

**Commonwealth of Massachusetts
Department of Public Utilities
Fitchburg Gas and Electric Light Company d/b/a Unitil
Docket No: D.P.U. 20-75**

Department's First Set Information Requests

EDC 1-1:

Identify whether a group or groups of interconnecting customers in the Company's service territory are likely to be presented with interconnection costs in the next 1-1.5 years that are significantly higher than have been historically presented. Include in the Company's response:

- a. Detailed information on the group(s), including: geographical region, number of distributed generation ("DG") facilities, capacity in megawatt ("MW"), and estimated timing for conclusion of associated distribution and transmission impact studies;
- b. High-level planning estimates of expected interconnection costs for the group(s). Provide data in dollar-amount-per-kilowatt ("\$/kW") and by group, where possible;
- c. High-level planning estimates of timeline for construction of anticipated EPS upgrades that will be required due to interconnection impacts of the group(s). Provide data by group, where possible;
- d. High-level estimates of how much DG capacity will be enabled by the anticipated EPS upgrades for the group(s); and
- e. Whether additional DG capacity could be enabled in coordination with anticipated EPS upgrades for the group(s), and if so, high-level estimates of costs and timelines for any additional EPS upgrades required to enable additional DG capacity.
- f. Will the anticipated EPS upgrades for the group(s) provide benefits to ratepayers and the Commonwealth beyond enabling renewable energy to interconnect to the EPS?

Response:

At this time Fitchburg Gas and Electric Light Company d/b/a Unitil (the "Company") does not have any applications or groups of applications in process that are expected to be presented with interconnection costs in the next 1-1.5 years that are significantly higher than have been historically presented. However, if the Company was to receive large application(s) in certain areas within its service territory within the next year, there are some substations that could require significant upgrades.

- a. The areas of service that susceptible to costly substation upgrades are Fitchburg and Lunenburg. There are substations in these areas that could require additional substation transformer capacity due to reverse power flow. Where there are no applications for large DG in these areas at this time, there is no known number of facilities or estimated timing of conclusion of Impact Studies.

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- b. Although a planning study or Impact Study would be required to determine the necessary modifications and cost estimates and no design has been performed, it is projected that the substation and distribution system upgrades may cost approximately \$10 - \$12 million per substation. This modification could be triggered by a single application for a 2 MW facility. Assuming a hypothetical single application of 2MW, the cost per kW would be approximately \$5,000 - \$6,000 /kW for a single applicant using the Company's present process. The added capacity of the substation would be approximately 20 MW.
- c. It is estimated that the design and construction of such substation modifications would require 2- 3 years after approval.
- d. Under the existing system planning criteria, the projected modifications would increase the DG capacity at the substation (as a whole) by approximately 20 MW. This would not necessarily increase the capacity of any given circuit by that amount.
- e. There are no anticipated EPS upgrades at this time that would enable additional DG capacity.
- f. There are presently no groups being studied and no design has been performed on the EPS upgrades mentioned above to determine any benefits to ratepayers other than DG facilities.

Person Responsible: John Bonazoli

Date: April 6, 2021