

Cleaning Up Coal

By Astrid Kalkbrenner

Regulation commented on:

Federal Draft Regulations “[Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations](#)” as of 27 August 2011

On 27 August 2011 the federal government published proposed regulations on the “Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity” (the “Regulations”). The Regulations are open for comments for a 60-day public consultation period. The final Regulations will be published next year.

Canada’s GHG Commitments and Climate Targets

Canada has several climate targets. According to the [Kyoto Protocol](#), Canada has to reduce Greenhouse gases (GHG) to 6% below 1990 levels by 2012. It is evident that Canada will not be able to comply with this target. In 2007 the federal government initiated the “[Turning the Corner](#)” plan and its associated [regulatory framework for air emissions](#). That Plan established a target of reducing GHG emissions by 20% from 2006 levels by 2020. Then, in 2009 Canada also committed to reduce GHG by 17% below 2005 levels by 2020 ([Copenhagen Accord](#)) (see [here](#)).

In 2008 the electricity generation sector contributed 16% (120 Mt) GHG to Canada’s inventory of emissions. Electricity generated from coal fired facilities represented 78% (93 Mt) of the total emissions of the electricity sector. Canada envisions clean electricity generation in which the sector will generate 90% of its electricity from zero-emitting sources by 2020. As part of this vision the former Minister of the Environment, Jim Prentice, told the Canadian coal industry in June 2010 that the days of using coal as usual were numbered and promised the introduction of stringent performance standards for coal fired units. The federal government’s intention is to phase out high-emitting coal fired generation and to promote a transition towards lower- or non-emitting types of generation such as high-efficiency natural gas, renewable energy, or fossil fuel-fired power with carbon capture and storage (CCS). The new performance standard for coal fired power plants will be 375 tonnes CO₂/GWh which will be on par with high-efficiency natural gas power generation. The proposed regulations are designed to give effect to this vision.

Content of Draft Regulations

The Regulations will be enacted under the *Canadian Environmental Protection Act 1999 (CEPA)*, SC 1999, c 33. The Regulations consist of 28 sections and 6 schedules divided into four parts: regulated units and emission limit; reporting, sending and recording of information; quantification rules; and dates for the coming into force. The Regulations apply to CO₂ emissions that result from the production of electricity by means of thermal energy using coal as

a fuel, whether in conjunction with other fuels or not (s.1(1)). The term “coal” includes petroleum coke and synthetic gas derived from coal or petroleum coke (s.2). Section 3(1), the heart of the Regulations, sets out that “[a] responsible person for a new unit or an old unit must not, on average, emit with an intensity of more than 375 tonnes CO₂ emissions from the combustion of fossil fuels in the unit for each GWh of electricity produced by the unit during a calendar year.” “Responsible person” means an owner or operator of a unit (s. 2). “New units” are those with a commissioning date on or after 1 July 2015 (s. 2). “Old unit” is a unit that has reached the end of its useful life but continue to produce electricity (s. 2). “Useful life” is defined as the period that begins on the commissioning date and ends on the latest of 31 December of the calendar year that is 45 years after the commissioning date (s. 2). The Regulations do not apply to an “existing unit” which is defined as neither being an old nor a new unit, or in other words those units are excluded that were operating before 1 July 2015 but which have not yet reached their end of useful life date (s. 2). The Regulations provide for temporary deferrals, for example depending on criteria set out in the Regulations until 2025, from the application of the performance standard if the operator of the coal fired power plant incorporates CCS technology (s. 8), or in case of emergency where there is a disruption or risk of disruption to the electricity supply. The Regulations are subject to *CEPA*’s enforcement and compliance provisions.

Effect of Regulations on GHG commitments

The federal government assumes Canada’s aging coal fired power plants will soon reach the end of their useful life. Further, the government estimates that 66% of the total coal fired capacity will reach the end by 2025 and by 2030, a total of 83% will have reached their end of useful life. According to the explanatory notes to the Regulations, this would result in a reduction of 175 Mt CO₂ by 2030.

Critics such as Tim Weis of the Pembina Institute, point out that the Regulations only partly contribute to the federal government’s commitment to generate 90% of electricity from zero-emitting sources by 2020 in order to fulfill the national GHG target for 2020. The federal government knows that the proposed Regulations will constitute only a partial move towards the fulfillment of Canada’s commitments. In the explanatory notes to the Regulations it is clearly set out that the “[g]overnment policies to date and the impact of the proposed coal-fired electricity Regulations will reduce 2020 GHG emissions from 850 Mt down to 785 Mt, a difference of some 65 Mt or one-quarter of the reductions required to meet Canada’s target.”

Some loopholes in the Regulations are already visible. The Regulations will come into effect on 1 July 2015. Coal fired power plants which are built and start operation before that date are not subject to the Regulations and therefore can continue to use old technology and emit GHG as usual. In light of this option the Alberta company Maxim Power expedited its application for a new 500 MW coal fired plant at the existing 150 MW H R Milner Generating Station in Grande Cache. The Alberta Utilities Commission’s (AUC) approval came just in time, on 30 June 2011. Maxim Power had stressed to the AUC that any delay in the approval, later than 30 June 2011, would also delay the in service date of the expansion. An in service date on 1 July 2015 or later would significantly harm or even kill the project, because it would then have to comply with the new performance standard. Maxim Power wanted to ensure that the plant would qualify as an existing plant under the new Regulations. In early October, the environmental legal action group Ecojustice filed an application to appeal Maxim Power’s approval (see [here](#)). To close this loophole, the Regulations should apply immediately to all proposed new plants.

Conclusion

Coal is an especially damaging fossil fuel from a climate and environmental perspective. However, using coal has advantages: it is a reliable energy source and the technology is mature in the sense that it is well understood. On average, coal is less expensive than other energy sources. Most importantly, coal is abundant – especially in Alberta where reserves are estimated at 33.4 billion tonnes. Coal could provide a secure source of energy for hundreds of years.

The electricity sector, with 78% of its production based on coal fired plants, has a huge potential for significant emission reductions and thus must be included in any national plan to reduce emissions. Canada has to attack coal related emissions in order to show significant effort in reducing GHG. The Regulations are one step in the right direction. However, the federal Regulations seem unassertive when compared to some provincial initiatives, such as Ontario's plan to phase out all coal-fired power plants by 2014. The federal Regulations grant a grace period that is too long, in particular for newer plants that are currently operating. The federal government should revise the Regulations and apply them to all newly built coal fired power plants immediately. That would also prevent hasty rushes to approve new power plants with old performance standards, as is shown by the Albertan case of Maxim Power. The delay built into the new Regulations appears to be an effort by Ottawa to soften their impact on the industry. It is, however, a short-sighted move certain to hamper efforts to achieve reduced GHG levels by the target dates.

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