Briefing Note

For: Standing Senate Committee on Energy, the Environment and Natural Resources

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Issue

The Standing Senate Committee on Energy, the Environment and Natural Resources has requested a meeting with the Pembina Institute – on Wednesday October 5th in Calgary – to discuss its study on Canada’s transition to a low carbon economy.

Context for meeting

The Standing Senate Committee on Energy, the Environment and Natural Resources has been authorized to examine and report on the effects of transitioning to a low carbon economy, as required to meet the Government of Canada’s announced targets for greenhouse gas emission reductions. Recognizing the role of energy production, distribution and consumption in Canada, the committee has been authorized to:

a) identify and report on the impact transitioning to a low carbon economy will have on energy end users, including Canadian households and businesses;

b) identify and report on the most viable way the following sectors — electricity, oil and gas, transportation, buildings and trade-exposed energy intensive industries — can contribute to a low carbon economy in meeting Canada’s emission targets;

c) examine and report on cross-sector issues and undertake case studies, if necessary, on specific programs or initiatives aimed at reducing greenhouse gas emissions;

d) identify areas of concern and make any necessary recommendations to the federal government that will help achieve greenhouse gas emission targets in a manner that is sustainable, affordable, efficient, equitable and achievable.

The Pembina Institute welcomes this opportunity to speak to members of the Senate committee. In light of our policy expertise across Canada and federally, we will limit our remarks to item B of the committee’s study. The below recommendations will be presented by Chris Severson-Baker, Regional Director for Alberta.
Background

• Undoubtedly, Canada has made significant climate policy progress over the last year. Unfortunately, this progress comes after many years of policy inaction, both at the provincial and federal levels. At present, Canada is not on track to achieve its 2020 emissions reduction goal under the Copenhagen Accord, nor its 2030 INDC. Canada’s 2016 National Inventory report shows that Canada’s emissions totalled 732 Mt in 2014 — only 2 per cent below 2005 levels of 747 Mt, and an increase of 20 per cent above 1990 levels.¹ Using the 2030 INDC as a floor, not a ceiling on ambition, Canada’s emissions will be at most 524 Mt by 2030.

• Canada’s second biennial report on climate change, submitted to the UNFCCC in April, takes stock of federal, provincial and territorial climate commitments up to September 2015, and details Canada’s progress towards its 2020 and 2030 goals. According to their estimates, Canada’s emissions are likely to be 768 Mt in 2020 and 815 Mt in 2030.² Taken relative to Canada’s maximum inventory size of 524 Mt in 2030, the biennial report indicates that the emissions gap in 2030 could be as much as 291 Mt in 2030 — more than four times the size of emissions currently produced in the oilsands (68 Mt in 2014). It’s clear from this data that, even with all federal, provincial and territorial policies in place as of September 2015, significantly greater effort is required to achieve Canada’s climate goals.

• More recently, research from leading environmental economists (Dave Sawyer and Dr. Chris Bataille) demonstrates that Canada’s emissions gap in 2030 is slightly smaller than official government estimates.³ After September 2015, a significant number of new climate policies were announced that were not taken into account in the biennial report. These policies include Alberta’s Climate Leadership Plan, Ontario’s cap-and-trade regulation, Saskatchewan’s 50 per cent commitment for installed renewable energy capacity, and the Canada-U.S. joint commitment to regulate new and existing sources of methane emissions in their oil and gas sectors.⁴

• Accordingly, based on the modeler’s expert judgment, these policies could reduce emissions to 709 Mt - 634 Mt in 2030, leaving a gap of 185 Mt - 110 Mt in 2030.⁵ While these estimates provide a more up-to-date assessment on the efficacy of existing and developing climate policies across Canada, the point remains: even with all national and sub-national climate efforts to date, Canada must bring in ambitious new policies and/or significantly increase the stringency of existing programs, to close the gap to 2030.

http:// unfccc.int/ national reports/ annex I ghg inventories/ national inventories submissions/ Items/ 9492. php
⁴ Ibid., 4.
⁵ Ibid., Figure 3.
Considerations

- Despite historical challenges, Canada’s federal, provincial, and territorial governments now have a new consensus on the need to decarbonize our economy.
- In our view, collaboration and consensus across national and sub-national governments is important, since some provinces have already made important contributions to emissions reductions worth scaling nationally, and since many of the challenges facing individual sectors are shared across the country.
- However, if consensus breaks down at the first ministers’ table, it remains the responsibility of the federal government to create a federal climate plan aligned with the country’s 2030 climate target.
- In this scenario, we believe the federal government must demonstrate a coherent plan to meet or exceed its 2030 target through additional federal actions and investments. These actions should build on successful provincial efforts already in place, and should result in additional mitigation opportunities beyond those established in provincial climate plans.

Recommendations

To close the gap to Canada’s 2030 target, we urge the Government of Canada to adopt the following sector-specific policy recommendations:

*Accelerate the phase out of coal-fired power and enhance policy support for clean energy:*

- **Require zero-emitting electricity supply by 2050**, with a schedule for decreasing proportion of emitting sources of electricity between now and 2050. More than 80 per cent of Canada’s electricity sector is generated by non-emitting sources. To achieve 100 per cent non-emitting, Canada will need to incrementally replace existing fossil fuel combustion sources with clean energy, and ensure new growth in the electricity sector comes from zero-emitting sources.

