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## **CO<sub>2</sub> Allowances Sold for \$3.55 in 34<sup>th</sup> RGGI Auction**

*\$52.5 Million Raised for Reinvestment in Fourth Auction of 2016*

NEW YORK — The nine Northeastern and Mid-Atlantic states participating in the Regional Greenhouse Gas Initiative (RGGI), the nation's first market-based regulatory program to reduce greenhouse gas (GHG) pollution, today announced the results of their 34<sup>th</sup> auction of carbon dioxide (CO<sub>2</sub>) allowances.

14,791,315 CO<sub>2</sub> allowances were sold at the auction at a clearing price of \$3.55. Bids for the CO<sub>2</sub> allowances ranged from \$2.10 to \$13.75 per allowance. Additional details are available in the [Market Monitor Report for Auction 34](#), which is also appended.

The December 7<sup>th</sup> auction was the fourth and final auction of 2016, and generated \$52.5 million for reinvestment in strategic programs, including energy efficiency, renewable energy, direct bill assistance, and GHG abatement programs. Cumulative proceeds from all RGGI CO<sub>2</sub> allowance auctions exceed \$2.6 billion dollars.

Ten million cost containment reserve (CCR) allowances were also available for sale. No CCR allowances were sold. The CCR is a fixed additional supply of allowances that are only available for sale if CO<sub>2</sub> allowance prices exceed certain price levels (\$8 in 2016, \$10 in 2017, and rising by 2.5 percent each year thereafter to account for inflation).

"The elements that made RGGI such a successful program at its inception are just as relevant today. The use of a market-based system to cap emissions allows for the most cost-effective reductions. And the auctioning of allowances and the reinvestment of auction proceeds provides benefits for consumers while locking in emissions reductions. The program's flexibility allows it to adapt to changing circumstances and support the goals of nine states across a diverse region," said Katie Dykes, Chair of the Connecticut Public Utilities Regulatory Authority and also Chair of the RGGI, Inc. Board of Directors.

"Our experience with RGGI shows that there is no need to choose between pollution reductions and economic growth – we can enjoy both at the same time because they are mutually supportive," said Tom Burack, Commissioner of the New Hampshire Department of Environmental Services, and Secretary of the RGGI, Inc. Board of Directors. "The reinvestment of auction proceeds generates savings for consumers and keeps costs low. New Hampshire has invested in direct bill assistance to ratepayers, as well as energy efficiency measures which continue generating savings year after year. RGGI has helped to fund these investments and build a cleaner, more reliable, and more affordable electric system across the region."

Auction 34 Results At-A-Glance	
Auction Date	Dec. 7, 2016
Allowances Offered for Sale	14,791,315
Allowances Sold	14,791,315
Ratio of Bids to Supply	2.4
Clearing Price	\$3.55
Reserve Price	\$2.10
Proceeds from Auction 34	\$52,509,168.25
Total Cumulative Proceeds (All Auctions)	\$2,637,489,039.04
Number of Bidders in Auction 34	33
Percent of Allowances Purchased by Compliance-Oriented Entities in Auction 34	40%
Percent of Allowances Purchased by Compliance Entities in Auction 34	71%
Percent of Allowances Purchased by Compliance Entities in Auctions 1 - 34	77%

More auction data is also available at: [http://www.rggi.org/market/co2\\_auctions/results](http://www.rggi.org/market/co2_auctions/results).

Market monitor reports are available at: [http://www.rggi.org/market/market\\_monitor](http://www.rggi.org/market/market_monitor)

To receive announcements relating to future auctions and other RGGI news, please join the RGGI, Inc. mailing list at [http://www.rggi.org/news/mailling\\_list](http://www.rggi.org/news/mailling_list).

### **About the Regional Greenhouse Gas Initiative**

The Northeast and Mid-Atlantic states participating in the third RGGI control period (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont) have implemented the first mandatory market-based regulatory program in the U.S. to reduce greenhouse gas emissions. The 2016 RGGI cap is 86.5 million short tons. The RGGI cap declines 2.5 percent each year until 2020. The RGGI states also include interim adjustments to the RGGI cap to account for banked CO<sub>2</sub> allowances. The 2016 RGGI adjusted cap is 64.6 million short tons.

