
RGGI Inc.



**MARKET MONITOR REPORT
FOR AUCTION 6**

Prepared for:

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

Prepared By:

**POTOMAC
ECONOMICS**

December 4, 2009

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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 6

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 6, which was held on December 2, 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 62 separate entities submitting bids to purchase 2.6 times the available supply of allowances, resulting in a clearing price of \$2.05 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, Auction 4, and Auction 5. Compliance entities or their affiliates purchased the majority (65 percent) of the allowances in the auction.

A small number of allowances were auctioned for the second control period (with a 2012 vintage year). 74 percent of the 2012 vintage allowances were sold, with eight entities submitting bids to purchase allowances, resulting in a clearing price of \$1.86 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 6 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.

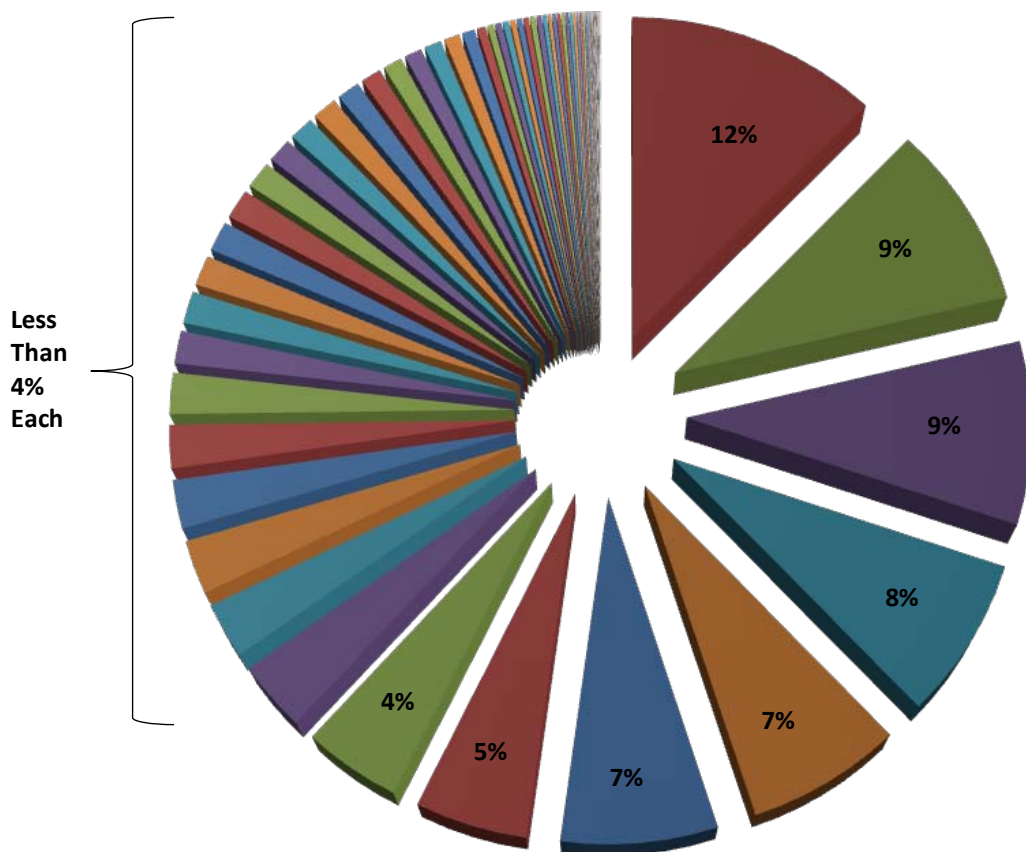
APPENDIX

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 6

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.

