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Crafting an Effective Canadian Energy Strategy

How Energy East and the oilsands affect climate and energy objectives

Erin Flanagan
April 2015

Crafting an Effective Canadian Energy Strategy: How Energy East and the oilsands affect climate change
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About the Pembina Institute

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The Pembina Institute is a national non-partisan think tank that advances clean energy solutions through research, education, consulting and advocacy. We have spent close to three decades working to reduce the environmental impacts of Canada's energy production and use in several key areas:

- driving down energy demand by encouraging energy efficiency and transportation powered with cleaner energy sources;
- promoting pragmatic policy approaches for governments to avoid dangerous climate change, such as increasing the amount of renewable energy plugged into our electricity grids;
- and — recognizing that the transition to clean energy will include fossil fuels for some time — advocating for responsible development of Canada's oilsands and shale gas resources.

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At a glance

Canada's premiers are meeting in Quebec City to discuss climate change and a Canadian Energy Strategy. This coordinated multi-province strategy presents an important opportunity for Canada to align its climate and energy policies with the global transition away from carbon-intensive fossil fuels.

While the provinces have agreed to collaborate on energy and climate, Environment Canada data shows they are not moving in the same direction. Some provinces, including Ontario, Quebec and British Columbia, have enacted policies that have begun to reduce their greenhouse gas emissions. Despite these improvements, however, the country's total emissions continue to climb. The main culprit is the oilsands sector — Canada's fastest-growing source of carbon emissions. Alberta has yet to adequately regulate the climate impacts associated with rapid expansion of this sector.

Consequently, Canadians continue to raise concerns in significant numbers about the climate change impacts associated with oilsands development. Recent oilsands pipeline proposals, including Northern Gateway and Keystone XL, have become flashpoints in the public debate about energy development and its environmental impacts.

This report aims to outline key considerations and corresponding recommendations to sub-national leaders as they convene to discuss a new path forward for Canadian energy and climate policies. The Canadian Energy Strategy will only be effective if takes into account the emissions footprint of new infrastructure projects — including TransCanada's proposed Energy East pipeline. Because of its proposed capacity of 1.1 million barrels per day, Energy East could play a significant role in determining how much and how fast the oilsands sector expands. At a time when other countries are transitioning away from fossil fuels, it is imprudent for Canada to approve infrastructure that could result in oilsands production at levels known to be inconsistent with International Energy Agency (IEA) scenarios for 2°C of warming.

The Canadian Energy Strategy provides a means to break the deadlock of climate inaction in Canada. It also present a critical opportunity for the premiers to reinvigorate a cooperative approach to climate and economic issues.

Canada's energy opportunities and responsibilities

Economies around the world are beginning to reduce their reliance on the planet's most carbon-intensive fossil fuels. The global market demand for clean technology was an estimated $1.1 trillion in 2012, and is estimated to grow to $2.5 trillion by 2022.[1] Canada is well-positioned to capture a sizeable share of the global clean technology economy but it must work together across regions and governments to capture this prize.[2]

Meanwhile, governments from coast to coast continue to discuss aspirations to expand carbon-intensive resource production. In recent years, much has been made of Canada as an "energy superpower" — typically in reference to the country's vast fossil fuel resources.[3] Unfortunately these political ambitions

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[1] Analytica Advisors, *Canadian Clean Technology Industry Report* (2014), xviii. http://www.analytica-advisors.com/sites/default/files/Stand%20alone%20ES.pdf

[2] Comette, Penelope, Dan Woynillowicz and Ed Whittingham. *Competing in Clean Energy.* (The Pembina Institute, 2013), 7. http://www.pembina.org/pub/2406

[3] The Right Honourable Stephen Harper, "Address by the Prime Minister at the Canada-UK Chamber of Commerce" speech, London, U.K., July 14, 2006. Available at: http://pm.gc.ca/eng/news/2006/07/14/address-prime-minister-canada-uk-chamber-commerce

often ignore the urgent need for countries around the world to reduce their greenhouse gas emissions, and the significant opportunities Canada has to capitalize on the growth in the clean technology sector.

If the premiers are to construct a credible and effective energy strategy, they must address the impact of energy megaprojects on joint efforts to curtail emissions. TransCanada's proposed Energy East pipeline, and other projects of a similar scale, would provide an outlet for expanded oilsands production at a time when emissions are not adequately regulated — locking Canada in to more emissions growth. It remains unclear how our federal and sub-national governments can meet ambitious emissions reductions targets while oilsands emissions continue to grow rapidly.

