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January 15, 2020

Members of the Vermont General Assembly
115 State Street
Montpelier, VT 05633-5301

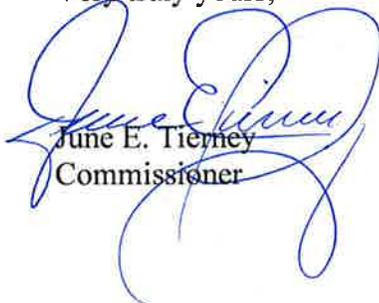
Re: 2019 Regional Greenhouse Gas Initiative Annual Report

Dear Senators and Representatives:

I am pleased to submit the 2019 Regional Greenhouse Gas Initiative Annual Report pursuant to 30 V.S.A. §255(e). The report, developed in consultation with the Agency of Natural Resources and the Public Utility Commission, includes information on Vermont's participation in the Regional Greenhouse Gas Initiative (RGGI), a market-based program intended to reduce greenhouse gas emissions by capping and reducing CO2 emissions from the power sector. This report details the four auctions that take place each year and the revenue generated from the sale of CO2 allowances. It also describes recent developments related to additional States that may join the Initiative.

If you have any questions or concerns upon reading this report please do not hesitate to contact me or the Director of Efficiency and Energy Resources, TJ Poor.

Very truly yours,



June E. Tierney
Commissioner

2019 Regional Greenhouse Gas Initiative Annual Report

Report to the Legislature from the Public Service Department

January 15, 2020

This Report was prepared pursuant to 30 V.S.A. § 255(e) which states:

On or before January 15 of each year, commencing in 2007, the Department of Public Service in consultation with the Agency of Natural Resources and the Public Utility Commission shall provide to the House Committees on Commerce and Economic Development, on Energy and Technology, and on Natural Resources, Fish, and Wildlife and the Senate Committees on Finance and on Natural Resources and Energy a report detailing the implementation and operation of RGGI and the revenues collected and the expenditures made under this section, together with recommended principles to be followed in the allocation of funds.

Background & Overview of the Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort by nine Northeastern and Mid-Atlantic states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont) to reduce carbon dioxide emissions – a greenhouse gas that contributes to global climate change – from electricity generation. Central to this initiative is the implementation of a multi-state cap-and-trade program with a market-based emissions trading system. The RGGI program requires fossil fuel fired electric generating units with a nameplate capacity of 25 MW or larger to purchase and retire allowances equal to the amount of CO₂ emitted by the unit. Regionally, RGGI-affected units account for approximately 95% of the CO₂ emissions from in-region fossil fuel generation. The RGGI “1 CO₂ Emissions from Electricity Generation and Imports in the Regional Greenhouse Gas Initiative: 2017 Monitoring Report^a” shows that in 2017, CO₂ emissions from RGGI affected units accounted for 94.7% of emissions from all RGGI region fossil generation. In 2015 it was 96%, and in 2016 it was 95.7%. In Vermont, there are two facilities subject to this program – the City of Burlington Electric Department’s Lake Street/Penny Lane facility, and Green Mountain Power Corporation’s Berlin 5 facility.

Vermont committed to participate in RGGI in 2007 when then Governor Douglas signed the RGGI Memorandum of Understanding (MOU) along with the governors of the other participating states. The Vermont Legislature then enacted statutory provisions to implement the RGGI program in Vermont. Both 30 V.S.A. § 255 and the RGGI MOU directed the

^a https://www.rggi.org/sites/default/files/Uploads/Electricity-Monitoring-Reports/2017_Elec_Monitoring_Report.pdf

Public Utilities Commission (PUC) and the Agency of Natural Resources (ANR) to participate in the RGGI program.

The RGGI states individually decide how to distribute CO₂ allowances, with most of the allowances sold through the quarterly centralized auctions. Vermont sells nearly all its allotment of allowances through the auction and allocates the net proceeds from the sale of allowances to fund Vermont programs that promote thermal energy and process fuels efficiency services. Proceeds from the sale of allowances are deposited into the Electrical Efficiency Fund pursuant to 30 V.S.A. § 209(e)(1)(B).

