

ECONOMIC IMPACT STATEMENT: ATTACHMENT A

A. Introduction

This rule is being proposed to establish the Vermont component of the Regional Greenhouse Gas Initiative (RGGI). RGGI is a multi-state regional initiative to design and implement a mandatory cap-and-trade program to reduce carbon dioxide emissions from power plants in the eastern United States. A cap-and-trade program is a flexible, market-based approach to achieving real emissions reductions at the lowest possible cost.

To estimate the potential impact of the RGGI program on the economies of participating states, a macro-economic impact study was conducted. The study used a computer model called the Regional Economic Models, Inc. (REMI). The study concluded that the economic impacts of RGGI on the economies of the participating states were very small and generally positive.¹

B. General Benefits

Implementing the RGGI program through the proposed regulations will provide numerous unquantifiable benefits to Vermont and the other participating RGGI states, including:

- Reductions in emissions of gases that cause or contribute to climate change.
- A more efficient electric generating sector means less waste and less dependence on foreign sources of energy. It also means a less-polluting electric generating sector—both in terms of carbon dioxide emissions and emissions of other pollutants, such as mercury, nitrogen oxides and sulfur dioxide.
- RGGI will promote non-emitting forms of electric generation, such as renewable energy.
- The market-based program is expected to stimulate the development of new technologies to scrub carbon from the emissions stream, and store carbon where it will not be harmful to the climate.
- The program is expected to directly drive new energy efficiency investments in the region, both in end-use electricity and natural gas, heating oil and propane efficiency. More efficiency means fewer dollars spent on energy and less dependence on foreign oil and gas.

¹ “REMI Impacts for RGGI Policies based on the Std REF & Hi-Emission REF”, by the Economic Development Research Group, dated November 17, 2005, available at <http://www.rggi.org/documents.htm>.

- Actions taken to address the challenge of climate change now will avoid the costs of doing nothing to ward off more significant changes in climate in the future.

C. Potential Impacts to Ratepayers

Commercial, industrial and residential electric ratepayers may be affected by the proposed rule. The Integrated Planning Model (IPM), a nationally recognized modeling tool, was used to analyze the potential costs and other impacts associated with RGGI on a regional basis.² According to the modeling, the RGGI program is initially expected to have modest price impacts on ratepayers in the region. Wholesale electricity rates are expected to increase approximately 1.6% in 2015 and 2.4% in 2021.³ For a typical residential customer in the region (using 750 KWh of electricity per month), the projected changes in wholesale electricity prices translate into a retail bill increase of \$0.78/month in 2015 (0.7%) and \$1.13/month in 2021 (1.0%). These figures represent modest potential price increases when viewed in the context of recent electricity price increases that are almost exclusively the result of higher fuel costs. Over time though, improvement in end-use energy efficiency, due to both RGGI and other state energy policies, is projected to produce a net savings that exceeds the price impact of the RGGI program.

There are a number of reasons why the projected regional impacts for the RGGI program may be less in Vermont. First, Vermont currently receives nearly two thirds of its electricity from sources that do not rely on fossil fuel. Roughly one third of Vermont's electricity demands are being met by Hydro Quebec (hydroelectric) and one third by Vermont Yankee (nuclear).⁴ Vermont receives some additional power from biomass facilities that are not subject to the RGGI program and run of the river hydro. Consequently, the increased rates associated with the RGGI program should affect Vermonters less than electric ratepayers in other states in the region that rely more heavily on fossil fuel-fired generation facilities.⁵ Second, Vermont already has state laws

² IPM is used by the EPA, state energy and environmental agencies, and private sector firms such as utilities and generation companies. The analyses and assumptions used for RGGI were thoroughly vetted through extensive stakeholder involvement. Assumptions and sources of input data are specified in detail in the "Assumption Development Document: Regional Greenhouse Gas Initiative Analysis" available at <http://www.rggi.org/documents.htm>.

³ RGGI, *Frequently Asked Questions* (Updated Oct. 27, 2006).

⁴ See Vermont Department of Public Service, *Utility Facts* at 8 (Oct. 2006), available at: <http://publicservice.vermont.gov/pub/other/utilityfacts.pdf>.

⁵ It should be noted, however, that Vermont faces a substantial near-term challenge with the impending need to replace the major power source contracts of both Hydro Quebec and Vermont Yankee in the period between 2012 and 2015. Given the low GHG intensity of Vermont's existing electricity mix, it is likely that at some portion of the future replacement generation will rely more heavily on fossil fuel-fired generation either in-state or within the New England region.

in place to improve end-use energy efficiency.⁶ For instance, Vermont has legislation for improved building energy codes and has an established energy efficiency program known as Efficiency Vermont. Finally, Vermont is required by statute to allocate 100 percent of its emissions allowances to a “consumer benefit or strategic energy purpose.”⁷ This means that all of the revenue generated from the sale of carbon dioxide allowances in Vermont will be dedicated to providing “the maximum long-term benefit to Vermont electric consumers.” 30 V.S.A. § 255(c)(2).

D. Potential Impacts to Regulated Businesses

The proposed rule only applies to fossil fuel-fired electric generating units that have a nameplate capacity equal to or greater than 25 megawatts. In Vermont, there are only two facilities meeting this criteria: (1) Burlington Electric Department’s gas turbine, and (2) Green Mountain Power’s Berlin 5 generator. Each unit subject to the proposed rule will be required to have enough carbon dioxide allowances to cover its emissions at the end of each compliance period. Such units can either reduce their emissions, buy allowances on the market, or generate offset allowances through an emissions offset project.⁸ Units that reduce their emissions and have excess allowances may either bank those allowances or sell them to other units (including those in other participating RGGI states). Emissions trading guarantees that the most cost-effective reductions are implemented at the plants. Further, each unit must also comply with the permitting, monitoring, and reporting requirements in the proposed regulations. Any increased costs due to the proposed regulations will most likely be passed on to consumers.

E. Potential Impacts to Governmental Entities

Like other ratepayers, state and local government entities may experience an initial modest increase in their electric bills as described above in the section entitled “Potential Impacts to Ratepayers.” Over time though, improvement in end-use energy efficiency, due to both RGGI and other state energy policies, should produce a net savings. The impacts to Burlington Electric, which is municipally owned, are discussed above. In addition, the Agency of Natural Resources, the Public Service Board, and the Department of Public Service will incur some costs in implementing the proposed rule.

F. Conclusion

⁶ See e.g., 21 V.S.A. §§ 266-67; Act 208, An Act Relating to the Energy Security and Reliability Act (enacted May 31, 2006).

⁷ See 30 V.S.A. § 255. Other participating states have agreed to allocate at least 25% of their allowances to a “consumer benefit or strategic energy purpose.” See Regional Greenhouse Gas Initiative Memorandum of Understanding (Dec. 2005). However, many states are opting to allocate more than 25%.

⁸ Note that under the proposed regulation the use of CO₂ offset allowances is limited to 3.3% of a unit’s total compliance obligation, though this may be increased to 5% or 10% if certain events occur.

In conclusion, the proposed rule is will achieve the regulatory purpose of reducing carbon dioxide emissions from large fossil-fuel fired electricity generating units in the region in an economically efficient manner. Furthermore, the proposed rule, if adopted, will satisfy the requirements of 30 V.S.A. § 255 and the Memorandum of Understanding signed by Governor Douglas on December 20, 2005.