

Public Service Company of New Hampshire  
Docket No. DE 11-250

Date Request Received: 09/16/2013

Request No. DEPOSITION-004

Request from: TransCanada

Date of Response: 11/14/2013

Page 1 of 5

Witness: Gary A. Long

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**Request:**

Who prepared the \$11 per MMBtu price assumption that appears in Deposition Exhibit 9, Part E, page 15? Please provide any underlying materials relied upon by the person preparing the MMBtu price in the report.

**Response:**

The referenced \$11 per MMBtu price assumption was based on actual reported Natural Gas Prices for dispatch at PSNH generating units at the time the analysis was performed (2008), as prepared by the NU Fuel Purchasing Department, rather than any specific forecast. The \$11 was assumed to continue until 2012, after which it was escalated at 2.5%. Forecasts available at the time (including those relied upon by FERC Staff in its presentation to the FERC Commissioners dated June 19, 2008, which are included in Deposition Exhibit 9 at Bates pages 21 and 22) support the base assumption and escalation, but were not used directly nor relied upon in preparing the referenced MMBtu price.

NEW HAMPSHIRE UNITS ONLY  
INCLUDES SO2 ADDER  
15-Jan-08

Reported Nepool  
Price

Note: Dollars per Barrel, Dollars per Ton, Dollars per MBtu  
calculate the Replacement \$/MBtu. w/o ADDER  
Sulfur Delivd Btu Replace. HeatRate. w/o adders Nom.  
\$/MBtu Btu/kWh \$/MBtu \$/MWh

|     |                 |         |           |       |         |        |        |        |             |
|-----|-----------------|---------|-----------|-------|---------|--------|--------|--------|-------------|
| 498 |                 |         |           |       |         |        |        |        |             |
| 557 | Schiller 5      | Coal    | 0.62      | 69.36 | 13,122  | 3.203  | 11,172 | 2.643  | \$35.79     |
| 558 | Schiller 6      | Coal    | 0.62      | 69.36 | 13,122  | 3.187  | 10,998 | 2.643  | \$35.05     |
| 558 | Schiller 4      | Coal    | 0.62      | 69.36 | 13,122  | 3.187  | 11,041 | 2.643  | \$35.19     |
| 490 | Merrimack 2     | Coal    | 1.24      | 82.8  | 13,046  | 3.637  | 9,682  | 3.173  | \$35.21     |
| 489 | Merrimack 1     | Coal    | 1.34      | 77.91 | 13,422  | 3.315  | 9,721  | 2.902  | \$32.23     |
| 481 |                 |         |           |       |         |        |        |        |             |
| 508 | Newington blend | oil/gas | 100%oil&0 | 11.66 |         | 12.064 | 10,793 | 11.656 | \$130.21    |
| 480 |                 |         |           |       |         |        |        |        |             |
| 397 |                 |         |           |       |         |        |        |        |             |
| 481 |                 |         |           |       |         |        |        |        |             |
| 390 |                 |         |           |       |         |        |        |        |             |
| 391 |                 |         |           |       |         |        |        |        |             |
| 390 |                 |         |           |       |         |        |        |        |             |
| 480 |                 |         |           |       |         |        |        |        |             |
| 493 |                 |         |           |       |         |        |        |        |             |
| 493 |                 |         |           |       |         |        |        |        |             |
| 520 |                 |         |           |       |         |        |        |        |             |
| 519 |                 |         |           |       |         |        |        |        |             |
| 508 | Newington       | Oil     | 1.09      | 76.44 | 156,149 | 12.058 | 10,793 | 11.656 | \$130.14    |
| 508 | Newington       | Gas     |           | 11    |         | 11     | 10,793 | 11     | \$118.72    |
| 390 |                 |         |           |       |         |        |        |        |             |
| 391 |                 |         |           |       |         |        |        |        |             |
| 493 |                 |         |           |       |         |        |        |        |             |
| 493 |                 |         |           |       |         |        |        |        |             |
| 481 |                 |         |           |       |         |        |        |        |             |
| 480 |                 |         |           |       |         |        |        |        |             |
| 494 |                 |         |           |       |         |        |        |        |             |
| 494 |                 |         |           |       |         |        |        |        |             |
| 558 | Schiller        | Oil     | 1.09      | 76.44 | 156,149 | 12.066 | 10,887 | 11.656 | \$131.36    |
| 557 | Schiller 5 NWP  | Wood    | 0         | 31    | 4,274   | 4.078  | 13,078 | 3.627  | \$0.00 **** |
| 482 |                 |         |           |       |         |        |        |        |             |