Further, to ensure Canada contributes adequately to global efforts to fight climate change, the Canadian Energy Strategy should build upon existing sub-national efforts to reduce emissions — including Ontario's phase-out of coal fired power, and British Columbia's economy-wide carbon tax. Moreover, these efforts would also ensure Canada's economy remains resilient and competitive as the world moves to low-carbon energy.

Measuring Canada's contribution to a new global climate accord

2015 is set to be a significant year for governments around the world working to address climate change. It's a year of reckoning for countries — like Canada — that have not taken actions consistent with previous climate commitments. World leaders will meet in Paris, France, at the United Nations Framework Convention on Climate Change 21st Conference of the Parties, to negotiate a new global agreement to reduce emissions and combat the worst impacts of climate change. In advance of these meetings, national and sub-national governments will invest time and energy to determine their contributions to such an agreement. The Paris negotiations represent an important juncture in the international climate process. All jurisdictions are being asked to come to Paris with ambitious climate change policies.

Despite international consensus that limiting warming to 2°C is essential to mitigate the worst impacts of climate change, current policies fall well short of ensuring the world has a reasonable chance of achieving this objective. Canada's climate action is especially out of sync with this important goal. Canada has committed to reduce emissions by 17% below 2005 levels by 2020. The country's economy-wide emissions totaled 736 megatonnes in 2005, and thus its target is 611 Mt by 2020. Despite this commitment, Environment Canada projections show Canada is set to miss this target by 122 Mt – an amount greater than all emissions from electricity generation across the country.[4]

Canada will have to work hard to overcome its dismal record on climate. Since the last major international goal-setting negotiation, however, Canada's provinces and territories have established a new forum for climate action through the Canadian Council of Ministers of the Environment and the Council of the Federation. This forum — the Canadian Energy Strategy Working Group — has the potential to break free of the federal government's inertia on climate issues. It represents a new mechanism through which a holistic, national-level conversation on the economic and environmental impacts of energy development can begin in earnest. All provinces and territories have agreed to participate in the development of the strategy, ensuring the forum has the critical momentum required to shepherd pan-Canadian solutions to climate change.

[4] Environment Canada, *Emissions Trends 2014* (2014), iii. http://www.ec.gc.ca/ges-ghg/E0533893-A985-4640-B3A2-008D8083D17D/ETR_E%202014.pdf

Canadian Energy Strategy: an opportunity to move the federation forward on climate

There is growing agreement across sectors and provinces that Canada requires a national energy strategy to ensure responsible decisions are made regarding how we produce and consume energy. Because provinces have significant jurisdiction over resources and the environment — and because of the recognition of the need to act on climate change by leaders at all levels of government — Canada's premiers will play a critical role in defining the country's transition to a low-carbon economy.

In addition to catalyzing this transition, the Canadian Energy Strategy should be designed to ensure the provinces and territories aggressively reduce the greenhouse gas emissions associated with energy development. To do so, it must consider more than Canada's fossil fuel commodities and the economic opportunity associated with their export. It must take into account the consequences associated with building new fossil fuel infrastructure, and the opportunities to invest in clean energy technologies.

In the absence of federal climate leadership, provincial governments have enacted policies to manage their regional greenhouse gas emissions. British Columbia, Alberta and Quebec have embarked upon their own carbon pricing policies. This has resulted in some successful initiatives to reduce carbon pollution (see below). However, Environment Canada data shows these provinces face an uphill battle to achieve their own targets. To date, emissions reduction plans at the provincial level have been poorly coordinated and have not been rooted in national-level climate objectives.

Ontario (19% below 2005)

Canada's most populous province has seen recent progress on several climate issues. Its phase out of coal-fired power and the successful implementation of the Green Energy Act have contributed to the province achieving a 19% reduction below 2005 emissions levels. Further, Premier Kathleen Wynne recently announced the province would unveil a carbon pricing strategy in 2015.

Quebec (9% below 2005)

Data from Environment Canada shows Quebec successfully achieved its Kyoto Protocol target by a slight margin. It has reduced its emissions by 6.8% below its 1990 levels. According to Environment Canada's 2014 *Emissions Trends* report, Quebec's 2012 emissions were 9% below its 2005 levels. Further, Quebec remains a strong member of the Western Climate Initiative, North America's first and largest cap-and-trade system.

