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Final RGGI Model Rule Amendments Released

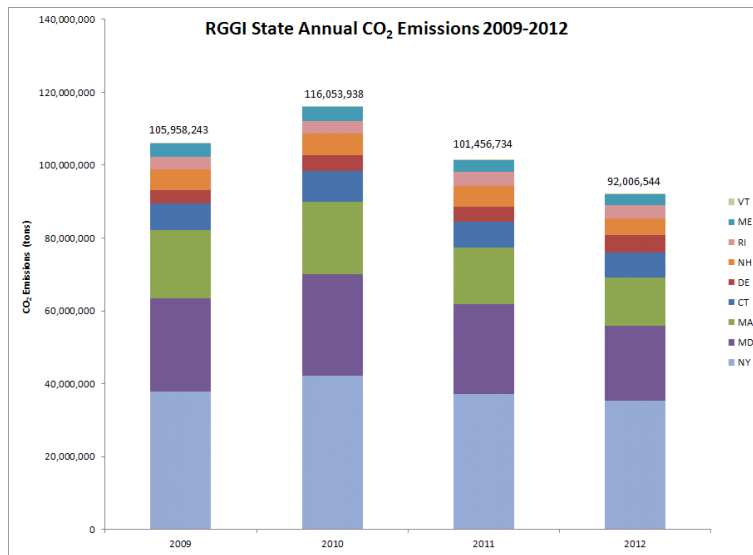
On February 7, 2013, the RGGI states released a revised RGGI Model Rule after a comprehensive program review that spanned 2012. Each state must now amend their existing RGGI regulations and/or secure legislative approval to adopt these amendments before January 1, 2014. The most significant change to the cap and trade program is a reduction in the current regional CO₂ emissions cap by 45 percent from 165 million tons to 91 million tons. The revised cap level presents 2012 reported emissions. Other RGGI Model Rule provisions include: a methodology to adjust the RGGI cap to account for the private allowance bank of 2009-2013 vintage allowances, a cost containment allowance reserve, interim compliance periods, a simplified auction reserve price, simplified carbon offset provisions, and the addition of a forestry carbon offset project category. This issue brief provides background on RGGI and summarizes key changes to RGGI Model Rule.

Background

In the RGGI Memorandum of Understanding (MOU) agreed to on December 20, 2005, the RGGI states outlined the framework of a regional CO₂ cap and trade program. In addition to the framework of the program, the MOU committed the states to conduct a comprehensive program review in 2012. During the program review RGGI states held numerous stakeholder meetings, and conducted energy and economic modeling. While all program design elements were evaluated, the main focus was on the level of the CO₂ cap.

Under the original RGGI program design, the goal of the program was to stabilize emissions beginning in 2009 through 2014 and then gradually reduce the cap annually beginning in 2015 to achieve a 10 percent reduction by 2018. Due to a decrease in natural gas prices, the economic recession and other environmental and energy market factors, RGGI region CO₂ emissions dropped from over 160 million tons in 2005 to 92 million tons, or about 42 percent.

According to an analysis by the New York State Energy Research and Development Authority (NYSERDA), three factors were the primary drivers of the decreased CO₂ emissions: 1) lower electricity load (due to weather; energy efficiency programs and customer-sited generation; and the economy); 2) fuel-switching from petroleum and coal to natural gas; and 3) changes in available capacity mix (due to increased nuclear capacity availability and updates; reduced available coal capacity; increased wind capacity; and increased use of hydro capacity). Regional annual emissions since RGGI's inception are provided below.



The RGGI program has been widely criticized for having a CO₂ cap that is much greater than actual emissions. Allowances offered in the RGGI quarterly actions have exceeded emissions. Therefore, demand for allowances has been low and allowances prices have hovered at the auction reserve price of less than \$2/ton for the last several years. However, the RGGI program was a groundbreaking effort as the first CO₂ cap and trade program in the U.S., the first program to auction the vast majority of allowances and the reinvestment of auction proceeds predominantly in energy efficiency programs in the RGGI states. There have been several studies that have showcased the economic benefits of the RGGI program to the region based on the reinvestment of the auction proceeds. According to a report by the Analysis Group, the first three years of the RGGI program saw \$912 million in allowance proceeds which results in \$1.3 billion in energy savings to RGGI region consumers.¹

