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CO₂ Allowances Sold for \$21.03 in 64th RGGI Auction

Second Auction of 2024 raises \$338 Million for Reinvestment

NEW YORK — The participating states in the Regional Greenhouse Gas Initiative (RGGI), the nation's first market-based regulatory effort to reduce greenhouse gas (GHG) pollution, today announced the results of their 64^{th} auction of carbon dioxide (CO₂) allowances.

16,053,188 CO₂ allowances were sold at the auction at a clearing price of \$21.03. Bids for the CO₂ allowances ranged from \$2.56 to \$40.00 per allowance. Additional details are available in the <u>Market Monitor Report for Auction 64</u>, which is appended.

The auction generated \$337.6 million for states to reinvest in strategic programs, including energy efficiency, renewable energy, direct bill assistance, and GHG abatement programs.

No cost containment reserve (CCR) allowances were available for sale during Auction 64. The CCR is a fixed additional supply of allowances that are made available for sale if an auction's interim clearing price exceeds a certain price level (\$15.92 in 2024). During the 63rd RGGI auction, the full complement of 8.42 million 2024 CCR allowances was released. Therefore, no additional CCR allowances will be available for sale during the remaining 2024 auctions.

7.81 million emissions containment reserve (ECR) allowances were available for withholding. The ECR is a designated quantity of allowances to be withheld if an auction's interim clearing price is below an established price level (\$7.35 in 2024). No ECR allowances were withheld in Auction 64.

"RGGI continues to prove that effective environmental policy can limit carbon emissions while supporting economic growth," said Katie Dykes, Commissioner of the Connecticut Department of Energy & Environmental Protection and Chair of the RGGI, Inc. Board of Directors. "For 64 consecutive, competitive auctions, the RGGI states have been delivering environmental benefits across the region, while reinvesting proceeds to support local businesses, families, and communities."

"Through bipartisan, multi-state cooperation, the RGGI states are driving robust, cost-effective emissions reductions," said Serena McIlwain, Secretary of the Maryland Department of the Environment and Vice Chair of the RGGI, Inc. Board of Directors. "We are proud to be a participating RGGI state, and look forward to many years of pollution reduction, health benefits, and clean energy innovation driven by this initiative."

Auction 64 Results At-A-Gland	e
Auction Date	June 5, 2024
Allowances Initially Offered for Sale	16,053,188
Total Allowances Sold	16,053,188
Ratio of Bids to Supply	2.7x
Clearing Price	\$21.03
Reserve Price	\$2.56
Proceeds from Auction 64	\$337,598,543.64
Total Cumulative Proceeds (All Auctions)	\$7,886,168,928.05
Number of Bidders in Auction 64	56
Percent of Allowances Purchased by Compliance- Oriented Entities in Auction 64	72%
Percent of Allowances Purchased by Compliance Entities in Auction 64	76%
Percent of Allowances Purchased by Compliance Entities in Auctions 1 – 64	72%

More auction data is also available at: <u>https://www.rggi.org/auctions/auction-results</u>. Market monitor reports are available at: <u>https://www.rggi.org/auctions/market-monitor-reports</u>. To receive announcements relating to future auctions and other RGGI news, please join the RGGI, Inc. mailing list at <u>http://eepurl.com/h2ICM</u>.

About the Regional Greenhouse Gas Initiative (RGGI)

The Eastern states participating in the sixth RGGI control period have implemented the first mandatory market-based regulatory program in the U.S. to reduce greenhouse gas emissions.

RGGI is composed of individual CO_2 budget trading programs in each state, based on each state's independent legal authority. A CO_2 allowance represents a limited authorization to emit one short ton of CO_2 , as issued by a respective state. A regulated power plant must provide CO_2 allowances equal to its emissions for each three-year control period. RGGI's sixth control period began on January 1, 2024 and extends through December 31, 2026. For more information visit www.rggi.org.

About the Regional Greenhouse Gas Initiative, Inc.

The Regional Greenhouse Gas Initiative, Inc. (RGGI, Inc.) was created to provide technical and administrative services to the states participating in the Regional Greenhouse Gas Initiative. RGGI, Inc. is a 501(c)(3) nonprofit organization. For more information, visit: <u>www.rggi.org/rggi-inc/contact</u>.