Auction Results for 2019

CO₂ Allowance Auction Results - All Participating States, 2019

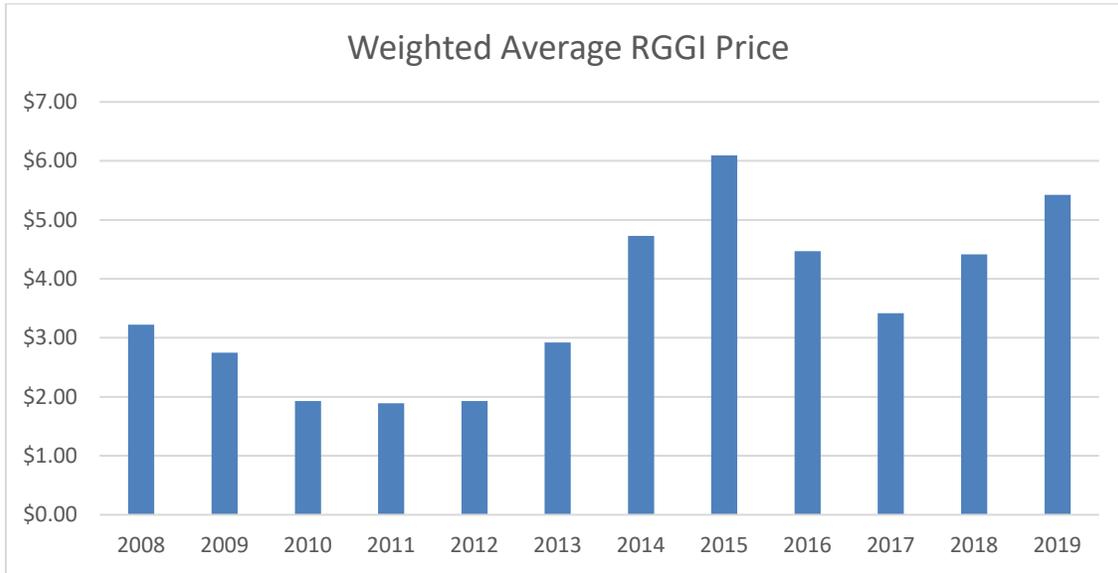
| Auction Number | Auction Format | Quantity Offered | Quantity Sold | Clearing Price |
|---------------------------------------|----------------------------|------------------|---------------|-----------------------|
| 43 | Sealed Bid - Uniform Price | 12,883,436 | 12,883,436 | \$5.27 |
| 44 | Sealed Bid - Uniform Price | 13,221,453 | 13,221,453 | \$5.62 |
| 45 | Sealed Bid - Uniform Price | 13,116,447 | 13,116,447 | \$5.20 |
| 46 | Sealed Bid - Uniform Price | 13,116,447 | 13,116,447 | \$5.61 |
| Total | | | | \$5.43 ^[1] |
| ^[1] Weighted Average Price | | | | |

CO₂ Allowance Auction Results - Vermont, 2019^b

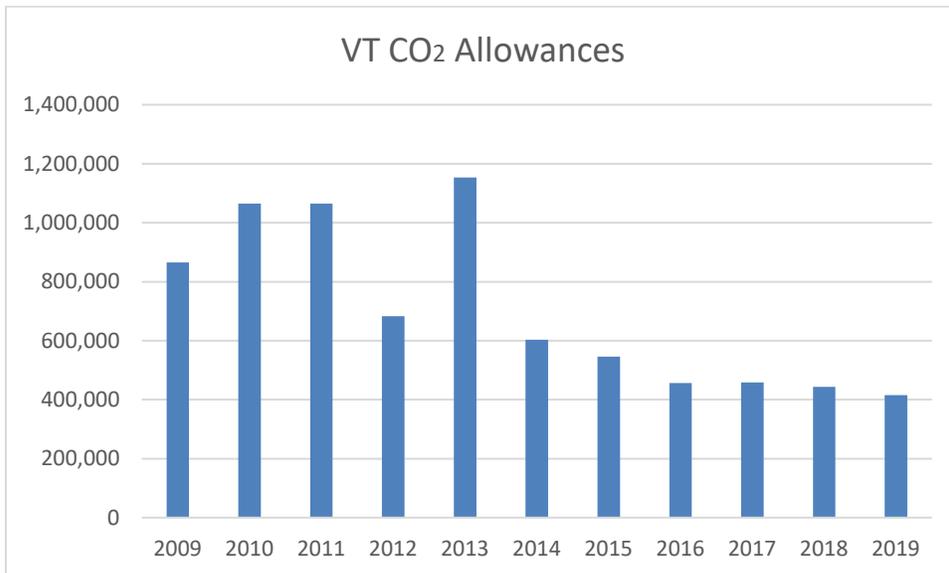
| Auction Number | Quantity Sold | Clearing Price | Total Proceeds |
|---------------------------------------|---------------|---------------------|----------------|
| 43 | 103,737 | \$5.27 | \$546,694 |
| 44 | 103,736 | \$5.62 | \$582,996 |
| 45 | 103,736 | \$5.20 | \$539,427 |
| 46 | 103,736 | \$5.61 | \$581,959 |
| Total | | \$5.43 ¹ | \$2,251,076 |
| ^[1] Weighted Average Price | | | |

^b Detailed auction results <https://www.rggi.org/Auctions/Auction-Results/Prices-Volumes>

In sum, Vermont participated in four market-based auctions for carbon allowances in 2019 and sold almost 415,000 allowances for a total of more than \$2.25 million.



