



June 11, 2010

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# RGGI CO<sub>2</sub> Auction Fuels Clean Energy Economy With \$80.4 Million in Proceeds

Current Control Period Allowances Sold at \$1.88 Future Control Period Allowances Sold at \$1.86

(NEW YORK, NY) – The ten states participating in the Regional Greenhouse Gas Initiative (RGGI), the nation's first mandatory, market-based program to reduce greenhouse gas emissions, today announced the results of the second quarterly auction of carbon dioxide (CO<sub>2</sub>) allowances in 2010. The auction, held Wednesday, June 9<sup>th</sup>, yielded \$80,465,566.78 for states to invest in the clean energy economy.

40,685,585 CO<sub>2</sub> allowances for the first three-year control period (2009-2011) offered in Wednesday's auction sold at a price of \$1.88.

In a parallel offering, the RGGI states also auctioned CO<sub>2</sub> allowances for the second three-year control period (2012-2014). A total of 2,137,993 CO<sub>2</sub> allowances for the second control period sold at a price of \$1.86.

"Wednesday's auction continues RGGI's track record of successful implementation," said David Littell, Commissioner of the Maine Department of Environmental Protection and Chair of the RGGI, Inc. Board of Directors. "As we work to advance legislation at the federal level, the RGGI programs continue to be a model for strong national policy, developing best practices for the implementation of cap-and-trade programs."

Proceeds from all the RGGI auctions now total more than \$662.8 million. States are investing these proceeds in consumer benefit programs that further reduce emissions, save consumers money and create jobs. Overall, states are investing the vast majority of proceeds to improve energy efficiency and accelerate the deployment of renewable energy technologies.

"Every dollar invested in energy efficiency and renewable energy advances the clean energy economy," said Amey Marrella, Commissioner of the Connecticut Department of Environmental Protection. "RGGI states are putting auction proceeds to work in innovative programs to secure a cleaner environment, save consumers money and put people back to work."

Overall, states are investing more than half of the proceeds from RGGI CO<sub>2</sub> allowance auctions in energy efficiency, the most cost-effective resource for reducing energy demand in the near-term. Energy efficiency measures, such as building retrofits, heating system replacements and appliance upgrades, save consumers 20 to 30 percent off their energy bills.

While states maximize near-term energy efficiency opportunities, they are also investing in renewable energy sources for a long-term clean energy future. Across the region, funds are being used to install solar, wind and geothermal energy generation systems in commercial and industrial facilities and to deploy solar energy and hot water systems on homes and businesses.

States are beginning to document both the direct consumer benefits and the broad economic gains that the investment of RGGI proceeds is bringing to the region. For example, in Connecticut, electric and gas energy efficiency programs, funded in part with RGGI proceeds, are producing more than \$4.00 in benefits for every \$1.00 invested. New York is showing a greater than 6 to 1 benefit for every dollar invested in renewable energy systems.

"Expanded efficiency programs, funded in part by RGGI, will generate roughly \$6 billion in consumer energy savings in Massachusetts over the next three years," said Phil Giudice, Commissioner of the Massachusetts Department of Energy Resources. "The same programs are also expected to create or maintain nearly 4,000 jobs for contractors, HVAC technicians, architects and other specialists, also over three years."

To learn more about how each state is investing RGGI auction proceeds, please visit: <a href="http://www.rggi.org/states/program\_investments">http://www.rggi.org/states/program\_investments</a>.

Additional details about RGGI Auction 8 may be found in the *Market Monitor Report for Auction 8*, appended below.

The next RGGI auction is scheduled for September 8, 2010.

## **Selected Investment Highlights**

Selected investment highlights from each of the ten RGGI states include the following:

## Renewable Energy

- Connecticut has approved \$1.3M of its RGGI allocation for municipal projects in the On-Site Distributed Generation Program the allocation funds solar PV energy systems on municipal buildings. Between November 2009 and May 2010, 9 projects were approved, 7 on schools and 2 on town buildings. Together, the projects will add 415 kW of clean, renewable power to the grid.
- Maryland has invested \$2.16M in its RGGI proceeds in its Solar Energy Grant Program a program to provide grants for solar electricity and hot water systems on homes and businesses. Since RGGI began, over 400 grants have been awarded to residents across the state. The grants helped add over 1,700 MWh of clean, renewable solar power to the grid.
- New Jersey has invested \$19.4M in its Clean Energy Solutions Capital Investment Loan/Grant Program – a program to provide zero-interest loans and grants for large-scale renewable energy and energy efficiency projects. Through April 2010, 8 projects have received grants or loans for combined heat and power (CHP) systems, commercial-scale solar electric systems and a feasibility study for an offshore wind turbine installation. The funded CHP and solar-electric systems represent 14 MW of new, clean generation capacity.

