

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4929  
In Re: Review of Power Purchase Agreement  
Responses to Commission's Fifth Set of Data Requests  
Issued on April 5, 2019

PUC 5-1

Request:

Referencing PUC 2-8, please add a column to show the net present value calculation that results in a direct benefit from the program of approximately \$4 million. Please provide the discount rate and the interest rate used. Please also plot that new column as a new line on the graph from PUC 2-8.

Response:

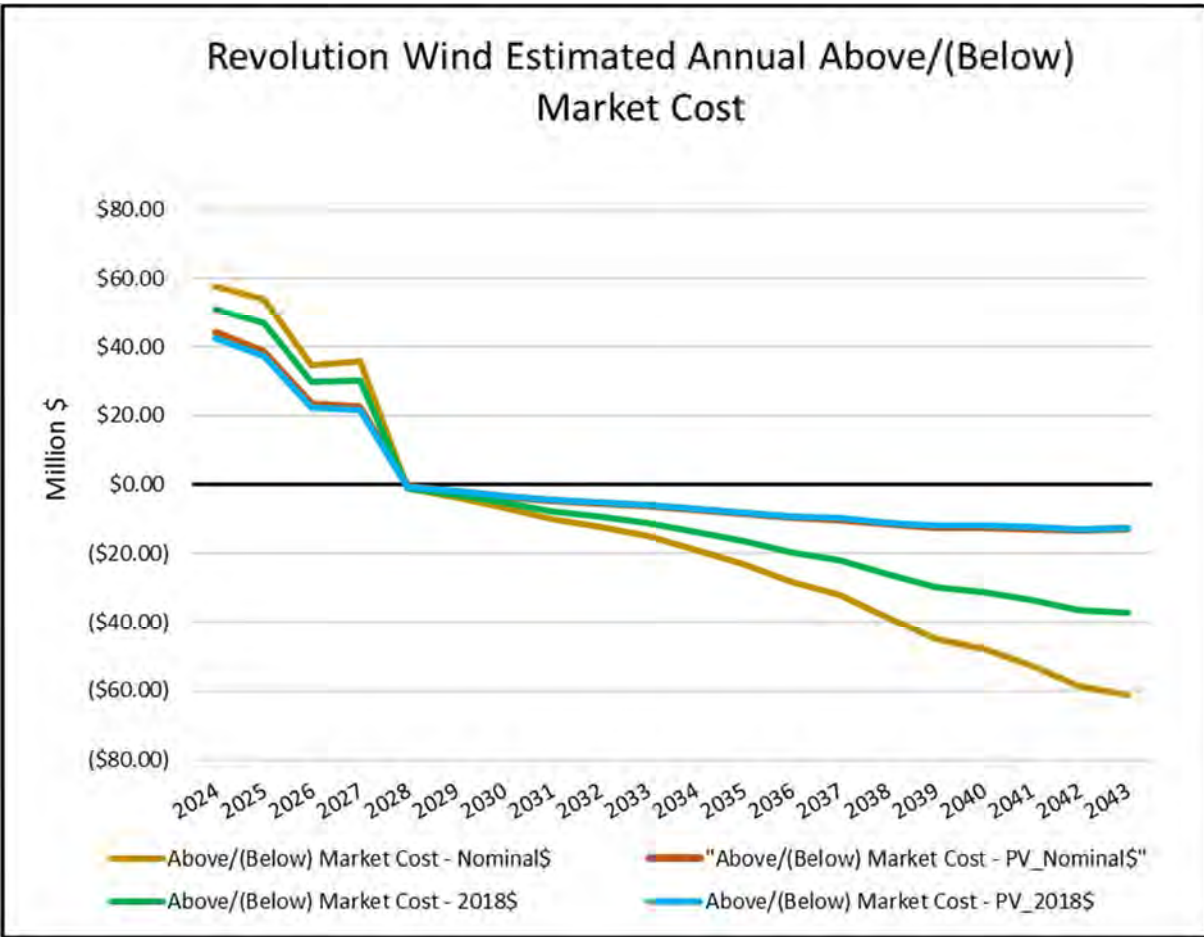
The table and graph summarize data provided in Attachment Schedule NG-5-A (Confidential).

| <b>Year</b> | <b>Annual Above/(Below)<br/>Market Cost<br/>Nominal\$</b> | <b>Annual Above/(Below)<br/>Market Cost<br/>NPV - Nominal\$ <sup>¶</sup></b> | <b>Annual Above/(Below)<br/>Market Cost<br/>2018\$ <sup>†</sup></b> | <b>Annual Above/(Below)<br/>Market Cost<br/>NPV - 2018\$ <sup>‡</sup></b> |
|-------------|---|--|---|---|
| 2024        | \$57,672,871  | \$44,014,809   | \$51,211,859  | \$42,305,914  |
| 2025        | \$54,121,903  | \$38,606,205   | \$47,116,373  | \$37,107,357  |
| 2026        | \$34,754,872  | \$23,171,629   | \$29,662,949  | \$22,272,047  |
| 2027        | \$35,933,439  | \$22,392,185   | \$30,067,494  | \$21,522,894  |
| 2028        | (\$1,144,678)   | (\$666,712)  | (\$939,035)   | (\$640,830)   |
| 2029        | (\$3,716,752)   | (\$2,023,368)  | (\$2,989,246)   | (\$1,944,824)   |
| 2030        | (\$6,638,100)   | (\$3,377,629)  | (\$5,234,097)   | (\$3,246,520)   |
| 2031        | (\$9,839,613)   | (\$4,679,538)  | (\$7,606,341)   | (\$4,497,900)   |
| 2032        | (\$12,054,760)  | (\$5,358,464)  | (\$9,136,001)   | (\$5,150,481)   |
| 2033        | (\$14,779,002)  | (\$6,140,216)  | (\$10,981,016)  | (\$5,901,899)   |
| 2034        | (\$18,898,720)  | (\$7,338,846)  | (\$13,766,694)  | (\$7,054,017)   |
| 2035        | (\$23,013,051)  | (\$8,352,690)  | (\$16,435,059)  | (\$8,028,525)   |
| 2036        | (\$28,265,069)  | (\$9,588,685)  | (\$19,790,053)  | (\$9,216,565)   |
| 2037        | (\$31,892,998)  | (\$10,112,561)   | (\$21,892,335)  | (\$9,720,125)   |
| 2038        | (\$38,611,307)  | (\$11,442,927)   | (\$25,984,302)  | (\$10,998,880)  |
| 2039        | (\$45,091,309)  | (\$12,490,283)   | (\$29,750,156)  | (\$12,005,611)  |
| 2040        | (\$48,139,376)  | (\$12,463,405)   | (\$31,138,427)  | (\$11,979,794)  |
| 2041        | (\$52,668,779)  | (\$12,745,190)   | (\$33,400,218)  | (\$12,250,664)  |
| 2042        | (\$58,835,053)  | (\$13,307,180)   | (\$36,579,017)  | (\$12,790,867)  |
| 2043        | (\$61,257,454)  | (\$12,949,877)   | (\$37,338,301)  | (\$12,447,442)  |
|             |   | <b>(\$4,852,741)</b>   |   | <b>(\$4,666,733)</b>  |

