

# MAINE STATE LEGISLATURE

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STATE OF MAINE  
PUBLIC UTILITIES COMMISSION

Mark A. Vannoy  
CHAIRMAN

David P. Littell  
Carlisle J. T. McLean  
COMMISSIONERS

Harry Lanphear  
ADMINISTRATIVE DIRECTOR

May 20, 2015

Honorable David Woodsome, Senate Chair  
Honorable Mark N. Dion, House Chair  
Energy, Utilities and Technology Committee  
100 State House Station  
Augusta, Maine 04333

**Re: RGGI Price Impacts Report**

Dear Senator Woodsome and Representative Dion:

By a letter dated June 20, 2007, the Chairs of the Utilities and Energy Committee (now the Energy, Utilities and Technology Committee) requested that the Public Utilities Commission (Commission) provide RGGI-related information to the Committee on a regular basis, at least annually. Specifically, the letter requested a report from the Commission on any ongoing efforts to work with regional partners to develop a model for tracking electricity and natural gas prices and usage in the region in a way that provides indicators of the price impacts from RGGI. Attached is the Commission's Report for the Committee's consideration.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Mark A. Vannoy, Chairman

On behalf of the Chairman and

David P. Littell, Commissioner  
Carlisle J. T. McLean, Commissioner  
Maine Public Utilities Commission

Attachment

cc: Energy, Utilities and Technology Committee Members  
Deirdre Schneider, Legislative Analyst

**Report by the Public Utilities Commission to the  
Energy, Utilities and Technology Committee  
Regarding Impacts of Public Law 2007, Chapter 317  
“An Act to Establish the Regional Greenhouse Gas Initiative”**

**May 20, 2015**

**I. BACKGROUND**

The Public Utilities Commission submits this report pursuant to a letter dated June 20, 2007, from the Chairs of the Joint Standing Committee on Energy, Utilities and Technology, requesting that the Commission provide Regional Greenhouse Gas Initiative (RGGI) related information to the Committee at least annually. Specifically, the letter requested a report from the Commission on any ongoing efforts to work with regional partners to develop a model for tracking electricity and natural gas prices and usage in the region in a way that provides indicators of the price impacts from RGGI.

Since 2007, Maine has participated in RGGI, a cooperative program of several northeastern and mid-Atlantic states to limit carbon dioxide (CO<sub>2</sub>) emissions.<sup>1</sup> See P.L. 2007, ch. 317 (“An Act to Establish the Regional Greenhouse Gas Initiative (RGGI)”). RGGI is the first regulation of CO<sub>2</sub> emissions in the United States.

The RGGI law requires certain generators of electricity<sup>2</sup> to account for their carbon emissions and acquire an “allowance” for every ton of CO<sub>2</sub> that they emit. Generators comply with the law by purchasing or trading for a number of allowances equivalent to the number of tons of CO<sub>2</sub> emitted. Generators and states may reduce their emissions – and therefore the number of allowances required – by implementing efficiency measures or switching to fuels with lower carbon content. Following a comprehensive program review in 2012, the RGGI states implemented a new RGGI cap for 2014 of 91 million short tons of carbon. The RGGI CO<sub>2</sub> cap then declines 2.5% per year from 2015 to 2020.<sup>3</sup>

The RGGI statute requires Maine to distribute most of the State’s allocation of emission allowances through quarterly regional auctions. Once the allowances are sold at auction, the proceeds are deposited into the RGGI Trust

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<sup>1</sup> The ten original RGGI states were: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. New Jersey withdrew from RGGI as of December 31, 2011.

<sup>2</sup> The provisions of the RGGI statute apply to six Maine power plants – NextEra Energy Wyman, Verso Androscoggin, Verso Bucksport, Casco Bay Energy, Westbrook Energy Center, and Rumford Power.

<sup>3</sup> The 2015 RGGI CO<sub>2</sub> cap is 88.7 million short tons of carbon.

Fund (formally the Energy and Carbon Savings Trust) and used for purposes specified in statute. These purposes include measures, investments and arrangements that reduce electricity consumption or reduce greenhouse gas emissions and lower energy costs at commercial or industrial facilities, and for investment in measures that lower residential heating energy demand and reduce greenhouse gas emissions. The measures that lower residential heating demand must be fuel-neutral and may include, but are not limited to, energy efficiency improvements to residential buildings and upgrades to efficient heating systems that will reduce residential energy costs and greenhouse gas emissions. Additionally, the Trust is directed to transfer to the Commission 15% of the funds received during fiscal years 2013-14, 2014-15 and 2015-16 which shall be distributed to the transmission and distribution (T&D) utilities for disbursement to ratepayers in a manner that provides maximum benefit to the Maine economy.

