



Public Service of New Hampshire d/b/a Eversource Energy  
Docket No. DE 16-822

Date Request Received: 05/22/2017

Date of Response: 06/08/2017

Request No. STAFF 4-002

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Request from: New Hampshire Public Utilities Commission Staff

Witness: Christopher J. Goulding

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**Request:**

Please provide detailed information and calculations regarding the deferral, carrying charge, O&M, property taxes, depreciation, revenues, and return on rate base related to the Scrubber at Merrimack Station for 2016 and 2017 to date, in the same format as provided in response to DR 1-1 in this docket.

**Response:**

Please refer to Attachment Staff 4-002.

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**MERRIMACK SCRUBBER 12/31/16 UNDER-RECOVERY SUMMARY**  
(Dollars in 000s)

| Summary of Forecasted 2016 Costs & Revenues |                                                  | Merrimack Scrubber<br>Total Cost/Revenues<br>For the Year Ended<br>December 31, 2016 | Source                   |
|---------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------|
| 1                                           | Total Merrimack Scrubber Under-Recovery 12/31/15 | \$ 123,838                                                                           | Page 4, Line 5           |
| 2                                           | Merrimack Scrubber O&M                           | 1,622                                                                                | Page 2, Line 1           |
| 3                                           | Merrimack Scrubber Fuel                          | 4,698                                                                                | Page 2, Line 2           |
| 4                                           | Merrimack Scrubber Avoided SO2 Cost              | (491)                                                                                | Page 2, Line 3           |
| 5                                           | Merrimack Scrubber Depreciation Expense          | 15,566                                                                               | Page 2, Line 4           |
| 6                                           | Merrimack Scrubber Property Tax Expense          | 215                                                                                  | Page 2, Line 5           |
| 7                                           | Merrimack Scrubber Return on Rate Base           | 26,285                                                                               | Page 3, Line 7           |
| 8                                           | Merrimack Scrubber Costs                         | \$ 47,895                                                                            | Lines 2 through 7        |
| 9                                           | Actual Merrimack Scrubber Revenue                | 58,861                                                                               | Page 4, Line 2           |
| 10                                          | Under-Recovery before Carrying Cost              | \$ 112,872                                                                           | Line 1 + Line 7 - Line 9 |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
FORECASTED 2016 MERRIMACK SCRUBBER O&M, DEPRECIATION AND PROPERTY TAXES  
(Dollars in 000s)

| Line | Merrimack Scrubber O&M, Depr. & Taxes           | January<br>2016<br>Actual | February<br>2016<br>Actual | March<br>2016<br>Actual | April<br>2016<br>Actual | May<br>2016<br>Actual | June<br>2016<br>Actual | July<br>2016<br>Actual | August<br>2016<br>Actual | September<br>2016<br>Actual | October<br>2016<br>Actual | November<br>2016<br>Actual | December<br>2016<br>Actual | Total    |
|------|-------------------------------------------------|---------------------------|----------------------------|-------------------------|-------------------------|-----------------------|------------------------|------------------------|--------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|----------|
| 1    | Merrimack Scrubber Operation & Maintenance Cost | \$ 177                    | \$ 310                     | \$ 87                   | \$ 142                  | \$ 11                 | \$ 63                  | \$ 121                 | \$ 74                    | \$ 137                      | \$ 217                    | \$ 81                      | \$ 201                     | \$ 1,622 |
| 2    | Merrimack Scrubber Fuel-Related Cost            | 446                       | 424                        | 248                     | 223                     | 824                   | 249                    | 382                    | 381                      | 309                         | 255                       | 253                        | 703                        | 4,698    |
| 3    | Merrimack Scrubber Avoided SO2 Cost             | (87)                      | (70)                       | -                       | -                       | -                     | -                      | (77)                   | (59)                     | (5.45)                      | -                         | (3)                        | (190)                      | (491)    |
| 4    | Merrimack Scrubber Depreciation Cost            | 1,297                     | 1,297                      | 1,297                   | 1,297                   | 1,297                 | 1,297                  | 1,297                  | 1,297                    | 1,297                       | 1,297                     | 1,297                      | 1,297                      | 15,566   |
| 5    | Merrimack Scrubber Property Taxes (1)           | 18                        | 18                         | 18                      | 18                      | 18                    | 18                     | 18                     | 18                       | 18                          | 18                        | 18                         | 18                         | 215      |