## **Energy Efficiency**

- Maine has invested \$3.5M in its Industrial Energy Efficiency Grant Program a program to provide grants between \$100,000 and \$1 million for large-scale energy efficiency projects, including CHP systems. In 2009, a total of 16 grants were awarded, 6 of which were funded by RGGI. The 6 RGGI projects will avoid more than 367,560 metric tons of CO₂ over their lifetime.
- New Hampshire has invested \$500K in its EnergySmart Schools Program a program to provide energy benchmarking services to New Hampshire's K-12 schools. Each school will

receive a report which documents energy use, costs and emissions for each building, and provides recommendations for immediate strategies to reduce energy use.

- Rhode Island has committed \$3.95M to the Least Cost Procurement Energy Efficiency Utility Account at National Grid for supplementing and expanding energy efficiency programs, including: home energy audits, Energy Star lighting and appliance rebates, higherficiency heating, water heating and controls incentives, Energy Star central air conditioning rebates and energy efficiency educational programs.
- Delaware has invested RGGI proceeds in the Sustainable Energy Utility's Energize Delaware Appliance Rebate Program a program to provide rebates of up to \$200 for the purchase of an Energy Star-qualified clothes washer, dishwasher, room air conditioner, or gas water heater. Since September 2009, the program has provided more than 10,000 rebates, saving consumers nearly \$250,000.
- Vermont has invested RGGI proceeds in its Button-Up Vermont Program a program to
  provide free home energy-savings workshops where residents learn how to implement do-ityourself measures to improve energy efficiency. Participants also learn about saving
  opportunities associated with energy retrofits, and about technical and financial resources
  available to them.

## Workforce Development

- New York State committed \$8M to the Workforce Development Programs To meet ambitious legislated goals for improving the energy efficiency of existing homes, New York is devoting substantial resources to greatly expand the workforce training infrastructure needed to prepare workers to design, install, and maintain energy efficiency initiatives. Funds will be used to provide apprenticeship and internship incentives to employers and training institutions, expand existing training centers, fund basic skill initiatives, provide funding for training equipment, and improve field testing process and certification examinations to help increase the number of qualified workers. The funds are projected to significantly increase the number of workers that have been trained over the past few years.
- Massachusetts has invested \$1.9M in its Energy Efficiency Skills and Innovation Initiative

   a program to train the state's cutting edge green collar workforce. Under the program,
   Springfield Technical Community College is serving as a statewide clearinghouse for energy efficiency training activities, materials and services, and is coordinating job training at community colleges across the state.

## About the Regional Greenhouse Gas Initiative

The 10 Northeast and Mid-Atlantic states participating in RGGI (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New Hampshire, New York, Rhode Island and Vermont) have designed and implemented the first market-based, mandatory cap-and-trade program in the U.S. to reduce greenhouse gas emissions. Power sector CO<sub>2</sub> emissions are capped at 188 million short tons per year through 2014. The cap will then be reduced by 2.5 percent in each of the four years 2015 through 2018, for a total reduction of 10 percent.

A  $CO_2$  allowance represents a limited authorization to emit one short ton of  $CO_2$ , as issued by a respective participating state. A regulated power plant must hold  $CO_2$  allowances equal to its emissions to demonstrate compliance at the end of each three-year control period. The first control period for fossil fuel-fired electric generators under each state's  $CO_2$  Budget Trading Program took

effect on January 1, 2009 and extends through December 31, 2011. CO<sub>2</sub> allowances for the first control period (2009-2011) may be used to meet current compliance obligations, or may be banked for use in future control periods. CO<sub>2</sub> allowances for the second control period (2012-2014) can only be used to meet compliance obligations beginning in 2012. CO<sub>2</sub> allowances issued by any participating state are usable across all state programs, so that the ten individual state CO<sub>2</sub> Budget Trading Programs, in aggregate, form one regional compliance market for CO<sub>2</sub> emissions. For more information turn to: <a href="https://www.rggi.org">www.rggi.org</a>

## About 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 please visit: <a href="https://www.rggi.org/rggi">www.rggi.org/rggi</a>

The RGGI auctions are administered by RGGI, Inc. and run on an online platform provided by World Energy Solutions, Inc.