## II. 2014 RGGI AUCTION RESULTS

RGGI has conducted twenty-seven quarterly allowance auctions since September 2008. The closing auction price for allowances has ranged from \$1.86 (September and December 2010) to \$5.41 (March 2015). In calendar year 2014, the closing sale prices for allowances in the quarterly RGGI auctions were \$4.00 (March), \$5.02 (June), \$4.88 (September) and \$5.21 (December). In each of the auctions conducted during 2014 100% of the allowances offered for sale were purchased.

Maine’s quarterly auction proceeds in 2014 ranged between \$2.45 million and \$3.66 million. Maine received a total of \$11.37 million from RGGI auctions in 2014:

2014 RGGI Auction Results for Maine					
Auction #	Auction Date	Closing Price	Maine's Allowances	Percentage Sold	Maine Proceeds
23	March 15, 2014	\$4.00	682,812	100%	\$2,731,248
24	June 4, 2014	\$5.02	502,743	100%	\$2,523,769
25	September 3, 2014	\$4.88	502,743	100%	\$2,453,385
26	December 3, 2014	\$5.21	702,743	100%	\$3,661,291
				total	\$11,369,693

Since the first auction in 2008, Maine has received a total of \$62.22 million in RGGI auction proceeds. These funds are allocated to specific state programs as determined by statute. During fiscal year 2013-14, slightly over \$1.6 million was distributed to the State’s T&D utilities for further disbursement to ratepayers.

The RGGI auction market is monitored by Potomac Economics, an independent market monitor which reports on market activity following each quarterly auction. Potomac Economics observed the 2014 auctions and

confirmed that each auction was fair and transparent, and found no evidence of market irregularities.

### **III. RGGI PROGRAM CHANGES THAT TOOK EFFECT IN 2014**

RGGI program design changes made as a result of the region-wide 2012 Program Review process took effect on January 1, 2014 and apply to the emissions from covered generators as of that date as well as the auctions conducted after that date. The changes include the following:

- A reduction in the regional CO<sub>2</sub> budget of allowable emissions (“cap”) from 165 million to 91 million tons (45% reduction) in the year 2014. Thereafter, the cap is scheduled to decrease by 2.5 percent annually until 2020. Actual emissions in 2012 were 92 million tons and in 2013 were 86 million tons.
- Additional adjustments to the cap to ensure that it is not distorted by the presence of allowances previously purchased and currently held in the allowance market.
- The creation of a new Cost Containment Reserve (CCR) consisting of a limited number of additional allowances that may be released for auction in the event that allowance prices exceed certain levels (\$4.00 in 2014, \$6.00 in 2015, \$8.00 in 2016 and \$10.00 in 2017). Releasing additional allowances from the CCR is intended to moderate any increase in allowance prices that might occur under the revised cap<sup>4</sup>.
- Updates to the RGGI offsets program. The previous offsets category applicable to forest management practices was expanded to also include reforestation activity as well as projects where the conversion of forest land to non-forest land is avoided.

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<sup>4</sup> During the March 7, 2014 auction, prices reached \$4.00, which triggered the new Cost Containment Reserve. As a result, 5 million additional allowances were released for sale and all were purchased. The closing price for that auction was \$4.00 – the price at which the CCR allowance release was triggered, suggesting the CCR mechanism worked as intended to moderate prices. Under the revised program, only 5 million CCR allowances were available during 2014, so CCR allowances were not a factor in the three subsequent auctions held in 2014 (June, September and December). An additional 10 million CCR allowances may be released in 2015 in the event that allowance auction prices reach \$6.00.

#### **IV. IMPACT OF RGGI ON PRICES IN 2014**

During its 2012 session, the Legislature enacted An Act To Provide Transparency in Electricity Pricing for Maine Ratepayers, P.L. 2011, ch. 590, which requires the Commission to develop useful information for ratepayers regarding the costs and effects of state policies on electricity ratepayers.