6 Total Merrimack Scrubber O&M, Fuel, SO2, Depr. and Taxes \$ 1,851 \$ 1,980 \$ 1,650 \$ 1,680 \$ 2,150 \$ 1,627 \$ 1,742 \$ 1,711 \$ 1,756 \$ 1,787 \$ 1,646 \$ 2,030 \$ 21,610

7 (1) Merrimack Scrubber related property tax impact represents the projection of the non-exempt portion of the project

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
FORECASTED 2016 MERRIMACK SCRUBBER RETURN ON RATE BASE  
(Dollars in 000s)

| Merrimack Scrubber<br>Line Return on Rate Base | Year End<br>2015 | January<br>2016<br>Actual | February<br>2016<br>Actual | March<br>2016<br>Actual | April<br>2016<br>Actual | May<br>2016<br>Actual | June<br>2016<br>Actual | July<br>2016<br>Actual | August<br>2016<br>Actual | September<br>2016<br>Actual | October<br>2016<br>Actual | November<br>2016<br>Actual | December<br>2016<br>Actual | Total     |
|------------------------------------------------|------------------|---------------------------|----------------------------|-------------------------|-------------------------|-----------------------|------------------------|------------------------|--------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|-----------|
| 1 Net Plant                                    |                  | \$ 351,398                | \$ 350,100                 | \$ 348,803              | \$ 347,506              | \$ 346,209            | \$ 344,912             | \$ 343,614             | \$ 342,355               | \$ 341,058                  | \$ 339,760                | \$ 338,463                 | \$ 337,166                 |           |
| 2 Working Capital Allow. (45 days of O&M)      |                  | \$ 200                    | \$ 200                     | \$ 200                  | \$ 200                  | \$ 200                | \$ 200                 | \$ 200                 | \$ 200                   | \$ 200                      | \$ 200                    | \$ 200                     | \$ 200                     |           |
| 3 Deferred Taxes                               |                  | (104,916)                 | (105,362)                  | (105,808)               | (106,975)               | (108,140)             | (109,310)              | (109,753)              | (110,196)                | (110,640)                   | (111,086)                 | (111,533)                  | (111,980)                  |           |
| 4 Total Rate Base (Lines 1 through 3)          | \$ 248,472       | \$ 246,682                | \$ 244,938                 | \$ 243,195              | \$ 240,731              | \$ 238,269            | \$ 235,802             | \$ 234,061             | \$ 232,359               | \$ 230,618                  | \$ 228,874                | \$ 227,130                 | \$ 225,386                 |           |
| 5 Average Rate Base ( prev + curr month)       |                  | \$ 247,577                | \$ 245,810                 | \$ 244,067              | \$ 241,963              | \$ 239,500            | \$ 237,036             | \$ 234,932             | \$ 233,210               | \$ 231,488                  | \$ 229,746                | \$ 228,002                 | \$ 226,258                 |           |
| 6 x Return                                     |                  | 0.9142%                   | 0.9142%                    | 0.9142%                 | 0.9178%                 | 0.9178%               | 0.9178%                | 0.9333%                | 0.9333%                  | 0.9333%                     | 0.9385%                   | 0.9385%                    | 0.9385%                    |           |
| 7 Merrimack Scrubber Return (Line 5 x Line 6)  |                  | \$ 2,263                  | \$ 2,247                   | \$ 2,231                | \$ 2,221                | \$ 2,198              | \$ 2,176               | \$ 2,193               | \$ 2,177                 | \$ 2,160                    | \$ 2,156                  | \$ 2,140                   | \$ 2,123                   | \$ 26,285 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
FORECASTED 2016 MERRIMACK SCRUBBER DEFERRAL & CARRYING CHARGE  
(Dollars in 000s)