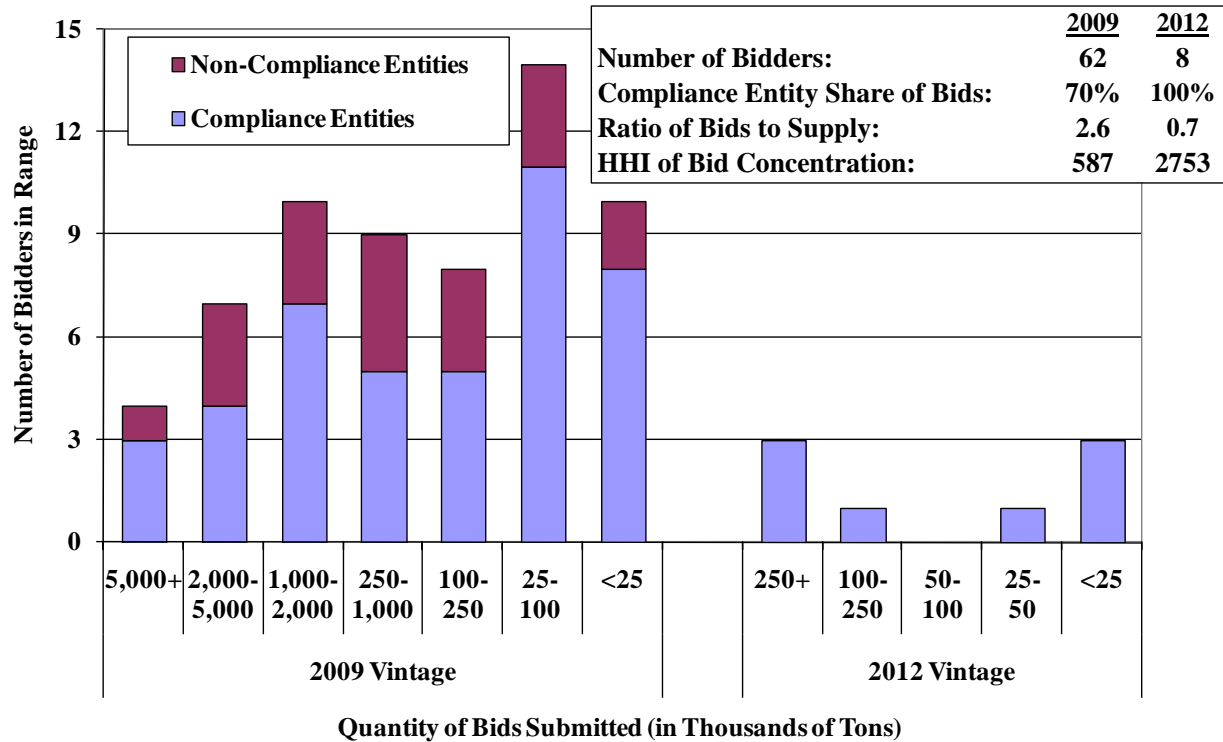
A small number of allowances were also auctioned in advance for the 2012 vintage year, with eight entities submitting bids to purchase 74 percent of the available supply of allowances. The volume of bids submitted declined from Auction 5, reflecting reduced participation by compliance entities. In our 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 70 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, Auction 4, and Auction 5.

In the 2012 vintage offering, the quantity of allowances for which bids were submitted by compliance entities decreased 32 percent from Auction 5. No non-compliance entities participated in the 2012 vintage offerings of either Auction 5 or Auction 6.

In addition to demand exceeding supply by 2.6 to 1, the bid quantities were widely distributed among the 62 bidders in the 2009 vintage offering. The concentration of bids, using the Herfindahl-Hirschman Index (“HHI”), was very low at 587 in the 2009 vintage offering. Fewer entities submitted bids in the 2012 vintage offering, leading the concentration of bids to be substantially higher (2753). 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