Based on the 2014 RGGI auction prices and results described above, the Commission has calculated that the annual cost to Maine ratepayers of the RGGI program was approximately \$0.0024 per kWh.<sup>5</sup> For the average Maine residential customer using 530 kWh per month, the 2014 RGGI program cost was approximately \$1.27 per month. For a commercial customer using 25,000 kWh per month the 2014 RGGI program cost was approximately \$60.00 per month. A large commercial or industrial customer using 500,000 kWh per month would have had a 2014 RGGI program cost of approximately \$1,200 per month. These are cost calculations. A discussion of the estimated benefits derived from the proceeds is addressed below.

Commercial, industrial and residential customers who participate in energy efficiency programs funded by the sale of allowances could see bill savings as a result of more efficient electricity usage. Fifty percent<sup>6</sup> of RGGI allowance proceeds received by Maine are allocated to projects of the RGGI Trust Fund that reduce electricity consumption or reduce greenhouse gas emissions and lower energy costs at commercial or industrial facilities. Thirty-five percent of funds are used to lower residential heating energy demand and reduce greenhouse gas emissions with the remaining fifteen percent distributed to T&D ratepayers as noted above.

The RGGI states published their most recent report on the utilization of auction proceeds in February 2014. That report showed that more than 73 percent of RGGI proceeds were invested within the region in energy efficiency.

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<sup>5</sup> Calculating the impact of RGGI allowance purchases on consumer bills requires the use of certain market information and assumptions. The cost calculation is based on emissions rates of the “marginal” generating units – the generators that set the clearing prices in the New England wholesale power auction and underlie the cost of electricity supply to Maine consumers. According to ISO-NE reports, the average CO<sub>2</sub> emission rate of the generators that were “marginal” during the year 2013 was equivalent to 0.465 tons/MWh. The average auction price of allowances in 2014 was \$4.72 per allowance, which equates to \$2.19 for each MWh at the margin. This equates to \$0.00219 (approximately 22 one-hundredths of a cent) per kWh in wholesale electricity prices, or, when adjusted for distribution losses, \$0.00238 (approximately 24 one-hundredths of a cent) per kWh in retail electricity prices.

<sup>6</sup> These percentage allocations apply during fiscal years 2013-2014, 2014-2015 and 2015-2016. 35-A M.R.S. §10109(4)(A).

Approximately 6 percent was used for renewable energy projects. Together, all RGGI proceeds since 2008 are expected to return more than \$2 billion in lifetime energy bill savings to more than 3 million households and more than 12,000 businesses across the eight states taking part in RGGI. See Regional Investment of RGGI CO2 Allowance Proceeds (February 2014), available at: <http://www.rggi.org/docs/Documents/2012-Investment-Report.pdf>.

In fiscal year 2014, more than 160 Maine businesses participated in Efficiency Maine's Large Customer Program and the Business Incentive Program's ductless heat pump initiative. Lifetime benefits of approximately \$6,631,571 in energy costs and 88,839 MWh can be attributed to the portion of funding these programs received from RGGI.

Our July 2014 report to the Legislature quantified the increases in employment, real personal income, and gross state product expected to occur in Maine as a result of the changes implemented in 2014. Economic impacts for the New England region include a cumulative increase in Gross Regional Product of over \$2 billion, a cumulative increase in employment of 38,900 job-years, and a cumulative increase in real personal income of \$1.5 billion including a cumulative increase in Maine Gross State Product of \$200 million, a cumulative increase in employment of more than 5,000 job-years, and a cumulative increase in real personal income of \$100 million. A copy of the July 2014 Report is available on the Commission's website at: <http://www.maine.gov/mpuc/legislative/archive/2013-2014ReportstoLegislature.shtml>

We expect that these benefits will be quantified again during the next Program Review process, scheduled to begin later this year. Additional information from that analysis will be provided in our upcoming annual updates, or as requested by the Committee.

## **V. CONCLUSION**

The information available to date shows that the impact of RGGI on electricity prices has been relatively modest, while RGGI-funded programs contribute to the gross state product, job growth, and personal income, and also reduce greenhouse gas emissions. At the direction of Maine and the other states, RGGI Inc. will continue to assess the costs and benefits of RGGI participation, with particular attention to the program design changes implemented following the Program Review process. Other independent analyses may also be undertaken in the months and years ahead, and we will continue to review those studies and any other information about the economic impact of the program on the Maine economy and on business, residential and commercial customers in the State and region.