RGGI is composed of individual CO<sub>2</sub> budget trading programs in each state, based on each state's independent legal authority. A CO<sub>2</sub> allowance represents a limited authorization to emit one short ton of CO<sub>2</sub>, as issued by a respective state. A regulated power plant must hold CO<sub>2</sub> allowances equal to its emissions for each three-year control period. RGGI's third control period began on January 1, 2015 and extends through December 31, 2017. For more information visit [www.rggi.org](http://www.rggi.org).

### **About Regional Greenhouse Gas Initiative, Inc.**

Regional Greenhouse Gas Initiative, Inc. (RGGI, Inc.) was created to provide technical and administrative services to the states participating in the Regional Greenhouse Gas Initiative. RGGI, Inc. is a 501(c)(3) nonprofit organization. For more information, visit: [www.rggi.org/rggi](http://www.rggi.org/rggi)

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**RGGI Inc.**



**MARKET MONITOR REPORT  
FOR AUCTION 34**

**Prepared for:**

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

**Prepared By:**

**POTOMAC  
ECONOMICS**

December 9, 2016

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This report was prepared by Potomac Economics (the contractor) in the course of performing work contracted for and sponsored by RGGI, Inc. on behalf of states participating in RGGI (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont). The opinions expressed in this report do not necessarily reflect those of RGGI, Inc. or any of the states participating in RGGI, and reference to any specific product, service, process, or method does not constitute an implied or expressed recommendation or endorsement of it. Further, RGGI, Inc., the states participating in RGGI, and the contractor make no warranties or representations, expressed or implied, as to the fitness for particular purpose or merchantability of any product, apparatus, or service, or the usefulness, completeness, or accuracy of any processes, methods, or other information contained, described, disclosed, or referred to in this report. RGGI, Inc., the states participating in RGGI, and the contractor make no representation that the use of any product, apparatus, process, method, or other information will not infringe privately owned rights and will assume no liability for any loss, injury, or damage resulting from, or occurring in connection with, the use of information contained, described, disclosed, or referred to in this report.

The Regional Greenhouse Gas Initiative (RGGI) is the first mandatory market-based regulatory program in the U.S. to reduce greenhouse gas emissions. RGGI is a cooperative effort of Northeast and Mid-Atlantic states to reduce emissions of carbon dioxide (CO<sub>2</sub>) from the power sector.

RGGI, Inc. is a non-profit corporation created to provide technical and administrative services to the states participating in the Regional Greenhouse Gas Initiative.

## MARKET MONITOR REPORT FOR AUCTION 34

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 EnerNOC, Inc. This report summarizes our findings regarding RGGI Auction 34, which was held on December 7, 2016.

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.

Thirty-three bidders participated in the offering of CO<sub>2</sub> allowances. Bids were submitted to purchase 2.4 times the available supply of allowances, resulting in a clearing price of \$3.55 per ton. Compliance-Oriented Entities purchased 40 percent of the allowances in the offering. There was no indication of barriers to participation 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 issues with the auction platform such as hardware or software problems, communications issues, or security breaches.

In summary, the results of our monitoring of RGGI Auction 34 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.