| Merrimack Scrubber<br>Line Deferral & Carrying Charge | Year End<br>2015 | January<br>2016<br>Actual | February<br>2016<br>Actual | March<br>2016<br>Actual | April<br>2016<br>Actual | May<br>2016<br>Actual | June<br>2016<br>Actual | July<br>2016<br>Actual | August<br>2016<br>Actual | September<br>2016<br>Actual | October<br>2016<br>Actual | November<br>2016<br>Actual | December<br>2016<br>Actual | Total       |
|-------------------------------------------------------|------------------|---------------------------|----------------------------|-------------------------|-------------------------|-----------------------|------------------------|------------------------|--------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|-------------|
| 1 Scrubber Cost                                       |                  | \$ 4,114                  | \$ 4,227                   | \$ 3,881                | \$ 3,901                | \$ 4,348              | \$ 3,803               | \$ 3,935               | \$ 3,888                 | \$ 3,916                    | \$ 3,943                  | \$ 3,786                   | \$ 4,153                   | \$ 47,895   |
| 2 Scrubber Revenues                                   |                  | (4,699)                   | (5,363)                    | (5,108)                 | (4,403)                 | (4,368)               | (4,745)                | (5,960)                | (6,061)                  | (4,654)                     | (4,031)                   | (4,378)                    | (5,091)                    | (58,861)    |
| 3 Current Month Deferred Scrubber Cost                |                  | \$ (585)                  | \$ (1,136)                 | \$ (1,227)              | \$ (502)                | \$ (20)               | \$ (942)               | \$ (2,025)             | \$ (2,173)               | \$ (738)                    | \$ (88)                   | \$ (593)                   | \$ (938)                   | \$ (10,966) |
| 4 Cumulative Deferred Scrubber Cost                   | \$ 123,838       | \$ 123,254                | \$ 122,117                 | \$ 120,890              | \$ 120,388              | \$ 120,368            | \$ 119,427             | \$ 117,402             | \$ 115,229               | \$ 114,491                  | \$ 114,403                | \$ 113,810                 | \$ 112,872                 |             |
| 5 Actual Retail MWH Sales                             |                  | 348,059                   | 311,831                    | 296,997                 | 255,963                 | 253,951               | 275,848                | 346,512                | 352,377                  | 270,580                     | 234,355                   | 254,575                    | 295,978                    | 3,497,026   |

Amounts shown above may not add due to rounding.

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY**  
**FORECASTED 2017 MERRIMACK SCRUBBER COSTS**  
(Dollars in 000s)

| <b>Summary of Forecasted 2017 Costs</b>   | <b>Merrimack Scrubber<br/>Forecasted Costs<br/>For the Year Ended<br/>December 31, 2017</b> | <b>Source</b>     |
|-------------------------------------------|---------------------------------------------------------------------------------------------|-------------------|
| 1 Merrimack Scrubber O&M                  | \$ 2,000                                                                                    | Page 6, Line 1    |
| 2 Merrimack Scrubber Fuel                 | \$ 1,545                                                                                    | Page 6 Line 2     |
| 3 Merrimack Scrubber Avoided SO2 Cost     | \$ (112)                                                                                    | Page 6, Line 3    |
| 4 Merrimack Scrubber Depreciation Expense | \$ 15,567                                                                                   | Page 6, Line 4    |
| 5 Merrimack Scrubber Property Tax Expense | \$ 215                                                                                      | Page 6, Line 5    |
| 6 Merrimack Scrubber Return on Rate Base  | \$ 24,710                                                                                   | Page 7, Line 7    |
| 7 Merrimack Scrubber Costs                | \$ 43,925                                                                                   | Lines 1 through 6 |

