

Docket No. 4780
Eighth Set of Data Requests of the
Division of Public Utilities and Carriers to National Grid
February 20, 2018

Performance Incentive Mechanisms

8-1. For each of the proposed performance incentive mechanisms without an associated commission-approved program, please state whether the Company plans to file an implementation plan for commission approval of actions the Company will take to achieve the targets.

Response can be found in Book 1 on Bates page(s) 1.

8-2. Please refer to Schedule PST – 1, Chapter 9 – Performance, Page 6 of 22, in which the earnings level is described as “a payment calculated based on equivalent basis point value determined by the size of the rate base in the given year.”

- a. Does “given year” refer to the rate year, or the year of performance?
- b. If “given year” refers to the rate year, how does the Company expect performance incentives to be determined in the next rate case?
- c. If “given year” refers to the year of performance, please explain whether and how this creates an incentive for the Company to increase its rate base.

Response can be found in Book 1 on Bates page(s) 2.

8-3. Please describe whether the Company intends to develop performance incentive mechanisms for the following categories in future proceedings and, if the Company does not intend to do so, please explain why:

- a. Customer information and data (e.g. increased access to customer information)
- b. Income eligible customers
- c. Distribution system planning
- d. Development of a data portal
- e. Non-wires alternatives

Response can be found in Book 1 on Bates page(s) 3-4.

8-4. For each performance incentive mechanism, please describe how the determination of the target achievement (and subsequent reward) will be calculated and confirmed?

Response can be found in Book 1 on Bates page(s) 5-8.

Annual Peak Demand Reduction PIM

- 8-5. Please refer to Workpaper 9.1 regarding peak reduction targets.
- a. Please provide the electronic file (e.g., Excel workbook with all formulas intact) for each page of this workpaper.
 - b. Please explain what the “storage” category of peak impacts (totaling 1 MW in 2019 at the midpoint) includes. Is this utility-owned storage, customer-owned storage, or something else?
 - c. The Company’s behind-the meter storage target is 3 MW in 2019, and the company-owned storage target is also 3 MW in 2019. Would achievement of these targets reduce the peak demand baseline by 6 MW in 2019? Please provide supporting data and calculations in electronic format to show how, if at all, the peak demand baseline would be modified.
 - d. Please explain what the “Solar PV” category of peak impacts (totaling 7 MW in 2019 at the midpoint) includes. Is this utility-owned solar PV, customer-owned solar PV, or something else? Is it attributable to a specific program that the Company will be earning an incentive for? Please provide supporting data and calculations in electronic format.
 - e. Please explain whether and how the Income Eligible Solar Program peak reduction has been factored into the baseline forecast of peak demand and provide supporting calculations in electronic format. If not, please explain why they are excluded.
 - f. If the Company fails to achieve targeted reductions in peak attributable to a specific DER but achieves targeted savings due to incremental effort, does the Company propose to still earn the financial incentive for achieving the target, even though the overall peak load target was not attained? For example, if the Company achieved only 41 MW of DER impacts in 2019 (rather than the 46 MW shown for the midpoint peak reduction target), but achieved 5 MW of incremental savings such that the final peak load was 1682 MW, rather than 1677 MW, does the Company propose that it would earn a reward?
 - g. The Company is proposing to earn 12 basis points for attaining target peak demand reductions. After removing MW of peak demand reductions that are covered by other incentives, would the Company’s proposal award 12 basis points for 5 MW attributable to incremental effort in 2019? If not, please explain.

Response can be found in Book 1 on Bates page(s) 9-22.

- 8-6. Refer to Schedule PST – 1, Chapter 9 – Performance, Page 18 of 22 regarding estimation of the benefits of FCM savings in the year 2022 due to the achievement of the 2019-2021 targets.

- a. Does the Company have an expectation for how long such savings are expected to persist? If yes, please describe the assumptions underlying the Company's expectations (e.g., the resources to be deployed to achieve the savings and the resources lives.)
- b. Please provide the annual and cumulative savings for the expected duration of the savings. Please provide these values and associated calculations in an Excel workbook with all calculations and formulas intact.

Response can be found in Book 1 on Bates page(s) 23-25.