<sup>¶</sup> The quantitative evaluation was for the period 2021-2045 with the Net Present Value calculated to the year prior. The Annual Present Values are calculated to the year 2020, at a discount rate of 6.99%.

<sup>†</sup> The energy market models assume all financial parameters to be in real 2018 dollars and are indexed to that based on a 2% rate of inflation.

<sup>‡</sup> The quantitative evaluation was for the period 2021-2045 with the Net Present Value calculated to the year prior. The Annual Present Values are calculated to the year 2020, at a real discount rate of 4.892%.



Note: The projected annual above/below market costs are based on the total net direct benefits, or the annual contract costs compared to a market forecast for energy and RECs. This does not include the expected reduction in electric supply costs.

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PUC 5-2

Request:

Referencing the footnote on PUC 2-9, please provide the calculation for each year of the PPA of the projected reduction in electric supply costs and explain where they will be reflected on bills and/or realized by customers.

Response:

| <b>Year</b> | <b>Annual (Reduction)/Increase in<br/>Electric Supply Cost [Indirect Benefit]<br/><i>Nominal\$</i></b> |
|-------------|--|
| 2024        | (\$10,288,908)   |
| 2025        | (\$9,096,317)  |
| 2026        | (\$7,266,169)  |
| 2027        | (\$7,175,280)  |
| 2028        | (\$11,194,213)   |
| 2029        | (\$8,563,199)  |
| 2030        | (\$10,563,312)   |
| 2031        | (\$11,040,632)   |
| 2032        | (\$9,480,073)  |
| 2033        | (\$9,153,435)  |
| 2034        | (\$14,002,850)   |
| 2035        | (\$14,860,224)   |
| 2036        | (\$19,851,217)   |
| 2037        | (\$17,590,110)   |
| 2038        | (\$17,109,092)   |
| 2039        | (\$12,353,279)   |
| 2040        | (\$3,109,352)  |
| 2041        | (\$8,583,186)  |
| 2042        | \$1,100,779  |
| 2043        | (\$3,162,515)  |

The projected reduction in energy supply costs will be realized by customers through reduced Standard Offer Service (SOS) charges or non-regulated power producer (NPP) supply charges in the Supply Services section of the bill.

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The calculations of the indirect benefits for each year of the PPA are provided in the TCR workbook tab 'Proposal\_Quant\_Metrics', in Schedule NG-5-A (Confidential).

PUC 5-3

Request:

Referencing Exhibit D of the PPA on Bates page 114, is the mathematical result of the language related to negative pricing such that, during periods of negative locational marginal price (LMP) at the Delivery point, ratepayers would have, after paying the contract cost and energy market sales cost, a net cost rate of \$98.425/megawatt-hour (i.e., the exact contract price assuming there is no Adjusted Price in effect)?

Response:

Yes. During periods of negative locational marginal price (LMP) at the Delivery point, the net effect to customers will be equal to the contract price of \$98.425 per megawatt-hour.

PUC 5-4

Request:

Please provide the above- and below-market cost projections for each year of the PPA with and without remuneration and provide a unitized amount per kWh across all distribution customers.

Response:

**Annual Above/(Below) Market Cost - Without Remuneration**

| Year | Projected Above/(Below)<br>Market Cost<br><i>Nominal\$</i> | Forecasted kilowatt-<br>hours (FkWhx) †<br><i>kWh</i> | Annual Unitized<br>Amount per kWh<br><i>\$/kWh</i> |
|------|--|---|--|
|      | (A)  | (B)   | ( C = A / B )                                      |
| 2024 | \$57,672,871   | 6,653,198,620   | \$0.00867  |
| 2025 | \$54,121,903   | 6,653,198,620   | \$0.00813  |
| 2026 | \$34,754,872   | 6,653,198,620   | \$0.00522  |
| 2027 | \$35,933,439   | 6,653,198,620   | \$0.00540  |
| 2028 | (\$1,144,678)  | 6,653,198,620   | (\$0.00017)  |
| 2029 | (\$3,716,752)  | 6,653,198,620   | (\$0.00056)  |
| 2030 | (\$6,638,100)  | 6,653,198,620   | (\$0.00100)  |
| 2031 | (\$9,839,613)  | 6,653,198,620   | (\$0.00148)  |
| 2032 | (\$12,054,760)   | 6,653,198,620   | (\$0.00181)  |
| 2033 | (\$14,779,002)   | 6,653,198,620   | (\$0.00222)  |
| 2034 | (\$18,898,720)   | 6,653,198,620   | (\$0.00284)  |
| 2035 | (\$23,013,051)   | 6,653,198,620   | (\$0.00346)  |
| 2036 | (\$28,265,069)   | 6,653,198,620   | (\$0.00425)  |
| 2037 | (\$31,892,998)   | 6,653,198,620   | (\$0.00479)  |
| 2038 | (\$38,611,307)   | 6,653,198,620   | (\$0.00580)  |
| 2039 | (\$45,091,309)   | 6,653,198,620   | (\$0.00678)  |
| 2040 | (\$48,139,376)   | 6,653,198,620   | (\$0.00724)  |
| 2041 | (\$52,668,779)   | 6,653,198,620   | (\$0.00792)  |
| 2042 | (\$58,835,053)   | 6,653,198,620   | (\$0.00884)  |
| 2043 | (\$61,257,454)   | 6,653,198,620   | (\$0.00921)  |

† Forecasted kWh per Company forecast - CY 2024.

