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**RGGI Inc.**



**MARKET MONITOR REPORT  
FOR AUCTION 11**

**Prepared for:**

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

**Prepared By:**

**POTOMAC  
ECONOMICS**

March 11, 2011

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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 11

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 11, which was held on March 9, 2011.

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 CO<sub>2</sub> allowances for the current control period (with 2010 and 2011 vintage years). Thirty-six entities submitted bids to purchase 1.1 times the available supply of allowances, resulting in a clearing price equal to the reserve price of \$1.89 per ton. Compliance entities or their affiliates purchased 85 percent of the allowances in the offering.

A small number of allowances were auctioned for a future control period (with a 2014 vintage year). Seven entities submitted bids to purchase 1.4 times the available supply of allowances, resulting in a clearing price equal to the reserve price of \$1.89 per ton. Compliance entities or their affiliates purchased 56 percent of the allowances in the 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 significant 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 11 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.

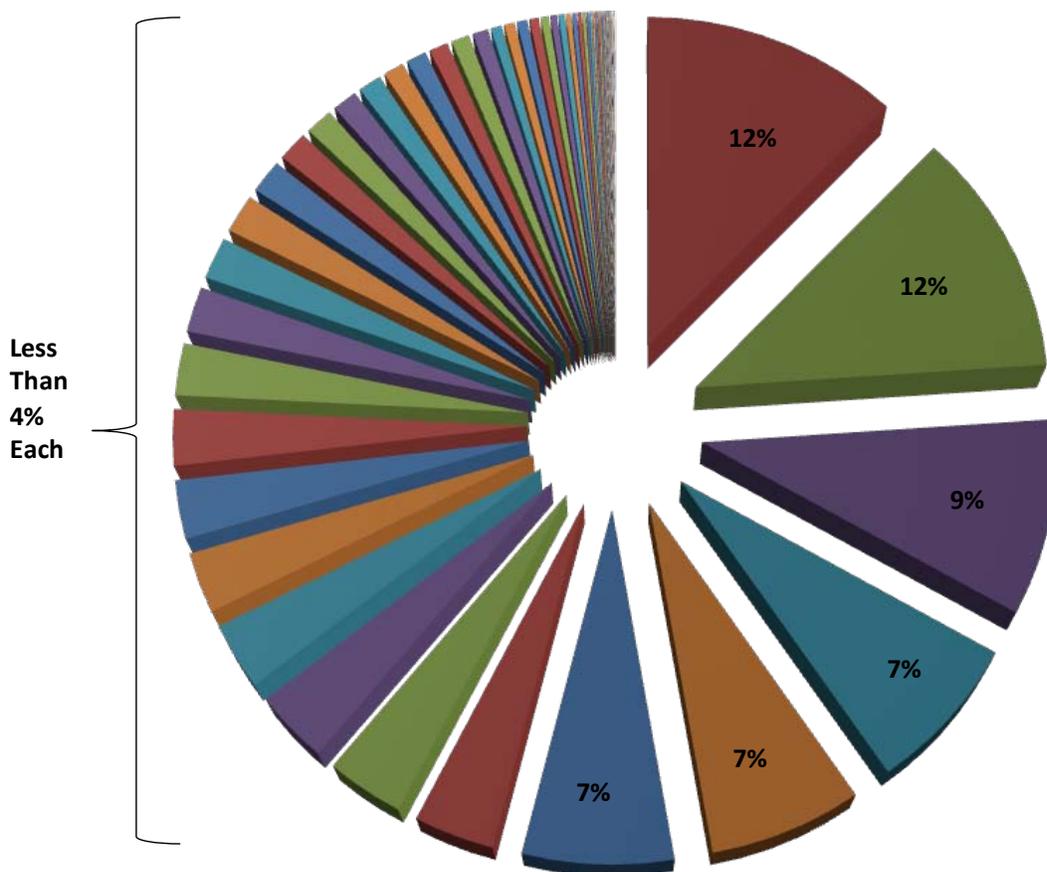
**APPENDIX**

**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 in the current control period. 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 4 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 11