The weighted average price of the allowances in 2018 was \$4.41, in 2019 the price was \$5.43, this resulted in a \$293,704 increase in revenue from 2018 to 2019.



As described in previous reports the RGGI market was redesigned, in part, to reduce the total number of allowances in the marketplace, which resulted in an increase in the individual allowance price. This caused a spike in revenue in 2015 which has since corrected to the current levels, averaging approximately \$1.9 million per year for the past three years.

Disbursement of Vermont 2019 RGGI Proceeds

| | |
|----------------------|--------------------------|
| Total Proceeds | \$2,251,076 |
| Administrative Costs | \$22,862.41 ^c |
| Trustee Costs | \$4,000 |
| <hr/> | |
| Net Proceeds | \$2,224,214 |

Pursuant to statute and the PUC’s January 10, 2019, Order^d, ANR and the Department of Public Service (“Department”) can request that appropriate and reasonable administrative costs associated with their administration of RGGI be paid from the auction proceeds. In addition, ANR and the Department may request funds to “stimulate or support investment in the development of innovative carbon emissions abatement technologies that have significant carbon reduction potential.”

To date, ANR has requested and received PUC approval for reimbursement for administrative costs directly related to RGGI participation, including staff time and travel, totaling \$22,862.41 from auctions 43 through 45. No request has yet been made for reimbursement from auction 46 at this time; however, the Department understands that a request of less than \$5,000 (based on prior requests) will be forthcoming from ANR. The remaining balance of approximately \$2.22 million will be deposited into the Electrical Efficiency Fund from the 2019 auctions. No changes are recommended at this time in the allocation of funds.

Voluntary Renewable Set-aside Program

The PUC’s January 10, 2019, Order^e governs the Vermont voluntary renewable set-aside program for RGGI. The set-aside for voluntary renewable programs is available to programs offered by Vermont electric utilities and other qualifying entities that purchase and retire renewable energy credits (RECs) on behalf of Vermont customers. An applicant may submit a written request to the PUC to retire a specified number of CO₂ allowances in the voluntary purchase set-aside account.

The PUC did not receive any requests to retire allowances in 2019.

^c Represents only administrative costs for auctions 43 through 45.

^d 2018 updates to the Regional Greenhouse Gas Initiative auction procedures for Vermont, Case No. 18-4145-INV, Order of 1/10/19. The PUC’s Order updated the State’s procedures for RGGI auctions consistent with RGGI’s 2017 Model Rule.

^e *Id.*

Program Review and New Participating States

The nine currently participating RGGI states completed a comprehensive review of the program in late 2017. The review resulted in the release of a revised Model Rule in early 2018. The participating states agreed to a regional CO₂ emissions cap of 75,147,748 tons in 2021 and to a cap reduction of 2,275,000 tons per year through 2030, which will result in a total 30% reduction in the regional cap from 2020 to 2030. In the absence of an agreement by the states, the regional CO₂ emissions cap in 2021 would have been 78,175,215 tons with no annual decrease in the following years. The states also agreed to several measures to better align allowance supply with actual emissions, including adjusting the allowances auction when the auction clearing price meets a certain level. Additionally, the states agreed to reduce the 2021-2025 regional annual CO₂ budgets for 100% of allowances sold in excess of emissions in 2018-2020, similar to adjustments for excess allowances that have occurred previously. This measure addresses the issue of regulated facility emissions being lower than the annual caps in the years 2018-2020. The states will collectively withhold allowances from the auctions in 2021 through 2025 that will be equal to the number of allowances auctioned in 2018 through 2020 that were in excess of actual reported emissions for those years. To implement these changes, ANR updated its CO₂ Budget Trading Program Regulations, effective September 15, 2018, and the PUC updated its Order implementing the RGGI auction procedures for Vermont on January 1, 2019^f.

Regarding new participating states, New Jersey has adopted rules allowing its re-entry into the RGGI program and will participate in the auctions beginning in March 2020. Additionally, the participating states anticipate that the recently elected legislature in Virginia will, once seated in early 2020, act to remove the existing statutory restriction on Virginia's participation. It is possible that Virginia could participate in the auctions starting in March 2021. Finally, Pennsylvania Governor Wolf issued an executive order in October 2019 directing development of draft RGGI-compatible carbon trading regulations for the state by July 2020. There is no firm timeline for Pennsylvania's participation in the auctions, but the participating states look forward to working with Pennsylvania as it moves forward with its efforts to join RGGI.

Initial modeling suggests that the cumulative impact of these changes should result in an overall increase in regional revenue and result revenue associated with Vermont's allowances. However, as this is a market-based auction, revenues could differ from the modeling, either up or down as a result of factors outside of the control of RGGI.

^f *Id.*