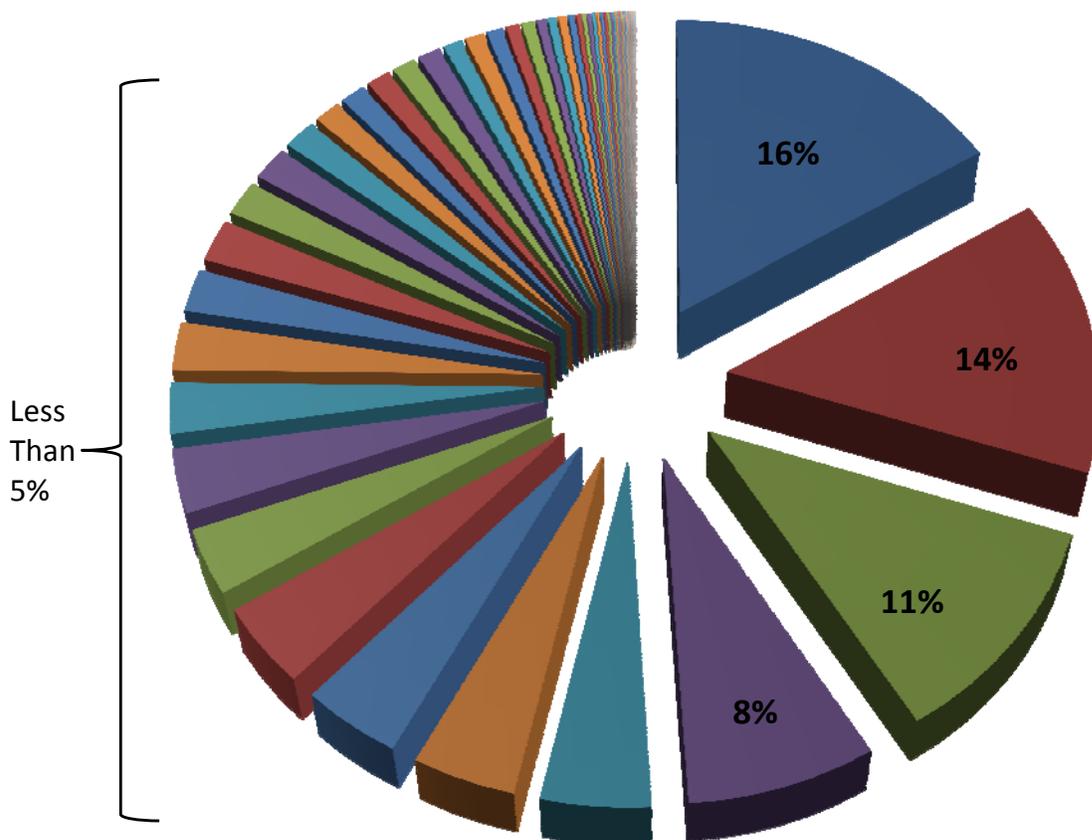
**APPENDIX**

**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 16 percent of the total projected demand for allowances. 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. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 34

*Awards were distributed across 29 bidders with five bidders purchasing one million tons or more and nine bidders purchasing 300,000 tons or more.*

This report summarizes participation for three categories: Compliance Entities<sup>1</sup>; Compliance-Oriented Entities and Other Entities.

- *Compliance Entities* – Includes firms with compliance obligations.
- *Compliance-Oriented Entities* – Includes compliance entities that appear to acquire and hold allowances primarily to satisfy their compliance obligations.
- *Other Entities* – Includes:
  - ✓ Firms without any compliance obligations, and
  - ✓ Firms that have compliance obligations but which hold a number of allowances that exceeds their estimated compliance obligations by a margin that suggests they are also buying for re-sale or some other investment purpose.<sup>2</sup>

In Auction 34, Compliance Entities purchased 71 percent of the allowances sold. In the first 34 RGGI auctions, Compliance Entities purchased 77 percent of the allowances sold. In Auction 34, Compliance-Oriented Entities purchased 40 percent of the allowances sold.

After settlement of allowances sold in Auction 34:

- Fifty-three percent of the allowances in circulation will be held by Compliance-Oriented Entities.
- Fifty-nine percent of the allowances in circulation are believed to be held for compliance purposes. The number of allowances that are believed to be held for compliance purposes includes 100 percent of the allowances held by Compliance-Oriented Entities and a portion of allowances held by Other Entities for compliance purposes.

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<sup>1</sup> This includes affiliates of the compliance entity, including 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.

<sup>2</sup> The assessment of whether a compliance entity holds a number of allowances that exceeds its compliance obligations by a margin that suggests they are also buying for re-sale or some other investment purpose is based on: (a) the entity's forecasted share of the total compliance obligations for the entire RGGI footprint through 2020 and (b) the total number of allowances in circulation.