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# MARKET MONITOR REPORT FOR AUCTION 8

# **Prepared for:**

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

**Prepared By:** 



June 11, 2010



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 the RGGI Participating States (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont). The opinions expressed in this report do not necessarily reflect those of RGGI, Inc. or any of the Participating States, 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 Participating States, 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 Participating States, 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 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 8

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 8, which was held on June 9, 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 2010 vintage offering with 43 entities submitting bids to purchase 1.3 times the available supply of allowances, resulting in a clearing price of \$1.88 per ton. The quantity of allowances for which bids were submitted (over 54 million) decreased from the previous auction. Compliance entities or their affiliates purchased the majority (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). All of the 2013 vintage allowances were sold, with ten entities submitting bids to purchase 1.2 times the available supply of allowances, resulting in a clearing 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 8 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. 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.

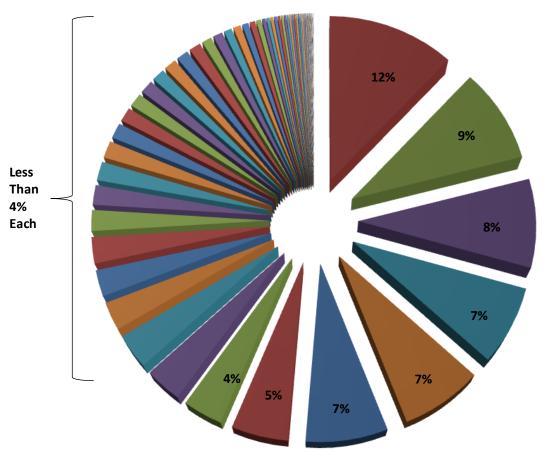


Figure 1: Projected Demand for RGGI Allowances Shares by Compliance Entity



#### **B.** DISPERSION OF BIDS IN AUCTION 8

In the 2010 vintage offering, 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 ten 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 2010 vintage offering, 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 90 percent of the quantity of allowances for which bids were submitted in the 2010 vintage offering. The quantity of allowances for which bids were submitted decreased from 2.3 times the available supply in Auction 7 to 1.3 times the available supply in Auction 8.

In the 2013 vintage offering, the quantity of allowances for which bids were submitted was 1.2 times the available supply. All of the bids were submitted by compliance entities in the 2013 vintage offering.

The bid quantities were widely distributed among the 43 bidders in the 2010 vintage offering. The concentration of bids, using the Herfindahl-Hirschman Index ("HHI"), was low at 992 in the 2010 vintage offering. Fewer entities submitted bids in the 2013 vintage offering, leading the concentration of bids to be substantially higher (1890). 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). In this report, firms that are involved in the management of a budget source may be categorized as compliance entities even if they do not have stock ownership in the source.



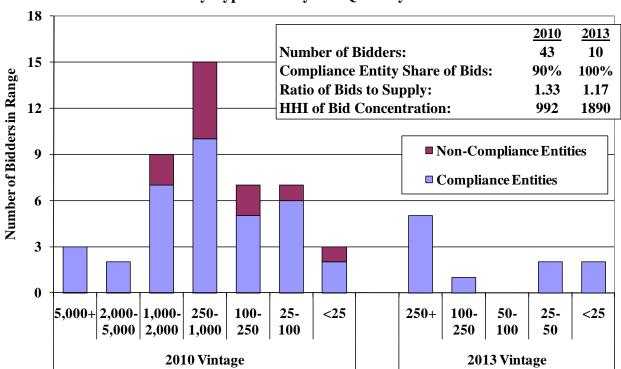


Figure 2: Quantity of Bids Submitted by Entity By Type of Entity and Quantity Bid

Quantity of Bids Submitted (in Thousands of Tons)



# C. SUMMARY OF PURCHASES OF ALLOWANCES IN AUCTION 8

In the 2010 vintage offering, awards were widely distributed across 42 bidders with 5 bidders purchasing two million tons or more, 11 bidders purchasing one million tons or more, and 24 bidders purchasing 250,000 tons or more. In the 2013 vintage offering, awards were distributed across ten bidders with four bidders purchasing 300,000 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.

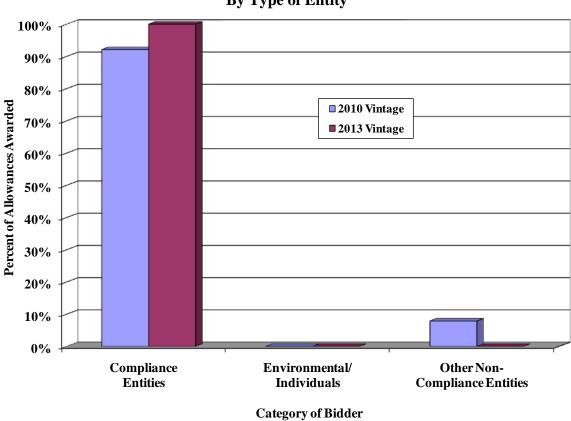


Figure 3: Quantity of Allowances Awarded By Type of Entity



The following table shows the quantity of allowances purchased by each bidder. 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