Note: The projected annual above/below market costs are based on the total net direct benefits, or the annual contract costs compared to a market forecast for energy and RECs. This does not include the expected reduction in electric supply costs.

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**Annual Above/(Below) Market Cost - With Remuneration**

| Year | Projected Above/(Below) | Remuneration | Forecasted kilowatt-<br>hours (FkWhx) † | Annual Unitized<br>Amount per kWh |
|------|-------------------------|--------------|---|-----------------------------------|
|      | Market Cost             |              |   |                                   |
|      | Nominal\$               | Nominal\$    | kWh                                     | \$/kWh                            |
|      | (A)                     | (B)          | (C)                                     | ( D = ( A + B ) / C )             |
| 2024 | \$57,672,871            | \$4,440,824  | 6,653,198,620                           | \$0.00934                         |
| 2025 | \$54,121,903            | \$4,413,470  | 6,653,198,620                           | \$0.00880                         |
| 2026 | \$34,754,872            | \$4,402,132  | 6,653,198,620                           | \$0.00589                         |
| 2027 | \$35,933,439            | \$4,372,362  | 6,653,198,620                           | \$0.00606                         |
| 2028 | (\$1,144,678)           | \$4,418,537  | 6,653,198,620                           | \$0.00049                         |
| 2029 | (\$3,716,752)           | \$4,412,302  | 6,653,198,620                           | \$0.00010                         |
| 2030 | (\$6,638,100)           | \$4,421,213  | 6,653,198,620                           | (\$0.00033)                       |
| 2031 | (\$9,839,613)           | \$4,413,470  | 6,653,198,620                           | (\$0.00082)                       |
| 2032 | (\$12,054,760)          | \$4,388,928  | 6,653,198,620                           | (\$0.00115)                       |
| 2033 | (\$14,779,002)          | \$4,390,708  | 6,653,198,620                           | (\$0.00156)                       |
| 2034 | (\$18,898,720)          | \$4,411,440  | 6,653,198,620                           | (\$0.00218)                       |
| 2035 | (\$23,013,051)          | \$4,412,302  | 6,653,198,620                           | (\$0.00280)                       |
| 2036 | (\$28,265,069)          | \$4,428,291  | 6,653,198,620                           | (\$0.00358)                       |
| 2037 | (\$31,892,998)          | \$4,402,132  | 6,653,198,620                           | (\$0.00413)                       |
| 2038 | (\$38,611,307)          | \$4,372,362  | 6,653,198,620                           | (\$0.00515)                       |
| 2039 | (\$45,091,309)          | \$4,390,708  | 6,653,198,620                           | (\$0.00612)                       |
| 2040 | (\$48,139,376)          | \$4,423,328  | 6,653,198,620                           | (\$0.00657)                       |
| 2041 | (\$52,668,779)          | \$4,421,213  | 6,653,198,620                           | (\$0.00725)                       |
| 2042 | (\$58,835,053)          | \$4,413,470  | 6,653,198,620                           | (\$0.00818)                       |
| 2043 | (\$61,257,454)          | \$4,402,131  | 6,653,198,620                           | (\$0.00855)                       |

† Forecasted kWh per Company forecast - CY 2024.

Note: The projected annual above/below market costs are based on the total net direct benefits, or the annual contract costs compared to a market forecast for energy and RECs. This does not include the expected reduction in electric supply costs.

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PUC 5-5

Request:

Please provide the above- and below-market cost projections for each year of the PPA with and without remuneration and convert it to a fixed monthly charge for each year for each customer class using the allocators approved in the Docket 4770 distribution rate case (consistent with the REGrowth methodology).

Response:

