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**RGGI Inc.**



**MARKET MONITOR REPORT  
FOR AUCTION 9**

**Prepared for:**

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

**Prepared By:**

**POTOMAC  
ECONOMICS**

September 10, 2010

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The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort by participating states to reduce emissions of carbon dioxide (CO<sub>2</sub>), a greenhouse gas that causes global warming.

RGGI, Inc. is a non-profit corporation created to provide technical and administrative services to the CO<sub>2</sub> Budget Trading Programs of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

## MARKET MONITOR REPORT FOR AUCTION 9

As the Market Monitor for the RGGI CO<sub>2</sub> 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 9, which was held on September 8, 2010.

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.

A large number of bidders participated in the offering of 2009 vintage and 2010 vintage allowances with 45 entities submitting bids to purchase 75 percent of the available supply of allowances. This resulted in a clearing price equal to the reserve price of \$1.86 per ton. Compliance entities or their affiliates purchased 92 percent of the allowances in the auction.

A small number of allowances were auctioned for the second control period (with a 2013 vintage year). Six entities submitted bids to purchase 61 percent of the available supply of allowances, resulting in a clearing price equal to the reserve price of \$1.86 per ton. Compliance entities or their affiliates purchased 100 percent of the allowances in the 2013 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 9 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<sub>2</sub> allowances and outcomes of the auction.

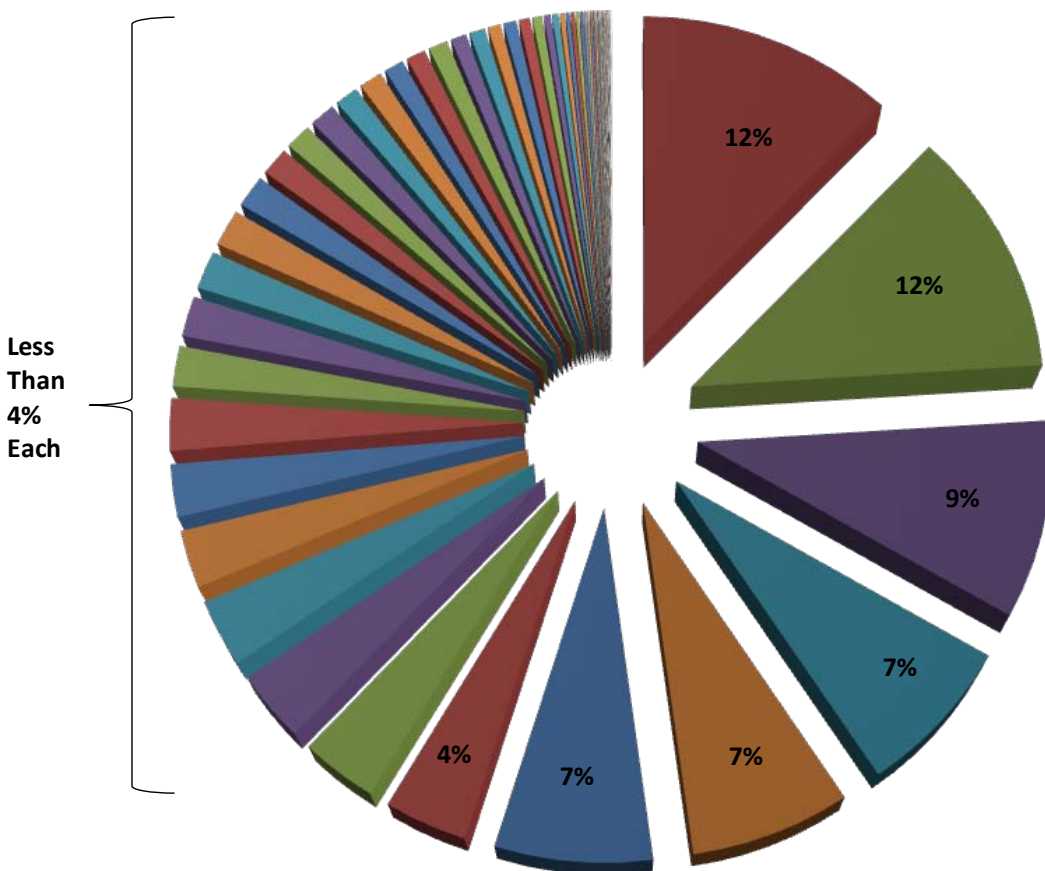
**APPENDIX**

**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 9

*In the offering of 2009 and 2010 vintage allowances, bids were submitted by a large number of entities, 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.*

