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CO₂ Allowances Sold for \$5.25 in 31st RGGI Auction

\$77.9 Million Raised for Reinvestment in First 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 31^{st} auction of carbon dioxide (CO₂) allowances.

14,838,732 CO₂ allowances were sold at the auction at a clearing price of \$5.25. Bids for the CO₂ allowances ranged from \$2.10 to \$10.46 per allowance. Additional details are available in the <u>Market Monitor Report for Auction 31</u>, which is also appended.

The March 9th auction was the first auction of 2016, and generated \$77.9 million for reinvestment in strategic programs, including energy efficiency, renewable energy, direct bill assistance, and GHG abatement programs. Cumulative proceeds from all RGGI CO₂ allowance auctions exceed \$2.4 billion dollars.

10 million cost containment reserve (CCR) allowances were also available for sale. None of the CCR allowances were sold. The CCR is a fixed additional supply of allowances that are only available for sale if CO_2 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). All 10 million CCR allowances remain available for sale in 2016.

"With the first auction of 2016, the RGGI states build on a seven-year track record of successfully working together to reduce harmful carbon pollution from the power sector," said Katie Dykes, Deputy Commissioner at the Connecticut Department of Energy and Environmental Protection, and Chair of the RGGI, Inc. Board of Directors. "Our 2016 Program Review is moving ahead, and with input from stakeholders and experts we look forward to continuing to improve our trailblazing program."

Auction 31 Results At-A-Glance		
Auction Date	Mar. 9, 2016	
Allowances Offered for Sale	14,838,732	
Allowances Sold	14,838,732	
Ratio of Bids to Supply	3.5	
Clearing Price	\$5.25	
Reserve Price	\$2.10	
Proceeds from Auction 31	\$77,903,343.00	
Total Cumulative Proceeds (All Auctions)	\$2,448,926,377.13	
Number of Bidders in Auction 31	46	
Percent of Allowances Purchased by Compliance Entities & their Affiliates in Auction 31	67%	
Percent of Allowances Purchased by Compliance Entities & their Affiliates in Auctions 1-31	77%	
Percent of Allowances Purchased by Compliance- Oriented Entities in Auction 31	59%	

More auction data is also available at: <u>http://www.rggi.org/market/co2_auctions/results</u>.

Market monitor reports are available at: <u>http://www.rggi.org/market/market_monitor</u>

To receive announcements relating to future auctions and other RGGI news, please join the RGGI, Inc. mailing list at <u>http://www.rggi.org/news/mailing_list</u>.

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 CO₂ allowances. The 2016 RGGI adjusted cap is 64.6 million short tons.

RGGI is composed of individual CO₂ budget trading programs in each state, based on each state's independent legal authority. A CO₂ allowance represents a limited authorization to emit one short ton of CO₂, as issued by a respective state. A regulated power plant must hold CO₂ 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 <u>www.rggi.org</u>.

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: <u>www.rggi.org/rggi</u>.



MARKET MONITOR REPORT FOR AUCTION 31

Prepared for:

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

Prepared By:



March 11, 2016



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_2) 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 31

As the Market Monitor for the RGGI CO_2 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 31, which was held on March 9, 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.

Forty-six bidders participated in the offering of CO_2 allowances. Bids were submitted to purchase 3.5 times the available supply of allowances, resulting in a clearing price of \$5.25 per ton. Compliance-oriented entities purchased 59 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 31 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_2 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.

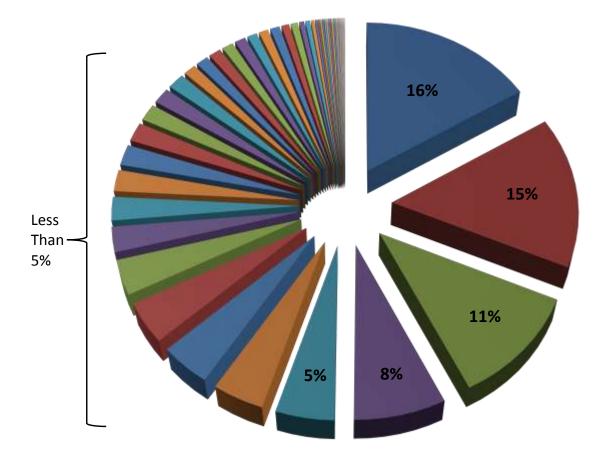


Figure 1: Projected Demand for RGGI Allowances Shares by Compliance Entity



B. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 31

Awards were distributed across 39 bidders with six bidders purchasing one million tons or more and 16 bidders purchasing 300,000 tons or more.

This report summarizes participation by compliance entities and their affiliates.¹ In Auction 31, compliance entities and their affiliates purchased 67 percent of the allowances sold. In the first 31 RGGI auctions, all compliance entities and their affiliates purchased 77 percent of the allowances sold.

We also separately report the purchases and holdings of allowances for:

- *Compliance-Oriented Entities*: This includes most compliance entities and their affiliates. This category excludes 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.²
- Other Entities: This includes all other entities.

The following statistics summarize the purchases and holdings of allowances by type of participant under the RGGI program:

- In Auction 31, compliance-oriented entities purchased 59 percent of the allowances sold.
- After settlement of allowances sold in Auction 31, 50 percent of the allowances in circulation will be held by firms that are believed to hold them for compliance purposes.³

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.

¹ 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.

² 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.

³ 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 compliance entities (i.e., compliance entities that are not included in the compliance-oriented category). Note this calculation treats allowances surrendered for 2015 Interim Compliance as no longer in circulation.

