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Friday, March 15, 2024

CO₂ Allowances Sold for \$16.00 in 63rd RGGI Auction

First Auction of 2024 raises \$388 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 63rd auction of carbon dioxide (CO₂) allowances.

24,272,157 CO₂ allowances were sold at the auction at a clearing price of \$16.00. This includes an initial offering of 15,855,879 allowances, and 8,416,278 CCR allowances. Bids for the CO₂ allowances ranged from \$2.56 to \$25.00 per allowance. Additional details are available in the *Market Monitor Report for Auction 63*, which is appended.

The auction generated \$388.4 million for states to reinvest in strategic programs, including energy efficiency, renewable energy, direct bill assistance, and GHG abatement programs.

As mentioned above, 8.42 million cost containment reserve (CCR) allowances were available for sale. 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). In addition to the initial offering of 15.86 million allowances, the full complement of 8.42 million CCR allowances were sold at Auction 63. As a result, no further CCR allowances will be available for the three remaining 2024 auctions.

In addition, 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 63.

"RGGI continues to drive emissions reductions across the region, while supporting programs that lower energy bills, improve public health, and strengthen our economy," said Katie Dykes, Commissioner of the Connecticut Department of Energy & Environmental Protection and Chair of the RGGI, Inc. Board of Directors. "The proceeds generated by the 63rd RGGI auction will be reinvested by the states to benefit families, local communities, and our shared environment."

"The results of the 63rd RGGI auction demonstrate the strength of the RGGI market and the continued success of this cooperative, multi-state endeavor," said Serena McIlwain, Secretary of the Maryland Department of the Environment and Vice Chair of the RGGI, Inc. Board of Directors. "RGGI is a prime example of effective environmental policy delivering tangible results and real economic benefits."

Auction 63 Results At-A-Gland	e
Auction Date	March 13, 2024
Allowances Initially Offered for Sale	15,855,879
CCR Allowances Available	8,416,278
CCR Allowances Sold	8,416,278
Total Allowances Sold	24,272,157
Ratio of Bids to Supply	3.0x
Clearing Price	\$16.00
Reserve Price	\$2.56
Proceeds from Auction 63	\$ 388,354,512.00
Total Cumulative Proceeds (All Auctions)	\$7,548,570,384.41
Number of Bidders in Auction 63	53
Percent of Allowances Purchased by Compliance- Oriented Entities in Auction 63	35%
Percent of Allowances Purchased by Compliance Entities in Auction 63	51%
Percent of Allowances Purchased by Compliance Entities in Auctions 1 – 63	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 CO₂ budget trading programs in each state, based on each state's independent legal authority. A CO₂ allowance represents a limited authorization to emit one short ton of CO₂, as issued by a respective state. A regulated power plant must provide CO₂ 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 <u>www.rggi.org</u>.

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 63

Prepared for:

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

Prepared By:



March 15, 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, 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 63

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 63, which was held on March 13, 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-three bidders participated in the auction for CO₂ allowances. Bids were submitted to purchase 3.0 times the initial offering of approximately 15.9 million allowances. However, the quantity for which bids were submitted above \$15.92 per ton exceeded the initial offering, so the Cost Containment Reserve ("CRR") was made available at the CCR Trigger Price of \$15.92 per ton. Over 8.4 million additional allowances were sold as the CCR for 2024 was fully depleted, resulting in a clearing price of \$16.00 per ton in the auction. Compliance-Oriented Entities purchased 35 percent of the allowances in the 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 63 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 CO_2 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.

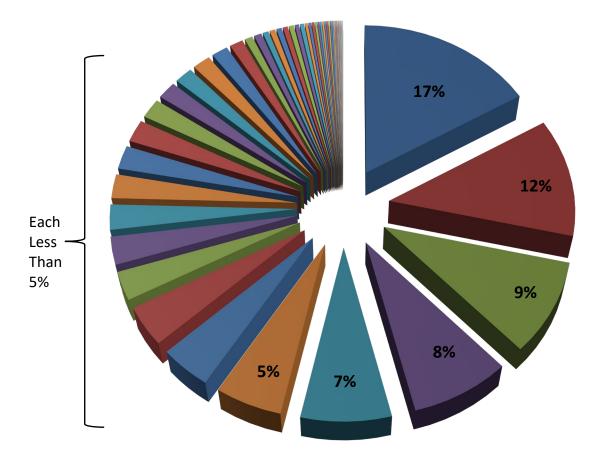


Figure 1: Projected Demand for RGGI Allowances Shares by Compliance Entity



B. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 63

Awards were distributed across 40 bidders with six bidders purchasing one million tons or more and 19 bidders purchasing 200,000 tons or more.

This report summarizes participation in Auction 63. 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.

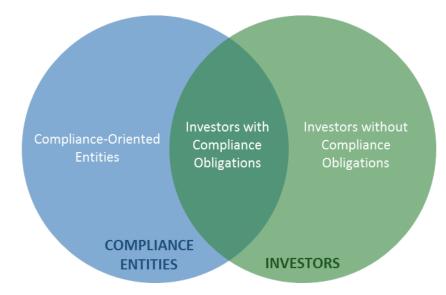


Figure 2: Classifications of Participant Firms in the RGGI Marketplace

- *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 63, Compliance Entities purchased 51 percent of the allowances sold. In the first 63 RGGI auctions, Compliance Entities purchased 72 percent of the allowances sold. In Auction 63, Compliance-Oriented Entities purchased 35 percent of the allowances sold.