British Columbia (3% below 2005)

Recent analysis shows the first phase of B.C.'s Climate Action Plan has been both an environmental and economic success. Polices such as the carbon tax, clean energy requirements and the low-carbon fuel standard have enabled the province to meet its 2012 interim target to cut carbon pollution.[5] In 2012, B.C. had reduced its emissions inventory by 3% relative to the province's 2005 emissions levels.

These achievements illustrate some provinces are making a positive contribution to decarbonize the Canadian economy — largely because of these initiatives, national emissions declined by 5% from 2005 to 2012. Despite this progress, Canada's overall emissions are projected to increase from now through 2020 and beyond. Some provinces, including Alberta and Saskatchewan, remain highly reliant on fossil fuel production and combustion – and as a result, their emissions are moving in the wrong direction.

[5] Matt Horne, "B.C. Climate Action Plan 2.0?" *Pembina Institute*, July 4, 2014. http://www.pembina.org/blog/bc-climate-action-plan-2

Between 2005 and 2012, only Alberta's and Saskatchewan's emissions profiles worsened in absolute terms, while every other province or territory reduced or maintained the absolute size of their emissions inventories. Both provinces' emissions increased between 2005 and 2012: Alberta's at a rate of 7% above 2005 levels, and Saskatchewan at a rate of 5% above 2005 levels.[6]

Those provinces' emissions numbers don't look any better on a per capita basis.[7] According to Environment Canada, per capita emissions in Saskatchewan and Alberta are significantly above average, at 68.8 tonnes and 64 tonnes respectively. Comparatively, Ontario, B.C., and Quebec's per capita emissions are vastly lower — measuring just 12.5 tonnes, 13.2 tonnes, and 9.7 tonnes respectively.[8]

These trends show Canada's provinces are not moving in the same direction on climate issues. Efforts to fight climate change led by some sub-national governments are being undermined by growth from others. Saskatchewan and Alberta's emissions inventories remain offside compared to the rest of Canada's efforts to fight climate change. As the next section illustrates, that is largely because of oil and gas development — and specifically oilsands production.

Oilsands emissions in context

As scientists are calling for a global decrease in greenhouse gas emissions to avoid the worst impacts of climate change, oilsands emissions are growing rapidly. Oilsands production reached 2.1 million barrels per day (mbpd) in 2013.[9] While the climate challenge faced by the industry today is significant, its impacts are forecasted to climb with increased production. The Canadian Association of Petroleum Producers (CAPP) expects industry will produce nearly five million barrels of bitumen a day by 2030.[10] Emissions from the sector more than doubled between 2005 and 2012, and are set to nearly double again by 2020.[11] Further, Alberta regulators have already approved 5.2 mbpd worth of mining and in situ production.[12]

The oilsands are Canada's fastest growing source of greenhouse gas emissions and, as such, the largest barrier to achieving national climate objectives. Alberta now produces more greenhouse gas emissions than Ontario and Quebec — home to over 60% of Canada's population — put together. In addition to rapidly expanding its oilsands sector, Alberta's emissions profile is exacerbated by its large conventional oil and gas industry, its petrochemical industry, and its heavy reliance on coal for electricity generation.[13]

At present, the Government of Alberta has not adopted adequate policies to slow the growth of carbon pollution from the oilsands sector.[14] Since 2007, Alberta has set a maximum target of a 12% intensity

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[6] Environment Canada, *Emissions Trends 2014* (2014), 28, Table 17. http://www.ec.gc.ca/ges-ghg/E0533893-A985-4640-B3A2-008D8083D17D/ETR_E%202014.pdf

[7] Environment Canada defines *per capita greenhouse gas emissions* as a measure of greenhouse gas emissions per person in each Canadian province or territory.

[8] Environment Canada, *Emissions Trends 2014*, 28, Table 17.

[9] Energy Resources Conservation Board, *ST98-2014: Alberta's Energy Reserves 2012 and Supply/Demand Outlook 2013-2023* (2014). http://www.aer.ca/documents/sts/ST98/ST98-2014.pdf

[10] Canadian Association of Petroleum Producers, *Crude Oil: Forecast, Markets and Transportation* (2014), 4. http://www.capp.ca/getdoc.aspx?DocId=247759&DT=NTV

[11] Environment Canada, *Emissions Trends 2014*, 28, Table 17.