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 Allowances Awarded</b>
<b>Bidder 1</b>	<b>3,697,000</b>
<b>Bidder 2</b>	<b>2,773,000</b>
<b>Bidder 3</b>	<b>2,618,315</b>
<b>Bidder 4</b>	<b>1,001,000</b>
<b>Bidder 5</b>	<b>1,000,000</b>
<b>Bidder 6</b>	<b>900,000</b>
<b>Bidder 7</b>	<b>407,000</b>
<b>Bidder 8</b>	<b>311,000</b>
<b>Bidder 9</b>	<b>300,000</b>
<b>Bidder 10</b>	<b>278,000</b>
<b>Bidder 11</b>	<b>250,000</b>
<b>Bidder 12</b>	<b>240,000</b>
<b>Bidder 13</b>	<b>150,000</b>
<b>Bidder 14</b>	<b>125,000</b>
<b>Bidder 15</b>	<b>100,000</b>
<b>Bidder 16</b>	<b>90,000</b>
<b>Bidder 17</b>	<b>75,000</b>
<b>Bidder 18</b>	<b>66,000</b>
<b>Bidder 19</b>	<b>65,000</b>
<b>Bidder 20</b>	<b>62,000</b>
<b>Bidder 21</b>	<b>60,000</b>
<b>Bidder 22</b>	<b>55,000</b>
<b>Bidder 23</b>	<b>50,000</b>
<b>Bidder 24</b>	<b>40,000</b>
<b>Bidder 25</b>	<b>33,000</b>
<b>Bidder 26</b>	<b>14,000</b>
<b>Bidder 27</b>	<b>12,000</b>
<b>Bidder 28</b>	<b>10,000</b>
<b>Bidder 29</b>	<b>9,000</b>

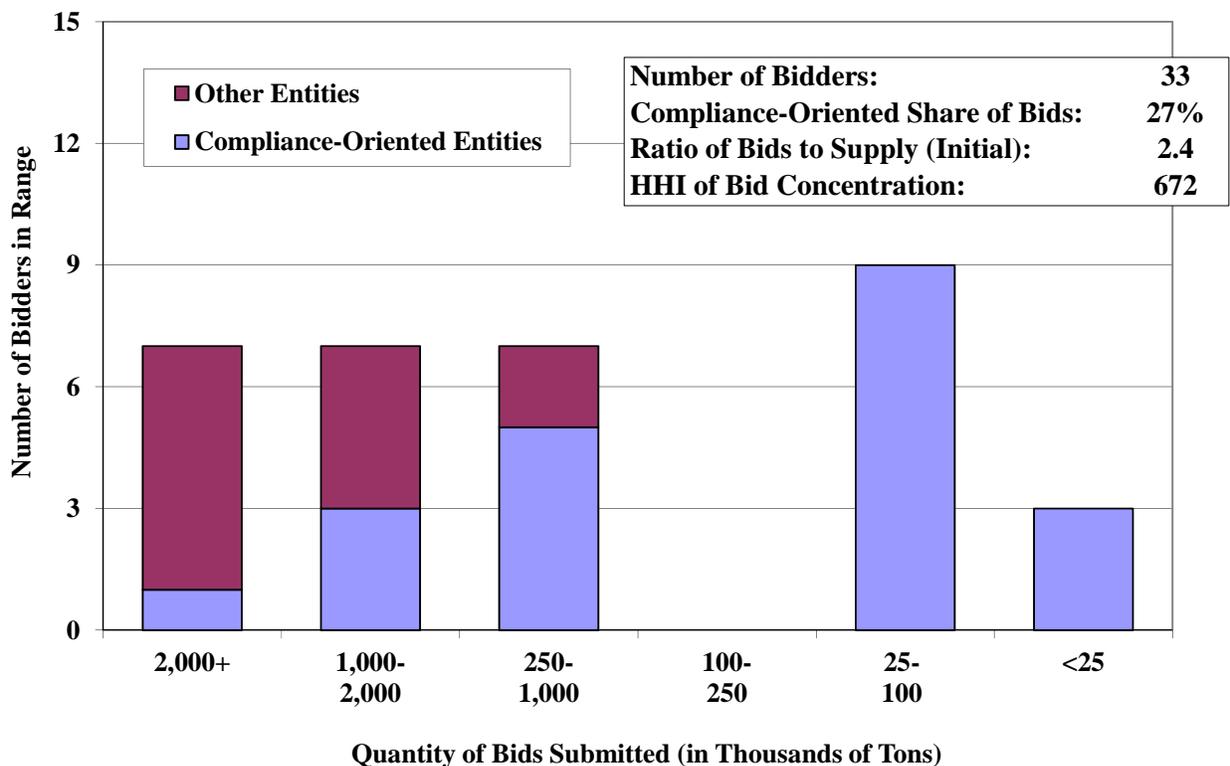
**C. DISPERSION OF BIDS IN AUCTION 34**

*Bids were submitted by 21 Compliance-Oriented Entities and 12 Other Entities. In our review of the bids and the qualification process, we found no material evidence of anti-competitive conduct or inappropriate barriers to participation.*