|            | NOX<br>Adder/ MBtu | Fuel<br>Add'tive  | Fuel<br>Unload | Fuel<br>Handle | Ash/Slag<br>Dispose | Maint<br>Costs | So2<br>Adder | Oper.<br>Adj. | NX-4<br>Adders | Per A. Dall 09/21//2004 ;<br>effective 09/22//2004<br>Date<br>Changed |
|------------|--------------------|---|----------------|----------------|---------------------|----------------|--------------|---------------|----------------|---|
| Newington  | 0 Oil              | 0.1968  | 0              | 0.0757         | 0.31                | 0.054          | 2.0003       |               | 2.6368         | 27-Sep-05   |
| Schiller   | 0 Oil              | 0.14  | 0.05           | 0.05           | 0.35                | 0.1            | 2.0003       |               | 2.6903         | 28-Jan-93   |
| Merrimack  | 0 Coal             | 0   | 0              | 1.0088         | 1.3546              | 0.9673         | 7.758        |               | 11.0886        | 28-Aug-07   |
| Merrimack  | 0 Coal             | 0.3924  | 0              | 1.0306         | 2.5038              | 0.9882         | 7.175        |               | 12.09          | 28-Aug-07   |
| Schiller 4 | 0 Coal             | 0.359   | 1.87           | 1.87           | 5.5                 | 1.0847         | 3.595        |               | 14.2787        | 24-Jul-06   |
| Schiller 5 | 0 Coal             | 0   | 1.87           | 1.87           | 6.2835              | 1.0847         | 3.595        |               | 14.7032        | 24-Jul-06   |
| Schiller 6 | 0 Coal             | 0.359   | 1.87           | 1.87           | 5.5                 | 1.0847         | 3.595        |               | 14.2787        | 24-Jul-06   |
| Schiller 5 | Wood               | 1.355   | 1.25           | 1.25           |                     |                |              |               | 3.855          | 17-May-06   |
| Newington  | 0 Gas              | Included in \$/MWh is an inefficiency rate of 3.7%        |                |                |                     |                |              |               |                |   |
|            |                    | \$289.00 per ton SO2 - Allowance Price                    |                |                |                     |                |              |               |                |   |
|            |                    | \$520.00 per ton SO2 - Allowance Market Price (Newington) |                |                |                     |                |              |               |                |   |
|            |                    | \$0.00 per ton NOX - Allowance Market Price (Newington)   |                |                |                     |                |              |               |                |   |
|            |                    | \$0.00 per ton NOX - Emission Rate                        |                |                |                     |                |              |               |                |   |

\*\*\*\* The NWPP dispatch price is inclusive of a production tax credit of \$10/MWh and realized (and forecast) REC revenue of approximately \$50/MWh.  
(The dispatch price without REC and PTC = \$53.33/MWh. )

NEW HAMPSHIRE UNITS ONLY  
INCLUDES SO2 ADDER  
15-Feb-08

Reported Nepool  
Price

Note: Dollars per Barrel, Dollars per Ton, Dollars per MBtu  
calculate the Replacement \$/MBtu.

|     |                 | Sulfur  | Delivd    | Btu   | Replace.<br>\$/MBtu | HeatRate.<br>Btu/kWh | w/o adders<br>\$/MBtu | Nom.<br>\$/MWh |
|-----|-----------------|---------|-----------|-------|---------------------|----------------------|-----------------------|----------------|
| 498 |                 |         |           |       |                     |                      |                       |                |
| 557 | Schiller 5      | Coal    | 0.63      | 80.5  | 13,077              | 3,643                | 11,172                | \$40.70        |
| 558 | Schiller 6      | Coal    | 0.63      | 80.5  | 13,077              | 3,626                | 10,998                | \$39.88        |
| 556 | Schiller 4      | Coal    | 0.63      | 80.5  | 13,077              | 3,626                | 11,041                | \$40.04        |
| 490 | Merrimack 2     | Coal    | 1.2       | 86.83 | 13,054              | 3,78                 | 9,682                 | \$36.60        |
| 489 | Merrimack 1     | Coal    | 1.72      | 80.3  | 13,419              | 3,486                | 9,721                 | \$33.89        |
| 481 |                 |         |           |       |                     |                      |                       |                |
| 508 | Newington blend | oil/gas | 100%oil&0 | 11.16 | 11,518              | 10,793               | 11.16                 | \$124.32       |
| 480 |                 |         |           |       |                     |                      |                       |                |
| 397 |                 |         |           |       |                     |                      |                       |                |
| 481 |                 |         |           |       |                     |                      |                       |                |
| 390 |                 |         |           |       |                     |                      |                       |                |
| 391 |                 |         |           |       |                     |                      |                       |                |
| 390 |                 |         |           |       |                     |                      |                       |                |
| 480 |                 |         |           |       |                     |                      |                       |                |
| 493 |                 |         |           |       |                     |                      |                       |                |
| 493 |                 |         |           |       |                     |                      |                       |                |
| 520 |                 |         |           |       |                     |                      |                       |                |
| 519 |                 |         |           |       |                     |                      |                       |                |
| 508 | Newington       | Oil     | 1.09      | 73.19 | 156,149             | 11,512               | 10,793                | \$124.25       |
| 508 | Newington       | Gas     |           | 10.96 |                     | 10.96                | 10,793                | \$118.29       |
| 390 |                 |         |           |       |                     |                      |                       |                |
| 391 |                 |         |           |       |                     |                      |                       |                |
| 493 |                 |         |           |       |                     |                      |                       |                |
| 493 |                 |         |           |       |                     |                      |                       |                |
| 481 |                 |         |           |       |                     |                      |                       |                |
| 480 |                 |         |           |       |                     |                      |                       |                |
| 494 |                 |         |           |       |                     |                      |                       |                |
| 494 |                 |         |           |       |                     |                      |                       |                |
| 556 | Schiller        | Oil     | 1.09      | 73.19 | 156,149             | 11.52                | 10,887                | \$125.42       |
| 557 | Schiller 5 NWP  | Wood    | 0         | 31    | 4,274               | 4.078                | 13,078                | \$0.00 ****    |
| 482 |                 |         |           |       |                     |                      |                       |                |