Summary of RGGI Model Rule Changes

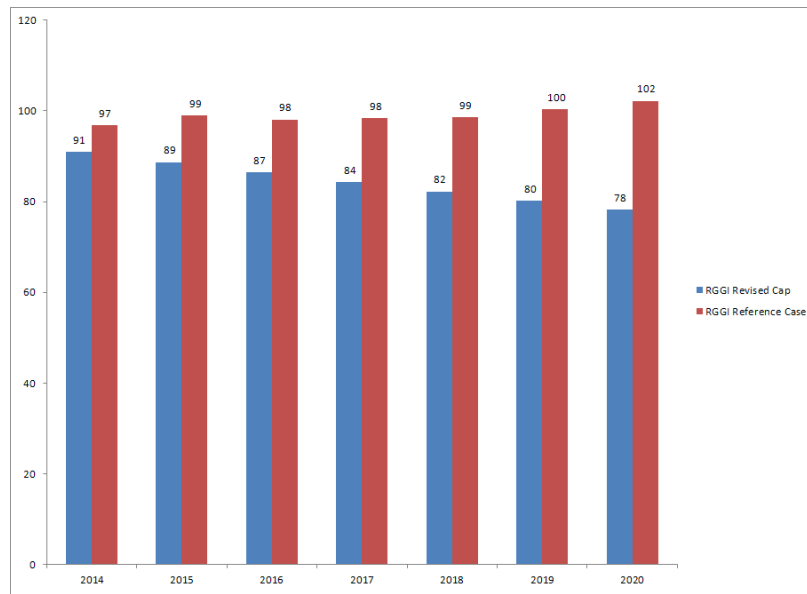
On February 7, 2013 the RGGI states released amendments to the RGGI Model Rule and supporting summary materials. This section provides a summary of the RGGI Model Rule Amendments.

Regional CO₂ Cap

The revised regional CO₂ cap is 91 million tons beginning on January 1, 2014. This cap level is roughly equivalent to 2012 emissions in the RGGI region. Beginning in 2015, the cap will be reduced by 2.5 percent annually through 2020, resulting in a 15 percent reduction from 2014 cap levels. The chart below illustrates business as usual emissions for the RGGI region compared to the revised RGGI cap levels.

¹ Analysis Group, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States," November 2011, See <http://www.analysisgroup.com/rggi.aspx>

RGGI Revised CO2 Cap Relative to Business as Usual



The state level caps will be adjusted to account for the revised cap. The table below provides the anticipated adjusted cap levels by RGGI state based on each state’s share of the current regional CO₂ cap.

State CO2 Emissions Budgets, Share of Regional Cap

State	2013 CO ₂ Budget	Share of Regional Cap	Revised 2014 CO ₂ Budget
Connecticut	10,695,036	6.47%	5,887,700
Delaware	7,559,787	4.58%	4,167,800
Maine	5,948,902	3.60%	3,276,000
Maryland	37,503,983	22.70%	20,657,000
Massachusetts	26,660,204	16.14%	14,687,400
New Hampshire	8,620,460	5.22%	4,750,200
New York	64,310,805	38.93%	35,426,300
Rhode Island	2,659,239	1.61%	1,465,100
Vermont	1,225,830	0.74%	673,400
TOTAL	165,184,246	100%	91,000,000

Cap Adjustments for Banked Allowances

The RGGI cap will also be adjusted downward to account for the private bank of RGGI allowances from the first control period (2009-2011) and from 2012-2013. The RGGI states felt it was necessary to maintain the ability for companies to retain and use banked allowances for compliance purposes but wanted to prevent the allowance bank from overwhelming the amended RGGI cap.

The cap adjustments are designed to take place in two stages. The first control period interim adjustment includes the total quantity of 2009, 2010, and 2011 vintage allowances held in general and compliance accounts on January 1, 2014. The quantity will be determined by January 15, 2014. Each state’s cap will be reduced equally over the 7 year period 2014-2020 according to its share of the total RGGI cap. According to the RGGI states, approximately 47 million vintage 2009-2011 allowances are currently in private banks translating into an annual reduction in the cap of 6.71 million tons per year. Therefore, beginning in 2014, the adjusted cap level available for allowance auctions and other state specific allocations will equal approximately 84 million tons. Assuming the entire quantity is auctioned, quarterly allowance auction volumes in 2014 will equal approximately 21 million allowances.²

First Control Period Interim Adjustment

	2014	2015	2016	2017	2018	2019	2020
RGGI Revised Cap	91	89	87	84	82	80	78
Adjustment for Banked Allowances (2009-2011)	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Adjusted Cap Level	84	82	80	78	76	73	71

The second control period interim adjustment includes 2012 and 2013 vintage banked allowances held in general and compliance accounts on March 15, 2014. The RGGI states will report annual CO2 emissions from 2012 and 2013. Any 2012 or 2013 vintage allowances held in general and compliance accounts that are greater than reported emissions will be assumed to be part of the private bank. The adjustment to each state’s cap will be determined on April 15, 2014. The cap will be reduced over the 6 year period 2015-2020 according to each state’s share of the RGGI cap.

According to the RGGI states, there are no 2012 banked allowances currently. In 2013, the RGGI states are expected to offer approximately 150 million allowances. The quantity of allowances purchased beyond what is needed to cover 2013 emissions will dictate the second round of cap adjustments to account for this bank. The fact that the cap is adjusted downward is intended to create a disincentive to bank allowances for use under the revised RGGI cap.

