



State of Vermont

Department of Public Service

112 State Street

Montpelier, VT 05620-2601

<http://www.publicservice.vermont.gov>

[phone] 802-828-2811

[fax] 802-828-2342

[tty] 800-734-8390

January 15, 2022

Representative Michael Marcotte, Chair
House Committee on Commerce and Economic Development

Representative Timothy Briglin, Chair
House Committee on Energy and Technology

Representative Amy Sheldon, Chair
House Committee on Natural Resources, Fish, and Wildlife

Senator Ann Cummings, Chair
Senate Committee on Finance

Sen. Christopher Bray, Chair
Senate Committee on Natural Resources and Energy


Re: 2021 Regional Greenhouse Gas Initiative Annual Report

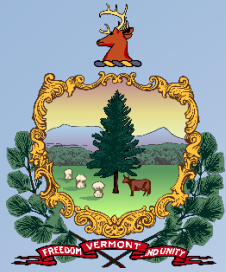
Dear Senators and Representatives:

I am pleased to submit the 2021 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.

If you have any questions or concerns upon reading this report, please do not hesitate to contact me or the Director of Planning, TJ Poor at TJ.Poor@vermont.gov.

Very truly yours,
DocuSigned by:


June E. Tierney
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Commissioner



A report detailing the implementation and operation of RGGI and the revenues collected and the expenditures made

2021 Regional Greenhouse Gas Initiative Annual Report

Pursuant to 30 V.S.A. § 255(e)

Department of Public Service

January 15, 2022

Report to the Legislature from the Department of Public Service

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 eleven Northeastern and Mid-Atlantic states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia) 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 (15MW or larger in NY) 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 “CO₂ Emissions from Electricity Generation and Imports in the Regional Greenhouse Gas Initiative: 2018 Monitoring Report^a” shows that in 2018, CO₂ emissions from RGGI affected units accounted for 95.2% of emissions from all RGGI region fossil generation. In 2016 it was 95.7%, and in 2017 it was 94.7%. 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 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.

^a https://www.rggi.org/sites/default/files/Uploads/Electricity-Monitoring-Reports/2018_Elec_Monitoring_Report.pdf

Proceeds from the sale of allowances are deposited into the Electric Efficiency Fund pursuant to 30 V.S.A. § 209(e)(1)(B).

Auction Results for 2021

CO₂ Allowance Auction Results - All Participating States, 2021

Auction Number	Auction Format	Quantity Offered	Quantity Sold	Clearing Price
51	Sealed Bid - Uniform Price	23,467,261	23,467,261	\$7.60
52	Sealed Bid - Uniform Price	22,987,719	22,987,719	\$7.97
53	Sealed Bid - Uniform Price	22,911,423	22,911,423	\$9.30
54	Sealed Bid - Uniform Price	23,121,518	27,041,000 ^b	\$13.00

Total \$9.60^[1]

^[1] Weighted Average Price

CO₂ Allowance Auction Results - Vermont, 2021^c

Auction Number	Quantity Sold	Clearing Price	Total Proceeds
51	113,026	\$7.60	\$858,998
52	112,296	\$7.97	\$894,999
53	112,295	\$9.30	\$1,044,344
54	129,987	\$13.00	\$1,689,831

Total \$9.60^[1] \$4,488,171

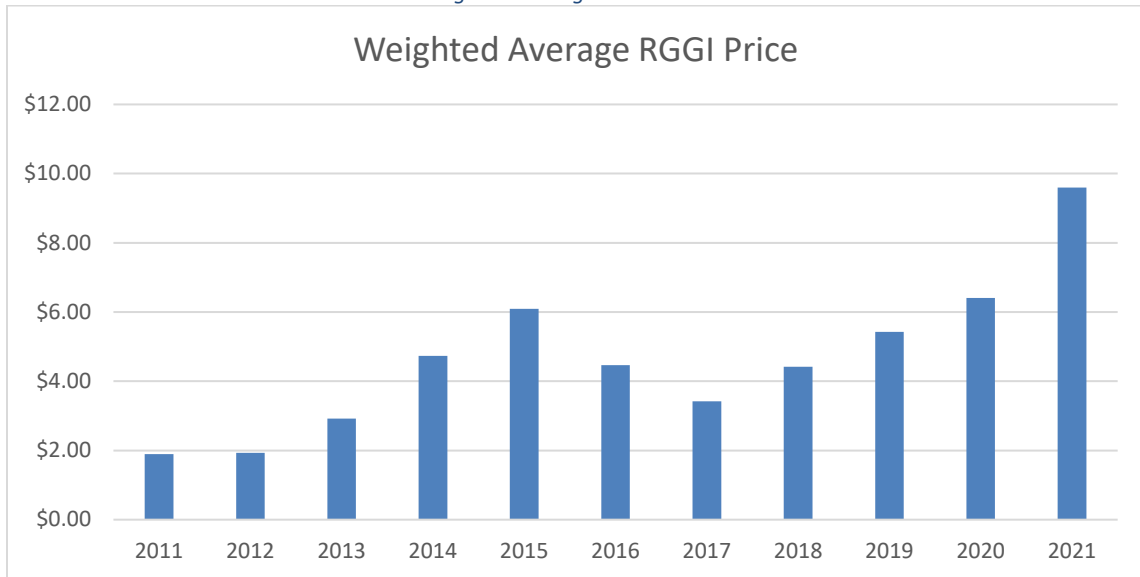
^[1] Weighted Average Price

In sum, Vermont participated in four market-based auctions for CO₂ allowances in 2021 and sold over 460,000 allowances for a total of more than \$4.48 million.

