

MARKET MONITOR REPORT FOR AUCTION 62

Prepared for:

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

Prepared By:



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POTOMAC ECONOMICS

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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.

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While technically a RGGI participating state, Pennsylvania is currently under order from the state's Commonwealth Court prohibiting it from actively participating in RGGI & RGGI Inc. related activities. Final adjudication of these matters is not expected until sometime in 2023.



MARKET MONITOR REPORT FOR AUCTION 62

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 62, which was held on December 6, 2023.

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.

Sixty bidders participated in the auction for CO₂ allowances. Bids were submitted to purchase 2.8 times the initial offering of approximately 22.1 million allowances. However, the quantity for which bids were submitted above \$14.88 per ton exceeded the initial offering, so the Cost Containment Reserve ("CRR") was made available at the CCR Trigger Price of \$14.88 per ton. Over 5.5 million additional allowances were sold, resulting in partial depletion of the CCR for 2023 and a clearing price of \$14.88 per ton in the auction. Compliance-Oriented Entities purchased 64 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.
- There were no indications 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 62 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 CO₂ allowances is based on the requirement for each compliance entity in the RGGI footprint to obtain one CO₂ allowance for each short ton of CO₂ 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 fifth control period. The largest compliance entity represents 16 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.

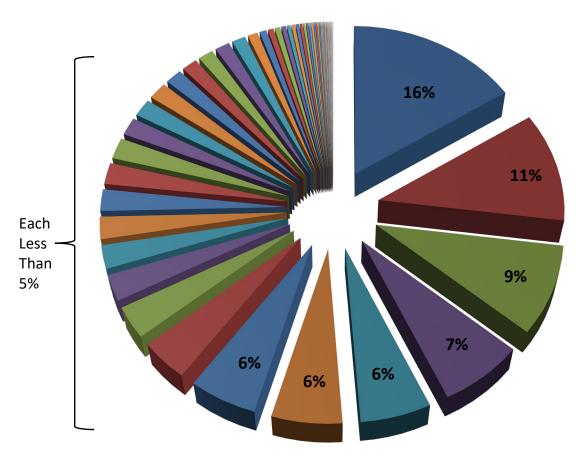


Figure 1: Projected Demand for RGGI Allowances Shares by Compliance Entity



B. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 62

Awards were distributed across 54 bidders with seven bidders purchasing one million tons or more and 33 bidders purchasing 200,000 tons or more.

This report summarizes participation in Auction 62. 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.

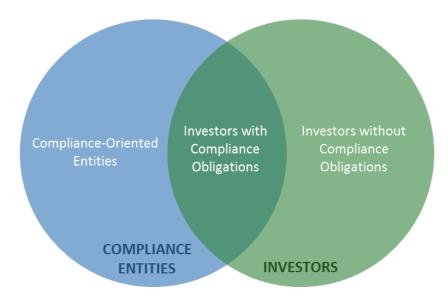


Figure 2: Classifications of Participant Firms in the RGGI Marketplace

- *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

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 62, Compliance Entities purchased 67 percent of the allowances sold. In the first 62 RGGI auctions, Compliance Entities purchased 73 percent of the allowances sold. In Auction 62, Compliance-Oriented Entities purchased 62 percent of the allowances sold.

After settlement of allowances sold in Auction 62:

- Sixty-two percent of the allowances in circulation will be held by Compliance-Oriented Entities.
- Sixty-five 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.

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.



Table 1: Quantity of Allowances Awarded by Bidder

Bidder	Number of Allowances Awarded	Bidder	Number of Allowances Awarded
Bidder 1	2,950,000	Bidder 28	252,000
Bidder 2	2,500,000	Bidder 29	250,000
Bidder 3	2,450,000	Bidder 30	215,000
Bidder 4	2,250,000	Bidder 31	200,000
Bidder 5	2,000,000	Bidder 32	200,000
Bidder 6	1,800,000	Bidder 33	200,000
Bidder 7	1,160,000	Bidder 34	198,000
Bidder 8	950,000	Bidder 35	118,000
Bidder 9	800,000	Bidder 36	90,000
Bidder 10	705,000	Bidder 37	75,000
Bidder 11	700,000	Bidder 38	65,000
Bidder 12	671,000	Bidder 39	60,000
Bidder 13	663,000	Bidder 40	50,000
Bidder 14	600,000	Bidder 41	35,000
Bidder 15	600,000	Bidder 42	35,000
Bidder 16	553,000	Bidder 43	30,000
Bidder 17	500,000	Bidder 44	22,000
Bidder 18	452,000	Bidder 45	20,000
Bidder 19	414,000	Bidder 46	15,000
Bidder 20	403,000	Bidder 47	10,000
Bidder 21	400,000	Bidder 48	9,000
Bidder 22	400,000	Bidder 49	7,000
Bidder 23	335,000	Bidder 50	5,000
Bidder 24	333,000	Bidder 51	3,000
Bidder 25	302,000	Bidder 52	2,000
Bidder 26	300,000	Bidder 53	1,000
Bidder 27	297,000	Bidder 54	1,000



