International Institute for Sustainable Development
Institut international du développement durable

Remarks to the Canadian-American Business Council

Scott Vaughan, Ottawa, November 4, 2013

Thank you to the Canadian-American Business Council for inviting me. I want to talk about U.S.-Canada climate change policies in the next few minutes, and specifically examine three issues: the convergence of regulatory approaches between Washington and Ottawa; the price implications of different mitigation options in Canada; and the likelihood of Canada hitting its 2020 target.

Before examining these, it's useful to note that this is the 20th anniversary of the NAFTA trade agreement, which was hailed then as the greenest trade agreement ever. While we are used to looking at U.S.-Canada environmental issues through the current lens of the Keystone XL pipeline proposal, it's important to take stock of highly successful examples of environmental cooperation, from migratory species including migratory birds; a formal cooperation treaty on acid rain; long-standing cooperation related to the Great Lakes, sharing data and methods on the health effects of toxic chemicals, and adopting common energy efficiency standards of Energy Star.

Climate Regulatory Approaches

Before looking at some specific aspects of climate policies, it's important to be reminded of the absolute urgency of reducing greenhouse gas emissions that have been directly linked to climate change. In its report of mid-2013, the International Energy Agency of the OECD noted:

> "With energy-related carbon dioxide representing the majority of global greenhouse gas emissions, the fight against climate change has become the defining factor for energy policy-making – but the implications are daunting."

The challenge is rightfully described as daunting because global emissions of carbon dioxide—the main greenhouse gas—continue to rise, and are estimated to overshoot the ceiling needed to meet a 2 degrees Celsius temperature increase by 60 per cent, putting into the spotlight the current approaches of Canada and the U.S. in meeting their own emission reduction targets.

The central feature of the federal approach in Canada to reduce greenhouse gas emissions is the setting of performance ceilings set out in sector-specific regulations. To date, climate emission reduction regulations have been introduced for automobiles and light trucks, heavy trucks and coal-fired electricity plants.

Crucially, the federal regulatory approach allows provinces the flexibility to meet the ceiling target. And quite clearly, we are seeing different approaches at the provincial level. For example, British Columbia has a carbon tax levied at $30 a tonne which meets tax-neutrality objectives; Quebec has a cap-and-trade system; Alberta has a regulatory approach within which regulated facilities have the option of lowering emissions directly, of purchasing emission reductions from other regulated facilities, buying emission offsets from unregulated entities, and—if still unable to meet their

reduction target—pay into a technology investment fund geared to advance cleaner energy projects. Saskatchewan may adopt the Alberta approach; Manitoba recently began consultations towards a new climate mitigation policy; Nova Scotia reached an agreement with Ottawa regarding its coal-fired electricity facilities; and the federal approach has led Ontario to reconsider carbon pricing.

So there is obviously a lot underway within Canada. The obvious question is whether different approaches create confusion and a patchwork of disjointed approaches that lead to inefficiency? No question it is a patchwork. And also no question, the business sectors operating in different provinces want clear, predictable and coherent climate mitigation approaches, if only for practical issues around differing administrative and compliance costs related to different jurisdictions.

However, I don't think different approaches necessarily add up to incoherence. While the debate continues about regulation or cap-and-trade or carbon taxes, it is less relevant in the current system in which multiple approaches are the reality, which combine all these features. The real challenge is ensuring different approaches can be measured as comparable or equivalent—in essence so that carbon dioxide equivalent reductions can be counted in an apples-to-apples manner that is transparent and robust. Put another way, we need to now pay attention to how different systems add up and are equivalent.

Right now there is not much paid attention to equivalency, largely because everyone is waiting for the oil and gas regulations from Ottawa, promised this spring, then anticipated this summer, and now everyone assumes they are likely in 2014—probably following the Keystone XL decision and/or the details of the U.S. federal approach to climate change.

But this is a good time to get the methods worked out, since equivalency can get complicated quickly—for instance, are estimates calculated by total emissions, by sector, by facility? Leadership from Ottawa is needed on this, and quite quickly, before we get into disagreements.

This question of equivalency becomes more important in comparing U.S. and Canadian approaches. As you know, President Obama this past June announced the new national climate action plan. Its centerpiece is regulations intended to curb major sources of carbon dioxide from stationary sources, notably existing and new coal-fired electricity plants, responsible for roughly 40 per cent of U.S. carbon dioxide emissions.

Of interest then is that while the U.S. and Canadian governments have arrived at the same answer to climate mitigation (despite conferences, papers, models, estimates and lobbying around carbon pricing and cap-and-trade system) the basis of action in the foreseeable future will be regulations regulations. Given long-standing business preoccupation around the relative compliance costs and potential competitiveness implications of U.S. approaches for Canadian business, it's important that we have ways of comparing these systems once they are both in place.

My second point is that the U.S. federal plan calls for flexibility from states to implement their own mitigation approaches in exactly the same way the Canadian federal government allows, and specifically invites a range of measures under a command-and-control approach, including market-based approaches, energy efficiency standards, renewable energy portfolios, investments in clean technology, etc.

It's unclear when the White House will introduce the details of their approach.

