff-031.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-009
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

In deciding how much power to purchase to supply PSNH's default service customers for 2009 what assumptions did PSNH or NUSCo use with regard to the amount of power that would be produced by generation owned by PSNH and what assumptions did it use with regard to outages at those generating units.

Response:

Please see the response to Staff-01, Q-Staff-009. Specific system assumptions such as dispatch prices, planned outages and loads were obtained from the appropriate departments and were subject to change as the purchase plan was executed and were revised in consultation with the appropriate departments. Generally speaking, throughout the period when energy purchases were being made the coal units were forecasted to be economic and were thus base loaded (other than for planned maintenance); hydro output was modeled at the historic 20 year average output; Newington was economically dispatched; Vermont Yankee was modeled based on information provided by Entergy; and energy purchases from independent power producers under long term rate orders, short term rate orders and purchased power agreements were modeled based on historic or forecast deliveries.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-013
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

Please provide any migration forecasts that were relied upon during the time period that the power purchases were made to serve PSNH's default service customers for 2009.

Response:

As noted in response to TC-01, Q-TC-010, then-current migration levels were considered in forecasted energy purchase planning. Please see the response to Staff-01, Q-Staff-010 for a measure of migration levels being experienced when the 2009 energy purchases were being planned and made.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-014
Page 1 of 2**

**Witness: David A. Errichetti
Request from: TransCanada**

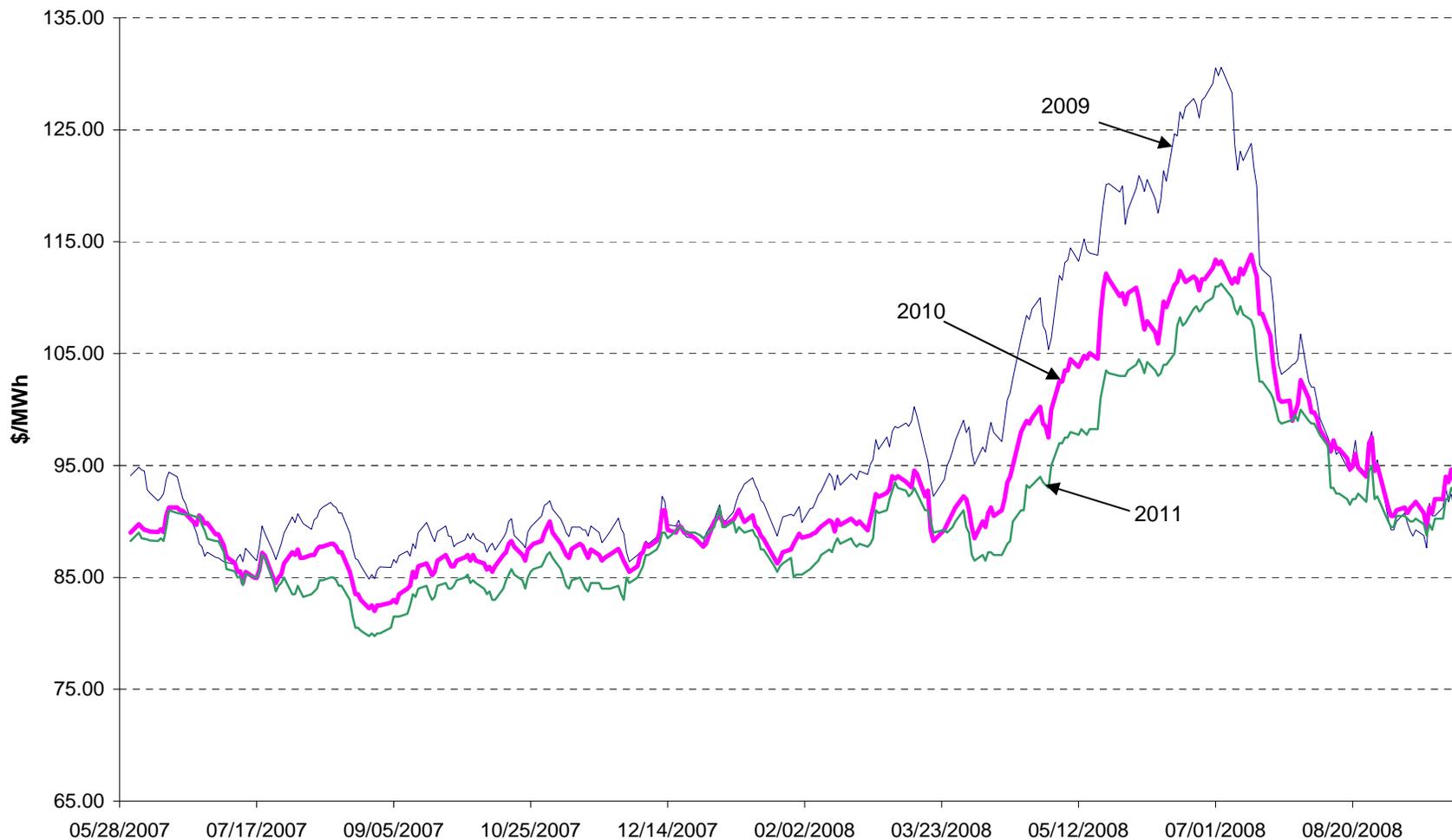
Question:

Please provide copies of publicly available forecasts relied on by PSNH for the purposes of the purchases that were made and that were used to supply load to PSNH's default service customers in 2009.