MARKET MONITOR REPORT FOR AUCTION 64

Prepared for:

RGGI, Inc., on behalf of the RGGI Participating States

Prepared By:



June 7, 2024



This report was prepared by Potomac Economics (the contractor) in the course of performing work contracted for and sponsored by RGGI, Inc. on behalf of states participating in RGGI (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania,¹ Rhode Island, and Vermont). The opinions expressed in this report do not necessarily reflect those of RGGI, Inc. or any of the states participating in RGGI, and reference to any specific product, service, process, or method does not constitute an implied or expressed recommendation or endorsement of it. Further, RGGI, Inc., the states participating in RGGI, and the contractor make no warranties or representations, expressed or implied, as to the fitness for particular purpose or merchantability of any product, apparatus, or service, or the usefulness, completeness, or accuracy of any processes, methods, or other information contained, described, disclosed, or referred to in this report. RGGI, Inc., the states participating in RGGI, and the contractor make no representation that the use of any product, apparatus, process, method, or other information will not infringe privately owned rights and will assume no liability for any loss, injury, or damage resulting from, or occurring in connection with, the use of information contained, described, disclosed, disclosed, or referred to in this report to in this report.

The Regional Greenhouse Gas Initiative (RGGI) is the first mandatory market-based regulatory initiative in the U.S. to reduce greenhouse gas emissions. RGGI is a cooperative effort of New England and Mid-Atlantic states to reduce emissions of carbon dioxide (CO₂) from the power sector.

RGGI, Inc. is a non-profit corporation created to provide technical and administrative services to the states participating in the Regional Greenhouse Gas Initiative.

¹ While technically a RGGI participating state, Pennsylvania is currently awaiting adjudication from the state's Supreme Court as to whether it will be allowed to actively participate in RGGI & RGGI Inc. related activities.



MARKET MONITOR REPORT FOR AUCTION 64

As the Market Monitor for the RGGI CO₂ allowance market, Potomac Economics monitors the conduct of market participants in the auctions and in the secondary market to identify indications of market manipulation or collusion. We also review the administration of the allowance auctions by Enel X. This report summarizes our findings regarding RGGI Auction 64, which was held on June 5, 2024.

We observed the auction as it occurred and have completed our review and analysis of its results. Based on our review of bids in the auction, we find no material evidence of collusion or manipulation by bidders.

Fifty-six bidders participated in the auction for CO₂ allowances. Bids were submitted to purchase 2.7 times the initial offering of approximately 16.1 million allowances, resulting in a clearing price of \$21.03 per ton in the auction. Although the quantity for which bids were submitted above the CCR Trigger Price of \$15.92 per ton exceeded the initial offering, the Cost Containment Reserve ("CRR") for 2024 was fully released in Auction 63, so no CCR allowances were sold in this auction. Compliance-Oriented Entities purchased 72 percent of the allowances in this offering. There was no indication of barriers to participation in the auction.

Based on our review of the administration of the market, we found that:

- The auction was administered in a fair and transparent manner in accordance with the noticed auction procedures and limitations.
- The auction results were consistent with the market rules and the bids received.
- Sensitive information was treated appropriately by the auction administrator.
- One bidder reported difficulty submitting bids, but there was no indication of issues with the auction platform such as hardware or software problems, communications issues, or security breaches.

In summary, the results of our monitoring of RGGI Auction 64 raise no material concerns regarding the auction process, barriers to participation in the auction, or the competitiveness of the auction results. The appendix provides additional information about the market for RGGI CO₂ allowances and outcomes of the auction.



APPENDIX

A. DISPERSION OF PROJECTED DEMAND

The wide dispersion of projected demand for RGGI allowances across compliance entities facilitates the competitive performance of the auction.

The demand for CO_2 allowances is based on the requirement for each compliance entity in the RGGI footprint to obtain one CO_2 allowance for each short ton of CO_2 that it emits from the sale of electricity. The following figure shows the relative shares of projected demand for RGGI allowances by compliance entity in the sixth control period. The largest compliance entity represents 17 percent of the total projected demand for allowances. Nearly half of the projected demand is composed of entities that each account for less than 5 percent of the total demand. Participation by a large number of entities facilitates the competitive performance of the auction.

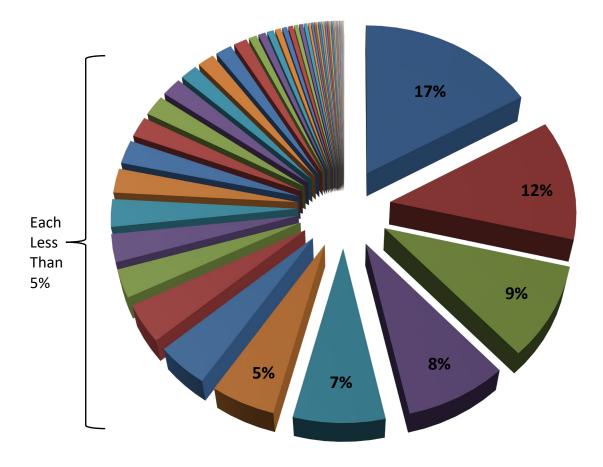


Figure 1: Projected Demand for RGGI Allowances Shares by Compliance Entity



B. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 64

Awards were distributed across 40 bidders with two bidders purchasing one million tons or more and 23 bidders purchasing 200,000 tons or more.