**Annual Above/(Below) Market Cost - Without Remuneration**

| Year                                      | Projected Above/(Below) Market Cost<br>Nominal\$ | Fixed Monthly Charge<br>\$ per bill/luminaire |                   |                     |                           |                      |                    |
|---|--|---|-------------------|---------------------|---------------------------|----------------------|--------------------|
|   |  | Residential<br>A-16/A-60                      | Small C&I<br>C-06 | General C&I<br>G-02 | Large Demand<br>B-32/G-32 | Streetlighting<br>SL | Propulsion<br>X-01 |
| Rate                                      |  |   |                   |                     |                           |                      |                    |
| Distribution Revenue Allocator (A)        |  | 55.6%   | 11.1%             | 15.4%               | 15.1%                     | 2.7%                 | 0.1%               |
| Forecasted Number of Bills/Luminaires (B) |  | 5,356,217                                     | 636,111           | 104,358             | 13,063                    | 1,227,828            | 12                 |
|   | (C)  | ( D = (C x A)/B )                             | ( E = (C x A)/B ) | ( F = (C x A)/B )   | ( G = (C x A)/B )         | ( H = (C x A)/B )    | ( I = (C x A)/B )  |
| 2024                                      | \$57,672,871                                     | \$5.98  | \$10.06           | \$85.10             | \$666.66                  | \$1.26               | \$4,806.07         |
| 2025                                      | \$54,121,903                                     | \$5.61  | \$9.44            | \$79.86             | \$625.61                  | \$1.19               | \$4,510.15         |
| 2026                                      | \$34,754,872                                     | \$3.60  | \$6.06            | \$51.28             | \$401.74                  | \$0.76               | \$2,896.23         |
| 2027                                      | \$35,933,439                                     | \$3.73  | \$6.27            | \$53.02             | \$415.36                  | \$0.79               | \$2,994.45         |
| 2028                                      | (\$1,144,678)                                    | (\$0.11)                                      | (\$0.19)          | (\$1.68)            | (\$13.23)                 | (\$0.02)             | (\$95.38)          |
| 2029                                      | (\$3,716,752)                                    | (\$0.38)                                      | (\$0.64)          | (\$5.48)            | (\$42.96)                 | (\$0.08)             | (\$309.72)         |
| 2030                                      | (\$6,638,100)                                    | (\$0.68)                                      | (\$1.15)          | (\$9.79)            | (\$76.73)                 | (\$0.14)             | (\$553.17)         |
| 2031                                      | (\$9,839,613)                                    | (\$1.02)                                      | (\$1.71)          | (\$14.52)           | (\$113.73)                | (\$0.21)             | (\$819.96)         |
| 2032                                      | (\$12,054,760)                                   | (\$1.25)                                      | (\$2.10)          | (\$17.78)           | (\$139.34)                | (\$0.26)             | (\$1,004.56)       |
| 2033                                      | (\$14,779,002)                                   | (\$1.53)                                      | (\$2.57)          | (\$21.80)           | (\$170.83)                | (\$0.32)             | (\$1,231.58)       |
| 2034                                      | (\$18,898,720)                                   | (\$1.96)                                      | (\$3.29)          | (\$27.88)           | (\$218.45)                | (\$0.41)             | (\$1,574.89)       |
| 2035                                      | (\$23,013,051)                                   | (\$2.38)                                      | (\$4.01)          | (\$33.96)           | (\$266.01)                | (\$0.50)             | (\$1,917.75)       |
| 2036                                      | (\$28,265,069)                                   | (\$2.93)                                      | (\$4.93)          | (\$41.71)           | (\$326.72)                | (\$0.62)             | (\$2,355.42)       |
| 2037                                      | (\$31,892,998)                                   | (\$3.31)                                      | (\$5.56)          | (\$47.06)           | (\$368.66)                | (\$0.70)             | (\$2,657.74)       |
| 2038                                      | (\$38,611,307)                                   | (\$4.00)                                      | (\$6.73)          | (\$56.97)           | (\$446.32)                | (\$0.84)             | (\$3,217.60)       |
| 2039                                      | (\$45,091,309)                                   | (\$4.68)                                      | (\$7.86)          | (\$66.54)           | (\$521.22)                | (\$0.99)             | (\$3,757.60)       |
| 2040                                      | (\$48,139,376)                                   | (\$4.99)                                      | (\$8.40)          | (\$71.03)           | (\$556.46)                | (\$1.05)             | (\$4,011.61)       |
| 2041                                      | (\$52,668,779)                                   | (\$5.46)                                      | (\$9.19)          | (\$77.72)           | (\$608.81)                | (\$1.15)             | (\$4,389.06)       |
| 2042                                      | (\$58,835,053)                                   | (\$6.10)                                      | (\$10.26)         | (\$86.82)           | (\$680.09)                | (\$1.29)             | (\$4,902.92)       |
| 2043                                      | (\$61,257,454)                                   | (\$6.35)                                      | (\$10.68)         | (\$90.39)           | (\$708.09)                | (\$1.34)             | (\$5,104.78)       |

(A) RIPUC Docket Nos. 4770/4780 Compliance Attachment 8 Schedule 3 Page 3 line 53.

(B) Forecasted Bills per Company forecast for customers - CY 2024, luminaires based on active luminaires as of December 31, 2018, used for all years.



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**Annual Above/(Below) Market Cost - With Remuneration**

