

Cécile Cléroux
Assistant Deputy Minister
Environmental Stewardship Branch
Environment Canada

March 31, 2008

Mme Cléroux,

Thank you for taking the time to respond in detail¹ to Pembina's analysis of the government's recent update to its Turning the Corner plan (<http://climate.pembina.org/pub/1614>). We appreciate the opportunity to engage in a dialogue with Environment Canada about the development of greenhouse gas (GHG) reduction policies. I have responded to each of the points on which you took exception to our analysis below. After careful consideration of each of them, as detailed below, I conclude that, based on currently available information, our analysis remains correct on all major points of substance. However, I have made one minor correction (see Point 4, below) in response to a point raised in your assessment.

Of course, we would welcome further discussion if you continue to believe that we are in error.

Best regards,
Matthew Bramley

Director, Climate Change Program
The Pembina Institute

Detailed Response

1. We said that the pre-certified investment option means that a “company can meet 100% of its regulatory obligation simply by promising to start capturing CO₂ in 2018 and by setting some funding aside to do this” in the years prior to 2018. You say that this is incorrect because, to use this option, “proponents will [have to] commit to [the] immediate implementation” of carbon capture and storage (CCS) projects. However, in

¹ Environment Canada's response to Pembina's analysis is available online at <http://www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=F0AF139B-17E4-4721-858D-B5DC425943C4>.

the government's document laying out the pre-certified investment option², there is no reference to "immediate implementation." On the contrary, the document states that "up to 100% of a firm's regulatory obligation in these pre-certified projects will qualify for credits up to 2018" — implying that, in general, implementation need not begin until 2018. If indeed the government intends to implement this option in a manner different from that implied in its document, it should publish a clarification to that effect.

2. We noted that "the government has not explained what will happen in the event that a company breaks its promise to implement CCS" — i.e., where a company receives credits for pre-certified investment in a CCS project before 2018 but fails to actually implement the project. In your response, you say only that the facility in question will face CCS-level targets in 2018 if it starts up in 2012 or later. But this is no guarantee that the project will actually be implemented.

Meeting 100% of the regulatory obligation — as opposed to 70% and declining — through pre-certified credits means fewer emission reductions in the near term in exchange for a promise to implement a CCS project later. This implies that the government attaches a special value to the implementation of actual CCS projects, as opposed to simply meeting CCS-level targets by buying emissions credits. So if a pre-certified project is not actually implemented, then the government will have foregone emission reductions but failed to meet its objective of having an actual CCS project implemented. We therefore believe that a provision must be included in the regulations to provide redress in the case that pre-certified projects are not implemented.

3. You say that "it is inaccurate to say that the corporate target applied to the electricity sector provides an exemption from the incrementality requirement. On the contrary, the regulatory approach to electricity will ensure that companies only benefit from introducing low emission technologies if real emission reductions are achieved." But your statement is contradicted by the government's definition of incrementality in the offset system, which includes a requirement that reductions are surplus to all legal requirements (including provincial) and "beyond what is expected from receipt of other climate change incentives".³ Emission reductions resulting from Ontario's coal phase-out regulation, or from federal incentives for wind power, for example, would fail the government's incrementality test but would count towards corporate emissions intensity targets. These may be considered to be "real emission reductions", but they do not meet the government's own definition of incrementality.

4. We said that replacing coal-fired electricity by renewable energy "would not have been counted under the 2007 regulatory framework." You say this is incorrect because "even if the targets were applied on a facility-specific basis, closing an emitting facility would have spared the company the emissions reductions it would otherwise have had to make to meet its emissions intensity targets had that facility remained open." We continue to believe our statement is correct. It can be argued that when a facility that is closed down,

² Environment Canada, *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions* (Ottawa, ON: Government of Canada, 2008), Section 5.1.3. Also available online at http://www.ec.gc.ca/doc/virage-corner/2008-03/pdf/541_eng.pdf.

³ Environment Canada, *Turning the Corner: Canada's Offset System for Greenhouse Gases* (Ottawa, ON: Government of Canada, 2008), 14–15. Also available online at http://www.ec.gc.ca/doc/virage-corner/2008-03/pdf/526_eng.pdf.

emission reductions equivalent to the difference between the facility's actual emissions (pre-closure) and its target are attributable to the framework, because there is a reduced demand for credits equal to that amount. But in the case of coal-fired facilities in Ontario, their closure is clearly not an anticipated result of the 2007 federal framework (especially when one considers that facility-based intensity targets provide a clear signal to reduce a facility's intensity, but only a very weak signal to reduce a facility's output) — but rather an anticipated result of a provincial regulation. It therefore seems to make much more sense to attribute those reductions to the provincial regulation.

Addendum (April 1, 2008) — On further reflection, there was one error in my earlier response above. I agree that when a facility is closed, emission reductions equivalent to the difference between the facility's actual emissions (pre-closure) and its target are counted under a framework using facility-level intensity targets, because there is a reduced demand for credits equal to that amount. The question of attribution is irrelevant.

This does not, however, have a significant effect on the point in our analysis about double counting. In our backgrounder, I have now replaced the words “These reductions would not have been counted under the 2007 regulatory framework” (p.5) with “The majority of these reductions would not have been counted...” The modified version has been posted on our website.