The following figure summarizes the quantity of allowances for which bids were submitted by each bidder. One Compliance-Oriented Entity and six Other Entities submitted bids for a large quantity of allowances (i.e., at least 2 million tons). Overall, Compliance-Oriented Entities accounted for 27 percent of the quantity of allowances for which bids were submitted. The quantity of allowances for which bids were submitted was 2.4 times the available supply. In Auction 33, the quantity of allowances for which bids were submitted was 2.8 times the Initial Offering.

The bid quantities were widely distributed among the 33 bidders. The concentration of bids, using the Herfindahl-Hirschman Index (“HHI”), is relatively low at 672, consistent with recent auctions. The HHI is a standard measure of concentration calculated by squaring each entity’s share and then summing the squares across all entities (i.e., the index ranges from 0 to 10,000).

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



**D. SUMMARY OF BID PRICES IN AUCTION 34**

*Bids were submitted across a wide range of prices in the auction and the clearing price of \$3.55 was relatively consistent with average bid prices submitted.*

The following table reports several statistics regarding the bid prices for bids submitted in Auction 34. 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>\$2.10</b>
<b>Maximum</b>	<b>\$13.75</b>
<b>Average (Median)</b>	<b>\$3.46</b>
<b>Average (Mean)</b>	<b>\$3.40</b>
<b>Clearing Price:</b>	<b>\$3.55</b>

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**E. NAMES OF POTENTIAL BIDDERS IN AUCTION 34**

In accordance with Sections 2.8 and 3 of the Auction Notice for CO<sub>2</sub> Allowance Auction 34, the Participating States are releasing the names of Potential Bidders in Auction 34. The states defined potential bidders as: “Each Applicant that has been qualified and submitted a complete *Intent to Bid.*” The list of 48 Potential Bidders is as follows:

Astoria Energy, LLC	Kendall Green Energy, LLC
Biourja Nehme Commodities, LLC	KMC Thermo, LLC
BP Products North America Inc.	Koch Supply & Trading, LP
Brooklyn Navy Yard Cogen Partners, LP	Luminus Energy Partners Master Fund, Ltd.
Caithness Long Island, LLC	Macquarie Energy, LLC
Calpine Energy Services, LP	Massachusetts Muni. Wholesale Elec. Co.
Castleton Commodities Merchant Trading, LP	Maxim Power (USA), Inc.
Cayuga Operating Company, LLC	Mercuria Energy America, Inc.
City of Dover	Morgan Stanley Capital Group, Inc.
Consolidated Edison Comp. of NY, Inc.	National Grid Gen. dba National Grid
Delaware City Refining Company, LLC	NextEra Energy Power Marketing, LLC
Delaware Municipal Electric Corp.	NRG Power Marketing, LLC
Direct Energy Business Marketing, LLC	Old Dominion Electric Cooperative
Dominion Energy Marketing, Inc.	Power Authority of the State of New York
DRW Commodities, LLC	PSEG Energy Resources & Trade, LLC
DTE Energy Trading, Inc.	Public Service Company of New Hampshire
Energie Row, LLC	RBC
Exelon Generation Company, LLC	Selkirk Cogen Partners, LP
Five Rings Capital, LLC	Statkraft Markets GmbH
GDF SUEZ Energy Marketing NA, Inc.	Taunton Municipal Lighting Plant
GenOn Energy Management, LLC	Verso Corporation
Hawkeye Energy Greenport	Village of Freeport
Indeck-Corinth Limited Partnership	Vitol Inc.
J-Power USA Development Co., Ltd.	Wallingford Energy, LLC