
RGGI Inc.



**MARKET MONITOR REPORT
FOR AUCTION 5**

Prepared for:

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

Prepared By:

**POTOMAC
ECONOMICS**

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The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort by participating states to reduce emissions of carbon dioxide (CO₂), a greenhouse gas that causes global warming.

RGGI, Inc. is a non-profit corporation created to provide technical and administrative services to the CO₂ Budget Trading Programs of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

MARKET MONITOR REPORT FOR AUCTION 5

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 auctions by World Energy Solutions. This report summarizes our findings regarding RGGI Auction 5, which was held on September 9, 2009.

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.

Participation in the 2009 vintage offering was robust with 46 separate entities submitting bids to purchase 2.5 times the available supply of allowances, resulting in a clearing price of \$2.19 per ton. Relative to the available supply of allowances, the quantity of allowances for which bids were submitted was comparable to that of Auction 3 and Auction 4. Consistent with previous auctions, compliance entities or their affiliates purchased the majority (77 percent) of the allowances in the auction.

A small number of allowances were auctioned for the second control period (with a 2012 vintage year). All of the 2012 vintage allowances were sold, with 12 entities submitting bids to purchase 1.1 times the available supply of allowances, resulting in a clearing price of \$1.87 per ton. Compliance entities or their affiliates purchased 100 percent of the allowances in the 2012 vintage offering.

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 hardware or software problems, communications issues, security breaches, or other problems with the auction platform.

In summary, the results of our monitoring of RGGI Auction 5 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.

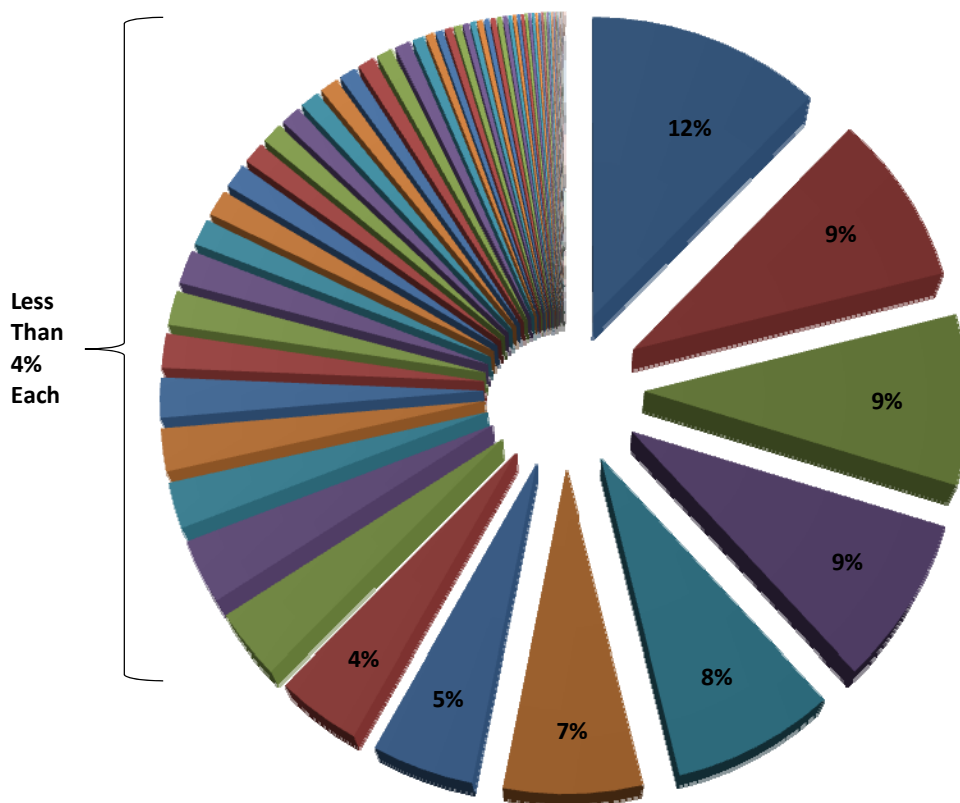
APPENDIX

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 following figure shows the relative shares of projected demand for RGGI allowances by compliance entity. The largest compliance entity represents only 12 percent of the total projected demand for allowances. Almost half of the projected demand is composed of entities that each account for less than 6 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. DISPERSION OF BIDS IN AUCTION 5

In the 2009 vintage offering, bids were submitted for a large quantity of allowances relative to the available supply, and the bids were widely dispersed across both compliance entities and non-compliance entities. These are both positive indicators regarding the competitiveness of the auction.