This report summarizes participation in Auction 64. Participation in the RGGI market involves many different firms with various interests in RGGI allowances. Some participate in order to satisfy compliance obligations, others have investment interests, and still others participate for both purposes. To more effectively track the activity of different participants, we use several classifications for participant firms. Figure 2 summarizes the relationship between these classifications.

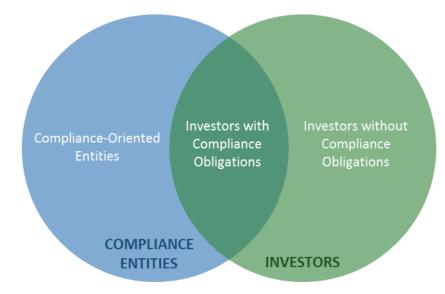


Figure 2: Classifications of Participant Firms in the RGGI Marketplace

- *Compliance-Oriented Entities* are compliance entities that appear to acquire and hold allowances primarily to satisfy their compliance obligations.
- *Investors with Compliance Obligations* are firms that have compliance obligations but which hold a number of allowances that exceeds their estimated compliance obligations by a margin suggesting they also buy for re-sale or some other investment purpose. These firms often transfer significant quantities of allowances to unaffiliated firms.²

² The assessment of whether a compliance entity holds a number of allowances that exceeds its compliance obligations by a margin that suggests they are also buying for re-sale or some other investment purpose is based on: (a) the entity's forecasted share of the total compliance obligations in the RGGI footprint through 2026, (b) the total number of allowances in circulation, and (c) consideration of the pattern of the entity's allowance transfers to unaffiliated firms versus affiliated firms. Since the designation of a compliance entity as an investor is based on a review of its transactions and holdings, the designation of a particular firm may change over time as more information becomes available.



• Investors without Compliance Obligations are firms without any compliance obligations.

These three categories form the basis for two overlapping groups.

- *Compliance Entities* All firms with compliance obligations and their affiliates.³ Combines the first and second of the above categories.
- *Investors* All firms which are assessed to be purchasing for investment rather than compliance purposes. Combines the second and third of the above categories.

In Auction 64, Compliance Entities purchased 76 percent of the allowances sold. In the first 64 RGGI auctions, Compliance Entities purchased 72 percent of the allowances sold. In Auction 64, Compliance-Oriented Entities purchased 72 percent of the allowances sold.

After settlement of allowances sold in Auction 64:

- Thirty-seven percent of the allowances in circulation will be held by Compliance-Oriented Entities.
- Forty-one percent of the allowances in circulation are believed to be held for compliance purposes. The number of allowances that are believed to be held for compliance purposes includes 100 percent of the allowances held by Compliance-Oriented Entities and a portion of allowances held by Investors with Compliance Obligations.

The following table shows the quantity of allowances purchased by each bidder. The identity of each bidder is masked, and the bidders are ranked according to the amount of allowances awarded, from largest to smallest.

³ Affiliates are firms that: (i) have a parent-subsidiary relationship with a compliance entity, (ii) are subsidiaries of a parent company that has a large interest in a compliance entity, (iii) have substantial control over the operation of a budget source and/or responsibility for acquiring RGGI allowances to satisfy its compliance obligations.

Bidder	Number of Allowances Awarded	Bidder	Number of Allowances Awarded
Bidder 1	4,000,000	Bidder 21	234,000
Bidder 2	1,000,000	Bidder 22	216,000
Bidder 3	824,000	Bidder 23	200,000
Bidder 4	813,000	Bidder 24	178,000
Bidder 5	711,000	Bidder 25	170,000
Bidder 6	650,000	Bidder 26	158,188
Bidder 7	610,000	Bidder 27	150,000
Bidder 8	577,000	Bidder 28	117,000
Bidder 9	570,000	Bidder 29	90,000
Bidder 10	567,000	Bidder 30	90,000
Bidder 11	500,000	Bidder 31	60,000
Bidder 12	500,000	Bidder 32	55,000
Bidder 13	500,000	Bidder 33	48,000
Bidder 14	500,000	Bidder 34	45,000
Bidder 15	355,000	Bidder 35	37,000
Bidder 16	325,000	Bidder 36	33,000
Bidder 17	305,000	Bidder 37	21,000
Bidder 18	300,000	Bidder 38	14,000
Bidder 19	275,000	Bidder 39	4,000
Bidder 20	250,000	Bidder 40	1,000

Table 1: Quantity of Allowances Awarded by Bidder



C. DISPERSION OF BIDS IN AUCTION 64

Bids were submitted by 34 Compliance-Oriented Entities and 22 Investors. In our review of the bids and the qualification process, we found no material evidence of anti-competitive conduct or inappropriate barriers to participation.