| NOX<br>Adder/ MBtu |        | Fuel<br>Add'tve   | Fuel<br>Unload | Fuel<br>Handle | Ash/Slag<br>Dispose | Maint<br>Costs | So2<br>Adder | Oper.<br>Adj. | NX-4<br>Adders | Per A. Dall 09/21//2004 :<br>effective 09/22//2004<br>Date<br>Changed |
|--------------------|--------|---|----------------|----------------|---------------------|----------------|--------------|---------------|----------------|---|
| Newington          | 0 Oil  | 0.1968  | 0              | 0.0757         | 0.31                | 0.054          | 1.6724       |               | 2.3089         | 27-Sep-05   |
| Schiller           | 0 Oil  | 0.14  | 0.05           | 0.05           | 0.35                | 0.1            | 1.6724       |               | 2.3624         | 28-Jan-93   |
| Merrimack          | 0 Coal | 0   | 0              | 1.0088         | 1.3546              | 0.9673         | 9.93         |               | 13.2606        | 28-Aug-07   |
| Merrimack          | 0 Coal | 0.3924  | 0              | 1.0306         | 2.5038              | 0.9882         | 6.944        |               | 11.859         | 28-Aug-07   |
| Schiller 4         | 0 Coal | 0.359   | 1.87           | 1.87           | 5.5                 | 1.0847         | 3.662        |               | 14.3457        | 24-Jul-06   |
| Schiller 5         | 0 Coal | 0   | 1.87           | 1.87           | 6.2835              | 1.0847         | 3.662        |               | 14.7702        | 24-Jul-06   |
| Schiller 6         | 0 Coal | 0.359   | 1.87           | 1.87           | 5.5                 | 1.0847         | 3.662        |               | 14.3457        | 24-Jul-06   |
| Schiller 5         | Wood   | 1.355   | 1.25           | 1.25           |                     |                |              |               | 3.855          | 17-May-06   |
| Newington          | 0 Gas  | Included in \$/MWh is an inefficiency rate of 3.7%        |                |                |                     |                |              |               |                |   |
|                    |        | \$289.00 per ton SO2 - Allowance Price                    |                |                |                     |                |              |               |                |   |
|                    |        | \$435.00 per ton SO2 - Allowance Market Price (Newington) |                |                |                     |                |              |               |                |   |
|                    |        | \$0.00 per ton NOX - Allowance Market Price (Newington)   |                |                |                     |                |              |               |                |   |
|                    |        | \$0.00 per ton NOX - Emission Rate                        |                |                |                     |                |              |               |                |   |

\*\*\*\* The NWPP dispatch price is inclusive of a production tax credit of \$10/MWh and realized (and forecast) REC revenue of approximately \$50/MWh.  
(The dispatch price without REC and PTC = \$53.33/MWh. )

NEW HAMPSHIRE UNITS ONLY  
INCLUDES SO2 ADDER  
14-Mar-08

Reported Nepool  
Price

Note: Dollars per Barrel, Dollars per Ton, Dollars per MBtu  
calculate the Replacement \$/MBtu.

|     |                 | Sulfur  | Delivd    | Btu   | Replace.<br>\$/MBtu | HeatRate.<br>Btu/kWh | w/o adders Nom.<br>\$/MBtu | \$/MWh      |
|-----|-----------------|---------|-----------|-------|---------------------|----------------------|----------------------------|-------------|
| 498 |                 |         |           |       |                     |                      |                            |             |
| 557 | Schiller 5      | Coal    | 0.64      | 72.25 | 13,163              | 3.307                | 11,172                     | \$36.95     |
| 558 | Schiller 6      | Coal    | 0.64      | 72.25 | 13,163              | 3.291                | 10,998                     | \$36.20     |
| 556 | Schiller 4      | Coal    | 0.64      | 72.25 | 13,163              | 3.291                | 11,041                     | \$36.34     |
| 490 | Merrimack 2     | Coal    | 1.2       | 86.83 | 13,054              | 3.78                 | 9,682                      | \$36.60     |
| 489 | Merrimack 1     | Coal    | 1.37      | 80.87 | 13,473              | 3.418                | 9,721                      | \$33.22     |
| 481 |                 |         |           |       |                     |                      |                            |             |
| 508 | Newington blend | oil/gas | 100%oil&0 | 11.34 | 11.701              | 10,793               | 11.343                     | \$126.29    |
| 480 |                 |         |           |       |                     |                      |                            |             |
| 397 |                 |         |           |       |                     |                      |                            |             |
| 481 |                 |         |           |       |                     |                      |                            |             |
| 390 |                 |         |           |       |                     |                      |                            |             |
| 391 |                 |         |           |       |                     |                      |                            |             |
| 390 |                 |         |           |       |                     |                      |                            |             |
| 480 |                 |         |           |       |                     |                      |                            |             |
| 493 |                 |         |           |       |                     |                      |                            |             |
| 493 |                 |         |           |       |                     |                      |                            |             |
| 520 |                 |         |           |       |                     |                      |                            |             |
| 519 |                 |         |           |       |                     |                      |                            |             |
| 508 | Newington       | Oil     | 1.09      | 74.39 | 156,149             | 11.695               | 10,793                     | \$126.23    |
| 508 | Newington       | Gas     |           | 10.81 |                     | 10.81                | 10,793                     | \$116.67    |
| 390 |                 |         |           |       |                     |                      |                            |             |
| 391 |                 |         |           |       |                     |                      |                            |             |
| 493 |                 |         |           |       |                     |                      |                            |             |
| 493 |                 |         |           |       |                     |                      |                            |             |
| 481 |                 |         |           |       |                     |                      |                            |             |
| 480 |                 |         |           |       |                     |                      |                            |             |
| 494 |                 |         |           |       |                     |                      |                            |             |
| 494 |                 |         |           |       |                     |                      |                            |             |
| 556 | Schiller        | Oil     | 1.09      | 74.39 | 156,149             | 11.703               | 10,887                     | \$127.42    |
| 557 | Schiller 5 NWP  | Wood    | 0         | 31    | 4,274               | 4.078                | 13,078                     | \$0.00 **** |
| 482 |                 |         |           |       |                     |                      |                            |             |