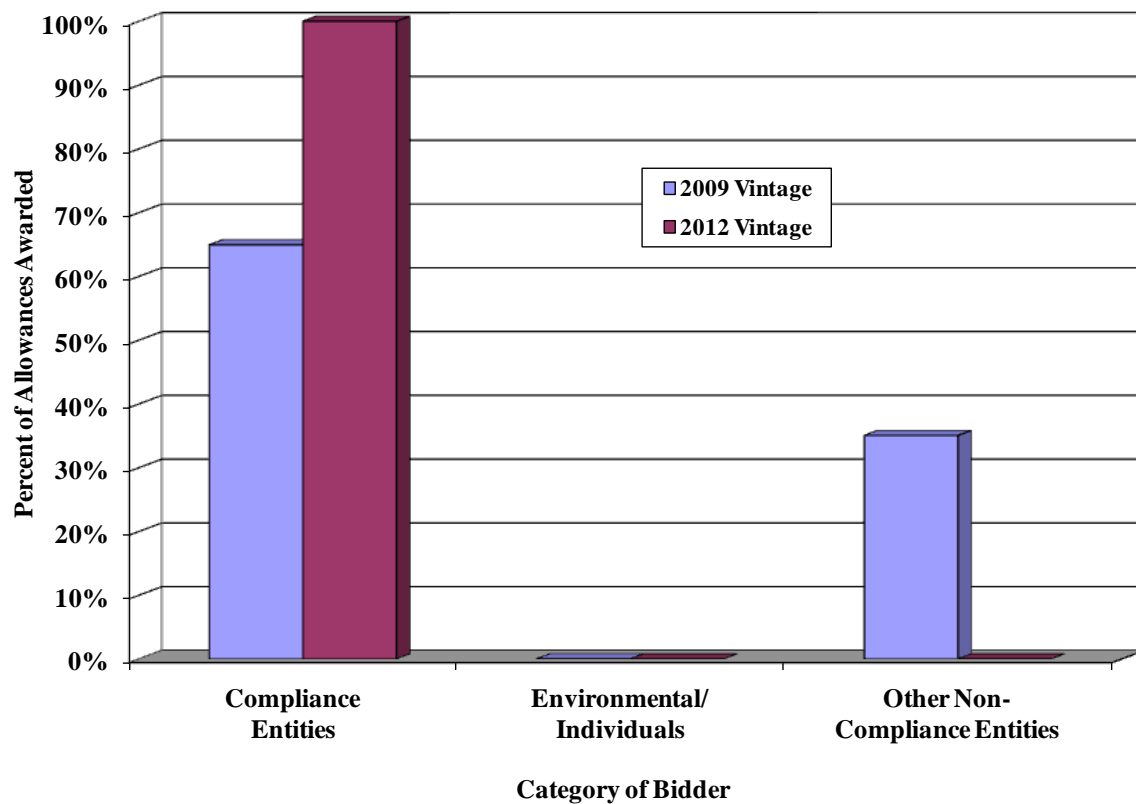
C. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 6

In the 2009 vintage offering, awards were widely distributed across 40 bidders with five bidders purchasing two million tons or more, eight bidders purchasing one million tons or more, and 13 bidders purchasing 250,000 tons or more. In the 2012 vintage offering, awards were distributed across eight bidders with four bidders purchasing approximately 97 percent of the allowances that were sold.

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 | 7,147,000 | Bidder 1 | 543,000 |
| Bidder 2 | 5,000,000 | Bidder 2 | 543,000 |
| Bidder 3 | 4,300,000 | Bidder 3 | 271,000 |
| Bidder 4 | 2,842,000 | Bidder 4 | 200,000 |
| Bidder 5 | 2,025,698 | Bidder 5 | 25,000 |
| Bidder 6 | 1,331,000 | Bidder 6 | 10,000 |
| Bidder 7 | 1,110,000 | Bidder 7 | 6,000 |
| Bidder 8 | 1,000,000 | Bidder 8 | 1,000 |
| Bidder 9 | 825,000 | | |
| Bidder 10 | 500,000 | | |
| Bidder 11 | 500,000 | | |
| Bidder 12 | 300,000 | | |
| Bidder 13 | 265,000 | | |
| Bidder 14 | 191,000 | | |
| Bidder 15 | 150,000 | | |
| Bidder 16 | 114,000 | | |
| Bidder 17 | 108,000 | | |
| Bidder 18 | 100,000 | | |
| Bidder 19 | 92,000 | | |
| Bidder 20 | 89,000 | | |
| Bidder 21 | 80,000 | | |
| Bidder 22 | 80,000 | | |
| Bidder 23 | 61,000 | | |
| Bidder 24 | 55,000 | | |
| Bidder 25 | 50,000 | | |
| Bidder 26 | 50,000 | | |
| Bidder 27 | 47,000 | | |
| Bidder 28 | 38,000 | | |
| Bidder 29 | 35,000 | | |
| Bidder 30 | 30,000 | | |
| Bidder 31 | 25,000 | | |
| Bidder 32 | 25,000 | | |
| Bidder 33 | 6,000 | | |
| Bidder 34 | 5,000 | | |
| Bidder 35 | 3,000 | | |
| Bidder 36 | 3,000 | | |
| Bidder 37 | 3,000 | | |
| Bidder 38 | 3,000 | | |
| Bidder 39 | 2,000 | | |
| Bidder 40 | 1,000 | | |