The following figure summarizes the quantity of allowances for which bids were submitted by each bidder. Six Compliance-Oriented Entities and seven Investors submitted bids for a large quantity of allowances (i.e., at least 1 million tons). Overall, Compliance-Oriented Entities accounted for 52 percent of the quantity of allowances for which bids were submitted. The quantity of allowances for which bids were submitted was 2.7 times the Initial Offering. In the previous auction, the quantity of allowances for which bids were submitted was 3.0 times the Initial Offering.

The bid quantities were widely distributed among the 56 bidders. The concentration of bids, using the Herfindahl-Hirschman Index ("HHI"), was relatively low at 519. The HHI is a standard measure of concentration calculated by squaring each entity's percent share and then summing the squares across all entities (i.e., the index ranges from 0 to 10,000).

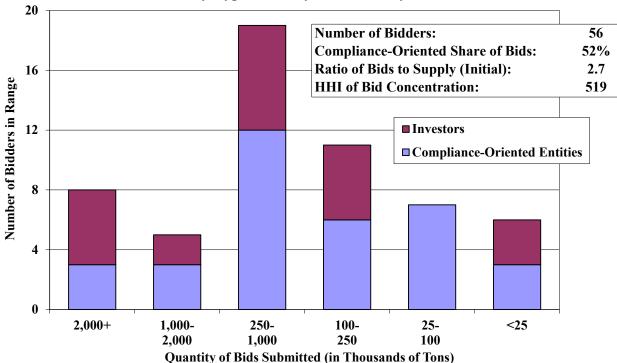


Figure 3: Quantity of Bids Submitted by Entity By Type of Entity and Quantity Bid

D. SUMMARY OF BID PRICES IN AUCTION 64

Bids were submitted across a wide range of prices in the auction and the clearing price of \$21.03 was relatively consistent with average bid prices submitted.

The following table reports several statistics regarding the bid prices for bids submitted in Auction 64. The median and mean bid prices are weighted by the quantity of each bid.

Bid Prices:	
Minimum	\$2.56
Maximum	\$40.00
Average (Median)	\$19.90
Average (Mean)	\$18.99
Clearing Price:	\$21.03



E. NAMES OF POTENTIAL BIDDERS IN AUCTION 64

In accordance with Sections 2.8 and 3 of the Auction Notice for CO₂ Allowance Auction 64, the Participating States are releasing the names of Potential Bidders in Auction 64. The states defined potential bidders as: "Each Applicant that has been qualified and submitted a complete *Intent to Bid.*" The list of 71 Potential Bidders is as follows:

Anew Environmental, LLC Astoria Energy, LLC Braintree Electric Light Department Caithness Long Island, LLC Calpine Energy Services, LP Canadian Imperial Bank of Commerce Carbon Lighthouse Association Castleton Commodities Merchant Trading, LP Citadel Energy Marketing LLC City of Vineland Clear Sky Enhanced Inflation Carbon Master Fund LP Cogen Technologies Linden Venture, L.P. Consolidated Edison Comp. of NY, Inc. Constellation Energy Generation, LLC CP Energy Marketing (US) Inc. CPV Maryland, LLC CPV Shore, LLC CPV Towantic, LLC CPV Valley, LLC Cricket Valley Energy Center, LLC Delaware City Refining Company, LLC DRW Investments LLC DTE Energy Trading, Inc. Dynegy Marketing and Trade, LLC East Coast Environmental, LLC Edgewood Energy, LLC Elbow River Marketing LTD. Empire Generating Co., LLC Equus Power I, LP Fortistar North Tonawanda Inc Global Carbon Opportunity (SPV) Fund LLC Hartree Partners, LP Helix Ravenswood Energy, LLC Indeck-Corinth Limited Partnership Jamestown Board of Public Utilities Kendall Green Energy LLC

Kleen Energy Systems, LLC KMC Thermo, LLC LMR Multi-Strategy Master Fund Limited Lockport Energy Associates, L.P. Macquarie Energy, LLC Mercuria Energy America, LLC Morgan Stanley Capital Group, Inc. National Grid Generation LLC dba National Grid New Athens Generating Company, LLC Newark Energy Center NextEra Energy Marketing, LLC NRG Business Marketing LLC Ocean State Power, LLC **Old Dominion Electric Cooperative** Pacific Summit Energy LLC Parkway Generation, LLC Pegasus Development Corporation PetroChina International (America), Inc. Pier61 Partners, LLC Pinelawn Power, LLC Power Authority of the State of New York Red Oak Power, LLC Rhode Island State Energy Center, LP Selkirk Cogen Partners, LP Shell Energy North America (US), LP Shoreham Energy, LLC Statkraft US, LLC STX Commodities LLC Tenaska Power Services Co. Trafigura Trading LLC Trailstone Commodity Trading US, LLC Village of Freeport Vitol Inc. Wallingford Energy, LLC West Coast Environmental, LLC