- 8-7. Refer to response to DIV 1-33 regarding the Company's peak demand forecast methodology.
- a. Please provide the functional form and variables included in the final model.
 - b. Please provide the functional form and variables included in all other models tested by the Company.
 - c. Please provide the underlying model input data used to produce the Company's forecast.
 - d. Please provide the model outputs for the Company's forecast. Include all estimated coefficients, standard errors, and goodness-of-fit statistics (such as MAPE, standard error of the estimate).
 - e. For each year 2019, 2020, and 2021, please provide the standard error of the forecast value and identify whether the Company's minimum, target, or maximum peak demand savings fall within the standard error. Please show your calculations.

Response can be found in Book 1 on Bates page(s) 26-52.

- 8-8. Please state how frequently the Company develops internal forecasts for system peak demand.

Response can be found in Book 1 on Bates page(s) 53.

- 8-9. Please provide the Company's ten most recent system peak demand forecasts (e.g., forecasts of vintage 2008 through 2017). If the Company forecasted DER impacts on peak demand, please include those estimates as well. If the data are not available in the format requested, please provide the data that most closely matches that requested. Please provide the data in electronic format.

Response can be found in Book 1 on Bates page(s) 54.

- 8-10. Please state how frequently the Company develops internal forecasts for distribution system peak demand (e.g., individual substation peaks).

Response can be found in Book 1 on Bates page(s) 55.

- 8-11. Please provide the Company's three most recent granular distribution-level peak forecasts (e.g., for substations or circuits), as well as any forecasts of energy efficiency and other DERs' impact on distribution peaks. Please provide the data in electronic format.

Response can be found in Book 1 on Bates page(s) 56-101.

Monthly Peak Demand Reduction PIM

- 8-12. Please refer to the proposed Monthly Transmission Peak Demand Reduction metric as described in Schedule PST-1, Chapter 9 – Performance.
- a. Has the Company developed a monthly transmission peak forecast to use as a baseline in the Monthly Transmission Peak Demand Reduction metric? If so, please provide the forecast in an electronic file with formulas intact.
 - b. If the Company has not yet developed such a forecast, please state whether the Company intends to develop a monthly transmission peak forecast to use as its baseline.
 - c. If the Company does not intend to develop such a forecast, please explain why it does not feel a monthly transmission peak forecast is necessary as a baseline.

Response can be found in Book 1 on Bates page(s) 102.

- 8-13. If the Company has developed a monthly transmission peak forecast for its Monthly Transmission Peak Demand Reduction metric, please answer the following.
- a. Please provide the functional form and variables included in the final model and all other models tested by the Company.
 - b. Please provide the underlying model input data used to produce the Company's forecast.
 - c. Please provide the model outputs for the Company's forecast. Include all estimated coefficients, standard errors, and goodness-of-fit statistics (such as MAPE, standard error of the estimate).
 - d. For each year 2019, 2020, and 2021, please provide the standard error of the sum of the monthly forecasts less the highest monthly peak (or the metric that the Company proposes to use to measure performance). Please show your calculations.

Response can be found in Book 1 on Bates page(s) 103.

- 8-14. Refer to response to DIV 1-34 regarding the Company's transmission peaks.
- a. Please provide the actual monthly peak load for years 2007 through 2017. Please provide the data in electronic format (e.g., in an Excel file).

- b. Please confirm that the Company has not yet performed a weather normalization of its historical monthly peak demands for use as a baseline. If the Company has performed a weather normalization, please provide the weather-normalized historical monthly peak demand information. Please provide the requested data in electronic format (e.g., in an Excel file).
- c. Please provide the data (e.g., degree days and humidity) that the Company expects it would use to calculate weather-normalized monthly peak demand. Please provide the data in electronic format (e.g., in an Excel file).
- d. Please confirm that the Company's proposal for the transmission peak PIM metric is the annual sum of 12 months peak demands, less the maximum month.
- e. Please confirm that the 12-month sum of monthly transmission peaks less the maximum peak for 2012 through 2017 ranged from 9,053 MW to 14,826 MW, a difference of 5,773 MW.
- f. Given the significant range in the sum of the monthly peak demands (less the maximum month) over the last 5 years, and the fact that the Company has not calculated the weather-normalized monthly peaks, please state whether it can be established with a reasonable degree of certainty that the targets for this PIM were achieved due to utility actions. If not, please explain how the PIM could be modified in order to provide greater certainty that the targets were achieved through utility action.

Response can be found in Book 1 on Bates page(s) 104-180.

Demand Response PIMs

8-15. Refer to response to DIV 1-40 (d).