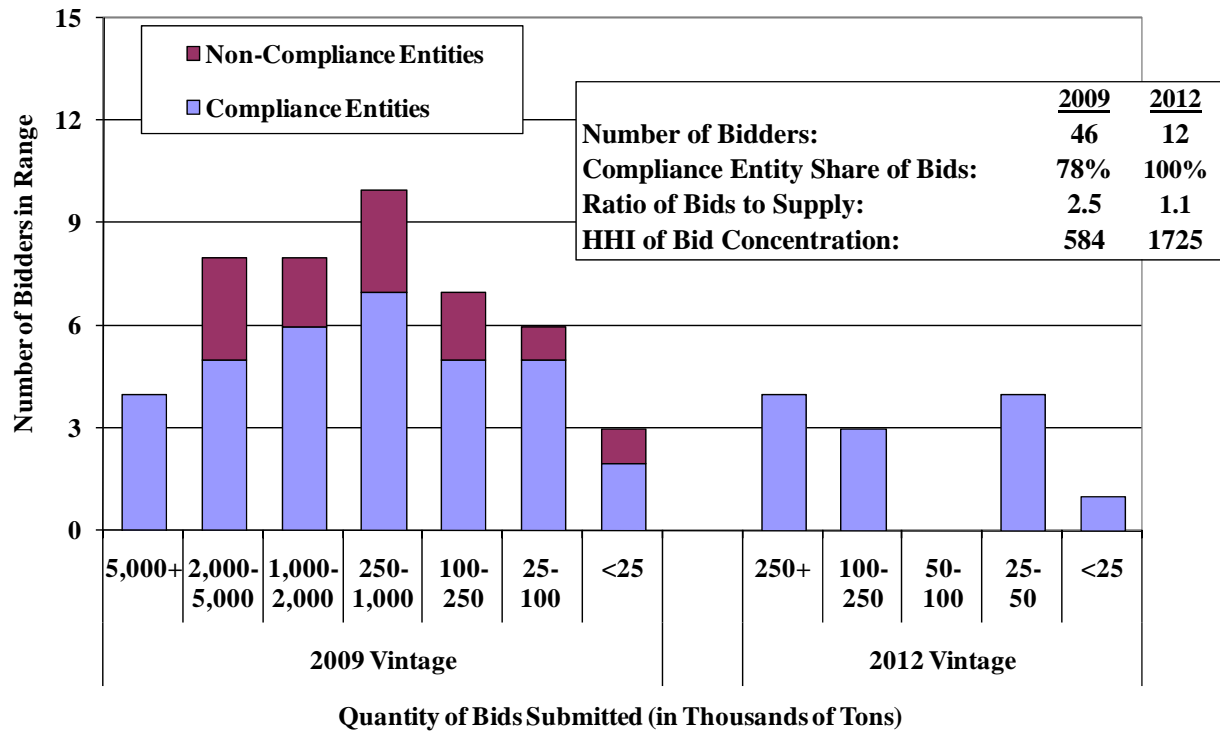
A small number of allowances were also auctioned in advance for the 2012 vintage year, with 12 entities submitting bids to purchase 1.1 times the available supply of allowances. The volume of bids submitted declined from Auction 4, reflecting reduced participation by non-compliance entities. In our review of the bids and the qualification process, we found no material evidence of anti-competitive conduct or significant barriers to participation.

The following figure summarizes the quantities of allowances for which bids were submitted in the two offerings. In the 2009 vintage offering, most of the bidders that submitted bids for a large quantity of allowances (e.g., at least 2 million tons which is 7 percent of the available supply) were compliance entities (or their affiliates). Overall, compliance entities accounted for 78 percent of the quantity of allowances for which bids were submitted in the 2009 vintage offering. Relative to the available supply of allowances, the total quantity of bids submitted was similar to Auction 3 and Auction 4.

In the 2012 vintage offering, the quantity of allowances for which bids were submitted by compliance entities was similar to Auction 4. However, non-compliance entities, which accounted for 38 percent of the quantity of allowances for which bids were submitted in Auction 4, did not participate in the 2012 vintage offering in Auction 5.