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
FORECASTED 2017 MERRIMACK SCRUBBER O&M, DEPRECIATION AND PROPERTY TAXES  
(Dollars in 000s)

| Line | Merrimack Scrubber O&M, Depr. & Taxes                    | January<br>2017<br>Actual | February<br>2017<br>Actual | March<br>2017<br>Actual | April<br>2017<br>Forecast | May<br>2017<br>Forecast | June<br>2017<br>Forecast | July<br>2017<br>Forecast | August<br>2017<br>Forecast | September<br>2017<br>Forecast | October<br>2017<br>Forecast | November<br>2017<br>Forecast | December<br>2017<br>Forecast | Total     |
|------|----------------------------------------------------------|---------------------------|----------------------------|-------------------------|---------------------------|-------------------------|--------------------------|--------------------------|----------------------------|-------------------------------|-----------------------------|------------------------------|------------------------------|-----------|
| 1    | Merrimack Scrubber Operation & Maintenance Cost          | \$ 180                    | \$ 109                     | \$ 246                  | \$ 163                    | \$ 163                  | \$ 163                   | \$ 163                   | \$ 163                     | \$ 163                        | \$ 163                      | \$ 163                       | \$ 163                       | \$ 2,000  |
| 2    | Merrimack Scrubber Fuel-Related Cost                     | 430                       | 365                        | 302                     | 2                         | -                       | 6                        | 7                        | -                          | 3                             | -                           | -                            | 431                          | 1,545     |
| 3    | Merrimack Scrubber Avoided SO2 Cost                      | (22)                      | (27)                       | (3)                     | -                         | -                       | -                        | -                        | -                          | -                             | -                           | -                            | (60)                         | (112)     |
| 4    | Merrimack Scrubber Depreciation Cost                     | 1,297                     | 1,297                      | 1,297                   | 1,297                     | 1,297                   | 1,297                    | 1,297                    | 1,297                      | 1,297                         | 1,297                       | 1,297                        | 1,297                        | 15,567    |
| 5    | Merrimack Scrubber Property Taxes (1)                    | 18                        | 18                         | 18                      | 18                        | 18                      | 18                       | 18                       | 18                         | 18                            | 18                          | 18                           | 18                           | 215       |
| 6    | Total Merrimack Scrubber O&M, Fuel, SO2, Depr. and Taxes | \$ 1,903                  | \$ 1,762                   | \$ 1,860                | \$ 1,480                  | \$ 1,478                | \$ 1,484                 | \$ 1,485                 | \$ 1,478                   | \$ 1,481                      | \$ 1,478                    | \$ 1,478                     | \$ 1,849                     | \$ 19,215 |

7 (1) Merrimack Scrubber related property tax impact represents the projection of the non-exempt portion of the project

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
FORECASTED 2017 MERRIMACK SCRUBBER RETURN ON RATE BASE  
(Dollars in 000s)

| Merrimack Scrubber<br>Line Return on Rate Base | Year End<br>2016 | January<br>2017 | February<br>2017 | March<br>2017 | April<br>2017 | May<br>2017 | June<br>2017 | July<br>2017 | August<br>2017 | September<br>2017 | October<br>2017 | November<br>2017 | December<br>2017 | Total     |
|------------------------------------------------|------------------|-----------------|------------------|---------------|---------------|-------------|--------------|--------------|----------------|-------------------|-----------------|------------------|------------------|-----------|
|                                                |                  | Actual          | Actual           | Actual        | Forecast      | Forecast    | Forecast     | Forecast     | Forecast       | Forecast          | Forecast        | Forecast         | Forecast         |           |
| 1 Net Plant                                    |                  | \$ 335,869      | \$ 334,571       | \$ 333,274    | \$ 330,796    | \$ 329,499  | \$ 328,202   | \$ 326,905   | \$ 325,608     | \$ 324,331        | \$ 323,014      | \$ 321,717       | \$ 320,419       |           |
| 2 Working Capital Allow. (45 days of O&M)      |                  | \$ 264          | \$ 264           | \$ 264        | \$ 264        | \$ 264      | \$ 264       | \$ 264       | \$ 264         | \$ 264            | \$ 264          | \$ 264           | \$ 264           |           |
| 3 Deferred Taxes                               |                  | (111,585)       | (111,193)        | (110,801)     | (110,410)     | (110,018)   | (109,627)    | (109,235)    | (108,843)      | (108,452)         | (108,060)       | (107,668)        | (107,277)        |           |
| 4 Total Rate Base (Lines 1 through 3)          | \$ 225,386       | \$ 224,547      | \$ 223,642       | \$ 222,737    | \$ 220,650    | \$ 219,744  | \$ 218,839   | \$ 217,934   | \$ 217,028     | \$ 216,143        | \$ 215,218      | \$ 214,312       | \$ 213,406       |           |
| 5 Average Rate Base ( prev + curr month)       |                  | \$ 224,967      | \$ 224,095       | \$ 223,190    | \$ 221,693    | \$ 220,197  | \$ 219,292   | \$ 218,386   | \$ 217,481     | \$ 216,586        | \$ 215,680      | \$ 214,765       | \$ 213,859       |           |
| 6 x Return                                     |                  | 0.9395%         | 0.9395%          | 0.9395%       | 0.9395%       | 0.9395%     | 0.9395%      | 0.9395%      | 0.9395%        | 0.9395%           | 0.9395%         | 0.9395%          | 0.9395%          |           |
| 7 Merrimack Scrubber Return (Line 5 x Line 6)  |                  | \$ 2,114        | \$ 2,105         | \$ 2,097      | \$ 2,083      | \$ 2,069    | \$ 2,060     | \$ 2,052     | \$ 2,043       | \$ 2,035          | \$ 2,026        | \$ 2,018         | \$ 2,009         | \$ 24,710 |