- a. Has the Company or its consultants estimated the C&I demand response potential in Rhode Island?
- b. Please explain how there was an average of 10.6 MW curtailed per demand response event, when only 6.7 MW of capacity was enrolled in the C&I demand response program in 2017?
- c. Please provide the incentives paid in 2017 for C&I demand response. If known, please also provide an estimate of the portion of those incentives retained by customers.
- d. Please reconcile the costs provided in response to DIV 1-40(e) with the costs provided in response to DIV 3-14 (d).

Response can be found in Book 2 on Bates page(s) 1-2.

8-16. Please provide all evaluation reports for the Company's C&I and residential demand response programs.

Response can be found in Book 2 on Bates page(s) 3-177.

DG-Friendly Substation Transformers PIM

8-17. Refer to response DIV 3-12 (a) regarding the Company's 3V0 Program, proposed as part of the ISR plan.

- a. How many substations is the Company planning to install 3V0 at in FY2019 through the ISR program?
- b. How many transformers is the Company planning to install 3V0 on in FY2019 through the ISR program?
- c. What are the expected costs associated with installing 3V0 through the ISR plan for FY2019? Please provide a detailed accounting of expected costs.
- d. Please explain whether the cost to install 3V0 varies by transformer and substation, and, if so, to what extent?
- e. Please provide a detailed description of the issues and problems on the distribution system that the Company is currently experiencing that 3V0 would help to mitigate. Please provide data to support your response.

Response can be found in Book 2 on Bates page(s) 178-181.

Electric Heat PIM

8-18. Refer to Workpaper 9.2 – Electric Heat Initiative Targets.

- a. Please provide the full working electronic version of this workpaper, with all formulae intact.
- b. Please provide justification and documentation for the GSHP program providing 55.23 tons avoided CO2 per year. If this assumption is derived from the BCA Workbook, tabs 8 through 12, please provide the specific cell location of the value and describe how it was calculated.
- c. Please provide justification and documentation for the equipment incentives providing 149, 168, and 195 incremental tons annually for years 1, 2, 3. If this assumption is derived from the BCA Workbook, tabs 8 through 12, please provide the specific cell location of the value and describe how it was calculated.
- d. Please reconcile the CO2 tons reductions in Workpaper 9.2 with the fuel oil CO2 Emissions Reduction from the Electric Heat Initiative in the BCA workbook, tab "11.EH – Benefits", row 67.
- e. Please explain how achievement of the target will be measured, and provide all assumptions that will be used to measure CO2 reductions.

Response can be found in Book 2 on Bates page(s) 182-186.

- 8-19. Regarding the electric heat benefit-cost analysis:
- a. Please identify all non-energy benefits included in the BCA for electric heat, including low-income non-energy benefits.
 - b. To what extent do non-energy benefits for electric heat align with the non-energy benefits included in the 2018 Energy Efficiency Plan for this type of measure?

Response can be found in Book 2 on Bates page(s) 187-190.

- 8-20. The Electric Heat initiative is the most cost-effective effort of the investment categories, yet the budget is substantially smaller than other investment categories. How were the cost-effectiveness outputs used to set budgets for the four investment categories (i.e., electric vehicles, electric heat, solar, and energy storage)?

Response can be found in Book 2 on Bates page(s) 191.

- 8-21. Regarding the responses to Division 5-12 and 5-9, please break the max utility shareholder incentive into the following components: a) return on investment, b) return of incentive, and c) performance incentive. If any component is not included in the current max utility shareholder incentive, please provide the dollar value for the component separately.

Response can be found in Book 2 on Bates page(s) 192.

- 8-22. Regarding the responses to Division 5-12, please explain why the shareholder incentives substantially different by program (i.e., 3% of GSHP costs and 9% of Equipment Incentive program costs)?

Response can be found in Book 2 on Bates page(s) 193.

- 8-23. Regarding the response to Division 5-22, why are the performance incentives low relative to other investment categories if this is the most cost-effective category?

Response can be found in Book 2 on Bates page(s) 194.

- 8-24. Refer to PST Panel Book 2, Bates 288, which states “Electric Heat Program: measured reductions in carbon in short tons per year”. Please reconcile this with Schedule PST-1, Bates 173, which lists the metric as “Metric Tons CO₂.” Is the Company’s proposal for the metric to be quantified in terms of short tons or metric tons, and is the pollutant measured as carbon, or as carbon dioxide?

Response can be found in Book 2 on Bates page(s) 195.