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June 25, 2021

The Honorable Michael D. Hurley  
Senate Clerk  
Office of the Clerk of the Senate  
24 Beacon Street, Room 335  
State House  
Boston, MA 02133

The Honorable Steven T. James  
House Clerk  
Office of the Clerk of the House of Representatives  
24 Beacon Street, Room 145  
State House  
Boston, MA 02133

**RE: 2020 Annual Report Concerning Self-Generation**

Dear Messrs. Hurley and James:

Pursuant to Section 193 of the Electric Restructuring Act ("Act")<sup>1</sup>, the Department of Public Utilities ("Department") hereby submits its report concerning installations of

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<sup>1</sup> "An Act Relative To Restructuring The Electric Utility Industry In The Commonwealth, Regulating The Provision Of Electricity And Other Services, And Promoting Enhanced Consumer Protections Therein." Chapter 164 of the Acts of 1997. Section 193 of the Act added G. L. c. 164, § 1G.

cogeneration, fuel cell, renewable energy, and on-site generation facilities (collectively, “self-generation”) for the year 2020 (“2020 Annual Report”). This 2020 Annual Report evaluates the effects of self-generation on sales of electricity and recovery of transition costs by electric distribution companies<sup>2</sup> during the year 2020, with comparative information from 1998 (the beginning of self-generation reporting).

## I. INTRODUCTION

The Act recognizes that self-generation, if implemented at a significant level, may lead to the shifting of costs to non-generating customers. St. 1997, c. 164, § 193. Accordingly, the Act requires that the Department monitor and report on the cost effects attributable to self-generation.

General Laws, c. 164, § 1G(g) states, in pertinent part:

The [D]epartment shall issue a report on July 1, 1999 and every year thereafter, for the period of transition cost recovery, relative to degree of impact on the aggregate reduction of the electricity and impact on transition charges due to implementation or use of cogeneration systems, fuel cell and renewable energy technologies.

Pursuant to G.L. c. 164, §§ 1G(a)(1) and 1G(e), electric distribution companies collect their transition costs from customers through a non-bypassable charge, billed based on the amount of kilowatt-hours of electricity used. To the extent that a customer uses less electricity from the electric distribution company, that customer will pay a lower transition cost amount, and other customers will pay a larger share of the electric distribution

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<sup>2</sup> An electric distribution company’s transition costs include the following: (1) unrecovered fixed costs for generation-related assets and obligations associated with producing electricity from generation facilities that were being collected by Department-approved rates on January 1, 1997, determined by the Department as prudently incurred and that became uneconomic as a result of the creation of the competitive generation market; (2) nuclear entitlements of electric distribution companies that divested their non-nuclear generation facilities and liabilities for nuclear plant post- shutdown and decommission costs not recoverable from the authorized decommissioning fund; (3) unrecovered book-balance amount of generation-related regulatory assets; and (4) amount by which the costs of contractual commitments for purchased power exceeds the competitive market price for the power upon the restructuring, buyout, or termination of the contract. G.L. c. 164, § 1G(b)(1)(i)-(iv).

company's transition costs. An extreme example of lowered electricity usage is self-generation that operates with little or no connection to an electric distribution company's power system.

In preparing this 2020 Annual Report, the Department relied on self-generation data from the following electric distribution companies: NSTAR Electric Company d/b/a Eversource Energy (legacy Boston Edison Company, Commonwealth Electric Company, Cambridge Electric Light Company, and Western Massachusetts Electric Company) ("NSTAR")<sup>3</sup>; Fitchburg Gas and Electric Light Company d/b/a Unitil ("Unitil"); and Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid ("National Grid").

## II. AGGREGATE REDUCTION OF ELECTRICITY SALES

Electric distribution companies reported a total of 12,144 self-generation installations during 2020. Of this total, 11,861 installations (97.7 percent) were equal to or less than 60 kilowatts in size and were photovoltaic systems. Furthermore, 12,098 of the installations (99.6 percent) were eligible for net metering under the Department's regulations at 220 CMR 18.00.

Electric distribution companies reported estimated reductions (combined reductions) in 2020 sales due to self-generation installations equal to 3,481,902 megawatt-hours ("MWh"),<sup>4</sup> an approximate 8.32-percent reduction of total electric distribution company sales from the year 2019. The percent reduction in electricity sales ranged from a low of 5.14 percent for Unitil to a high of 14.5 percent for Western Massachusetts Electric Company. For the period March 1, 1998 (the beginning of self-generation reporting) through December 31, 2020, electric distribution companies have reported estimated reductions in electricity sales due to self-generation of approximately 26,030,985 MWh, approximately 2.48 percent of total electric distribution companies' sales for that period (approximately 1,050,319,621 MWh). The reduction in electricity sales of approximately 3,481,902 MWh in 2020

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<sup>3</sup> These legacy companies have been merged into NSTAR Electric Company, which operates within the Eversource Energy holding company system. For purposes of self-generation reporting, Boston Edison Company, Commonwealth Electric Company, and Cambridge Electric Light Company are grouped as "NSTAR" and Western Massachusetts Electric Company is reported as "WMECo."

<sup>4</sup> A megawatt-hour equals 1,000 kilowatt-hours.

represents 13.4 percent of the total reductions in sales (approximately 26,031 MWh) from self-generation installations since 1998.

### III. IMPACT ON TRANSITION CHARGES

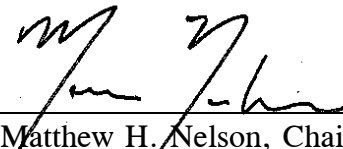
Despite the increased number of self-generation installations in recent years, the electric distribution companies have recovered nearly all of their transition costs through 2020. By comparison, the aggregate transition cost balance for all the electric distribution companies at year-end 2008 was \$283,583,612. Presently, transition costs are primarily a result of the electric distribution companies' cost responsibilities associated with legacy long-term power purchase agreements. The level of associated transition costs can vary from year to year based on the market value of the underlying power commitments. The table below provides the electric distribution companies' estimated aggregate impact on transition costs related to self-generation since 1998:

| <b>Aggregate Effect of Self-Generation on Transition Cost Recovery<br/>1998 - 2020</b> |                      |               |              |              |
|--|----------------------|---------------|--------------|--------------|
|  | <b>National Grid</b> | <b>Unitil</b> | <b>WMECo</b> | <b>NSTAR</b> |
| Reduction in Transition Cost Recovery  | \$550,636            | \$2,246,110   | \$570,052    | \$19,337,577 |
| Percent Reduction in Transition Cost Recovery  | 0.028%               | 1.481%        | 0.739%       | 0.598%       |

IV. CONCLUSION


Based upon the self-generation information that the electric distribution companies reported, the Department concludes that for the period January 1, 2020 through December 31, 2020, self-generation did not have a significant effect on the transition cost recovery of the electric distribution companies operating in Massachusetts. Regarding the impact of self-generation installations on electricity sales, the 2020 electricity sales reductions, in and of themselves, are relatively small, but cumulative self-generation or distributed resource installations on the electric distribution companies' power systems suggest the potential for a more material impact on electricity sales over time.

Sincerely,




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Matthew H. Nelson, Chair



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Robert E. Hayden, Commissioner



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Cecile M. Fraser, Commissioner

cc: Sen. Michael J. Rodrigues, Chair, Senate Committee on Ways and Means  
Sen. Michael J. Barrett, Senate Chair, Joint Committee on Telecommunications,  
Utilities and Energy  
Rep. Aaron Michlewitz, Chair, House Committee on Ways and Means  
Rep. Jeffrey N. Roy., House Chair, Joint Committee Telecommunications, Utilities  
and Energy