In addition to demand exceeding supply by 2.5 to 1, the bid quantities were widely distributed among the 46 bidders in the 2009 vintage offering. The concentration of bids, using the Herfindahl-Hirschman Index (“HHI”), was very low at 584 in the 2009 vintage offering. Fewer entities submitted bids in the 2012 vintage offering, leading the concentration of bids to be substantially higher (1725), but still moderate for most product markets. The HHI is a standard measure of concentration calculated by squaring each entity’s share and then summing the squares across all entities (hence, the index ranges from 0 to 10,000).

Figure 2: Quantity of Bids Submitted by Entity
By Type of Entity and Quantity Bid



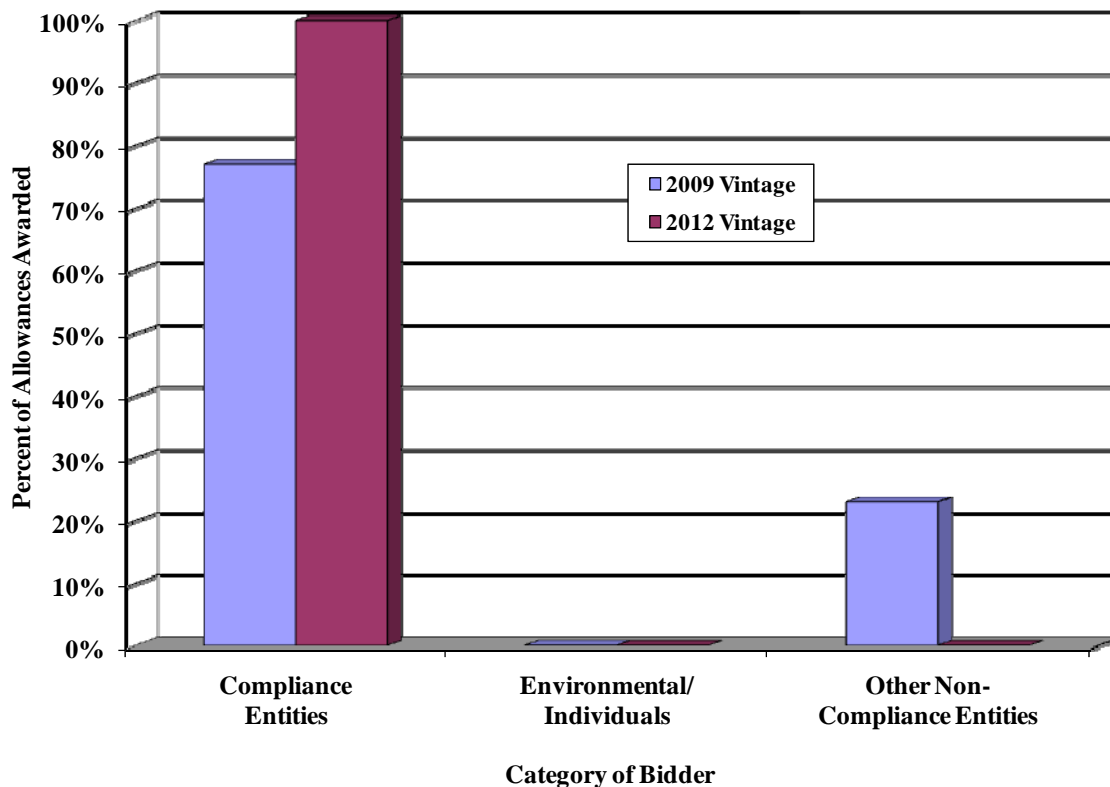
C. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 5

In the 2009 vintage offering, awards were widely distributed across 34 bidders with five bidders purchasing two million tons or more, nine bidders purchasing one million tons or more, and 19 bidders purchasing 250,000 tons or more. In the 2012 vintage offering, awards were distributed across 12 bidders with four bidders purchasing approximately 79 percent of the allowances and seven additional bidders each purchasing 25,000 tons or more.

The following figure shows the quantity of allowances purchased in the auction by each of three types of entities:

- *Compliance Entities*: This includes all compliance entities and their affiliates.
- *Environmental/Individuals*: This includes non-compliance entities describing themselves as “Environmental Groups” or “Individual Person” in their qualification application.
- *Other Non-Compliance Entities*: This includes all other non-compliance entities.

**Figure 3: Quantity of Allowances Awarded
By Type of Entity**



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.