	Number of 2010	
Bidder	Allowances Awarded	
Bidder 1	7,500,000	
Bidder 2	7,150,000	
Bidder 3	4,383,585	
Bidder 4	2,500,000	
Bidder 5	2,397,000	
Bidder 6	1,500,000	
Bidder 7	1,450,000	
Bidder 8	1,450,000	
Bidder 9	1,400,000	
Bidder 10	1,250,000	
Bidder 11	1,052,000	
Bidder 12	966,000	
Bidder 13	800,000	
Bidder 14	795,000	
Bidder 15	791,000	
Bidder 16	630,000	
Bidder 17	550,000	
Bidder 18	500,000	
Bidder 19	500,000	
Bidder 20	476,000	
Bidder 21	400,000	
Bidder 22	370,000	
Bidder 23	307,000	
Bidder 24	260,000	
Bidder 25	240,000	
Bidder 26	200,000	
Bidder 27	200,000	
Bidder 28	175,000	
Bidder 29	100,000	
Bidder 30	75,000	
Bidder 31	61,000	
Bidder 32	47,000	
Bidder 33	38,000	
Bidder 34	32,000	
Bidder 35	29,000	
Bidder 36	25,000	
Bidder 37	24,000	
Bidder 38	20,000	
Bidder 39	20,000	
Bidder 40	15,000	
Bidder 41	4,000	
Bidder 42	3,000	

Bidder	Number of 2013 Allowances Awarded	
Bidder 1	534,000	
Bidder 2	534,000	
Bidder 3	475,000	
Bidder 4	300,000	
Bidder 5	177,993	
Bidder 6	53,000	
Bidder 7	25,000	
Bidder 8	25,000	
Bidder 9	13,000	
Bidder 10	1,000	



# D. SUMMARY OF BID PRICES IN AUCTION 8

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

	2010	2013
Bid Prices:		
Minimum	<b>\$1.86</b>	<b>\$1.86</b>
Maximum	<b>\$4.00</b>	\$2.02
Average (Median)	<b>\$2.00</b>	<b>\$1.89</b>
Average (Mean)	<b>\$2.01</b>	<b>\$1.89</b>
Clearing Prices:	\$1.88	<b>\$1.86</b>



#### E. NAMES OF POTENTIAL BIDDERS IN AUCTION 8

In accordance with Section 2.8 of the Auction Notice for CO<sub>2</sub> Allowance Auction 8 on June 9, 2010, the Participating States are releasing the names of Potential Bidders in Auction 8. The states defined potential bidders as: "Each Applicant that has been qualified and submitted a complete *Intent to Bid*." The list of 53 Potential Bidders is as follows:

AES Eastern Energy, LP Aircraft Services Corporation

ANP Funding I, LLC

Astoria Generating Company, LP

Barclays Bank PLC Boston Generating, LLC Brick Power Holding, LLC Bridgeport Energy, LLC

Brooklyn Navy Yard Cogen Partners, LP

Caithness Long Island, LLC Calpine Energy Services, LP Castleton Power, LLC

Conectiv Energy Supply, Inc.

Conn. Municipal Electric Energy Coop.

ConocoPhillips Company

Consolidated Edison Comp. of NY, Inc. Constellation Energy Commodities Group

CP Energy Marketing (US) Inc. Delaware Municipal Electric Corp. Dominion Energy Marketing, Inc.

DTE Carbon, LLC

Dynegy Marketing and Trade, LLC

E.ON Energy Trading SE

GDF SUEZ Energy Marketing NA, Inc.

H.Q. Energy Services (US) Inc.

Hess Corporation (G)

J-Power USA Development Co., Ltd.

Lake Road Generating Company, L.P Louis Dreyfus Energy Services, LP

Macquarie Energy, LLC

Massachusetts Muni. Wholesale Elec. Co.

Merrill Lynch Commodities, Inc.
Millennium Power Partners, LP
Mirant Energy Trading, LLC
Morgan Stanley Capital Group, Inc.
National Grid Gen. dba National Grid
New Athens Generating Company, LLC
NextEra Energy Power Marketing, LLC
North American Energy Alliance, LLC

NRG Power Marketing, LLC

Old Dominion Electric Cooperative

Power Authority of the State of New York

PPL EnergyPlus, LLC

PSEG Energy Resources & Trade, LLC Public Service Company of New Hampshire

**RBC** 

Rochester Gas and Electric Corporation

Selkirk Cogen Partners, LP

TAQA Gen X, LLC

TransCanada Power Marketing, Ltd.

Verso Paper Corp. Village of Freeport

Vitol Inc.