

## MEMORANDUM

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**TO:** RGGI, Inc.  
RGGI Participating States

**FROM:** David Patton  
Pallas LeeVanSchaick

**DATE:** January 5, 2009

**RE:** Allowance Auction on December 17, 2008

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As the Market Monitor for the RGGI CO<sub>2</sub> allowance market, Potomac Economics monitors the conduct of market participants in both the primary auctions and the secondary market to identify indications of market manipulation or collusion. We also review the administration of the auctions by World Energy. This memorandum summarizes our findings regarding the second RGGI allowance auction, which was held on December 17, 2008.

We observed the auction as it occurred and have completed our review and analysis of its results. Based on our monitoring of participant conduct in the auction, we find no material evidence of collusion or manipulation by bidders. The vast majority of bids were consistent with competitive expectations.

Participation in the auction was robust with 69 separate entities submitting bids to purchase 3.5 times the available supply of allowances in the auction. This liquidity contributed to generating a clearing price that is consistent with the underlying supply and demand fundamentals governing the CO<sub>2</sub> allowance market. It is also encouraging that compliance entities or their affiliates, which should value the allowances most highly, purchased most of the allowances 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 hardware or software problems, communications issues, security breaches, or other problems with the auction platform.

In summary, the results of our monitoring of CO<sub>2</sub> Allowance Auction 2 raise no material concerns regarding the auction process or its results. An appendix to this memo provides additional information about the market for RGGI CO<sub>2</sub> allowances and outcomes of the auction.