[12] Oilsands Review, "Statistics: Oilsands Production." http://www.oilsandsreview.com/statistics/production.asp

[13] Government of Alberta, *Alberta's 2008 Climate Change Strategy: Responsibility, Leadership, Action*. 9. http://esrd.alberta.ca/focus/alberta-and-climate-change/climate-change-strategy/documents/AlbertaClimateChangeStrategy-2008.pdf

[14] For further details, see: Amin Asadollahi, "Risky climate policy: Why governments do the energy sector no favours with a status quo approach," *Oilsands Review*, September 2014, 78-80. http://www.pembina.org/docs/oilsands-review-september-2014.pdf

improvement for its heavy industry firms, and has charged a technology fund price of $15 per tonne. Alberta's rules apply to approximately 50% of the province's total emissions; facilities with less than 100,000 tonnes of emissions per year are exempt. Despite being the first jurisdiction in North America to put a price on carbon, Alberta's climate policy has not resulted in emissions reductions at large industrial facilities, including in the oilsands.

At a price of only $15 per tonne, there are very few onsite reduction opportunities available. Companies have instead chosen primarily to pay into the technology fund as a means of compliance. The effective carbon price resulting from Alberta's approach is therefore well below $15 per tonne — for companies regulated by the policy, it works out to just $1.80 per tonne of emissions released.

It remains unclear how national and sub-national governments in Canada can achieve their emissions targets if Alberta fails to effectively regulate the climate impacts of the oilsands. Because of the magnitude of current emissions and projections of near-term growth, oilsands expansion is everyone's business. While Alberta's climate policy is too weak to meaningfully drive emissions reductions in the oilsands, those same emissions are a major threat to all provinces and territories in their shared goal to decarbonize. Unmanaged, the growth in oilsands emissions also hampers Canada's ability to show leadership on the international stage.

New pipelines unlock oilsands expansion and associated emissions

Pipeline capacity is a key determinant of oilsands growth, in addition to operating and capital cost increases and the market price for oilsands crude.[15] Because of the oilsands' remote location and above-average processing requirements, crude derived from bitumen sells at a discount relative to other crude oils in North America.[16] The more oilsands companies have reliable access to market via pipelines — in addition to rail capacity for arbitrage — the better prospects oilsands producers have to close the price gap between their extra-heavy crude oil and its lighter competition.

Enough pipeline takeaway capacity exists in Alberta to move the amount of bitumen currently being produced; however, production volumes will soon exceed pipeline capacity.[17,18] Recently, lack of pipeline capacity has resulted in lower netback[19] prices in Alberta. Further, the Alberta Energy Regulator expects the "deep discount on heavy Canadian crudes" will continue until the Western Canada Sedimentary Basin[20] expands its pipeline network to serve increased oilsands and conventional crude production.[21]

Because of the Energy East pipeline's proposed capacity of 1.1 mbpd, it could play a significant role in determining how much and how fast the oilsands sector expands. Conversely, uncertainty about — or

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[15] Jeff Lewis, "New pipelines needed to hit oil sands growth targets: CIBC," *Alberta Oil*, September 21, 2012, http://www.albertaoilmagazine.com/2012/09/new-pipelines-needed-to-hit-oil-sands-growth-targets-cibc/

[16] According to the Alberta Energy Regulator, Western Canadian Select averaged US$73.01 per barrel in 2013, trading at US$25.04 per barrel under the price of West Texas Intermediate — a North American oil benchmark.

[17] Deloitte and Touche LLP, *Energy East: The economic benefits of TransCanada's Canadian Mainline conversion project* (2013), 10. http://www.energyeastpipeline.com/wp-content/uploads/2013/09/Energy-East-Deloitte-Economic-Benefits-Report.pdf

[18] Jeff Lewis, "Oil boom will strain pipelines, may delay Canadian projects: IEA," *Financial Post*, May 14, 2013. http://business.financialpost.com/2013/05/14/oil-boom-will-strain-pipelines/?__lsa=06db-a5e8

[19] Netbacks are calculated by taking all of the revenues from the oil, less all costs associated with getting the oil to a market.

[20] The Western Canada Sedimentary Basin is a petroleum reserve that spans southwestern Manitoba, southern Saskatchewan, northeastern British Columbia, the southwest portion of the Northwest Territories and all of Alberta.

[21] Alberta Energy Regulator "*ST98-2014: Alberta's Energy Reserves 2013 and Supply/Demand Outlook 2014—2023*" May 2014. http://www.aer.ca/documents/sts/ST98/ST98-2014.pdf

constraints on — the future availability of low-cost crude transportation acts as a brake on oilsands expansion, as current production has nearly reached the limit of existing pipeline capacity.