Table 1: Quantity of Allowances Awarded by Bidder

Bidder	Number of 2009 Allowances Awarded	Bidder	Number of 2012 Allowances Awarded
Bidder 1	5,000,000	Bidder 1	543,000
Bidder 2	4,950,000	Bidder 2	500,000
Bidder 3	3,044,000	Bidder 3	347,000
Bidder 4	2,602,000	Bidder 4	323,540
Bidder 5	2,000,000	Bidder 5	149,000
Bidder 6	1,900,000	Bidder 6	100,000
Bidder 7	1,200,000	Bidder 7	100,000
Bidder 8	1,000,000	Bidder 8	30,000
Bidder 9	1,000,000	Bidder 9	26,000
Bidder 10	750,000	Bidder 10	25,000
Bidder 11	541,000	Bidder 11	25,000
Bidder 12	529,000	Bidder 12	4,000
Bidder 13	450,000		
Bidder 14	400,000		
Bidder 15	400,000		
Bidder 16	375,000		
Bidder 17	375,000		
Bidder 18	300,000		
Bidder 19	250,000		
Bidder 20	200,000		
Bidder 21	200,000		
Bidder 22	180,000		
Bidder 23	132,000		
Bidder 24	125,000		
Bidder 25	91,000		
Bidder 26	83,000		
Bidder 27	75,000		
Bidder 28	75,000		
Bidder 29	60,000		
Bidder 30	50,000		
Bidder 31	46,945		
Bidder 32	21,000		
Bidder 33	2,000		
Bidder 34	2,000		

D. SUMMARY OF BID PRICES IN AUCTION 5

The distribution of bid prices submitted in the auction indicates that the demand for allowances was relatively elastic, which is a signal that the results were competitive.

The following table reports several statistics regarding the bid prices for bids submitted in Auction 5. The median and mean bid prices are weighted by the quantity of each bid.

	<u>2009</u>	<u>2012</u>
Bid Prices:		
Minimum	\$1.86	\$1.86
Maximum	\$12.00	\$3.00
Average (Median)	\$2.10	\$1.97
Average (Mean)	\$2.30	\$1.97
Clearing Prices:	\$2.19	\$1.87

E. NAMES OF POTENTIAL BIDDERS IN AUCTION 5

In accordance with Section 2.8 of the Auction Notice for CO₂ Allowance Auction 5 on September 9, 2009, the Participating States are releasing the names of Potential Bidders in Auction 5. The states defined potential bidders as: “Each Applicant that has been qualified and submitted a complete *Intent to Bid*.” The list of 59 Potential Bidders is as follows:

Adirondack Council Inc.	Lake Road Generating Company, L.P.
AES Eastern Energy, LP	Louis Dreyfus Energy Services, LP
Aircraft Services Corporation	Massachusetts Muni. Wholesale Elec. Co.
Allegheny Energy Supply Company, LLC	Massachusetts Water Resources Authority
ANP Funding I, LLC	Merrill Lynch Commodities, Inc.
Astoria Energy, LLC	Milford Power Company, LLC
Astoria Generating Company, LP	Millennium Power Partners, LP
Barclays Bank PLC	Mirant Energy Trading, LLC
Boston Generating, LLC	Morgan Stanley Capital Group, Inc.
Brick Power Holding, LLC	National Grid Gen. dba National Grid
Brookfield Energy Marketing Inc.	New Athens Generating Company, LLC
Caithness Long Island, LLC	North American Energy Alliance, LLC
Calpine Energy Services, LP	NRG Power Marketing, LLC
Chambers Cogeneration, LP	Old Dominion Electric Cooperative
Conectiv Energy Supply, Inc.	Power Authority of the State of New York
Conn. Municipal Electric Energy Coop.	PPL EnergyPlus, LLC
ConocoPhillips Company	PSEG Energy Resources & Trade, LLC
Consolidated Edison Comp. of NY, Inc.	Public Service Company of New Hampshire
DigiLog Global Environmental Master Fund	RBC
Dominion Energy Marketing, Inc.	Selkirk Cogen Partners, LP
DTE Carbon, LLC	Sempra Energy Trading, LLC
Dynegy Marketing and Trade, LLC	Statkraft Markets GmbH
Element Markets, LLC	Sunoco Power Generation, LLC
Four Oaks Interests, LLC	TAQA Gen X, LLC
GDF SUEZ Energy Marketing NA, Inc.	Tauber Oil Co.
Granite Ridge Energy, LLC	Tradax Green Energy, LLC
H.Q. Energy Services (US) Inc.	TransCanada Power Marketing Ltd.
Hess Corporation (G)	Verso Paper Corp.
JP Morgan Ventures Energy Corporation	Vitol Inc.
J-Power USA Development Co., Ltd.	