Everyone watched the U.S. Supreme Court rule in mid-October, in essence not challenging the authority of the U.S. Environmental Protection Agency to regulate GHG emissions. Still before the Court is whether this particular regulatory approach—delineating major sources of GHG emissions from stationary sources like individual refineries, coal-fired electricity plants, factories and major sources and issuing permitting limits—is allowed.

While people are awaiting the Supreme Court decision, no one is standing around. Leading U.S. and Canadians firms have signed various commitments, including moving to carbon neutral footprints in the coming decade; over 1,000 mayors in both countries have done the same.

Last week was the announcement that California, Oregon, Washington State and British Columbia—under the Pacific Coast Collaborative—would work to harmonize climate mitigation strategies, including setting GHG emission reductions, putting a price on carbon, driving energy efficiency and renewable energy standards.

This kind of geographic coalition between states and provinces is being echoed elsewhere: for example, the New England governors and eastern Canadian premiers continue to discuss clean energy, etc. Clearly a driver for these discussions is finding coherence not for itself, but in relation to price effects of climate policies.

There is a long-standing debate about the costs of climate mitigation policies. For example, following the June Obama climate speech, the U.S. coal industry denounced the plan, saying it would kill jobs, crush growth and stifle innovation.

Price effects are thus central to any climate policy. And right now, there is a flurry of proposals in Canada anticipating the federal oil and gas regulation that explicitly include the price of carbon dioxide equivalent.

In April of this year, the government of Alberta floated a proposal to set a 40 per cent emission-intensity improvement target with a price ceiling of $40 per tonne of CO_2 equivalent. The so-called 40/40 proposal is interesting both for its level of ambition, and also because it continues to differentiate emissions from unconventional energy sources, notably oil sands production, from conventional lighter oil and gas sources. This therefore continues the system in place in Alberta since 2007 in which large emitters—notably oil sands operators—face a 12 per cent reduction target and $15 per barrel to pay into its technology fund.

The Alberta 40/40 target has now focused enormous attention around what Ottawa will do under its regulatory target—and specifically, will it match the 40/40 target of Alberta, follow the suggestion of CAPP at 20/20, or find a middle ground at 3/30? While this sounds arcane, the actual target matters quite a bit in terms of costs.

In an economic model developed by my IISD colleagues Dave Sawyer and Dale Beugin and released in May, they estimated that adopting a 20/20 federal oil and gas target would results in a cost of $17 per tonne compared to $33 per tonne under a 40/40 target. The total cost at 20/20 would be $350 million annually, compared to $1.3 billion per year under the 40/40 target. So looking at a large range, but also looking at significantly different emission reduction levels between the two points.

A summary of these estimates is available on the IISD web site.[1]

[1] Sawyer, Dave and Dale Beugin. (2013). *Oil and Gas Greenhouse Gas Regulations: The Implications of Alternative Proposals*. IISD: Winnipeg. http://www.iisd.org/publications/pub.aspx?pno=2786

TABLE 1: NATIONAL GHG AND COST IMPACTS IN 2020: ALL OIL AND GAS PRODUCTION

	COMPLIANCE (MT)				COST IMPACTS ($2012)		
	Total	Sector	LCDR	Tech Fund	Average Cost ($/tonne)	Per bbl. Before tax/royalty*	Total (mln)**
1. 20%/$20	21 Mt	4 Mt	10 Mt	7 Mt	$17	$0.12	$348
2. 30%/$30:$60	32 Mt	6.6 Mt	15 Mt	9 Mt	$25	$0.35	$780
3. 40%/$30:$60	42 Mt	14 Mt	15 Mt	13 Mt	$28	$0.42	$1,172
4. 40%/$40	42 Mt	6.8 Mt	21 Mt	15 Mt	$33	$0.49	$1,370

** Provided as an indicator of cost. Does not include natural gas policy costs. Oil costs divided by oil production, before tax and royalty interactions reduce costs further.*

*** Undiscounted costs. In theory, these 2020 costs would be deflated by 50 per cent to reflect the time value of money (net present value @ 10 per cent discount rate).*

Source: Sawyer and Beugin, IISD, 2013.

The final comment about the current formulas is that they show differing costs if flexibility is inherent in their design. Sawyer and Beugin show that rather than locking into a 30/30 or similar symmetrical formula, using a hybrid approach may be more effective. Their analysis shows that a scenario where we see a ceiling on reductions of either 30 per cent or 40 per cent, along with a variable price of between $30 to $60 dollars for lower-cost conventional energy sources, yields the same result but with a compliance cost difference running into hundreds of millions of dollars.

Let me conclude with a comment on the target for year 2020 target.

During the five years I was federal environment commissioner, we reported that Canada wasn't going to meet its target of a 17 per cent emissions reduction. The short answer is because there were different approaches, from Made in Canada to Turning the Corner to the new regulatory approach, and now because the centerpiece of the approach—the oil and gas regulations—aren't in place, while emissions from the energy sector are expected to increase in the coming decade: the oil sands saw new investments last week of $13 billion, and production is supposed to double in the next few years.

But the sooner new regulations are in place, and the extent to which they can follow the Alberta model in differentiating oil sands emissions from conventional sources, then the sooner they can spur innovation that is hard to anticipate today.

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