Cost Containment Reserve

The RGGI states have included a cost containment reserve (CCR) for the purpose of containing the cost of CO₂ allowances within acceptable levels for the region. The CCR is designed to account for unforeseen price impacts if emissions end up higher than anticipated. Emissions could increase for a variety of reasons including higher natural gas prices, greater reliance on coal- and oil-fired units, or electricity system contingencies such as prolonged nuclear plant outages, power plant outages, or transmission interruptions.

The CCR is made up of allowances in addition to the cap. In 2014, the size of the CCR will be 5 million tons, but beginning in 2015 and thereafter, the size of the CCR will be increased to 10 million tons per year. If all the CCR allowances are sold in a given year, no additional CCR allowances will be offered for sale in that year. The CCR is available at predetermined prices through the existing quarterly allowance auction process. The trigger prices for the CCR allowances are as follows: \$4 in 2014, \$6 in 2015, \$8 in 2016, and \$10 in 2017. The CCR trigger grows at 2.5 percent annually beginning in 2018.

² Quarterly auction volumes will likely be less than 21 million tons after taking into consideration state specific allowance set asides and other special allowance provisions that may be adopted during the RGGI amendment adoption process.

The RGGI allowance auctions are conducted using an electronic, internet-based platform that bidders use to submit bids in a uniform-price, sealed-bid auction format. All bids are first ranked by bid price from high to low. Then, cumulative demand is noted at each bid. The CCR allowances would be made available immediately in any RGGI allowance auction where demand for allowances at prices above the CCR trigger price exceeds the supply of allowances offered for sale in that auction not including the CCR allowances. If CCR allowances are sold, the reserve price for the auction is the CCR trigger price.

In order for a CCR allowance to be sold in 2014, the demand for allowances must exceed the supply of allowances offered (approximately 21 million allowances) in the auction at prices above the \$4 CCR trigger price. In the simplified example provided in the table below, the cumulative demand for allowances at \$4.00 exceeds the allowance available in the auction by 1.5 million allowances. As a result, the auction would clear \$1.5 million CCR allowances in addition to the 21 million allowances offered at auction at a clearing price of \$4.00.

RGGI Allowance Auction CCR Example

Bidder	Bid Price	Bid Quantity	Cumulative Demand
Bidder A	\$7.00	500,000	500,000
Bidder B	\$6.00	500,000	1,000,000
Bidder C	\$5.00	2,500,000	3,500,000
Bidder D	\$4.95	3,000,000	6,500,000
Bidder E	\$4.90	3,500,000	10,000,000
Bidder F	\$4.75	5,000,000	15,000,000
Bidder G	\$4.25	5,000,000	20,000,000
Bidder H	\$4.00	2,500,000	22,500,000
Bidder I	\$3.00	2,500,000	25,000,000
Bidder J	\$2.50	250,000	25,250,000

Interim Control Periods

RGGI operates with three-year compliance periods. This compliance provision differs from the annual compliance periods included in U.S. EPA’s Acid Rain Program and the European Union’s Emission Trading Scheme. Under RGGI, CO₂ Budget Sources report their CO₂ emissions quarterly but will only “true-up” allowances and their reported CO₂ emissions at the end of each three-year compliance period. The RGGI states decided to structure the compliance periods this way largely because CO₂ emissions are related to a number of factors such as meteorology (hotter than normal summers or colder than normal winters), nuclear facility outages, variability in fossil fuel prices, and the impacts on unit dispatch based on those factors. As a result, CO₂ emissions could be higher or lower than normal in any given year because of uncontrollable factors. A multi-year compliance period provides added flexibility for the CO₂ Budget Sources to obtain the necessary allowances and offsets to cover their reported emissions for each compliance period. However, given some RGGI noncompliance issues with sources who had gone into bankruptcy, the RGGI states are adjusting the compliance period.

The RGGI Model Rule includes a provision for compliance entities to comply with an Interim Control Period. This is defined as the first two calendar years of each control period beginning in January 1, 2015. Compliance entities will be required to surrender allowances to cover 50 percent of emissions for each Interim Control Period, subject to the existing true-up process and a March 1 deadline. Therefore,

compliance entities must surrender RGGI allowances by March 1, 2017 to account for 50 percent of emissions in 2015 and 2016. Each ton of Excess Interim Emissions will be considered a violation, subject to the ordinary existing enforcement provisions of the relevant agency on an annual basis. A compliance certification report would not be required as part of the compliance obligation during an interim control period.