- **Incrementally claw-back the end-of-life of coal plants** in a measured fashion down to 40 years, with no later than a 2030 end-date for unabated coal power. To implement this accelerated phase-out, the environment minister needs only to strengthen the existing Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations issued under the Canadian Environmental Protection Act (CEPA) — a federal authority that is already being exercised for this purpose. The accelerated phase-out is simply a strengthening of these regulations, which were originally drafted with a 45-year phase-out before being weakened to allow up to 50 years of unabated coal emissions.

- **Facilitate the creation and implementation of a pan-Canadian electrification strategy.** A pan-Canadian electrification strategy should build on successful provincial efforts to transform their electricity systems, and should establish a national vision and policy framework through which strategic investments in electrification infrastructure will be made. This strategy should promote resilient electricity systems, fuelled by renewable energy, capable of reducing carbon pollution from transportation, buildings, and industrial processes, while also reducing risk to Canadians from polluting facilities. Done right, this
electrification pathway offers important job creation potential and will help build healthy and resilient communities across the country.

Decarbonize fuels and expand low-carbon transportation options:

- **Introduce federal zero emissions vehicle (ZEV) legislation.** Starting with models manufactured in Canada in 2018, federal legislation should require that a certain percentage of major vehicle manufacturers’ sales* have zero or near-zero tailpipe emissions. The target should have predictable and consistent increases to provide the auto industry long-term policy stability. We recommend a target of 10 per cent of sales by 2020, 22.5 per cent of sales by 2025, and 30 per cent of sales by 2030.

- **Implement a national Low Carbon Fuel Standard (LCFS) as a legislated intensity target, measured in grams of CO2e per MJ of energy, for all transportation fuels sold in Canada.** The LCFS should be increasingly stringent, in order to provide a clear signals to fuel producers and vehicle manufacturers for their investments and technology development pathways. To that end, the national LCFS should have a short and long-term framework that supports a 10 per cent decrease in CO2e intensity by 2020 and a 20 per cent decrease by 2030. Further, a national LCFS should be based on lifecycle environmental impact assessments that have a carefully defined boundary and encompass all steps from upstream production to final consumption.

Transform the buildings sector:

- **Update national building codes to meet nearly zero energy standards by 2025,** and work with the province to facilitate their adoption. This will require revisions to the National Energy Code for Buildings and Section 9.36 of the National Building Code (for homes) for new construction. Transitions along this revision schedule can be facilitated by creating a nearly zero energy stretch code, adapting Passive House standard to a Canadian context (revising R-2000 for homes) and creating a schedule of EUI targets for more complex building types along the way to nearly zero energy building. These stretch codes should be developed in the next year and made available to provinces and local government to adopt as voluntary or baseline standards.

- **Develop or adapt a performance-based retrofit code providing targets suitable for a range of renovation sizes (small and major).** ASHRAE-100 standard can be used to set performance targets, while design guides such as NRCan’s upcoming ‘Major Renovation Guidelines’ provide more detailed instruction on how to achieve such targets, without restricting contractors to a set of prescribed requirements which might not be appropriate to any given situation.

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* A federal ZEV mandate would apply to vehicles manufactured and imported into Canada.
Further, we urge the Government of Canada to adopt the following overarching recommendations:

*Ensure effective carbon pricing systems are in place:*

- **Carbon prices should be implemented in all provinces, with plans to increase prices above current schedules or projections.** A carbon price should apply to all sources of carbon pollution that can be accurately measured with a schedule of rate increases that extends for 10 years. In our view, the price schedule should begin – at the latest – in 2018. Further, we recommend a price schedule that ramps up quickly, as such a system would increase the likelihood of Canada achieving its climate targets, and would allow other complementary policies to achieve further emissions reductions.

- **Eliminate federal and provincial subsidies to oil, gas and coal by 2020,** and commit to publicly releasing a detailed schedule in their respective 2017 budgets outlining the specific fiscal measure to be eliminated.

*Create strong, long-term accountability structures to assess national climate progress:*

- **Design and implement a method of stocktaking for the pan-Canadian climate framework,** to ensure commitments made this year are strengthened and improved upon with time. Further, we urge the first ministers’ to link the pan-Canadian climate process directly to the long-term low greenhouse gas strategy: since the Paris Agreement calls for carbon neutrality by mid-century, the Prime Minister and premiers should ensure the federal-provincial-territorial discussions align with and support the development of a collective strategy to achieve that end. Within this process, Canada should commit to increasing its climate ambition beyond its existing 2030 target, in line with the Paris Agreement requirements for developed nations.

**Conclusions**

- **Additional efforts are required to close the gap to Canada’s 2030 emissions reduction target** – and more additional efforts will be required beyond that to align with the ambition of the Paris Agreement.

- **The federal government should seek to maintain a consensus across provincial and territorial governments on the need to price carbon and introduce sector-specific policy reforms,** since some provinces have already made important contributions to emissions reductions worth scaling nationally, and since many of the challenges facing individual sectors are shared across the country.

- **However, if consensus breaks down at the first ministers’ table, it remains the responsibility of the federal government to create a federal climate plan aligned with the country’s 2030 climate target.**

- **To that end, the federal government has established jurisdiction to accelerate the phase-out of coal-fired power, introduce additional climate requirements for transportation fuels, update the national building code, and price carbon pollution.**