| Year                                      | Projected Above/(Below) Market Cost, including Remuneration<br><i>Nominal \$</i> | Fixed Monthly Charge per Bill/Luminaire |                   |                     |                           |                      | Propulsion<br>X-01 |
|---|--|---|-------------------|---------------------|---------------------------|----------------------|--------------------|
|   |  | <i>\$ per bill/luminaire</i>            |                   |                     |                           |                      |                    |
| Rate                                      |  | Residential<br>A-16/A-60                | Small C&I<br>C-06 | General C&I<br>G-02 | Large Demand<br>B-32/G-32 | Streetlighting<br>SL |                    |
| Distribution Revenue Allocator (A)        |  | 55.6%                                   | 11.1%             | 15.4%               | 15.1%                     | 2.7%                 | 0.1%               |
| Forecasted Number of Bills/Luminaires (B) |  | 5,356,217                               | 636,111           | 104,358             | 13,063                    | 1,227,828            | 12                 |
|   | (C)  | ( D = (C x A)/B )                       | ( E = (C x A)/B ) | ( F = (C x A)/B )   | ( G = (C x A)/B )         | ( H = (C x A)/B )    | ( I = (C x A)/B )  |
| 2024                                      | \$62,113,695   | \$6.44                                  | \$10.83           | \$91.66             | \$717.99                  | \$1.36               | \$5,176.14         |
| 2025                                      | \$58,535,372   | \$6.07                                  | \$10.21           | \$86.38             | \$676.63                  | \$1.28               | \$4,877.94         |
| 2026                                      | \$39,157,004   | \$4.06                                  | \$6.83            | \$57.78             | \$452.63                  | \$0.86               | \$3,263.08         |
| 2027                                      | \$40,305,801   | \$4.18                                  | \$7.03            | \$59.47             | \$465.90                  | \$0.88               | \$3,358.81         |
| 2028                                      | \$3,273,859  | \$0.33                                  | \$0.57            | \$4.83              | \$37.84                   | \$0.07               | \$272.82           |
| 2029                                      | \$695,550  | \$0.07                                  | \$0.12            | \$1.02              | \$8.04                    | \$0.01               | \$57.96            |
| 2030                                      | (\$2,216,887)  | (\$0.23)                                | (\$0.38)          | (\$3.27)            | (\$25.62)                 | (\$0.04)             | (\$184.74)         |
| 2031                                      | (\$5,426,143)  | (\$0.56)                                | (\$0.94)          | (\$8.00)            | (\$62.72)                 | (\$0.11)             | (\$452.17)         |
| 2032                                      | (\$7,665,831)  | (\$0.79)                                | (\$1.33)          | (\$11.31)           | (\$88.61)                 | (\$0.16)             | (\$638.81)         |
| 2033                                      | (\$10,388,295)   | (\$1.07)                                | (\$1.81)          | (\$15.32)           | (\$120.08)                | (\$0.22)             | (\$865.69)         |
| 2034                                      | (\$14,487,280)   | (\$1.50)                                | (\$2.52)          | (\$21.37)           | (\$167.46)                | (\$0.31)             | (\$1,207.27)       |
| 2035                                      | (\$18,600,749)   | (\$1.93)                                | (\$3.24)          | (\$27.44)           | (\$215.01)                | (\$0.40)             | (\$1,550.06)       |
| 2036                                      | (\$23,836,778)   | (\$2.47)                                | (\$4.15)          | (\$35.17)           | (\$275.53)                | (\$0.52)             | (\$1,986.39)       |
| 2037                                      | (\$27,490,867)   | (\$2.85)                                | (\$4.79)          | (\$40.56)           | (\$317.77)                | (\$0.60)             | (\$2,290.90)       |
| 2038                                      | (\$34,238,945)   | (\$3.55)                                | (\$5.97)          | (\$50.52)           | (\$395.78)                | (\$0.75)             | (\$2,853.24)       |
| 2039                                      | (\$40,700,602)   | (\$4.22)                                | (\$7.10)          | (\$60.06)           | (\$470.47)                | (\$0.89)             | (\$3,391.71)       |
| 2040                                      | (\$43,716,048)   | (\$4.53)                                | (\$7.62)          | (\$64.51)           | (\$505.32)                | (\$0.96)             | (\$3,643.00)       |
| 2041                                      | (\$48,247,566)   | (\$5.00)                                | (\$8.41)          | (\$71.19)           | (\$557.71)                | (\$1.06)             | (\$4,020.63)       |
| 2042                                      | (\$54,421,583)   | (\$5.64)                                | (\$9.49)          | (\$80.30)           | (\$629.07)                | (\$1.19)             | (\$4,535.13)       |
| 2043                                      | (\$56,855,323)   | (\$5.90)                                | (\$9.92)          | (\$83.90)           | (\$657.21)                | (\$1.25)             | (\$4,737.94)       |

(A) RIPUC Docket Nos. 4770/4780 Compliance Attachment 8 Schedule 3 Page 3 line 53.

(B) Forecasted Bills per Company forecast for customers - CY 2024, luminaires based on active luminaires as of December 31, 2018, used for all years.

Note:

The projected annual above/below market costs are based on the total net direct benefits, or the annual contract costs compared to a market forecast for energy and RECs. This does not include the expected reduction in electric supply costs.

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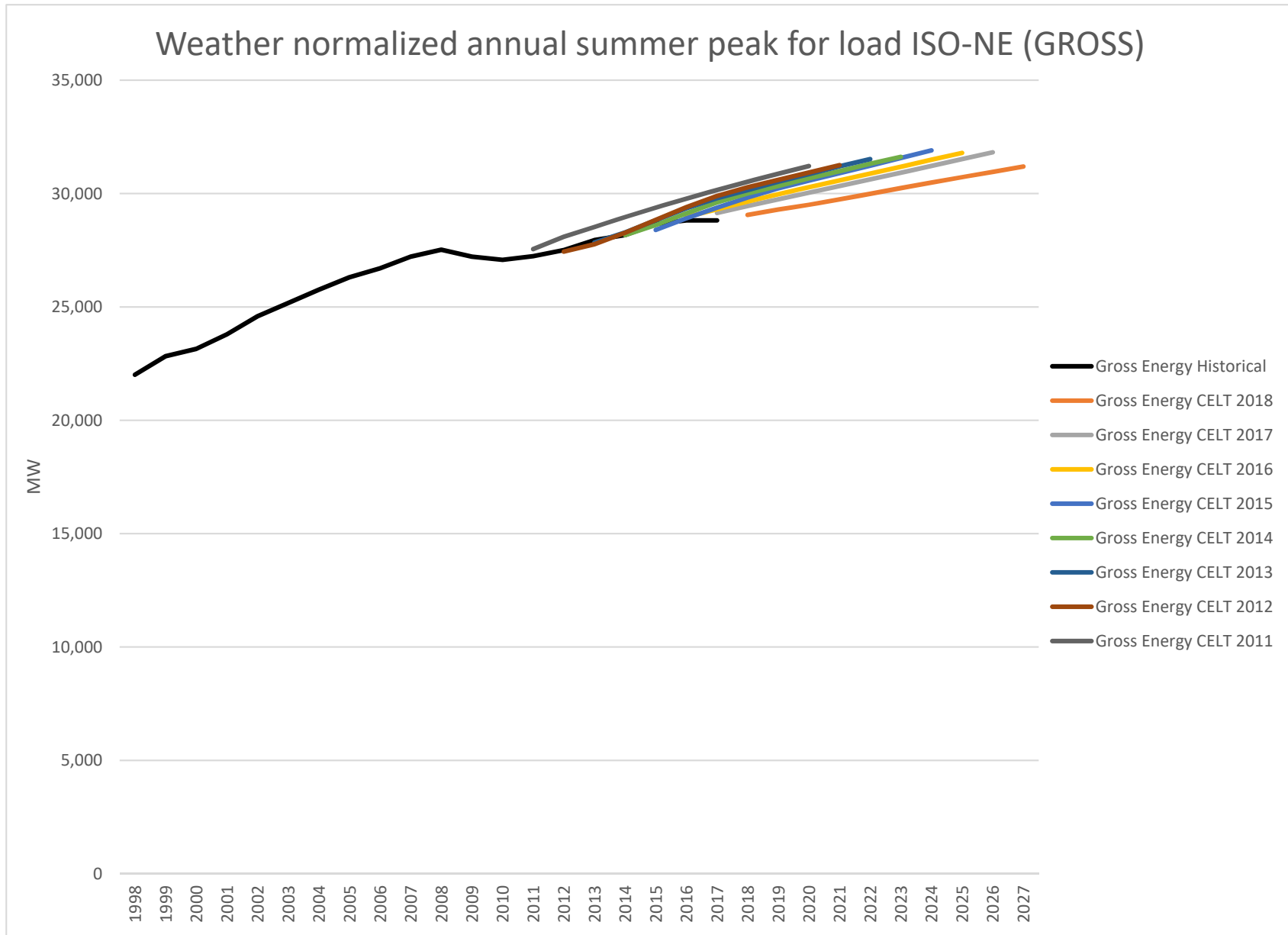
Request:

Using the historical information for the period 1998-2017 located at: <https://www.iso-ne.com/system-planning/system-forecasting/load-forecast/> (2018 Forecast Data), please use any relevant adjustments National Grid believes necessary (or none), and explain any adjustments.

- a. Please use a solid black line to plot a graph of the actual summer peak load for New England from 1998 to present.
- b. On the same graph, please plot the appropriate ISO New England CELT Report summer peak forecast for each CELT Report using a different color line for the forecast in each CELT Report. Please identify the peak data used (e.g., net of PV).
- c. Please provide a table with the data depicted in the graph.

Response:

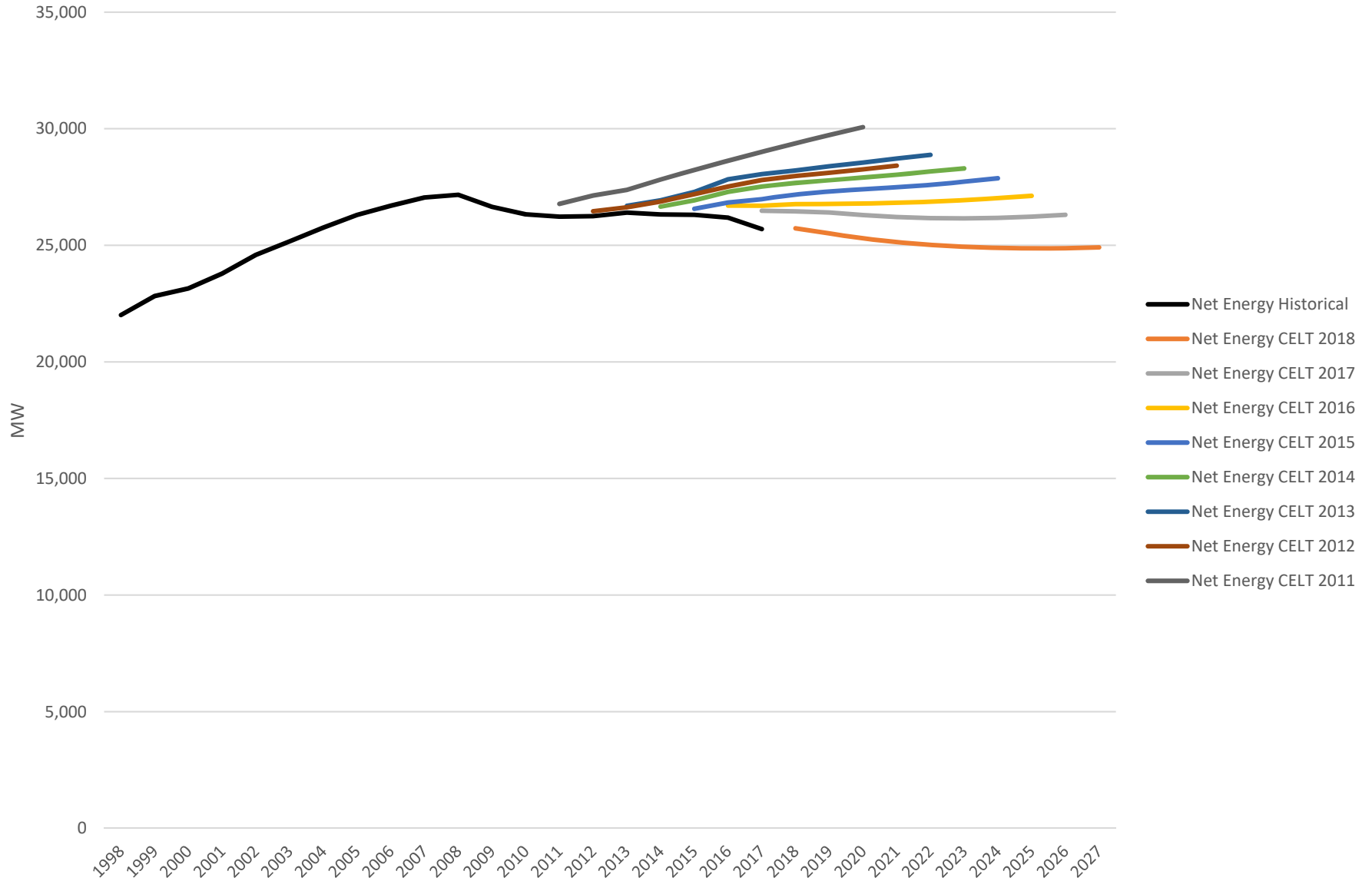
- a. Please refer to Attachment PUC 5-6 for the requested graphs and data tables for historic and forecasted weather normalized summer peak data. National Grid has not made any adjustments. This includes:
  - Weather normalized annual summer peak for load ISO-NE (Gross) in tabs '1Ch Sum Peak (Gross)' and '1 Sum Peak (Gross); and
  - Weather normalized annual summer peak for load ISO-NE (Net of PV and PDR) in tabs '2Ch Sum Peak (Net)' and '2 Sum Peak (Net).
- b. Please refer to the response to part a, above.
- c. Please refer to the response to part a, above.