C. DISPERSION OF BIDS IN AUCTION 62

Bids were submitted by 39 Compliance-Oriented Entities and 21 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. Nine Compliance-Oriented Entities and eight Investors submitted bids for a large quantity of allowances (i.e., at least 1 million tons). Overall, Compliance-Oriented Entities accounted for 47 percent of the quantity of allowances for which bids were submitted. The quantity of allowances for which bids were submitted was 2.8 times the Initial Offering. In the previous auction, the quantity of allowances for which bids were submitted was 2.2 times the Initial Offering.

The bid quantities were widely distributed among the 60 bidders. The concentration of bids, using the Herfindahl-Hirschman Index ("HHI"), was relatively low at 493. 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).

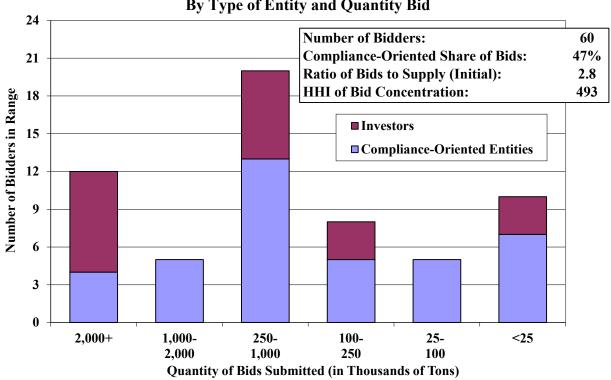


Figure 3: Quantity of Bids Submitted by Entity By Type of Entity and Quantity Bid



D. SUMMARY OF BID PRICES IN AUCTION 62

Bids were submitted across a wide range of prices in the auction and the clearing price of \$14.88 was relatively consistent with average bid prices submitted.

The following table reports several statistics regarding the bid prices for bids submitted in Auction 62. The median and mean bid prices are weighted by the quantity of each bid.

Bid Prices:	
Minimum	\$2.50
Maximum	\$20.00
Average (Median)	\$14.87
Average (Mean)	\$13.53
Clearing Price:	\$14.88



E. NAMES OF POTENTIAL BIDDERS IN AUCTION 62

In accordance with Sections 2.8 and 3 of the Auction Notice for CO₂ Allowance Auction 62, the Participating States are releasing the names of Potential Bidders in Auction 62. The states defined potential bidders as: "Each Applicant that has been qualified and submitted a complete *Intent to Bid.*" The list of 73 Potential Bidders is as follows:

Anew Environmental, LLC Appalachian Power Company Astoria Energy, LLC

BP Products North America Inc. Braintree Electric Light Department

Buchanan Generation Caithness Long Island, LLC Calpine Energy Services, LP

Canadian Imperial Bank of Commerce Carbon Lighthouse Association Citadel Energy Marketing LLC

Clear Sky Enhanced Inflation Carbon Master Fund LP

CLIFI Carbon LLC

Cogen Technologies Linden Venture, L.P.

Coloma Strategies LLC

Commonwealth Chesapeake Company, LLC Consolidated Edison Comp. of NY, Inc. Constellation Energy Generation, LLC

Cooler, Inc.

CPV Maryland, LLC CPV Shore, LLC CPV Towantic, LLC CPV Valley, LLC

Cricket Valley Energy Center, LLC Delaware City Refining Company, 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

Global Carbon Opportunity (SPV) Fund LLC

Hartree Partners, LP

Helix Ravenswood Energy, LLC Kcarbon Holdings LLC

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. MV Global Carbon Fund LP

National Grid Generation LLC dba National Grid

New Athens Generating Company, LLC

Newark Energy Center

NextEra Energy Marketing, LLC NRG Business Marketing LLC Old Dominion Electric Cooperative Pacific Summit Energy LLC Parkway Generation, LLC Pinelawn Power, LLC Pixelle Androscoggin LLC Potomac Energy Center, LLC

Power Authority of the State of New York

RBC

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 Pennsylvania Partners, LLC

Tenaska, Inc.

Trafigura Trading LLC Village of Freeport

Virginia Electric and Power Company

Vitol Inc.

Wallingford Energy, LLC World Carbon Fund