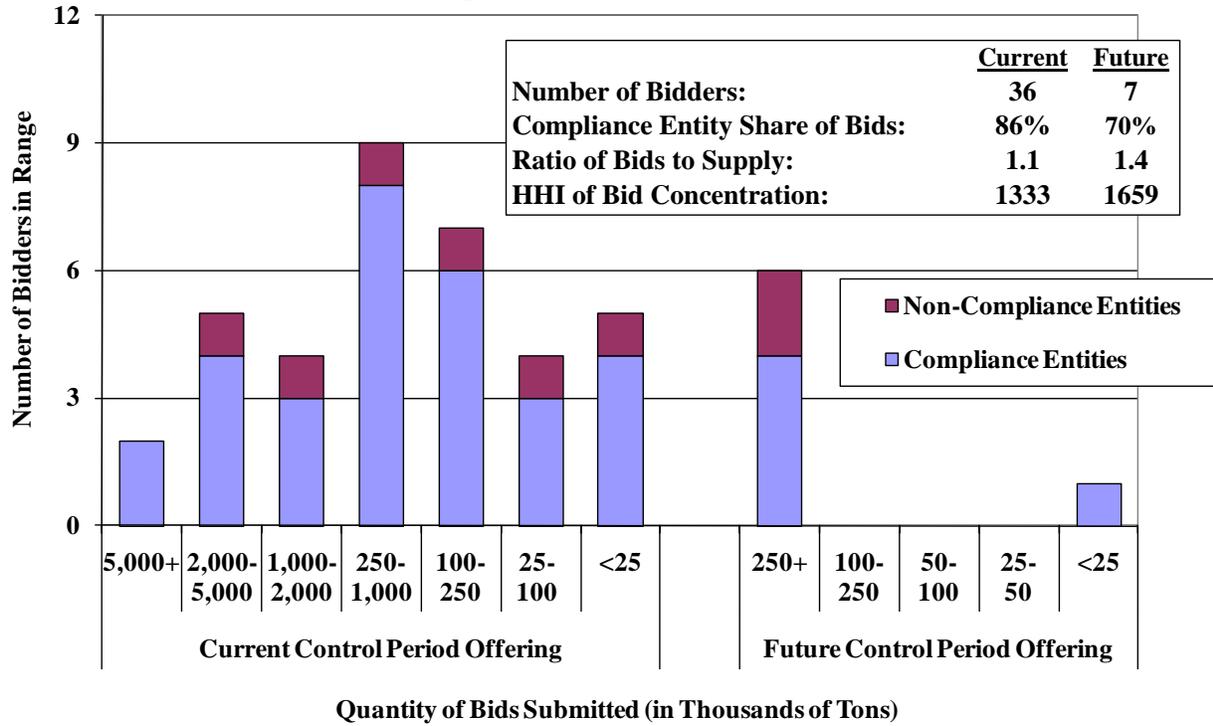
*In the offering of current control period allowances, bids were submitted by a large number of compliance entities and several non-compliance entities. A small number of allowances was also auctioned in advance for a future control period, with participation by five compliance entities or their affiliates and two 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 offering of current control period allowances, six compliance entities and one non-compliance entity submitted bids for a large quantity of allowances (e.g., at least 2 million tons or 5 percent of the available supply). Overall, compliance entities accounted for 86 percent of the quantity of allowances for which bids were submitted in the offering of current control period allowances. The quantity of allowances for which bids were submitted increased to 1.1 times the available supply in Auction 11 from 0.57 times the available supply in Auction 10 and 0.75 times the available supply in Auction 9.

In the offering of future control period allowances, four compliance entities and two non-compliance entities submitted bids for large shares of the allowances for sale (e.g., at least 250 thousand tons or 10 percent of the available supply). Overall, compliance entities accounted for 70 percent of the quantity of allowances for which bids were submitted in the offering of future control period allowances. The quantity of allowances for which bids were submitted was 1.4 times the available supply. This increased from 0.55 times the available supply in Auction 10 and 0.61 times the available supply in Auction 9.

The bid quantities were widely distributed among the 36 bidders in the offering of current control period allowances. The concentration of bids, using the Herfindahl-Hirschman Index (“HHI”), was relatively low at 1333. Fewer entities submitted bids in the offering of future control period allowances, leading the concentration of bids to be higher (1659). 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 11

*In the offering of current control period allowances, awards were widely distributed across 36 bidders with six bidders purchasing two million tons or more, ten bidders purchasing one million tons or more, and 17 bidders purchasing 250,000 tons or more. In the offering of future control period allowances, awards were distributed across six bidders with three bidders purchasing 500,000 tons or more.*

*Compliance entities or their affiliates purchased 85 percent of the allowances in the offering of current control period allowances and 56 percent of the allowances in the offering of future control period 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-subsidary 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 11, compliance entities and their affiliates purchased:
  - ✓ 85 percent of the current control period allowances sold, and
  - ✓ 56 percent of the future control period allowances sold.
- In the first eleven RGGI auctions, compliance entities and their affiliates purchased:
  - ✓ 85 percent of the current control period allowances sold,
  - ✓ 91 percent of the future control period allowances sold, and
  - ✓ 85 percent of all allowances sold.
- Compliance entities and their affiliates will hold 97 percent of the allowances in circulation following the settlement of allowances sold in Auction 11.