D. SUMMARY OF BID PRICES IN AUCTION 6

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 6. 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 | \$5.00 | \$2.41 |
| Average (Median) | \$2.00 | \$1.87 |
| Average (Mean) | \$2.12 | \$1.94 |
| Clearing Prices: | \$2.05 | \$1.86 |

E. NAMES OF POTENTIAL BIDDERS IN AUCTION 6

In accordance with Section 2.8 of the Auction Notice for CO₂ Allowance Auction 6 on December 2, 2009, the Participating States are releasing the names of Potential Bidders in Auction 6. The states defined potential bidders as: “Each Applicant that has been qualified and submitted a complete *Intent to Bid*.” The list of 74 Potential Bidders is as follows:

| | |
|--|--|
| Adirondack Council Inc. | Indeck-Oswego Limited Partnership |
| AES Eastern Energy, LP | Indeck-Yerkes Limited Partnership |
| Algonquin Windsor Locks, LLC | James S. Burrell II |
| Allegheny Energy Supply Company, LLC | JP Morgan Ventures Energy Corporation |
| ANP Funding I, LLC | J-Power USA Development Co., Ltd. |
| Astoria Energy, LLC | Koch Supply & Trading LP |
| Astoria Generating Company, LP | Lake Road Generating Company, L.P. |
| Barclays Bank PLC | Logan Generating Company, LP |
| Boston Generating, LLC | Louis Dreyfus Energy Services, LP |
| Brick Power Holding, LLC | Macquarie Cook Power Inc. |
| Brookfield Energy Marketing Inc. | Massachusetts Muni. Wholesale Elec. Co. |
| Brooklyn Navy Yard Cogen Partners, LP | Merrill Lynch Commodities, Inc. |
| Caithness Long Island, LLC | Millennium Power Partners, LP |
| Calpine Energy Services, LP | Mirant Energy Trading, LLC |
| Cargill Power Markets, LLC | Morgan Stanley Capital Group, Inc. |
| Castleton Power, LLC | National Grid Gen. dba National Grid |
| CE2 Environmental Markets, LP | New Athens Generating Company, LLC |
| CE2 Environmental Opportunities I, LP | NextEra Energy Power Marketing, LLC |
| Chambers Cogeneration, LP | North American Energy Alliance, LLC |
| Conectiv Energy Supply, Inc. | NRG Power Marketing, LLC |
| Conn. Municipal Electric Energy Coop. | Old Dominion Electric Cooperative |
| ConocoPhillips Company | ORBEO |
| Consolidated Edison Comp. of NY, Inc. | Power Authority of the State of New York |
| Constellation Energy Commodities Group | PPL EnergyPlus, LLC |
| Delaware Municipal Electric Corp. | PSEG Energy Resources & Trade, LLC |
| Dominion Energy Marketing, Inc. | Public Service Company of New Hampshire |
| DTE Carbon, LLC | RBC |
| Dynegy Marketing and Trade, LLC | Rochester Gas and Electric Corporation |
| Element Markets, LLC | Selkirk Cogen Partners, LP |
| GDF SUEZ Energy Marketing NA, Inc. | Sempra Energy Trading, LLC |
| Granite Ridge Energy, LLC | Statkraft Markets GmbH |
| H.Q. Energy Services (US) Inc. | Stonyfield Farm |
| Hess Corporation (G) | Sunoco Power Generation, LLC |
| ICAP United Inc. | TAQA Gen X, LLC |
| Indeck Energy Serv. of Silver Springs | Tradax Green Energy, LLC |
| Indeck-Corinth Limited Partnership | Verso Paper Corp. |
| Indeck-Olean Limited Partnership | Vitol Inc. |