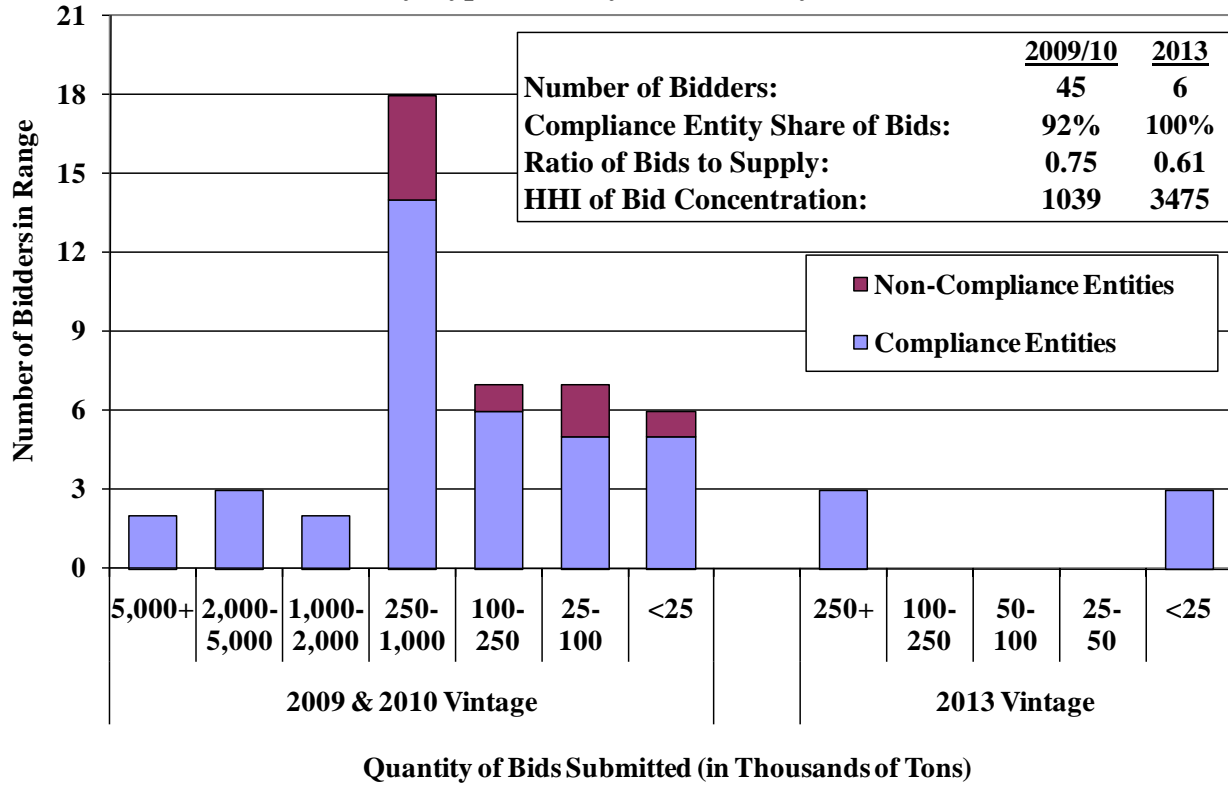
*A small number of allowances were also auctioned in advance for the 2013 vintage year, with six compliance entities or their affiliates submitting bids. In our review of the bids and the qualification process, we found no material evidence of anti-competitive conduct or significant barriers to participation.*

The following figure summarizes the quantities of allowances for which bids were submitted in the two offerings. In the offering of 2009 vintage and 2010 vintage allowances, all of the bidders that submitted bids for a large quantity of allowances (e.g., at least 2 million tons or 5 percent of the available supply) were compliance entities or their affiliates. Overall, compliance entities accounted for 92 percent of the quantity of allowances for which bids were submitted in the offering of 2009 vintage and 2010 vintage allowances. The quantity of allowances for which bids were submitted decreased to 0.75 times the available supply in Auction 9 from 1.3 times the available supply in Auction 8 and 2.3 times the available supply in Auction 7.

In the 2013 vintage offering, the quantity of allowances for which bids were submitted was 0.61 times the available supply. This decreased from 1.2 times the available supply in Auction 8 and 0.98 times the available supply in Auction 7. All of the bids were submitted by compliance entities in the 2013 vintage offering of Auction 9.

The bid quantities were widely distributed among the 45 bidders in the offering of 2009 vintage and 2010 vintage allowances. The concentration of bids, using the Herfindahl-Hirschman Index (“HHI”), was relatively low at 1039. Fewer entities submitted bids in the 2013 vintage offering, leading the concentration of bids to be substantially higher (3475). 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 9**

*In the offering of 2009 vintage and 2010 vintage allowances, awards were widely distributed across 45 bidders with five bidders purchasing two million tons or more, seven bidders purchasing one million tons or more, and 25 bidders purchasing 250,000 tons or more. In the 2013 vintage offering, awards were distributed across six bidders with three bidders purchasing 250,000 tons or more.*

*Compliance entities or their affiliates purchased 92 percent of the allowances in the offering of 2009 vintage and 2010 vintage allowances and 100 percent of the allowances in the offering of 2013 vintage allowances.*

The share of allowances purchased and several other quantities are reported for each of three types of entities:

- *Compliance Entities:* This includes all compliance entities and their affiliates. In this report, affiliated firms 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.
- *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.