**Weather normalized annual summer peak for load ISO-NE (GROSS)**

| MW   | Gross Energy |           |           |           |           |           |           |           |           |
|------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|      | Historical   | CELT 2018 | CELT 2017 | CELT 2016 | CELT 2015 | CELT 2014 | CELT 2013 | CELT 2012 | CELT 2011 |
| 1998 | 22,010       |           |           |           |           |           |           |           |           |
| 1999 | 22,825       |           |           |           |           |           |           |           |           |
| 2000 | 23,150       |           |           |           |           |           |           |           |           |
| 2001 | 23,790       |           |           |           |           |           |           |           |           |
| 2002 | 24,590       |           |           |           |           |           |           |           |           |
| 2003 | 25,170       |           |           |           |           |           |           |           |           |
| 2004 | 25,760       |           |           |           |           |           |           |           |           |
| 2005 | 26,305       |           |           |           |           |           |           |           |           |
| 2006 | 26,700       |           |           |           |           |           |           |           |           |
| 2007 | 27,220       |           |           |           |           |           |           |           |           |
| 2008 | 27,525       |           |           |           |           |           |           |           |           |
| 2009 | 27,220       |           |           |           |           |           |           |           |           |
| 2010 | 27,075       |           |           |           |           |           |           |           |           |
| 2011 | 27,240       |           |           |           |           |           |           |           | 27550     |
| 2012 | 27,507       |           |           |           |           |           |           | 27440     | 28095     |
| 2013 | 27,952       |           |           |           |           |           | 27840     | 27765     | 28525     |
| 2014 | 28,171       |           |           |           |           | 28165     | 28290     | 28275     | 28970     |
| 2015 | 28,660       |           |           |           | 28395     | 28615     | 28825     | 28840     | 29380     |
| 2016 | 28,815       |           |           | 28966     | 28910     | 29130     | 29350     | 29400     | 29775     |
| 2017 | 28,817       |           | 29,146    | 29307     | 29375     | 29610     | 29790     | 29895     | 30155     |
| 2018 |              | 29,060    | 29,454    | 29652     | 29825     | 30005     | 30155     | 30275     | 30525     |
| 2019 |              | 29,298    | 29,753    | 29975     | 30230     | 30335     | 30525     | 30605     | 30875     |
| 2020 |              | 29,504    | 30,039    | 30276     | 30575     | 30675     | 30860     | 30930     | 31215     |
| 2021 |              | 29,744    | 30,327    | 30578     | 30900     | 30990     | 31205     | 31255     |           |
| 2022 |              | 29,994    | 30,623    | 30883     | 31230     | 31315     | 31520     |           |           |
| 2023 |              | 30,245    | 30,923    | 31190     | 31570     | 31620     |           |           |           |
| 2024 |              | 30,486    | 31,223    | 31493     | 31905     |           |           |           |           |
| 2025 |              | 30,721    | 31,521    | 31794     |           |           |           |           |           |
| 2026 |              | 30,957    | 31,820    |           |           |           |           |           |           |
| 2027 |              | 31,192    |           |           |           |           |           |           |           |

### Weather normalized annual summer peak for load ISO-NE (NET OF PV AND PDR)



**Weather normalized annual summer peak for load ISO-NE (NET OF PV AND PDR)**

| MW   | Net Energy |           |           |           |           |           |           |           |           |
|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|      | Historical | CELT 2018 | CELT 2017 | CELT 2016 | CELT 2015 | CELT 2014 | CELT 2013 | CELT 2012 | CELT 2011 |
| 1998 | 22,010     |           |           |           |           |           |           |           |           |
| 1999 | 22,825     |           |           |           |           |           |           |           |           |
| 2000 | 23,150     |           |           |           |           |           |           |           |           |
| 2001 | 23,790     |           |           |           |           |           |           |           |           |
| 2002 | 24,590     |           |           |           |           |           |           |           |           |
| 2003 | 25,170     |           |           |           |           |           |           |           |           |
| 2004 | 25,760     |           |           |           |           |           |           |           |           |
| 2005 | 26,305     |           |           |           |           |           |           |           |           |
| 2006 | 26,700     |           |           |           |           |           |           |           |           |
| 2007 | 27,053     |           |           |           |           |           |           |           |           |
| 2008 | 27,167     |           |           |           |           |           |           |           |           |
| 2009 | 26,650     |           |           |           |           |           |           |           |           |
| 2010 | 26,327     |           |           |           |           |           |           |           |           |
| 2011 | 26,229     |           |           |           |           |           |           |           | 26,776    |
| 2012 | 26,248     |           |           |           |           |           |           | 26,462    | 27,135    |
| 2013 | 26,405     |           |           |           |           |           | 26,690    | 26,629    | 27,377    |
| 2014 | 26,324     |           |           |           |           | 26,658    | 26,929    | 26,877    | 27,822    |
| 2015 | 26,310     |           |           |           | 26,565    | 26,930    | 27,290    | 27,193    | 28,232    |
| 2016 | 26,185     |           |           | 26,704    | 26,835    | 27,291    | 27,830    | 27,520    | 28,627    |
| 2017 | 25,698     |           | 26,482    | 26,698    | 26,976    | 27,521    | 28,053    | 27,797    | 29,007    |
| 2018 |            | 25,729    | 26,458    | 26,764    | 27,178    | 27,677    | 28,213    | 27,973    | 29,377    |
| 2019 |            | 25,512    | 26,409    | 26,782    | 27,310    | 27,782    | 28,391    | 28,111    | 29,727    |
| 2020 |            | 25,298    | 26,298    | 26,788    | 27,399    | 27,911    | 28,546    | 28,257    | 30,067    |
| 2021 |            | 25,136    | 26,213    | 26,817    | 27,487    | 28,028    | 28,721    | 28,414    |           |
| 2022 |            | 25,021    | 26,167    | 26,870    | 27,598    | 28,167    | 28,878    |           |           |
| 2023 |            | 24,942    | 26,155    | 26,942    | 27,733    | 28,298    |           |           |           |
| 2024 |            | 24,889    | 26,176    | 27,026    | 27,875    |           |           |           |           |
| 2025 |            | 24,864    | 26,228    | 27,122    |           |           |           |           |           |
| 2026 |            | 24,874    | 26,310    |           |           |           |           |           |           |
| 2027 |            | 24,912    |           |           |           |           |           |           |           |