Per A. Dall 09/21/2004  
effective 09/22/2004

|            | NOX<br>Adder/ MBtu | Fuel<br>Add'tve   | Fuel<br>Unload | Fuel<br>Handle | Ash/Slag<br>Dispose | Maint<br>Costs | So2<br>Adder | Oper.<br>Adj. | NX-4<br>Adders | Date<br>Changed |
|------------|--------------------|---|----------------|----------------|---------------------|----------------|--------------|---------------|----------------|-----------------|
| Newington  | 0 Oil              | 0.1968  | 0              | 0.0757         | 0.31                | 0.054          | 1.6724       |               | 2.3089         | 27-Sep-05       |
| Schiller   | 0 Oil              | 0.14  | 0.05           | 0.05           | 0.35                | 0.1            | 1.6724       |               | 2.3624         | 28-Jan-93       |
| Merrimack  | 0 Coal             | 0   | 0              | 1.0088         | 1.3546              | 0.9673         | 7.895        |               | 11.2256        | 28-Aug-07       |
| Merrimack  | 0 Coal             | 0.3924  | 0              | 1.0306         | 2.5038              | 0.9882         | 6.944        |               | 11.859         | 28-Aug-07       |
| Schiller 4 | 0 Coal             | 0.359   | 1.87           | 1.87           | 5.5                 | 1.0847         | 3.712        |               | 14.3957        | 24-Jul-06       |
| Schiller 5 | 0 Coal             | 0   | 1.87           | 1.87           | 6.2835              | 1.0847         | 3.712        |               | 14.8202        | 24-Jul-06       |
| Schiller 6 | 0 Coal             | 0.359   | 1.87           | 1.87           | 5.5                 | 1.0847         | 3.712        |               | 14.3957        | 24-Jul-06       |
| Schiller 5 | Wood               | 1.355   | 1.25           | 1.25           |                     |                |              |               | 3.855          | 17-May-06       |
| Newington  | 0 Gas              | Included in \$/MWh is an inefficiency rate of 3.7%        |                |                |                     |                |              |               |                |                 |
|            |                    | \$289.00 per ton SO2 - Allowance Price                    |                |                |                     |                |              |               |                |                 |
|            |                    | \$435.00 per ton SO2 - Allowance Market Price (Newington) |                |                |                     |                |              |               |                |                 |
|            |                    | \$0.00 per ton NOX - Allowance Market Price (Newington)   |                |                |                     |                |              |               |                |                 |
|            |                    | \$0.00 per ton NOX - Emission Rate                        |                |                |                     |                |              |               |                |                 |

\*\*\*\* The NWPP dispatch price is inclusive of a production tax credit of \$10/MWh and realized (and forecast) REC revenue of approximately \$50/MWh.  
(The dispatch price without REC and PTC = \$53.33/MWh. )

NEW HAMPSHIRE UNITS ONLY  
INCLUDES SO2 ADDER  
15-Apr-08

Reported Nepoch  
Price

Note: Dollars per Barrel, Dollars per Ton, Dollars per MBtu  
calculate the Replacement \$/MBtu.

|     |                 | Sulfur  | Delivd    | Btu   | Replace.<br>\$/MBtu | HeatRate.<br>Btu/kWh | w/o adders Nom.<br>\$/MBtu | \$/MWh            |
|-----|-----------------|---------|-----------|-------|---------------------|----------------------|----------------------------|-------------------|
| 498 |                 |         |           |       |                     |                      |                            |                   |
| 557 | Schiller 5      | Coal    | 0.66      | 70.07 | 13,163              | 3.229                | 11,172                     | 2.662 \$36.07     |
| 558 | Schiller 6      | Coal    | 0.66      | 70.07 | 13,163              | 3.212                | 10,998                     | 2.662 \$35.33     |
| 556 | Schiller 4      | Coal    | 0.66      | 70.07 | 13,163              | 3.212                | 11,041                     | 2.662 \$35.47     |
| 490 | Merrimack 2     | Coal    | 1.2       | 88.16 | 13,064              | 3.827                | 9,682                      | 3.374 \$37.06     |
| 489 | Merrimack 1     | Coal    | 1.28      | 82.5  | 13,509              | 3.452                | 9,721                      | 3.054 \$33.56     |
| 481 |                 |         |           |       |                     |                      |                            |                   |
| 508 | Newington blend | oil/gas | 100%oil&0 | 12.46 |                     | 12.772               | 10,793                     | 12.464 \$137.85   |
| 480 |                 |         |           |       |                     |                      |                            |                   |
| 397 |                 |         |           |       |                     |                      |                            |                   |
| 481 |                 |         |           |       |                     |                      |                            |                   |
| 390 |                 |         |           |       |                     |                      |                            |                   |
| 391 |                 |         |           |       |                     |                      |                            |                   |
| 390 |                 |         |           |       |                     |                      |                            |                   |
| 480 |                 |         |           |       |                     |                      |                            |                   |
| 493 |                 |         |           |       |                     |                      |                            |                   |
| 493 |                 |         |           |       |                     |                      |                            |                   |
| 520 |                 |         |           |       |                     |                      |                            |                   |
| 519 |                 |         |           |       |                     |                      |                            |                   |
| 508 | Newington       | Oil     | 1.09      | 81.74 | 156,149             | 12.766               | 10,793                     | 12.464 \$137.78   |
| 508 | Newington       | Gas     |           | 11.25 |                     | 11.25                | 10,793                     | 11.25 \$121.42    |
| 390 |                 |         |           |       |                     |                      |                            |                   |
| 391 |                 |         |           |       |                     |                      |                            |                   |
| 493 |                 |         |           |       |                     |                      |                            |                   |
| 493 |                 |         |           |       |                     |                      |                            |                   |
| 481 |                 |         |           |       |                     |                      |                            |                   |
| 480 |                 |         |           |       |                     |                      |                            |                   |
| 494 |                 |         |           |       |                     |                      |                            |                   |
| 494 |                 |         |           |       |                     |                      |                            |                   |
| 556 | Schiller        | Oil     | 1.09      | 81.74 | 156,149             | 12.774               | 10,887                     | 12.464 \$139.07   |
| 557 | Schiller 5 NWP  | Wood    | 0         | 31    | 4,274               | 4.078                | 13,078                     | 3.627 \$0.00 **** |
| 482 |                 |         |           |       |                     |                      |                            |                   |

