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Draft Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations

By Shauna Finlay

As part of the Government of Canada's plan to regulate carbon emissions, sector by sector, the Government of Canada recently released the *Draft Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* (the "Draft Regulations"). In summary, the Draft Regulations aim to phase out the use of coal-fired generation units, unless such units are associated with carbon capture storage systems ("CCS") that enable such generation units to meet the intensity limits set by the Draft Regulations. This raises issues for domestic coal producers that supply coal-fired electrical energy generation units.

The Draft Regulations

The Draft Regulations apply to coal-fired electricity generation units that have been characterized as either (i) old, (ii) new, or (iii) existing:

- **"Old unit"** means a unit that has reached the end of its useful life but continues to produce electricity. Generally speaking, end of useful life is defined as the later of 45 years from the commission date or the end of their power purchase agreement applying to that unit.
- **"New unit"** means a unit, other than an old unit, whose commissioning date is on or after July 1, 2015.
- **"Existing unit"** means a unit that is not an old unit (so has not reached the end of its useful life) and is not a new unit (so had a commissioning date before July 1, 2015).

For coal-fired generation units, the Draft Regulations impose an intensity limit on 375 tonnes of CO₂ emissions per GWh of electricity produced by the unit during a calendar year from the combustion of fossil fuels. This intensity limit will apply in 2015. It will initially only apply to new units and old units that have reached the end of their useful life. Existing units will not be subject to the intensity limit until they reach the end of their useful life, as defined in the Draft Regulations.

The Draft Regulations set out some time limited flexibilities to ensure the integrity of supply of electricity, subject to ministerial (Minister of the Environment) approval. These include:

- New and old units would be able to apply for a temporary deferral, until January 1, 2025, from the application of the performance standard if they incorporate technology for CCS.
- An old unit may be entitled to an 18 month deferral from the application of the emission intensity standard in the event the owner or operator of the old unit also owns an existing unit and CCS technology is used with that existing unit such that at least 30% of the CO₂ emissions from that existing unit are captured for five years before that existing unit is subject to the performance standard (i.e. five years before the end of the useful life of that existing unit).
- An existing unit that closes before the end of its useful life or meets the performance standard prior to when it would be required to do so may transfer its effective “end of useful life” date to an old unit that reaches its end of useful life date before 2020 for the remaining time before the calculated end of useful life for the existing unit. For example, Unit A is to reach the end of its useful life in 2017, and unit B is to reach the end of its useful life in 2026. However, Unit B had been altered to meet the emission intensity standard in advance of the end of its useful

life. The “end of useful life” calculation for these units can, essentially, be swapped so that the earlier “end of useful life date” applies to the unit that is already in compliance (Unit B), and the longer date gets applied to the older unit (Unit A).

- A deferral to meeting the performance standard under emergency circumstances is available where there is a disruption, or a significant risk of disruption, to the electricity supply. An emergency circumstance affecting the electricity supply is a circumstance that is either unforeseen or that arises when there is a formal declaration of emergency issued by the province or territory where the unit is located¹.

The intensity level chosen (375 tonnes of CO₂ emissions per GWh during a calendar year) is to mirror the intensity level of Natural Gas Combined Cycle technology², or the performance of an average coal-fired generation plant using CCS that captures approximately 70% of its emissions.

Electricity Generation in Canada from Coal

To put the impact of the Draft Regulations in context, it is of note that as of 2008, 14% of Canada’s electricity came from coal.

¹ The source of this summary is the “Regulatory Impact Analysis Statement”, published by the Privy Council, Government of Canada, August 27, 2011, *Canada Gazette*, Part I, Vol. 145, No. 35 — August 27, 2011, found at <http://www.gazette.gc.ca/rp-pr/p1/2011/2011-08-27/html/reg1-eng.html>

² See Backgrounder: Key Elements of Proposed Regulatory Approach, published by Environment Canada, <http://www.ec.gc.ca/default.asp?lang=en&n=714D9AAe-1%news=55D9108-5209-43B0-A9D1-347E1769C2A5&printerversion=true>

As of 2008, coal contributed to the electricity generation in six provinces, as follows³:

- 74% of generation in Alberta;
- 73% of generation in Nova Scotia;
- 60% of generation in Saskatchewan;
- 31% of generation in New Brunswick;
- 17% of generation in Ontario; and
- 1% of generation in Manitoba.

With respect to each province's share of the total coal generation capacity, Ontario and Alberta are nearly tied, at 39% and 38% respectively, followed by Saskatchewan (11%), Nova Scotia (8%), New Brunswick (3%) and Manitoba (1%)⁴.

Conclusion

The Draft Regulations have been promulgated with the express goal of reducing dramatically, and then eliminating, the use of coal for electrical generation, unless the majority of carbon generated from the use of coal is captured and stored. While it would appear that the emissions emanating from the oil and gas sector are greater, the writer suspects that ongoing discussions and negotiations between the oil and gas sector and the Government of Canada are the reason the Draft Regulations have preceded regulations applicable to the oil and gas sector.

It is also of note that amongst the industry groups consulted on advance of the publication of the Draft Regulations, the coal mining industry is notably absent. With most of Canada's domestically produced coal being used for electrical generators, this apparent absence is even striking. At the time of writing, both Nova

Scotia and Alberta have lobbied for additional time flexibility to apply to the application of the Draft Regulations. Whether and in what form the Draft Regulations are ultimately put into force will reflect how effective these lobbying efforts will have been.

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For further information, please contact a member of our [National Mining Group](#).

³ See s. 2.4.1 in the "Regulatory Impact Analysis Statement", published by the Privy Council, Government of Canada, August 27, 2011, *Canada Gazette*, Part I, Vol. 145, No. 35 — August 27, 2011, found at <http://www.gazette.gc.ca/rp-pr/p1/2011/2011-08-27/html/reg1-eng.html>

⁴ Ibid.