Amounts shown above may not add due to rounding.

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE DBA EVERSOURCE ENERGY  
FORECASTED 2017 MERRIMACK SCRUBBER DEFERRAL & CARRYING CHARGE  
(Dollars in 000s)

| Merrimack Scrubber<br>Line Deferral & Carrying Charge |                                      | Year End<br>2016 | January<br>2017<br>Actual | February<br>2017<br>Actual | March<br>2017<br>Actual | April<br>2017<br>Forecast | May<br>2017<br>Forecast | June<br>2017<br>Forecast | July<br>2017<br>Forecast | August<br>2017<br>Forecast | September<br>2017<br>Forecast | October<br>2017<br>Forecast | November<br>2017<br>Forecast | December<br>2017<br>Forecast | Total       |
|-------------------------------------------------------|--------------------------------------|------------------|---------------------------|----------------------------|-------------------------|---------------------------|-------------------------|--------------------------|--------------------------|----------------------------|-------------------------------|-----------------------------|------------------------------|------------------------------|-------------|
| 1                                                     | Scrubber Cost                        |                  | \$ 4,016                  | \$ 3,867                   | \$ 3,957                | \$ 3,562                  | \$ 3,547                | \$ 3,544                 | \$ 3,537                 | \$ 3,521                   | \$ 3,516                      | \$ 3,504                    | \$ 3,496                     | \$ 3,858                     | \$ 43,925   |
| 2                                                     | Scrubber Revenues                    |                  | (5,849)                   | (4,535)                    | (4,811)                 | (4,070)                   | (3,930)                 | (4,322)                  | (5,102)                  | (5,040)                    | (4,089)                       | (3,958)                     | (4,287)                      | (5,281)                      | \$ (55,284) |
| 3                                                     | Current Month Deferred Scrubber Cost |                  | \$ (1,832)                | \$ (668)                   | \$ (854)                | \$ (508)                  | \$ (384)                | \$ (776)                 | \$ (1,565)               | \$ (1,519)                 | \$ (573)                      | \$ (464)                    | \$ (751)                     | \$ (1,423)                   | \$ (11,359) |
| 4                                                     | Cumulative Deferred Scrubber Cost    | \$ 112,872       | \$ 111,040                | \$ 110,372                 | \$ 109,518              | \$ 109,010                | \$ 108,627              | \$ 107,849               | \$ 106,284               | \$ 104,765                 | \$ 104,192                    | \$ 103,727                  | \$ 102,936                   | \$ 101,513                   |             |
| 5                                                     | Actual Retail MWH Sales              |                  | 340,041                   | 263,673                    | 279,703                 | 236,621                   | 228,506                 | 251,256                  | 296,644                  | 293,036                    | 237,712                       | 230,718                     | 249,244                      | 307,039                      | 3,214,192   |

Amounts shown above may not add due to rounding.