Per A. Dall 09/21/2004 at 9:00 A.M.  
effective 09/22/2004 NOX Adde NOX Adders

| NOX<br>Adder/ MBtu | Fuel<br>Add'tve | Fuel<br>Unload  | Fuel<br>Handle | Ash/Slag<br>Dispose | Maint<br>Costs | So2<br>Adder | Oper.<br>Adj. | NX-4<br>Adders | Date<br>Changed | Em. Rate |
|--------------------|-----------------|---|----------------|---------------------|----------------|--------------|---------------|----------------|-----------------|----------|
|                    |                 |   |                |                     |                |              |               |                |                 | 0        |
| Newington          | 0 Oil           | 0.1966  | 0              | 0.0757              | 0.31           | 0.054        | 1.3444        | 1.9809         | 27-Sep-05       | 0.21     |
| Schiller           | 0 Oil           | 0.14  | 0.05           | 0.05                | 0.35           | 0.1          | 1.3444        | 2.0344         | 28-Jan-93       | 0.3      |
| Merrimack          | 0 Coal          | 0   | 0              | 1.0088              | 1.3546         | 0.9673       | 7.43          | 10.7606        | 28-Aug-07       | 0.15     |
| Merrimack          | 0 Coal          | 0.3924  | 0              | 1.0306              | 2.5038         | 0.9882       | 6.924         | 11.839         | 28-Aug-07       | 0.15     |
| Schiller 4         | 0 Coal          | 0.359   | 1.87           | 1.87                | 5.5            | 1.0847       | 3.817         | 14.5007        | 24-Jul-06       | 0        |
| Schiller 5         | 0 Coal          | 0   | 1.87           | 1.87                | 6.2835         | 1.0847       | 3.817         | 14.9252        | 24-Jul-06       | 0        |
| Schiller 6         | 0 Coal          | 0.359   | 1.87           | 1.87                | 5.5            | 1.0847       | 3.817         | 14.5007        | 24-Jul-06       | 0        |
| Schiller 5         | Wood            | 1.355   | 1.25           | 1.25                |                |              |               | 3.855          | 17-May-06       |          |
| Newington          | 0 Gas           | Included in \$/MWh is an inefficiency rate of 3.7%        |                |                     |                |              |               |                |                 | 0.15     |
|                    |                 | \$289.00 per ton SO2 - Allowance Price                    |                |                     |                |              |               |                |                 |          |
|                    |                 | \$350.00 per ton SO2 - Allowance Market Price (Newington) |                |                     |                |              |               |                |                 |          |
|                    |                 | \$0.00 per ton NOX - Allowance Market Price (Newington)   |                |                     |                |              |               |                |                 |          |
|                    |                 | \$0.00 per ton NOX - Emission Rate                        |                |                     |                |              |               |                |                 |          |

\*\*\*\* The NWPP dispatch price is inclusive of a production tax credit of \$10/MWh and realized (and forecast) REC revenue of approximately \$50/MWh.  
(The dispatch price without REC and PTC = \$53.33/MWh. )

**In Re:**

*DE 11-250 PUBLIC SERVICE COMPANY OF N.H.  
INVESTIGATION OF SCRUBBER COSTS AND COST RECOVERY*

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*DEPOSITION OF: GARY LONG  
September 16, 2013*

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*SUSAN J. ROBIDAS, N.H. LCR  
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(603) 540-2083 (cell)*

 **COPY**

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**DEPOSITION OF: GARY LONG - September 16, 2013**  
**DE 11-250 PUBLIC SERVICE COMPANY OF N.H. INVESTIGATION OF SCRUBBER COSTS AND COST**