Bidder	Number of Allowances Awarded
Bidder 1	1,600,000
Bidder 2	1,500,000
Bidder 3	1,250,000
Bidder 4	1,250,000
Bidder 5	1,200,000
Bidder 6	1,000,000
Bidder 7	665,000
Bidder 8	660,732
Bidder 9	652,000
Bidder 10	625,000
Bidder 11	590,000
Bidder 12	570,000
Bidder 13	550,000
Bidder 14	417,000
Bidder 15	350,000
Bidder 16	332,000
Bidder 17	250,000
Bidder 18	230,000
Bidder 19	160,000
Bidder 20	141,000
Bidder 21	135,000
Bidder 22	115,000
Bidder 23	100,000
Bidder 24	100,000
Bidder 25	100,000
Bidder 26	75,000
Bidder 27	69,000
Bidder 28	33,000
Bidder 29	23,000
Bidder 30	17,000
Bidder 31	16,000
Bidder 32	14,000
Bidder 33	10,000
Bidder 34	10,000 10,000
Bidder 35 Bidder 36	8,000
Bidder 30	7,000
Bidder 38	3,000
Bidder 39	1,000

Table 1: Quantity of Allowances Awarded by Bidder



C. DISPERSION OF BIDS IN AUCTION 31

Bids were submitted by 30 compliance-oriented entities and 16 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. Four compliance-oriented entities and seven other entities submitted bids for a large quantity of allowances (i.e., at least 2 million tons). Overall, compliance-oriented entities accounted for 41 percent of the quantity of allowances for which bids were submitted. The quantity of allowances for which bids were submitted was 3.5 times the available supply. In Auction 30, the quantity of allowances for which bids were submitted was 3.0 times the Initial Offering.

The bid quantities were widely distributed among the 46 bidders. The concentration of bids, using the Herfindahl-Hirschman Index ("HHI"), is relatively low at 522, 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).

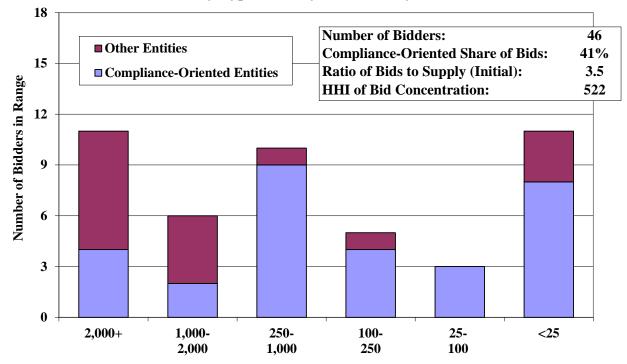


Figure 2: Quantity of Bids Submitted by Entity By Type of Entity and Quantity Bid

Quantity of Bids Submitted (in Thousands of Tons)



D. SUMMARY OF BID PRICES IN AUCTION 31

Bids were submitted across a wide range of prices in the auction and the clearing price of \$5.25 was relatively consistent with average bid prices submitted.

The following table reports several statistics regarding the bid prices for bids submitted in Auction 31. The median and mean bid prices are weighted by the quantity of each bid.

Bid Prices:	
Minimum	\$2.10
Maximum	\$10.46
Average (Median)	\$4.75
Average (Mean)	\$4.41
Clearing Price:	\$5.25





E. NAMES OF POTENTIAL BIDDERS IN AUCTION 31

In accordance with Sections 2.8 and 3 of the Auction Notice for CO_2 Allowance Auction 31, the Participating States are releasing the names of Potential Bidders in Auction 31. The states defined potential bidders as: "Each Applicant that has been qualified and submitted a complete *Intent to Bid.*" The list of 57 Potential Bidders is as follows:

Astoria Energy, LLC Berkshire Power Company, LLC Blue Delta Energy, LLC BP Products North America Inc. Brooklyn Navy Yard Cogen Partners, LP Caithness Long Island, LLC Calpine Energy Services, LP Carbon Lighthouse Association Castleton Commodities Merchant Trading, LP Castleton Power, LLC City of Dover Consolidated Edison Comp. of NY, Inc. Covanta Niagara I, LLC Delaware City Refining Company, LLC Delaware Municipal Electric Corp. Direct Energy Business Marketing, LLC Dominion Energy Marketing, Inc. DRW Commodities, LLC DTE Energy Trading, Inc. EDF Trading North America, LLC Energie Row, LLC Essential Power, LLC Exelon Generation Company, LLC Five Rings Capital, LLC GDF SUEZ Energy Marketing NA, Inc. GenOn Energy Management, LLC Hawkeye Energy Greenport Indeck-Corinth Limited Partnership Indeck-Oswego Limited Partnership

Indeck-Yerkes Limited Partnership Jamestown Board of Public Utilities J-Power USA Development Co., Ltd. Kendall Green Energy, LLC Kleen Energy Systems, LLC KMC Thermo, LLC Koch Supply & Trading, LP Luminus Energy Partners Master Fund, Ltd. Macquarie Energy, LLC Maxim Power (USA), Inc. Mercuria Energy America, Inc. Morgan Stanley Capital Group, Inc. National Grid Gen. dba National Grid NextEra Energy Power Marketing, LLC NRG Power Marketing, LLC Old Dominion Electric Cooperative Power Authority of the State of New York PSEG Energy Resources & Trade, LLC Public Service Company of New Hampshire RBC Selkirk Cogen Partners, LP Talen Energy Marketing, LLC **Taunton Municipal Lighting Plant** TransCanada Power Marketing, Ltd. Upstate New York Power Producers, LLC Verso Corporation Vitol Inc. Wallingford Energy, LLC