



September 2012
BACKGROUND

Greenhouse Gas Emissions from the Electricity Sector Canada and Nova Scotia Draft Equivalency Agreement

Overview

Nova Scotia's long-standing dependency on coal for electricity compromises our air quality, changes our climate, and makes the province vulnerable to volatile world prices and supply.

In response, the government of Nova Scotia has developed a robust approach for reducing the province's reliance on coal by replacing it with clean, renewable resources that stabilize prices for Nova Scotians in the longer term.

The federal government through Environment Canada has recognized the province's work by agreeing to a draft equivalency agreement that will ensure Nova Scotia's greenhouse gas (GHG) regulations for the electricity sector continue to apply instead of the new federal coal-fired electricity regulations that include a stringent performance standard on coal-fired generation units.

Without the equivalency agreement, Nova Scotia's coal-fired units would have to close prematurely at a cost of up to \$1.3 billion to Nova Scotia ratepayers.

Under the draft agreement Nova Scotia's current greenhouse gas (GHG) regulations for the electricity sector apply until 2020. The province will add regulated GHG reductions for 2020 to 2030 to meet the federal time line. This will ensure that Nova Scotia's GHG regulations achieve the same GHG emission reductions over the term of the agreement.

This agreement will meet the needs of both governments by avoiding duplication of efforts to control GHG emissions and ensuring industry has only one set of regulations to follow.

Nova Scotia Approach: Capitalizing on Opportunities, Reducing Risks

Since the electricity sector is responsible for almost half of the province's GHG emissions the government enacted "hard caps" on GHG emissions from electricity generation (*Greenhouse Gas Emissions Regulations*). These regulations will reduce GHG emissions in Nova Scotia's electricity sector by mandating increasingly lower targets for allowable emission of GHGs for the period of 2010 to 2020, representing a 25 per cent reduction. Nova Scotia is the first and only jurisdiction in North America to implement such a regulation and has received numerous awards and recognition because of it.

Nova Scotia's GHG regulation is part of a larger, comprehensive strategy to transform our electricity sector from one largely based on coal to one using cleaner energy sources. This work has included:

- In 2010, the province released the *Renewable Electricity Plan* with a commitment to increase renewable electricity to 25 per cent by 2015 and 40 per cent by 2020.
- In 2010, the net metering program was expanded to provide Nova Scotians with more options for generating and consuming renewable energy.
- In 2010, the Muskrat Falls hydroelectric development was announced, which will supply 8-10 per cent of our province's total energy needs.
- In 2011, Efficiency Nova Scotia Corp. was established to help Nova Scotians reduce their energy consumption and improve their energy efficiency at home and at work.
- In 2011, the first Community Feed-In Tariff projects were announced supporting the use of locally-based renewable electricity projects.
- In 2012, the *Marine Renewable Energy Strategy* was released outlining broad policy, economic and legal conditions for renewable energy projects and technologies for commercial development in the province.

We are starting to see the results of these measures with the use of renewable energy sources increasing from 11 to 17 per cent between 2006 and 2011 and it is projected to reach 40 per cent in 2020. Energy efficiency programs and the expansion of natural gas use will also support the reduction of GHGs in the electricity sector. The province's coal consumption has already declined from a high of 80 per cent in 2006 to 57 per cent in 2011, and is projected to reach 40 per cent or lower in 2020. This decrease in coal consumption has both environmental and health benefits. It also provides greater diversification of our energy supply, allowing us to use more local energy sources and increase our energy security.

Proposed Federal GHG Regulation: *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations*

In the spring of 2010, Environment Canada announced its intention to develop regulations to reduce GHG emissions from coal-fired electricity. In August 2011, the federal department published the draft *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* in Canada Gazette I, along with a detailed regulatory impact analysis statement for public review. The final regulations were released by the federal government on September 12, 2012.

Under the new regulations, coal-fired electricity units must meet a very strict new GHG emissions standard or shut down at the end of their economic life.

The federal regulations are designed to encourage the use of more natural gas for

electricity production, and enable the adoption of “carbon capture and storage” (CCS) technology that is the practice of capturing GHG emissions at the stack, and storing them in underground geological formations. Both options are limited in Nova Scotia due to our relatively new natural gas market and lack of viable CCS opportunities.

Without the equivalency agreement, Nova Scotia would have to adhere to the federal regulations, which would make it necessary for Nova Scotia’s eight coal-fired electricity units to close prematurely, based on the following schedule:

- Trenton 5 (2019), Point Tupper 2 (2022)
- Lingan 1 (2029), Lingan 2 (2029), Lingan 3 (2029), Lingan 4 (2029)
- Trenton 6 (2041) and Point Aconi 2043)

The federal regulations, presented in Canada Gazette I, would not result in additional GHG reductions over the provincial approach but would represent an additional cost to Nova Scotia ratepayers of between \$935 million to \$1.3 billion.

Under Nova Scotia’s approach, GHG emissions in the province would be reduced at a rate on par with what would be required by the federal regulation, but coal units would be closed only when economically appropriate and in the best interests of Nova Scotian ratepayers.

Canada-Nova Scotia Equivalency Agreement

The Canada-Nova Scotia draft Equivalency Agreement negotiated by Environment Canada and the province of Nova Scotia includes the following key elements:

- Nova Scotia will match the GHG reductions up to 2030 as outlined in federal regulations.
- Nova Scotia’s regulations will be enforced in the province, not the federal regulations, for the period of the agreement.
- It is recognized that Nova Scotia’s current *Greenhouse Gas Emissions Regulations* will result in equivalent outcomes in GHG emissions from the electricity sector to 2020.
- Nova Scotia will amend its GHG regulations to require additional reduction requirements for the period 2020 to 2030, which will represent over a 50 per cent reduction in electricity sector GHGs from 2007 to 2030. These regulations have to be in place on or before January 1, 2016.
- Nova Scotia will share GHG reporting information from the electricity sector with Environment Canada to ensure targets are being met.

The agreement covers the period of July 1, 2015 to December 31, 2019. Federal regulations limit equivalency agreements to five year periods, so this agreement will need to be reviewed and renewed on a regular basis.

The agreement becomes effective when the federal Governor in Council issues an order exempting Nova Scotia from the application of the federal regulations. This will occur after Nova Scotia has published its revised GHG regulations for the 2020 to 2030 period.

The Nova Scotia Draft Equivalency Agreement negotiated by the province and Environment Canada allows Nova Scotia the flexibility needed to reduce the province's electricity sector GHG emissions in a manner that produces the greatest benefit to the environment over the long term, and has the least effect on provincial power rates.

A copy of the draft agreement is available at <http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=1ADECED-1>