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| <p>GARY LONG - 9/16/13<br/>Page 69</p> <p>1 "draft" on it. But this was part of the<br/>2 input to the management team, you know, to<br/>3 help understand why the costs have changed<br/>4 over time.<br/>5 Q. So you didn't think it was important enough<br/>6 to include it in those presentations?<br/>7 A. I'm not sure that's a fair characterization.<br/>8 Q. Okay. Well, you can characterize it however<br/>9 you want.<br/>10 A. Well, we obviously thought it was important<br/>11 to enlist PowerAdvocates to look at these<br/>12 questions. So, obviously, it's important.<br/>13 Q. Okay. But not important enough to mention it<br/>14 to the RaCC or the board of trustees, or<br/>15 ultimately the PUC in September.<br/>16 A. Now, what point are you thinking that is<br/>17 excluded? Because we've listed a number of<br/>18 facts and risks to the RaCC Committee and<br/>19 summaries of what the price -- the cost<br/>20 change were. So I would say this report was<br/>21 used.<br/>22 Q. Okay. Well, I didn't see anything in those<br/>23 presentations, so I'm just asking why it<br/>24 wasn't there.</p>   | <p style="text-align: center;"><b>RECOVERY</b></p> <p>GARY LONG - 9/16/13<br/>Page 71</p> <p>1 industry that even had natural gas companies<br/>2 not certain, but in the case of TransCanada,<br/>3 certainly projecting five-year price<br/>4 increases in natural gas in that '09, '10,<br/>5 '11 time frame. So we would look at the<br/>6 reports of companies like theirs and others.<br/>7 But I think our main conclusion would be it's<br/>8 very volatile.<br/>9 Q. Who had the responsibility within the company<br/>10 for developing -- for reviewing those<br/>11 forecasts, first of all, I guess I'd say?<br/>12 A. Well, there is no single responsibility. As<br/>13 I said, we typically don't perform those<br/>14 forecasts. We look at what others have done.<br/>15 We obviously, in the day-to-day bidding<br/>16 process, need to look at short-term prices,<br/>17 what's posted out there. But long-term<br/>18 prices were changing quite a bit, and still<br/>19 are.<br/>20 Q. Who's the "we" in that response? That's what<br/>21 I'm trying to understand.<br/>22 A. We have what's called a wholesale marketing<br/>23 group and generation personnel who bid<br/>24 generation in the market on a daily basis,</p> |
| <p>GARY LONG - 9/16/13<br/>Page 70</p> <p>1 A. I can't answer that question any better than<br/>2 I just answered it.<br/>3 Q. Okay. In that time frame, in the summer of<br/>4 '08 and the fall of '08, and actually early<br/>5 into '09, what was the way in which you<br/>6 personally, and PSNH more generally, checked<br/>7 and evaluated natural gas and coal prices and<br/>8 price projections? What did you have in<br/>9 place? Who was the one that did that? How<br/>10 did that relate to your responsibilities?<br/>11 I'd like a little bit of background on that.<br/>12 A. On commodity prices?<br/>13 Q. Natural gas and coal prices and price<br/>14 projections.<br/>15 A. Well, those projections were changing. We<br/>16 don't typically project gas prices ourselves.<br/>17 We look at what others are forecasting. I<br/>18 mean, your own client, during that time<br/>19 frame, was questioning decisions based on<br/>20 short-term prices and had been altering its<br/>21 forecast when it considered its McKenzie<br/>22 Project, its Keystone Project and then the<br/>23 Mainline Project. So I think the changes --<br/>24 there were many changes happening in the gas</p> | <p>GARY LONG - 9/16/13<br/>Page 72</p> <p>1 who plan for how we'll meet our customers'<br/>2 needs in the next week, the next month, the<br/>3 next six months.<br/>4 Q. And so they're the ones who would be<br/>5 responsible for reviewing those forecasts and<br/>6 then presumably reporting to others in the<br/>7 company, including yourself?<br/>8 A. The forecasts that you're thinking here are<br/>9 posted prices for the purpose of determining<br/>10 how to manage our power portfolio. It's not<br/>11 long-term forecasts or five-year forecasts<br/>12 like TransCanada puts together.<br/>13 Q. Okay. Well, I'm not interested in those, in<br/>14 terms of managing the portfolio that you<br/>15 referenced. I'm interested more in the<br/>16 natural gas and coal prices and price<br/>17 projections as they relate to Merrimack<br/>18 Station, because clearly that was done in the<br/>19 summer of '08, and that was filed with the<br/>20 Commission in September of '08; correct?<br/>21 A. I don't know what forecasts -- I'm not<br/>22 familiar with their forecasts. It's -- you<br/>23 know, what I've said repeatedly is that<br/>24 long-term forecasts are typically not</p>                                  |

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1 reliable, and particularly in that time frame  
2 where they were changing. Like I say, even  
3 TransCanada was changing its forecast every  
4 year, and they're in the business. So we're  
5 not in the -- I'm not in the practice of  
6 directing my subordinates to do a long-term  
7 forecast and then depending on it. It's more  
8 of managing what we have and complying with  
9 the law.  
10 Q. I'd like you to take a look at the response  
11 to TransCanada 1-2.  
12 A. Has been that previously been marked?  
13 Q. Not yet. I don't think we've marked this.  
14 (Long Deposition Exhibit 8 marked  
15 for identification.)  
16 Q. And the question was: "Please provide all  
17 fuel price forecasts available to PSNH at the  
18 time of its initial decision to construct the  
19 flue gas scrubber at Merrimack Station."  
20 You objected. Commission ordered a  
21 response, and then you responded. You, PSNH,  
22 responded. And it says, "The fuel price  
23 forecasts available to PSNH at that time are  
24 provided in the attached, which includes

1 that it isn't.  
2 BY MR. PATCH:  
3 Q. So you don't know what these are, then, I  
4 guess, is what you're telling me.  
5 A. I haven't -- I didn't prepare that response.  
6 I didn't prepare the forecasts.  
7 Q. Would you take a look at them just for a  
8 minute and tell me whether -- well, first of  
9 all, have you ever looked at fuel price  
10 forecasts in your career as president of  
11 PSNH?  
12 A. Yes. I've never done a fuel price forecast,  
13 but I have seen results of fuel price  
14 forecasts.  
15 Q. Is this what they would typically look like?  
16 Would there be a narrative accompanying them?  
17 Would they have a company identifier? Would  
18 they be marked "proprietary"?  
19 MS. ROSS: Could you ask one  
20 question at time, please.  
21 BY MR. PATCH:  
22 Q. Okay. Is this what they would typically look  
23 like?  
24 A. Again, I don't prepare them. But, you know,