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 Current Control Period Allowances Awarded</b>	<b>Bidder</b>	<b>Number of Future Control Period Allowances Awarded</b>
Bidder 1	10,498,000	Bidder 1	536,000
Bidder 2	10,415,000	Bidder 2	536,000
Bidder 3	4,840,000	Bidder 3	536,000
Bidder 4	3,000,000	Bidder 4	400,000
Bidder 5	2,260,000	Bidder 5	124,710
Bidder 6	2,080,000	Bidder 6	12,000
Bidder 7	1,500,000		
Bidder 8	1,100,000		
Bidder 9	1,000,000		
Bidder 10	1,000,000		
Bidder 11	755,000		
Bidder 12	518,000		
Bidder 13	480,000		
Bidder 14	462,000		
Bidder 15	369,000		
Bidder 16	300,000		
Bidder 17	250,000		
Bidder 18	195,000		
Bidder 19	160,000		
Bidder 20	140,000		
Bidder 21	128,813		
Bidder 22	100,000		
Bidder 23	100,000		
Bidder 24	100,000		
Bidder 25	55,000		
Bidder 26	50,000		
Bidder 27	30,000		
Bidder 28	30,000		
Bidder 29	30,000		
Bidder 30	20,000		
Bidder 31	10,000		
Bidder 32	9,000		
Bidder 33	6,000		
Bidder 34	5,000		

**D. SUMMARY OF BID PRICES IN AUCTION 11**

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

	<u>Current</u>	<u>Future</u>
<b>Bid Prices:</b>		
<b>Minimum</b>	<b>\$1.89</b>	<b>\$1.89</b>
<b>Maximum</b>	<b>\$6.39</b>	<b>\$2.06</b>
<b>Average (Median)</b>	<b>\$1.96</b>	<b>\$1.90</b>
<b>Average (Mean)</b>	<b>\$1.97</b>	<b>\$1.96</b>
<b>Clearing Prices:</b>	<b>\$1.89</b>	<b>\$1.89</b>

E. NAMES OF POTENTIAL BIDDERS IN AUCTION 11

In accordance with Section 2.8 of the Auction Notice for CO<sub>2</sub> Allowance Auction 11 on March 9, 2011, the Participating States are releasing the names of Potential Bidders in Auction 11. The states defined potential bidders as: “Each Applicant that has been qualified and submitted a complete *Intent to Bid*.” The list of 49 Potential Bidders is as follows:

AES Eastern Energy, LP	Hess Corporation (G)
Aircraft Services Corporation	Indeck-Corinth Limited Partnership
Algonquin Windsor Locks, LLC	Indeck-Olean Limited Partnership
ANP Funding I, LLC	Indeck-Oswego Limited Partnership
Astoria Generating Company, LP	Indeck-Yerkes Limited Partnership
Brick Power Holding, LLC	J-Power USA Development Co., Ltd.
Bridgeport Energy, LLC	Koch Supply & Trading, LP
Brooklyn Navy Yard Cogen Partners, LP	Logan Generating Company, LP
Caithness Long Island, LLC	Massachusetts Muni. Wholesale Elec. Co.
Calpine Energy Services, LP	Millennium Power Partners, LP
Carbon Lighthouse Association	Morgan Stanley Capital Group, Inc.
Cargill Power Markets, LLC	National Grid Gen. dba National Grid
Castleton Power, LLC	New Athens Generating Company, LLC
Chambers Cogeneration, LP	North American Energy Alliance, LLC
ConocoPhillips Company	NRG Power Marketing, LLC
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
Dynegy Marketing and Trade, LLC	RBC
Empire Generating Co., LLC	Selkirk Cogen Partners, LP
Energy Echelon, LLC	TAQA Gen X, LLC
EquiPower Resources	Verso Paper Corp.
GenOn Energy Management, LLC	Vitol Inc.
Green Mountain Power Corporation	