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Request:

R.I. Gen. Laws § 39-31-1(4) states that one of the purposes of the Affordable Clean Energy and Security Act (ACES) is the increased use of no- and low-carbon energy resources that diversify our energy supply portfolio. R.I. Gen. Laws § 39-31-7(a)(4) contemplates the possibility of the PUC addressing changes to standard offer procurements related to projects approved under ACES. Since the PPA is purported to be below market for most of the years of operation and the PUC will be considering a last resort procurement plan prior to the commercial operation date of the Facility, please explain why the Company has not proposed to consider this PPA as part of a last resort service portfolio.

Response:

R.I. Gen. Laws § 39-1-27.3(c) requires the Company to “arrange for a last-resort power supply for customers who have left the standard offer for any reason and are not otherwise receiving electric service from nonregulated power producers.” Currently, almost half of the Company's distribution load receives its supply from nonregulated power producers (NPPs).

Using any fixed price Power Purchase Agreement (PPA), whether it is above- or below-market, in the Company's Last Resort Service (LRS) portfolio will distort the competitive retail markets and disrupt customer choice. Including the contract prices of these PPAs in LRS rates will not reflect actual market conditions. In reaction, customers could migrate to or from LRS, depending on the switching rules and which option (LRS or NPPs) provides the lowest electric supply rates. If LRS rates include above-market contract prices, then more customers may migrate to NPPs, leaving a smaller number of customers on LRS rates to shoulder the above-market costs. Stranded costs may arise if all customers switch. If LRS rates include below-market contract prices, then more customers will migrate to LRS, which may result in some NPPs leaving the market and reducing overall customer choice. Including the net market difference between the contract price and the resale of energy to the ISO-NE back through the LTCRER to all distribution customers as proposed ensures all distribution customers share in the benefit or costs of the fixed price contracts and will not create a false price signal between LRS and competitive retail markets. Using the fixed price contracts in the LRS would most likely impact the retail customer choice market in a negative way.

PUC 5-9

Request:

Please explain why, instead of positive-only remuneration calculated on the cost of the PPA, the Company did not propose something more like the shared incentive proposal in National Grid's Proposal to Bid Capacity of Customer-Owned Distributed Generation Facilities Into the Forward Capacity Market, Docket No. 4676.

Response:

The Company is not proposing remuneration as an incentive. The purpose of remuneration is to minimize any harm to the Company as a result of accepting the financial obligation of this long-term contract in furtherance of the State of Rhode Island's clean energy goals, and to help Rhode Island customers and the region achieve the identified benefits associated with the long-term contract.

The purpose of National Grid's proposal to receive a shared percentage of net Forward Capacity Market proceeds associated with bidding the capacity of certain non-residential distributed generation facilities was to align the interests of the Company with customers by incenting the Company to maximize the value of the Forward Capacity Market portfolio, on an ongoing basis. The Narragansett Electric Company, Docket No. 4676, Report and Order at 5-6 (2018). To maximize the value of Forward Capacity Market proceeds for customers, the Company proposed to assume a Capacity Supply Obligation, which would include both Performance Incentive payments and penalties. *Id.* at 3-4. To minimize the risk of penalties, the Company proposed to take certain actions, including qualifying resources as "Summer Only" Intermittent Generating Resources, conducting a full review of a facility's projected and/or historic performance to appropriately size the Capacity Supply Obligation, and monitoring the facility for underperformance after receiving a Capacity Supply Obligation. *Id.* at 4-5. The shared incentive structure was proposed to encourage the Company to execute these voluntary administrative functions effectively on an ongoing basis to maximize Forward Capacity Market revenues for the benefit of customers.

In the case of the proposed long-term contract with DWW, the Company is providing value to customers by enabling cost-effective financing for the project that would not be obtainable without the use of the Company's balance sheet. As explained in Mr. Hevert's initial testimony, remuneration of 2.75 percent will: (1) compensate the Company for strategically utilizing its balance sheet and strong credit profile to advance the public interest objectives of the Affordable Clean Energy Security (ACES) Act; (2) mitigate the financial risks to the Company associated with the long-term, fixed financial obligations under the Contract, thereby supporting the Company's financial flexibility and strong credit profile, which are required to efficiently fund



The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4929  
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Issued on April 5, 2019

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its ongoing utility operations and to enter into long-term renewable energy contracts; and (3) enable significant net benefits to its customers after consideration of the remuneration payments, while advancing the public policy objectives that the ACES Act intends to achieve. (Initial Filing at Bates page 381). The remuneration rate therefore has two objectives: (1) maximize the total value created by the Project (by enabling its cost-effective financing); and (2) minimize the financial harm associated with large, fixed financial obligations.

Unlike the Company's proposal to monetize capacity from non-residential distributed generation facilities in the Forward Capacity Market in Docket No. 4676, it is not within the Company's control to maximize the net benefits of the DWW contract over the 20-year term. In addition, remuneration is not intended to influence the Company's future behavior or management of the PPA. It is intended to provide compensation for the use of the Company's balance sheet, which in turn relies on the capital supplied by investors. Because the purpose of the Company's proposal is different in this case than in Docket No. 4676, it is reasonable that the compensation structure is also different.