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1 NYMEX and broker forward fuel price  
2 quotations from June '08," and then it goes  
3 on from there.  
4 So, attached to this are what we were  
5 provided in response to that data request.  
6 And I guess I would like to ask, first of  
7 all, are these the kind of fuel price  
8 forecasts that you would have personally  
9 reviewed?  
10 A. No.  
11 Q. But this was part of the attachment to what  
12 you submitted to the Commission in September  
13 of '08. So you just didn't review them?  
14 MR. BERSAK: I would just like  
15 to note that the witnesses for this response  
16 that has been identified as and marked as  
17 No. 8 were Frederick Wright, Jody J. TenBrock  
18 and Terrence J. Large, and did not include  
19 Mr. Long.  
20 MR. PATCH: I don't think Mr.  
21 Long's name is on any of the responses to  
22 data requests, is it?  
23 MR. BERSAK: I don't know.  
24 MR. PATCH: I can tell you

1 seeing a table like on Page 2 of 68, that  
2 might be a typical summary of a forecast.  
3 Could be in graphical form. As I said, I've  
4 looked at TransCanada ones which were in  
5 graphical form. Those are summaries of  
6 studies. As I said, I haven't done a fuel  
7 forecast myself.  
8 Q. When you've looked at them, do they typically  
9 have a narrative accompanying them?  
10 A. Like I said, Page 2 doesn't.  
11 Q. Well, I know. But I'm asking you, when you  
12 typically looked at them, not necessarily  
13 these.  
14 A. Sometimes there are tables, sometimes there's  
15 words. Could be either.  
16 Q. Do they typically have company identifiers on  
17 them indicating which company actually made  
18 the projection?  
19 A. Not always.  
20 Q. Are they marked "proprietary," typically?  
21 A. If they are. You know, if they're public  
22 information, they wouldn't be.  
23 Q. So when you submitted the letter on  
24 September 2nd of '08 to the Commission,



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| <p>GARY LONG - 9/16/13<br/>Page 77</p> <p>1 attached to that letter was a report. And I<br/> 2 guess I'd like to have that marked next.<br/> 3 (Long Deposition Exhibit 9 marked<br/> 4 for identification.)<br/> 5 Q. Are you familiar with this report?<br/> 6 A. Generally.<br/> 7 Q. When was the last time that you or anyone<br/> 8 else at PSNH checked the price of natural gas<br/> 9 and projections for those prices prior to<br/> 10 this submission on September 2nd?<br/> 11 A. Prior to the submission of this report?<br/> 12 Q. Yes.<br/> 13 A. I don't know.<br/> 14 Q. Do you have a rough idea? Was it three<br/> 15 months? Was it six months? One month?<br/> 16 A. As I told you, I don't do that work. So I<br/> 17 don't know.<br/> 18 Q. Did you discuss the forecast contained in<br/> 19 this report with anyone prior to the<br/> 20 September 2nd submission?<br/> 21 A. I don't recall.<br/> 22 Q. Do you have any idea how the projection of<br/> 23 natural gas prices was done?<br/> 24 A. Again, you're referring to forecasts. I</p>   | <p style="text-align: center;"><b>RECOVERY</b></p> <p>GARY LONG - 9/16/13<br/>Page 79</p> <p>1 different assumptions different places.<br/> 2 Q. That's right. But this --<br/> 3 A. This is a statement of an assumption. I<br/> 4 think you called it a forecast. It says a<br/> 5 price was used. It doesn't say it was<br/> 6 forecasted. It just explains what was used<br/> 7 in the analysis.<br/> 8 Q. It's a pretty critical assumption, isn't it?<br/> 9 A. One of many.<br/> 10 Q. One of many. So, pretty critical to the<br/> 11 impact on customers, would you say?<br/> 12 A. Yes. As we stated earlier, fuel prices are<br/> 13 important.<br/> 14 Q. But you don't know who did this.<br/> 15 A. Not sitting here today, no.<br/> 16 Q. Is there any documentation you could check so<br/> 17 that you could find out who was responsible<br/> 18 for doing this?<br/> 19 A. I wouldn't be able to.<br/> 20 MR. PATCH: I'd like to make a<br/> 21 data request of the Company, that they answer<br/> 22 the question of who prepared the \$11 per<br/> 23 MMBtu price that was used as an "assumption,"<br/> 24 as Mr. Long says, in this particular report,</p> |
| <p>GARY LONG - 9/16/13<br/>Page 78</p> <p>1 don't know which forecast you're referring<br/> 2 to.<br/> 3 Q. Okay. Well, let's look at --<br/> 4 A. And they're not forecasts that I personally<br/> 5 did, so...<br/> 6 Q. Okay. Let's look at Page 15 of this. And<br/> 7 there's a Part E on Page 15 in the lower<br/> 8 right-hand corner of Page 15. There's a lot<br/> 9 of different page numbers on here. Yeah, and<br/> 10 Part E, or Paragraph E at the bottom of the<br/> 11 page, it says, "In the market purchase and<br/> 12 combined cycle natural gas scenarios, a year<br/> 13 2012 price of \$11 per MMBtu was used as the<br/> 14 first-year price of natural gas." This value<br/> 15 was escalated at a rate of 2.5 percent per<br/> 16 year for future years of the analysis." Did<br/> 17 I read that correctly?<br/> 18 A. Yes.<br/> 19 Q. Do you know who did this forecast?<br/> 20 A. No.<br/> 21 Q. You have no idea who prepared this?<br/> 22 A. I don't have a recollection of who prepared<br/> 23 it. I think it's a statement of an<br/> 24 assumption. So, you know, you could use</p> | <p>GARY LONG - 9/16/13<br/>Page 80</p> <p>1 referenced on Page 15, Paragraph E.<br/> 2 MR. BERSAK: We've been<br/> 3 through discovery for several years. This<br/> 4 report has been out there for over five<br/> 5 years. If you're going to depose Mr. Long<br/> 6 about what he knows about this project, I<br/> 7 think we've completed discovery, and I would<br/> 8 object to further discovery.<br/> 9 MR. PATCH: And then I would<br/> 10 also like to ask for any of the underlying<br/> 11 materials --<br/> 12 MR. BERSAK: May we have a<br/> 13 ruling on this one, please?<br/> 14 MR. PATCH: Well, I thought<br/> 15 what had been indicated was that those<br/> 16 rulings were going to be reserved until --<br/> 17 MS. ROSS: I wasn't planning<br/> 18 on ruling, but I would recommend production<br/> 19 of this because it is a critical piece of<br/> 20 information in this docket.<br/> 21 (Court Reporter interjects.)<br/> 22 MR. BERSAK: I'm just asking,<br/> 23 when does discovery stop?<br/> 24 MS. ROSS: Whenever the</p>  |