5. You object to our characterization of the government's timeline for implementing CCS as “leisurely” in comparison to projections by ICO₂N - but you compare the federal plan with the ICO₂N projections only for the year 2020. Our comments were based on looking at earlier years, where it is noticeable that the government anticipates a sudden drop in oil sands emissions between 2017 and 2018, while ICO₂N lays out a much smoother scenario of increasing amounts of emissions captured annually, with large-scale capture occurring as early as 2012. It would be surprising if large-scale capture in 2012 resulted from the regulatory framework, as the framework's anticipated price on emissions is only \$25/tonne in that year. Also, the government's modelling results for oil sands, which include the 55 Mt of reductions in 2020 to which you refer, do not make clear whether they are for actual emissions or net emissions (actual minus purchased credits).⁴ Without clarification on that point, the government's 55 Mt cannot be compared to the ICO₂N numbers.

6. You take issue with our statement that Canada's 2020 target “leaves Canada far short of doing its fair share in the global effort to prevent dangerous climate change.” In response, you say that “Canada has clearly stated that global emissions should be reduced at least by half by 2050 [and] has put in place domestic targets to support that objective.”

There are two problems with your answer. First, Canada's statements about cutting global emissions in half by 2050 are unfortunately far from “clear” because, to date, they have never specified a base year. Reductions are strictly meaningless without specifying the reference point from which they are quantified. Second, if we assume that Canada's proposed target of cutting global emissions in half by 2050 is relative to 1990 — the internationally accepted base year for GHG reductions — then Canada's domestic targets

⁴ Environment Canada, *Turning the Corner: Detailed Emissions and Economic Modelling* (Ottawa, ON: Government of Canada, 2008), 8. Also available online at http://www.ec.gc.ca/doc/virage-corner/2008-03/pdf/571_eng.pdf.

are incompatible with its proposed global target. This is because Canada's domestic target for 2050 is equivalent to a reduction of only about 49–62% below the 1990 level — i.e. approximately the same percentage reduction as the global reduction — while it is almost universally accepted that wealthy countries with high per-capita emissions such as Canada will need to make much larger percentage reductions than the world as a whole.

On the other hand, if we assume that Canada's proposed target of cutting global emissions in half by 2050 is relative to 2006, then (according to the Intergovernmental Panel on Climate Change, or IPCC) this would imply an increase in global average temperature, relative to the pre-industrial level, well in excess of 2°C, the limit recommended by many leading climate scientists.

Canada's 2020 target would leave national emissions at about the 1990 level, while the IPCC has shown that to have a chance of avoiding 2°C of global warming, industrialized countries as a whole must reduce their emissions to 25–40% below the 1990 by 2020. The government will continue to find it difficult to convince others that its 2020 target is fair, or compatible with climate science, unless it can provide a demonstration that Canada's target represents a fair share of the 25–40% below 1990 target range according to some burden-sharing formula with clear and reasonable assumptions.

7. In our analysis, we questioned the government's assumed medium-term price of oil of \$50 per barrel (\$2005) up to 2020; you cite various authorities as the basis for this assumed price. The fact is, of course, that the future price of oil is highly uncertain. According to a March 16, 2008 article in the *Financial Times*,⁵ the crude oil futures market is now estimating that the price of oil will be above \$100 per barrel in 2016, and some major financial institutions are now forecasting a price of \$135 per barrel in 2015. Clearly, the government needs to evaluate the emission reductions expected from the regulatory framework and other measures, and to compare the results to its overall 2020 GHG target, under a range of oil prices, including \$100/barrel and higher. Using a single price of oil much lower than the market is currently expecting (i) does not appear prudent for purposes of planning, and (ii) damages the credibility of the government's projections of the effectiveness of its policies.

8. In our analysis, we noted that the government has asserted without explanation that investments by the Technology Fund will generate 20 Mt of reductions in annual emissions. In your response, you provide some additional comments on the likely effectiveness of investments by the fund in reducing emissions, but you do not explain how the figure of 20 Mt was arrived at. We remain interested in receiving an explanation of this.

9. Finally, you note that the emissions prices projected in the government's modelling exercise are fairly close to the emissions prices currently advocated by Pembina and other environmental organizations. In our analysis we did acknowledge (p.3) that the framework is projected to generate a price of over \$50/tonne in 2016. This is encouraging up to a point, but there are some important caveats:

⁵ Javier Blas, "Investors Bet on \$100 a barrel oil until 2016," *Financial Times*, March 16, 2008, Also available online at http://www.ft.com/cms/s/0/d821c5aa-f387-11dc-b6bc-0000779fd2ac.html?nclink_check=1.

- Under the regulatory framework, not all emission reductions are worth the full price. Those that result in reduced reliance on technology fund or pre-certified investment credits, and (because of intensity targets) those resulting from a shift in output from one facility to a facility with a different intensity target.
- The complexity of the regulatory framework (in comparison, say, to a straightforward emissions tax or cap-and-trade system) and the considerable number of unanswered questions that remain, considerably reduce the credibility of the future emissions prices that the government has projected. From the perspective of industry, this limits the framework's value in affecting investment decisions; from an environmental perspective, it limits the confidence we can have in projected emission reductions.