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DEPARTMENT OF PUBLIC UTILITIES

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June 30, 2023

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

RE: 2022 Annual Report Concerning Self-Generation

Dear Messrs. Hurley and James:

Pursuant to Section 193 of the Electric Restructuring Act (“Act”)¹, the Department of Public Utilities (“Department”) hereby submits its report concerning installations of

¹ “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. Among other things, 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 2022 (“2022 Annual Report”). This 2022 Annual Report evaluates the effects of self-generation on sales of electricity and recovery of transition costs by electric distribution companies² during the year 2022, 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

²

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 2022 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")³; Fitchburg Gas and Electric Light Company d/b/a Unitil ("Fitchburg"); 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 19,945 self-generation installations during 2022. Of this total, 19,639 installations (98.5 percent) were equal to or less than 60 kilowatts in size and were photovoltaic (solar) systems. Furthermore, 19,916 of the installations (99.9 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 2022 sales due to self-generation installations equal to 3.9 million megawatt-hours ("MWh"),⁴ an approximate 9.2 percent reduction of total electric distribution company sales. The percent reduction in electricity sales ranged from a low of 6.1 percent for Fitchburg to a high of 14.7 percent for WMECo. For the period March 1, 1998 (the beginning of self-generation reporting) through December 31, 2022, electric distribution companies have reported an estimated cumulative reduction in electricity sales due to self-generation of approximately 34.6 million MWh, approximately 3.1 percent of total electric distribution companies' sales for that period (approximately 1,135.5 million MWh). The incremental reduction in electricity sales of approximately 3.9 million MWh from 2022 represents

³ 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."

⁴ A megawatt-hour equals 1,000 kilowatt-hours.

11.3 percent of the total cumulative reduction in sales from self-generation installations over the past 25 years (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 2022.⁵ 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 cumulative impact on transition costs related to self-generation since 1998, which shows a cumulatively small impact of generally less than 1.5 percent for each company:

Cumulative Effect of Self Generation on Transition Cost Recovery 1998 - 2022				
	National Grid	Fitchburg	WMECo	NSTAR
Reduction in Transition Cost Recovery	\$(2,218,733)	\$2,246,110	\$570,052	\$19,337,577

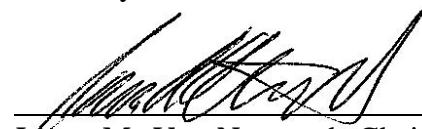
⁵ At the end of 2020, the Department approved Fitchburg's proposal to terminate its transition charge. Fitchburg Gas and Electric Light Company, D.P.U. 20-134, at 4 (December 29, 2020). Transition charges for Massachusetts Electric/Nantucket Electric and NSTAR Electric are currently credits to ratepayers (Department of Public Utilities 2022 Annual Report at 62).

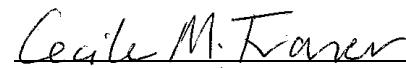
Percent Reduction in Transition Cost Recovery	-0.116%	1.481%	0.739%	0.598%
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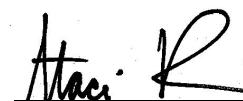
IV. CONCLUSION

Based upon the self-generation information that the electric distribution companies reported, the Department concludes that for the period January 1, 2022 through December 31, 2022, 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 2022 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,



James M. Van Nostrand, Chair

Cecile M. Fraser, Commissioner

Staci Rubin, 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