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| <p>1 any report circulated within PSNH that</p> <p>2 provided spot and future fuel prices prepared</p> <p>3 for management review?</p> <p>4 A. I don't know.</p> <p>5 Q. You don't know if there were any -- you don't</p> <p>6 know if it would be a typical thing to do.</p> <p>7 You have no knowledge of that?</p> <p>8 A. Well, it certainly may have occurred, but</p> <p>9 within our service providers. Fuel</p> <p>10 forecasting was not an area under my</p> <p>11 responsibility.</p> <p>12 Q. Okay. So you didn't feel it was one of your</p> <p>13 responsibilities to be aware of spot and</p> <p>14 future fuel prices. Not part of your</p> <p>15 responsibility as president of PSNH.</p> <p>16 A. I didn't manage that function. Would I be</p> <p>17 generally aware? Would they inform me of</p> <p>18 changes? Yes. But I didn't manage that,</p> <p>19 forecast that process. I did not manage the</p> <p>20 day-to-day market interactions of the company</p> <p>21 within the ISO-New England market.</p> <p>22 Q. How frequently would they have informed you</p> <p>23 of you that?</p> <p>24 A. Of what?</p>   | <p>1 decision?</p> <p>2 A. Well, that's a topic that I'm sure we talked</p> <p>3 about. I can't recall when or how or where.</p> <p>4 I had conversations multiple times every day.</p> <p>5 So, you know, you asked me specifically about</p> <p>6 a specific conversation. Well, I don't</p> <p>7 recall. But certainly that topic was</p> <p>8 discussed.</p> <p>9 Q. With who?</p> <p>10 A. Well, that's what I'm saying. It could have</p> <p>11 been with any -- it could have been with an</p> <p>12 analyst. It could have been with anybody on</p> <p>13 the generation team. It could have been with</p> <p>14 anybody who's involved with company</p> <p>15 operations.</p> <p>16 Q. Was there any documentation provided of any</p> <p>17 of those discussions?</p> <p>18 A. Not that I recall, but -- I don't recall.</p> <p>19 Q. Okay.</p> <p>20 A. As I said earlier, we typically don't --</p> <p>21 these are oral discussions. You know, you</p> <p>22 asked me early on my style of management. It</p> <p>23 is to communicate with people often, but we</p> <p>24 don't record those conversations. We don't</p>  |
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| <p>1 Q. You just said, you know, you were informed by</p> <p>2 people within the company of this. So I'm</p> <p>3 trying to understand the frequency. Was</p> <p>4 there some protocol? Was there some regular</p> <p>5 occurrence? Did they inform you weekly? Did</p> <p>6 they inform you daily? Did they inform you</p> <p>7 monthly? I'm trying to understand how that</p> <p>8 was done.</p> <p>9 A. Well, they'd certainly inform me upon inquiry</p> <p>10 or as we're considering analysis like this.</p> <p>11 There was no protocol for immediate weekly</p> <p>12 reports or daily reports. As I said, I did</p> <p>13 not manage that function.</p> <p>14 Q. So, on request they would inform you, you</p> <p>15 said? So, in other words, if you asked for</p> <p>16 it, they'd give it to you.</p> <p>17 A. Oh, yes.</p> <p>18 Q. Did you ever ask for this?</p> <p>19 A. I may have. I don't recall.</p> <p>20 Q. Do you remember anyone, at any point in that</p> <p>21 time frame, in the summer of '08 and the fall</p> <p>22 of '08, anyone at PSNH or NU voicing concern</p> <p>23 about the gas price drop and the effect it</p> <p>24 would have on the scrubber go-forward</p> | <p>1 have a need to.</p> <p>2 Q. But if somebody thought that it was</p> <p>3 significant enough that the gas price was</p> <p>4 dropping and the projections were going down</p> <p>5 and the effect that would have on the</p> <p>6 scrubber, presumably they would have done</p> <p>7 more than just communicate with you orally.</p> <p>8 A. It's well known -- it was well known by us</p> <p>9 that gas prices were very volatile. I'll</p> <p>10 give you your own client's example. The CEO</p> <p>11 of TransCanada, in talking to his investors,</p> <p>12 said you don't make an investment decision</p> <p>13 based on a one-month or short-term gas</p> <p>14 prices, that you have to look at the long</p> <p>15 term. And TransCanada projected steadily</p> <p>16 increasing prices when they looked at their</p> <p>17 own projects. And that's what the CEO</p> <p>18 communicated to investment communities. So,</p> <p>19 we were no different. Although we weren't in</p> <p>20 the gas business, we understood that you</p> <p>21 don't look at a short-term forecast and</p> <p>22 assume that's the way it's going to be</p> <p>23 forever.</p> <p>24 And so, yes, I did not track the</p> |