Response:

PSNH uses, among other sources, NYMEX to track forward electricity prices. PSNH also subscribes to services that either produce original opinions or report on what others are saying. The attached graph shows NYMEX daily peak period prices for calendar year electricity delivered at the Massachusetts hub for 2009, 2010 and 2011 for June 1, 2007 through September 30, 2008.

NYMEX Daily Peak Period Prices for Calendar Year Electricity Delivered at the Massachusetts Hub



**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-016
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

If the response to request #15 is yes, was this because PSNH or NUSCo locked into multi-year contracts to buy power to meet customer demand that PSNH was not able to satisfy with its own generation ?

Response:

As noted in response to TC-01, Q-TC-015 PSNH does not know with certainty that its ES rate was above market for all customers throughout 2009. Regardless of whether PSNH's 2009 ES rate was above or below market, PSNH knows that the multi-year contract identified in TC-01, Q-TC-002 was not the sole driver of ES pricing.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-017
Page 1 of 1**

**Witness: Robert A. Baumann
Request from: TransCanada**

Question:

With reference to Mr. Baumann's prefiled testimony in this docket, p. 8, line 20, what definition of "prudent" does PSNH rely upon ?

Response:

PSNH objects to this question on the grounds that it seeks a legal conclusion, and not factual information in the possession of the company.

Notwithstanding this objection, PSNH responds as follows:

The word "prudent" is a term of the art used universally in the regulation of utility companies. The NHPUC and the Supreme Court of New Hampshire, amongst others, have provided many definitions of the prudence standard.

For example, in the "Agreement to Settle PSNH Restructuring" approved by the Commission in Docket No. DR 99-099, the term "Prudence" is defined as follows:

Prudence: The standard of care which qualified utility management would be expected to exercise under the circumstances that existed at the time the decision in question had to be made. In determining whether a decision was prudently made, only those facts known or knowable at the time of the decision can be considered.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-018
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

With reference to Mr. Errichetti's prefiled testimony in this docket, p. 1, lines 8-16, please explain whether the "design and execution of the power supply sourcing contracts associated with" CL&P and WMECO involves the issuance of RFPs.

Response:

No, CL&P and WMECo do not use RFPs in the design or execution of the power supply sourcing contracts associated with those companies' versions of ES. They do use RFPs to solicit power supplies to meet their versions of ES.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-01

**Dated: 07/16/2010
Q-TC-019
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

Please explain how much of the administrative services that NUSCo provides to CL&P and WMECO involves a strategy used to procure energy in the same manner as what is provided to PSNH.

Response:

At present, none of the administrative services that NUSCo provides to CL&P and WMECO involves a strategy used to procure energy in the same manner as what is provided to PSNH.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-02

**Dated: 08/13/2010
Q-TC-001
Page 1 of 1**

**Witness: David A. Errichetti
Request from: TransCanada**

Question:

With reference to the PSNH response to TC-01, please explain in detail what is meant by the phrase “standard of care which qualified utility management would be expected to exercise” in the context of this response. Please provide examples of other utilities to which PSNH’s or NUSCo’s practices in this context could be compared.

Response:

See the response to TransCanada Set No. 1, Q-TC-017 which puts the quoted passage into its appropriate context. With respect to examples, PSNH is not aware of any other utilities that supply default energy service in a restructured electric environment that uses its owned generation assets and then acquires supplemental power to supply the rest of its default energy service load.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-02

**Dated: 08/13/2010
Q-TC-002
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**Witness: David A. Errichetti
Request from: TransCanada**

Question:

With reference to the PSNH response to TC-06, please explain in detail why similar services were not provided to other Northeast Utilities affiliates.

Response:

In the context of TC-01, Q-TC-005, power trading activities to supply PSNH's default service customers during 2009 referred to the purchase or sale of individual components of full requirements electricity supply such as energy or FTRs for specific generation or bilateral energy transactions. Similar services were not provided to other Northeast Utilities affiliates because they operate under different statutory and regulatory requirements.

**Public Service Company of New
Hampshire
Docket No. DE 10-121**

Data Request TC-02

**Dated: 08/13/2010
Q-TC-003
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**Witness: David A. Errichetti
Request from: TransCanada**

Question:

With reference to the PSNH response to TC-018, please explain in detail how RFPs are used by CL&P and WMECo to solicit power supplies to meet their versions of ES.

Response:

Requests for Proposals are used to secure full requirements electricity power supplies for CL&P and WMECo's default service loads.

In Connecticut full requirements power supply is secured through an RFP process up to three years in advance for residential, commercial/industrial with demands less than 500 kW, and street lighting customers such that, by the start of any year 100% of the first half of that year has been purchased; and every three months for commercial/industrial customers with demands of at least 500 kW. As noted in TC-02, Q-TC-002 pricing is received reflecting either Connecticut zonal energy prices or MA Hub energy prices.

In Massachusetts full requirements power supply is secured through an RFP process for residential, small commercial/industrial, and street lighting customers, with 50% for 12 months starting in July and 50% for 12 months starting in January; and for large commercial/industrial customers every three months.