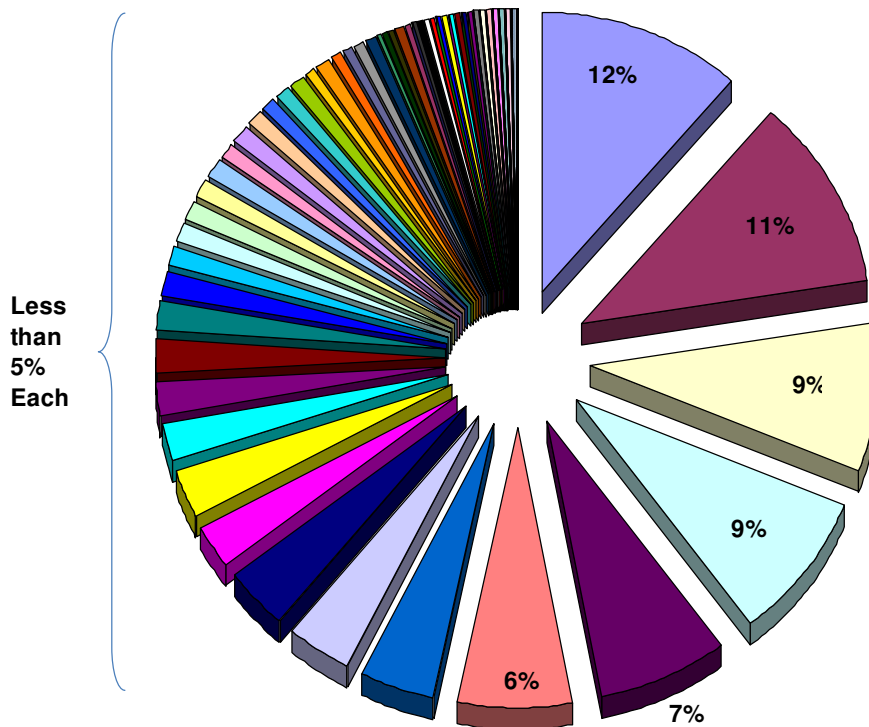
**APPENDIX**

**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 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**



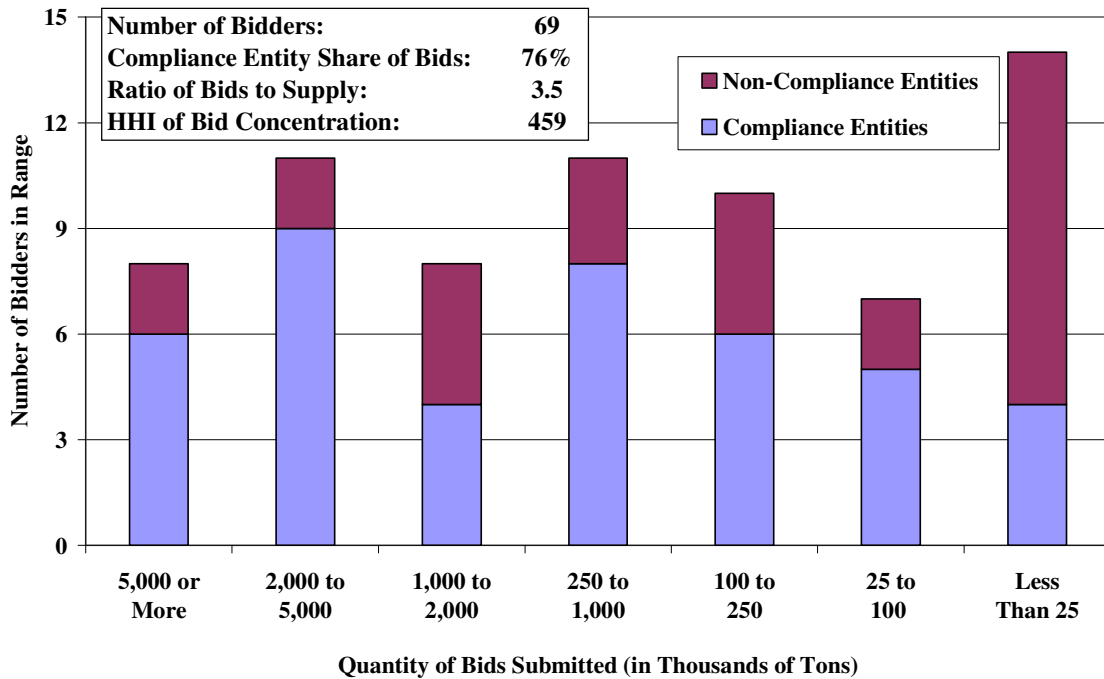
**B. Dispersion of Bids in Auction 2**

*The large amount of bids submitted relative to the available supply and the wide dispersion of bids across both compliance entities and non-compliance entities are positive indicators about the competitiveness of the auction.*

The following figure summarizes the quantity of bids submitted in the auction by 69 bidders. Most of the bidders that submitted a large number of bids (e.g., 2 million tons or more) were compliance entities. Overall, compliance entities accounted for 76 percent of the quantity of bids submitted in the auction.

In addition to demand exceeding supply by 3.5 to 1, the bids quantities were widely distributed among the 69 bidders. The concentration of bids, using the Herfindahl-Hirschman Index (“HHI”), was very low at 459. 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). The low concentration of bids and high ratio of bids to the available supply indicates that the auction was liquid.

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



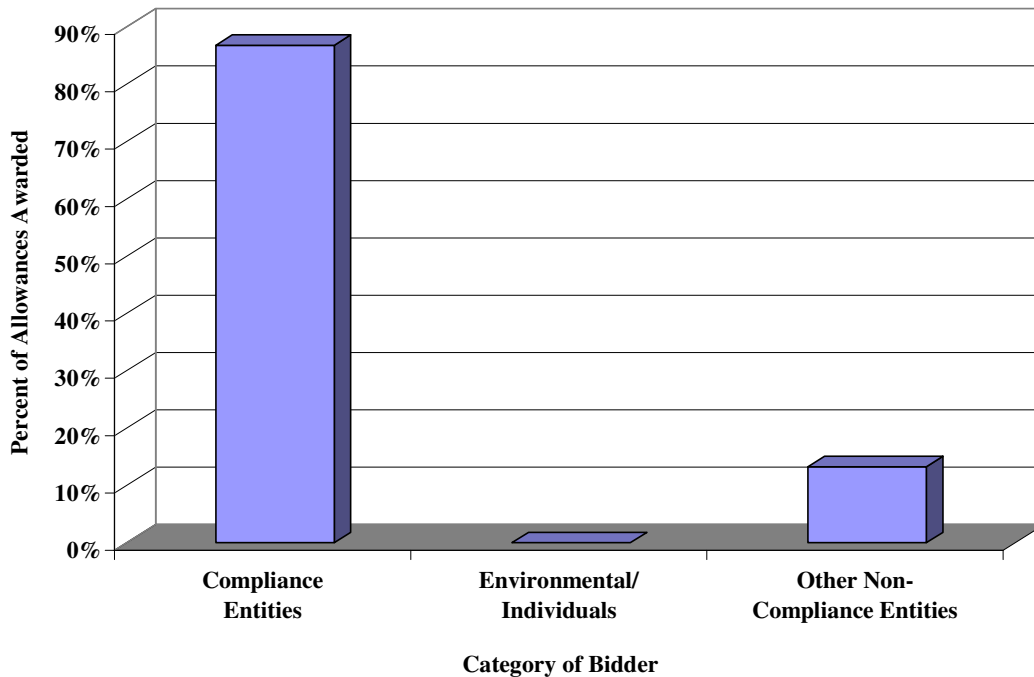
**C. Summary of Purchases of Allowances in Auction 2**

*The purchase of most allowances by compliance entities and their affiliates is encouraging, because compliance entities generally value the allowances most highly. Awards were widely distributed across 46 bidders with four bidders purchasing two million tons or more, seven bidders purchasing one million tons or more, and 17 bidders purchasing 250,000 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 in the auction. The identity of each bidder is masked, and the bidders are ranked according to the amount of allowances awarded in the auction, from largest to smallest.