^b Includes 3,919,482 allowances from the cost containment reserve.

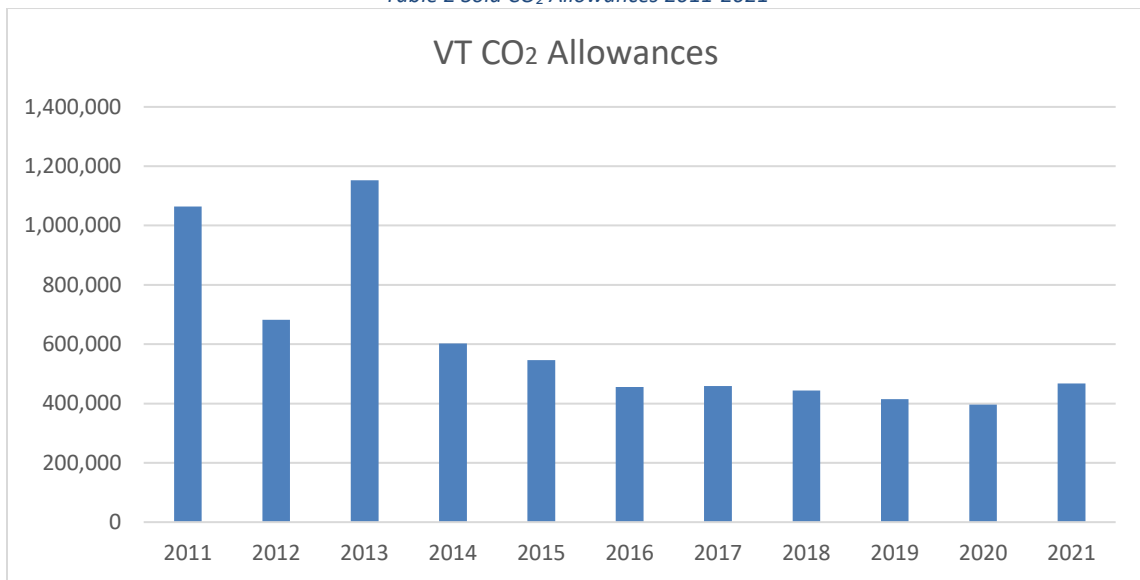
^c Detailed auction results <https://www.rggi.org/Auctions/Auction-Results/Prices-Volumes>

Table 1 Weighted Average RGGI Price 2011-2021



The weighted average price of the allowances in 2020 was \$6.41 and \$9.60 in 2021., This resulted in a \$1,947,566 increase in revenue from 2020 to 2021.

Table 2 Sold CO₂ Allowances 2011-2021



2021 represents the beginning of the fifth, three year control period.

Post-2020 cap levels have been established through program review and the RGGI states included two interim adjustments to the RGGI cap to account for banked CO₂ allowances accumulated in the first and second control periods. The total interim adjustment for 2014-2020 was 139.5 million CO₂ allowances.

The current RGGI program design also established a Cost Containment Reserve (CCR), consisting of a quantity of allowances in addition to the cap which are held in reserve. These are sold if allowance prices exceed predefined price levels, so that the CCR will only trigger if emission reduction costs are higher than projected. The CCR is replenished at the start of each calendar year.

The CCR trigger price was \$13.00 in 2021, which resulted in additional 3,919,482 allowances being made available to the market during the December 2021 auction.

Disbursement of Vermont 2021 RGGI Proceeds

Total Proceeds	\$4,488,171.22
Administrative Costs	\$19,079.23 ^d
Trustee Costs	\$3,000
<hr/>	
Net Proceeds	\$4,466,091.99

Pursuant to statute and the PUC’s January 10, 2019, Order^e, 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 \$19,079.23 from auctions 51 through 53. No request has yet been made for reimbursement from auction 54; however, the Department anticipates that a request of less than \$6,500 (based on prior requests) is likely to be forthcoming from ANR. The remaining balance of approximately \$4.46 million from the 2021 auctions will be deposited into the Electric Efficiency Fund. No changes are recommended at this time regarding the allocation of funds.

Voluntary Renewable Set-aside Program

The PUC’s January 10, 2019, Order^f 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

^d Represents only administrative costs for auctions 51 through 53.

^e 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.

^f *Id.*

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 approved the retirement of 5,711 RGGI CO₂ allowances in Vermont's set-aside account on behalf of 2020 voluntary renewable programs.^g

Program Review and New Participating States

The nine states participating in RGGI during the last comprehensive program review completed that review in late 2017 and released a revised Model Rule in early 2018. The Emissions Containment Reserve, a mechanism to automatically reduce the number of allowances offered at auction if allowance prices are low, was incorporated into the revised Model Rule and became effective in the March 2021 auction. The participating states agreed to initiate another comprehensive program review in 2021.

Virginia began participating as the tenth RGGI member in the auctions in March 2021. Pennsylvania is in the process of promulgating their regulation and anticipates commencing their participation in 2022.

The continuing upward trend in auction clearing prices in 2021 indicates that the cumulative impact of the implemented changes has resulted in an overall increase in regional revenue and resultant revenue associated with Vermont's allowances. The electricity market in general, and the RGGI allowance market in particular, has remained relatively stable through the COVID-19 pandemic, unlike other energy markets such as those for transportation fuels. Auction 54 represents the first-time allowances from the CCR have been sold since Auction 29 in 2015 and only the third time since the establishment of the program in 2008. The four auctions that took place in 2021 achieved the highest four clearing prices in the history of RGGI.

^g See *Order Approving 2020 Approving RGGI Set-Aside Retirement*, Case No. 21-2353-PET, Order of 8/23/21.