

# MAINE STATE LEGISLATURE

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**Report by the Public Utilities Commission to the  
Utilities and Energy Committee  
Regarding L.D. 1851,  
“An Act to Establish the Regional Greenhouse Gas Initiative”**

**January 11, 2010**

**I. BACKGROUND**

During its First Regular Session, the 123<sup>rd</sup> Legislature enacted an Act to Establish the Regional Greenhouse Gas Initiative (RGGI) (P.L. 2007, Chapter 317) a cooperative program by 10 eastern and mid Atlantic states to limit carbon dioxide (CO<sub>2</sub>) (including greenhouse gas) emissions. RGGI has established a goal of reducing carbon emissions from large fossil fuel-fired power plants in the RGGI region (the “RGGI power plants”) by 10% by the year 2018. RGGI is the first regulation of global warming emissions in the United States.

The RGGI law requires generators of electricity to account for their carbon emissions and pay for every ton of CO<sub>2</sub> that they emit. Generators comply with the law by purchasing or trading allowances – one allowance is permission to emit one ton of CO<sub>2</sub> - or reducing their emissions by implementing efficiency measures or switching to lower carbon containing fuels. The RGGI law requires proceeds from emission allowance auctions to be administered by the Energy and Savings Carbon Trust (Trust) and used for specific purposes. No less than 85% of the funds must be used on measures that reduce electricity use and no more than 15% on measures that reduce consumption of fossil fuels. The proceeds from the auctions enhance energy efficiency and renewable energy projects that should reduce demand for electricity leading to lower electricity costs for Maine’s electricity consumers.

By a letter dated June 20, 2007, the Chairs of the Utilities and Energy Committee (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.

**II. RGGI AUCTIONS AND ELECTRICITY PRICES**

The first RGGI auction occurred in September 2008, at which allowances sold for \$3.07. The peak value for allowances occurred in March 2009 with a value of \$3.51. Allowance value then fell to the current low of \$2.05, a decrease of 41.6%.

Electricity prices since the first RGGI auction have been steadily decreasing, even when the price of RGGI allowances was increasing. In September 2008, the average wholesale electricity price was \$63.34 per Megawatthour (MWh). It is currently

\$34.44/MWh, a decrease of 45.6%. Please see Table A for allowance value and electricity prices.

### III. EFFORTS TO TRACK RGGI PRICE IMPACTS

In its 2009 Regional System Plan, ISO New England estimates that the impact of RGGI on natural gas-fired generation is approximately \$2/MWh when allowances values are \$4/ton, based on a typical CO<sub>2</sub> emissions rate of 1,000 lbs/MWh. Natural gas typically sets the wholesale price for electricity, so using those assumptions, the impact RGGI had on average wholesale electricity prices in Maine ranges from a 2.4% to a 5% increase due to the incremental costs incurred by generators for the CO<sub>2</sub> they are emitting. This is illustrated in Table A.

It is worth noting that the percent impact that RGGI has on wholesale electricity prices will be greater than the percent impact that RGGI has on residential retail electricity prices because those prices encompass more than the wholesale cost of electricity (e.g, transmission and distribution (T&D) and stranded costs). Retail prices vary across the state, but a representative average for residential customers is \$160 per MWh, or 16 cents/kilowatt hour (kWh). Using that average, the impact RGGI had on residential retail electricity prices ranges from a 0.6% to 1.1% increase. This is also illustrated in Table A.

**Table A: Percent Impact of RGGI on Electricity Prices**

Date	2009 Vintage RGGI allowance value (\$/ton)	Average wholesale electricity price (\$/MWh)	Impact on wholesale electricity prices	Impact on residential retail electricity prices
September 2008	\$3.07	\$63.34	2.4 %	1.0%
December 2008	\$3.38	\$57.56	2.9%	1.1%
March 2009	\$3.51	\$40.18	4.4%	1.1%
June 2009	\$3.23	\$32.50	5.0%	1.0%
September 2009	\$2.19	\$27.86	3.9%	0.7%
December 2009	\$2.05	\$34.44	3.0%	0.6%

ISO New England's model is consistent with Massachusetts efforts to develop a detailed analysis of the price impacts of RGGI. Preliminary results from the first RGGI auction in September 2008 indicate that the price impact in Massachusetts is about \$1.47/MWh at an auction price of \$3.07 per tons of carbon dioxide.

**IV. CONCLUSION**

With the many factors that influence the price of electricity and natural gas, it is difficult to isolate the impacts of RGGI. However it is clear that since the first RGGI auction, all factors are combining to result in a net decrease in electricity prices. Despite falling electricity prices, it is likely that RGGI is having a price impact and that current electricity prices would likely be lower without the impact of RGGI. Maine will continue to stay abreast of regional efforts to track the impacts of RGGI and will report future developments to the Committee.