Reserve Price

The existing allowance auction reserve price is known as the “Minimum Reserve Price”. It started at \$1.86 in 2009 and has been annually adjusted based on the Consumer Price Index (CPI). The reserve price for Auction 19 in March 2013 is \$1.98. The RGGI program also had something known as the “Current Market Reserve Price” or CMP. Although this market based reserve price was never used, it was included so the RGGI states could transition from the minimum reserve price to a reserve price based on the market price of allowances. The RGGI Model rule adjusts and simplifies the current allowance auction reserve price methodology and eliminates the CMP. Beginning in 2014, the reserve price is \$2.00 and will increase by 2.5 percent each year.

Offset Triggers

RGGI limits the quantity of offsets that CO₂ Budget Sources can utilize for compliance. At the outset of the program, CO₂ Budget Sources are permitted to cover 3.3 percent of their emissions with offsets, which represents approximately 50 percent of the projected emissions reductions necessary to comply with RGGI.

To address concerns over higher than expected allowances prices, the RGGI Model Rule permits the use of a higher percentage of offsets if allowance prices reach \$7 or \$10 (2005\$) on a sustained basis. If allowance prices reach \$7, CO₂ Budget Sources may use offsets up to a limit equivalent to 5 percent of reported CO₂ emissions. If allowance prices reach \$10, CO₂ Budget Sources may use offsets up to a limit equivalent to 10 percent of reported CO₂ emissions, the compliance period is extended to four years, and international offsets are eligible for compliance.

Given the movement to a costs containment reserve, the RGGI states are amending the Model Rule to eliminate the offset price triggers. As a result, the allowable offset percentage is limited to 3.3 percent of reported emissions for the duration of the program.

Offset Categories

The existing RGGI program includes five categories of offset projects that are eligible to create RGGI offsets for use by CO₂ Budget Sources towards compliance. The RGGI states selected this initial list of eligible project categories based on the expected offset supply within the borders of the RGGI states; the relative ease of developing standards; and, the likelihood of mandatory greenhouse gas regulations for that sector. The RGGI states agreed to continue to cooperate on the development of additional offset categories and types, including other types of forestry projects and grassland re-vegetation projects. The five initial eligible project categories include: landfill methane capture and destruction, reduction in emissions of sulfur hexafluoride (SF₆), sequestration of carbon due to afforestation, end-use energy efficiency, and avoided methane emissions from agricultural manure management operations.

Given the low allowance prices experienced in the RGGI program since its inception, there has been little to no carbon offset activity in RGGI. While several utility companies engaged the RGGI states in discussions on the SF₆ and end use energy efficiency categories, they did not pursue offsets for use in RGGI.

Based on the 2012 review, the RGGI states are now replacing the existing eligible RGGI “Afforestation” offset category with a new forestry category “Sequestration of carbon due to reforestation, improved forest management or avoided conversion”. This category is modeled after the California Air Resources Board (CARB) forestry offset protocol. However, the RGGI protocol uses a discounting approach, instead of the buffer account approach used by CARB, to address reversals and ensure permanence. Eligible forest offset projects must initially commence on or after January 1, 2014.

Key Takeaways

- While the RGGI states successfully created the first CO₂ cap-and-trade program in the country, CO₂ reductions directly attributable to the emissions cap have been minimal. Market forces, such as low natural gas prices, fuel switching, relatively mild temperatures, and reduced demand associated with the recent recession, have resulted in regional electricity emissions well below the levels anticipated when RGGI was conceived.
- The revised RGGI cap is based on 2012 emissions – a year that saw historically low emissions due to numerous factors including a mild winter. The RGGI states are relying on the assumption that compliance entities will use banked allowances to ease the transition to a binding cap. If modeling estimates are inaccurate, the CCR is designed to insulate against higher allowance prices.
- The RGGI states evaluated a wide range of cap levels during the Program Review. Allowance prices associated with alternative CO₂ caps ranged from \$3.60-\$6.00 in 2014 to \$6.60-\$10 in 2020. The modeling also showed that both cap levels could result in the CCR being accessed as early as 2014 and as late as 2020 depending on the use of the private bank of allowances.
- Emissions leakage associated with electricity imports into the RGGI region continues to be a major concern of generators with assets on the borders with PJM. If increasing the cost to generators covered by RGGI means additional electricity imports from uncapped generators, the CO₂ reductions achieved by the program would be quickly negated. The RGGI states have committed to identify and evaluate potential imports tracking tools, conduct further modeling to ascertain energy and price implications of any potential policy on emissions associated with imported electricity, and pursue additional legal research necessary, leading to a workable, practicable, and legal mechanism to address emissions associated with imported electricity.
- As the RGGI states debated the RGGI Model Rule amendments, EPA’s NSPS for existing power plants was a key consideration. The RGGI states were motivated by the prospects of Federal recognition of the revised RGGI program. While EPA’s NSPS for existing power plants remains to be proposed, now that the RGGI states have amended the program, stakeholders can evaluate the rigor of the RGGI program and how other states may fair under a RGGI cap starting with a 2012 baseline.

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