The following statistics summarize the purchases and holdings of allowances by compliance entities and their affiliates under the RGGI program:

- In Auction 9, compliance entities and their affiliates purchased:
  - 92 percent of the V2009 & V2010 allowances sold and
  - 100 percent of the V2013 allowances sold.
- In the first nine RGGI auctions, compliance entities and their affiliates purchased:
  - 83 percent of the V2009 & V2010 allowances sold,
  - 96 percent of the V2012 & V2013 allowances sold, and
  - 84 percent of all allowances sold.
- Compliance entities and their affiliates will hold 95 percent of the allowances in circulation following the settlement of allowances sold in Auction 9.

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**

<b>Bidder</b>	<b>Number of 2009 &amp; 2010 Allowances Awarded</b>	<b>Bidder</b>	<b>Number of 2013 Allowances Awarded</b>
Bidder 1	7,526,000	Bidder 1	534,000
Bidder 2	6,450,000	Bidder 2	500,000
Bidder 3	2,650,000	Bidder 3	250,000
Bidder 4	2,150,000	Bidder 4	20,000
Bidder 5	2,000,000	Bidder 5	7,000
Bidder 6	1,000,000	Bidder 6	1,000
Bidder 7	1,000,000		
Bidder 8	993,000		
Bidder 9	967,000		
Bidder 10	876,000		
Bidder 11	870,000		
Bidder 12	793,000		
Bidder 13	657,000		
Bidder 14	611,000		
Bidder 15	600,000		
Bidder 16	591,000		
Bidder 17	545,000		
Bidder 18	500,000		
Bidder 19	435,000		
Bidder 20	400,000		
Bidder 21	390,000		
Bidder 22	300,000		
Bidder 23	267,000		
Bidder 24	250,000		
Bidder 25	250,000		
Bidder 26	184,000		
Bidder 27	140,000		
Bidder 28	119,000		
Bidder 29	110,000		
Bidder 30	100,000		
Bidder 31	100,000		
Bidder 32	100,000		
Bidder 33	79,000		
Bidder 34	75,000		
Bidder 35	70,000		
Bidder 36	65,000		
Bidder 37	50,000		
Bidder 38	50,000		
Bidder 39	35,000		
Bidder 40	17,000		
Bidder 41	16,000		
Bidder 42	15,000		
Bidder 43	9,000		
Bidder 44	1,000		
Bidder 45	1,000		



**D. SUMMARY OF BID PRICES IN AUCTION 9**

*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 9. The median and mean bid prices are weighted by the quantity of each bid.

	<u>2009 &amp; 2010</u>	<u>2013</u>
<b>Bid Prices:</b>		
<b>Minimum</b>	<b>\$1.86</b>	<b>\$1.86</b>
<b>Maximum</b>	<b>\$3.00</b>	<b>\$1.92</b>
<b>Average (Median)</b>	<b>\$1.89</b>	<b>\$1.88</b>
<b>Average (Mean)</b>	<b>\$1.92</b>	<b>\$1.88</b>
<b>Clearing Prices:</b>	<b>\$1.86</b>	<b>\$1.86</b>

E. NAMES OF POTENTIAL BIDDERS IN AUCTION 9

In accordance with Section 2.8 of the Auction Notice for CO<sub>2</sub> Allowance Auction 9 on September 8, 2010, the Participating States are releasing the names of Potential Bidders in Auction 9. The states defined potential bidders as: “Each Applicant that has been qualified and submitted a complete *Intent to Bid*.” The list of 56 Potential Bidders is as follows:

Adirondack Council Inc.	Indeck-Corinth Limited Partnership
AES Eastern Energy, LP	Indeck-Olean Limited Partnership
Aircraft Services Corporation	Indeck-Oswego Limited Partnership
ANP Funding I, LLC	Indeck-Yerkes Limited Partnership
Astoria Energy, LLC	J-Power USA Development Co., Ltd.
Astoria Generating Company, LP	Koch Supply & Trading, LP
Barclays Bank PLC	Massachusetts Muni. Wholesale Elec. Co.
Boston Generating, LLC	Massachusetts Water Resources Authority
Brick Power Holding, LLC	Millennium Power Partners, LP
Bridgeport Energy, LLC	Mirant Energy Trading, LLC
Brooklyn Navy Yard Cogen Partners, LP	National Grid Gen. dba National Grid
Caithness Long Island, LLC	New Athens Generating Company, LLC
Calpine Energy Services, LP	NextEra Energy Power Marketing, LLC
Castleton Power, LLC	North American Energy Alliance, LLC
Conn. Municipal Electric Energy Coop.	NRG Power Marketing, LLC
ConocoPhillips Company	Panda Brandywine, LP
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
E.ON Energy Trading SE	Selkirk Cogen Partners, LP
EquiPower Resources	TAQA Gen X, LLC
GDF SUEZ Energy Marketing NA, Inc.	TransCanada Power Marketing, Ltd.
Granite Ridge Energy, LLC	Verso Paper Corp.
H.Q. Energy Services (US) Inc.	Vitol Inc.
Hess Corporation	Wing Fuel, LLC