After settlement of allowances sold in Auction 63:

- Twenty-seven percent of the allowances in circulation will be held by Compliance-Oriented Entities.
- Thirty-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	3,963,000	Bidder 28	51,000
Bidder 2	3,963,000	Bidder 29	49,000
Bidder 3	3,250,000	Bidder 30	25,000
Bidder 4	2,000,000	Bidder 31	25,000
Bidder 5	2,000,000	Bidder 32	25,000
Bidder 6	1,824,000	Bidder 33	10,000
Bidder 7	900,000	Bidder 34	5,000
Bidder 8	770,157	Bidder 35	3,000
Bidder 9	591,000	Bidder 36	1,000
Bidder 10	550,000	Bidder 37	1,000
Bidder 11	500,000	Bidder 38	1,000
Bidder 12	464,000	Bidder 39	1,000
Bidder 13	400,000	Bidder 40	1,000
Bidder 14	400,000	Bidder 41	0
Bidder 15	375,000	Bidder 42	0
Bidder 16	373,000	Bidder 43	0
Bidder 17	310,000	Bidder 44	0
Bidder 18	300,000	Bidder 45	0
Bidder 19	200,000	Bidder 46	0
Bidder 20	186,000	Bidder 47	0
Bidder 21	165,000	Bidder 48	0
Bidder 22	140,000	Bidder 49	0
Bidder 23	102,000	Bidder 50	0
Bidder 24	100,000	Bidder 51	0
Bidder 25	96,000	Bidder 52	0
Bidder 26	90,000	Bidder 53	0
Bidder 27	62,000		

Table 1: Quantity of Allowances Awarded by Bidder



C. DISPERSION OF BIDS IN AUCTION 63

Bids were submitted by 33 Compliance-Oriented Entities and 20 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. Four Compliance-Oriented Entities and nine Investors submitted bids for a large quantity of allowances (i.e., at least 1 million tons). Overall, Compliance-Oriented Entities accounted for 40 percent of the quantity of allowances for which bids were submitted. The quantity of allowances for which bids were submitted was 3.0 times the Initial Offering. In the previous auction, the quantity of allowances for which bids were submitted was 2.8 times the Initial Offering.

The bid quantities were widely distributed among the 53 bidders. The concentration of bids, using the Herfindahl-Hirschman Index ("HHI"), was relatively low at 565. 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).

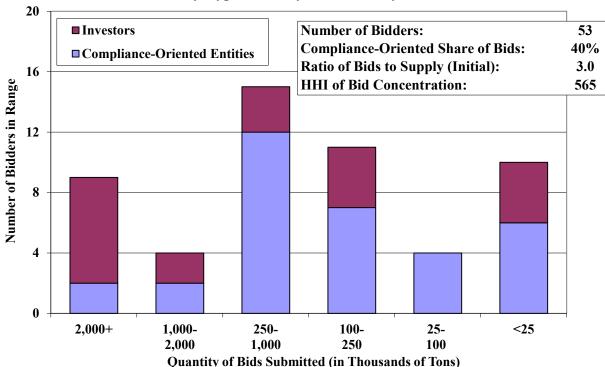


Figure 3: Quantity of Bids Submitted by Entity By Type of Entity and Quantity Bid

D. SUMMARY OF BID PRICES IN AUCTION 63

Bids were submitted across a wide range of prices in the auction and the clearing price of \$16.00 was relatively consistent with average bid prices submitted.

The following table reports several statistics regarding the bid prices for bids submitted in Auction 63. The median and mean bid prices are weighted by the quantity of each bid.

Bid Prices:	
Minimum	\$2.56
Maximum	\$25.00
Average (Median)	\$16.00
Average (Mean)	\$15.91
Clearing Price:	\$16.00



E. NAMES OF POTENTIAL BIDDERS IN AUCTION 63

In accordance with Sections 2.8 and 3 of the Auction Notice for CO₂ Allowance Auction 63, the Participating States are releasing the names of Potential Bidders in Auction 63. 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 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 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 Delaware Municipal Electric Corp. DTE Energy Trading, Inc. Dynegy Marketing and Trade, LLC East Coast Environmental, LLC ECP Capital LP ECP Capital Parallel Fund LP Edgewood Energy, LLC Elbow River Marketing LTD. Empire Generating Co., LLC **Energy Center Dover** Equus Power I, LP Global Carbon Opportunity (SPV) Fund LLC Global Emission Fund LP Hartree Partners, LP Hawkeye Energy Greenport Helix Ravenswood Energy, LLC Indeck-Corinth Limited Partnership

Kendall Green Energy LLC Kleen Energy Systems, LLC KMC Thermo, LLC LMR Multi-Strategy Master Fund Limited Lucid Clarity Master Fund LP 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 Pegasus Development Corporation PetroChina International (America), Inc. Pinelawn Power, LLC Power Authority of the State of New York Rhode Island State Energy Center, LP Rubicon Carbon Services LLC Selkirk Cogen Partners, LP Shell Energy North America (US), LP Shoreham Energy, LLC Statkraft US, LLC STX Commodities LLC Tenaska Power Services Co. Tenaska, Inc. Trafigura Trading LLC Village of Freeport Virginia Electric and Power Company Vitol Inc. Wallingford Energy, LLC West Coast Environmental, LLC