**Table 1: Quantity of Allowances Awarded by Bidder**

<b>Bidder</b>	<b>Number of Allowances Awarded</b>
Bidder 1	7,876,000
Bidder 2	5,150,000
Bidder 3	3,762,898
Bidder 4	2,250,000
Bidder 5	1,637,000
Bidder 6	1,580,000
Bidder 7	1,375,000
Bidder 8	959,000
Bidder 9	870,000
Bidder 10	820,000
Bidder 11	750,000
Bidder 12	650,000
Bidder 13	605,000
Bidder 14	517,000
Bidder 15	500,000
Bidder 16	300,000
Bidder 17	250,000
Bidder 18	243,000
Bidder 19	200,000
Bidder 20	200,000
Bidder 21	150,000
Bidder 22	150,000
Bidder 23	125,000
Bidder 24	105,000
Bidder 25	100,000
Bidder 26	100,000
Bidder 27	60,000
Bidder 28	50,000
Bidder 29	50,000
Bidder 30	29,000
Bidder 31	24,000
Bidder 32	15,000
Bidder 33	10,000
Bidder 34	10,000
Bidder 35	7,000
Bidder 36	6,000
Bidder 37	5,000
Bidder 38	3,000
Bidder 39	3,000
Bidder 40	2,000
Bidder 41	2,000
Bidder 42	1,000
Bidder 43	1,000
Bidder 44	1,000
Bidder 45	1,000
Bidder 46	1,000

**D. Summary of Bid Prices in Auction 2**

*The distribution of bid prices submitted in the auction indicates that the demand for allowances was 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 2. The median and mean bid prices are weighted by the quantity of each bid.

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<b>Bid Prices:</b>	
<b>Minimum</b>	<b>\$1.86</b>
<b>Maximum</b>	<b>\$7.20</b>
<b>Average (Median)</b>	<b>\$3.00</b>
<b>Average (Mean)</b>	<b>\$3.03</b>

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**E. Names of Potential Bidders in Auction 2**

In accordance with Section 2.8 of the Auction Notice for CO2 Allowance Auction 2 on December 17, 2008, the Participating States are releasing the names of Potential Bidders in Auction 2. The states defined potential bidders as; “Each Applicant that has been qualified and submitted a complete *Intent to Bid.*” The list of 84 Potential Bidders is as follows:

Adirondack Council Inc.	James S.Burrell II
Aeolus Fund II Master Fund, Ltd.	Jamestown Board of Public Utilities
AES Eastern Energy, LP	JP Morgan Ventures Energy Corporation
Aircraft Services Corporation	Laurence DeWitt
Allegheny Energy Supply Company, LLC	Logan Generating Company, LP
ANP Funding I, LLC	Louis Dreyfus Energy Services, LP
Astoria Energy	Massachusetts Muni. Wholesale Elec. Co.
Astoria Generating Company, LP	Massachusetts Water Resources Authority
Barclays Bank PLC	Maxim Power Corp.
Boston Generating, LLC	Merrill Lynch Commodities, Inc.
Brick Power Holding, LLC	Milford Power Company, LLC
Brookfield Energy Marketing Inc.	Millennium Power Partners, LP
Calpine Energy Services, LP	Mirant Energy Trading, LLC
CE2 Carbon Capital, LLC	Morgan Stanley Capital Group, Inc.
CE2 Environmental Markets, LP	National Grid Gen. dba National Grid
CE2 Environmental Opportunities I, LP	New Athens Generating Company, LLC
Chambers Cogeneration, LP	North American Energy Alliance, LLC
Clean Air Conservancy	NRG Power Marketing, LLC
Conectiv Energy Services, Inc.	Old Dominion Electric Cooperative
Conn. Municipal Electric Energy Coop.	Power Authority of the State of New York
Consolidated Edison Energy, Inc.	PPL EnergyPlus, Inc.
Constellation Energy Commodities Group, Inc.	PSEG Energy Resources & Trade, LLC
C-Quest Capital, LLC	Public Service Company of New Hampshire
DC Energy Marketing, LLC	RBC
Dominion Energy Marketing, Inc.	RC Cape May Holdings, LLC
Dynegy Marketing and Trade	Rochester Gas and Electric Corporation
Eco-Energy	RPL Holdings, Inc.
Element Markets, LLC	Saranac Power Partners
Energy America, LLC	Selkirk Cogen Partners, LP
Evolution Markets, Inc.	Sempra Energy Trading, LLC
FirstLight Power Resources Mgmt, LLC	Seventh Generation Advisors
FPL Energy Power Marketing, Inc.	Shell Energy North America (US), LP
Global Inv. Alternatives Group, Ltd.	Statkraft Markets GmbH
Green Mountain Power	Sterling Planet, Inc.
Hess Corporation Green	SUEZ Energy Marketing NA, Inc.
Indeck Energy Services of Silver Springs, Inc.	Tradax Energy, Inc.
Indeck-Corinth Limited Partnership	TransCanada Power Marketing Ltd.
Indeck-Olean Limited Partnership	Universal Carbon, LLC
Indeck-Oswego Limited Partnership	Village of Freeport
Indeck-Yerkes Limited Partnership	Vitol Inc.
Integrays Energy Services, Inc.	William P Short III
J. Aron & Company	Wing Fuel, LLC