Moving crude by rail

CAPP estimated in a June 2014 report that total crude oil movements by rail from Western Canada reached about 200,000 barrels per day (bpd) in late 2013.[22] While the growth in oil shipments by rail has been significant in the last two years,[23] crude-by-rail currently represents only 9.5% of total bitumen movement out of Western Canada. Even if rail capacity grows to 700,000 bpd by the end of 2016, as CAPP suggests, modelling by the Alberta Energy Regulator projects total oilsands production will be nearly 3 mbpd[24] in that same year. According to these two estimates, crude by rail will provide less than one-quarter of the oilsands industry's total transportation requirement in the next 12 to 16 months.

On the financial side, the economics of crude by rail present ongoing challenges for companies attempting to grow their access to markets. RBN Energy estimates that netback for unit trains to be approximately $60 per barrel delivered to the U.S. Gulf Coast, while netbacks for pipelines to the same market average nearly $75 per barrel delivered.[25] The oilsands — increasingly profit-starved from ongoing supply gluts — remain highly sensitive to netback discrepancies of this magnitude.

Decisions for or against carbon-intensive infrastructure projects have a profound impact on our shared climate. Because of the lifespan of most energy infrastructure projects, capital decisions made today will affect emissions for decades to come. Investment decisions that result in rapid fossil fuel production will make it more challenging for Canada to be part of the global low-carbon shift. After assets such as pipelines, rail tracks and electricity transmission lines are constructed, the associated emissions get locked into the energy system for decades.

Because of the disproportionate effect on Canada's ability to transition to a less greenhouse gas-intensive economy, infrastructure decisions that would allow the oilsands sector to expand should be reviewed with an eye to their national — and global — climate implications. While it is true that all sectors and industries in the Canadian economy must reduce their impact on our shared climate if the country is to show leadership on the international stage, oilsands face the highest hurdle. Accordingly, their climate impacts must be urgently reduced to ensure Canada can play a constructive role in renewed climate negations.

Energy East: a catalyst for provincial leadership on climate

Last year, the Pembina Institute released the first quantification of the upstream greenhouse gas emissions associated with the Energy East pipeline. This assessment determined the project would likely have a

[22] Canadian Association of Petroleum Producers, "*Crude Oil Forecasts, Markets & Transportation*" June 2014. http://www.capp.ca/getdoc.aspx?DocId=224970&dt=NTV

[23] Ibid.

[24] Alberta Energy Regulator "*ST98-2014: Alberta's Energy Reserves 2013 and Supply/Demand Outlook 2014—2023*" May 2014. http://www.aer.ca/documents/sts/ST98/ST98-2014.pdf

[25] Oil Change International. "*Wrong Side of the Tracks: Why Rail is not the answer to the tar sands market access problem.*" September 2014. http://priceofoil.org/2014/09/08/report-wrong-side-tracks/

large climate impact — up to 32 million tonnes of annual emissions. That is the equivalent of adding seven million new cars to Canada's roads.[26]

In light of the significant climate impacts of the proposed pipeline, many Canadians have spoken out against its approval. As of mid-March 2015, more than 2,200 applications have been filed with the National Energy Board (NEB) in advance of its review of the project. More than two-thirds of the applications are rooted in concerns about the climate impacts of the proposal.[27] By virtue of its size and significance across Canada, there remains a high degree of interest from coast to coast in evaluating the climate impacts of this project. A recent poll conducted by the University of Montreal found support for the Energy East proposal is highest in Alberta but dissipates quickly moving eastward and westward. Notably, only 33% of Quebecers support the Energy East project.[28]

In November of last year, the Quebec government outlined seven conditions for Energy East that must be met for that province to condone the portion of the project passing through its borders.[29] These seven conditions were released following a unanimous vote in Quebec's National Assembly expressing a lack of confidence in both the NEB review process and the federal government's lack of greenhouse gas regulations for the oil and gas sector.[30]

Interestingly, Quebec's conditions up the ante on the issue of transboundary climate impacts associated with infrastructure projects. One condition requests a "full environmental assessment that looks at the impact of the project on greenhouse gas emissions." At face value, this condition suggests that Quebec believes it has the authority — although the province is not currently choosing to exercise it fully — to review the full scope of greenhouse gas emissions associated with Energy East, including those that occur outside the province. And Quebec is not alone in its skepticism about the project — Ontario subsequently signed a Memorandum of Understanding with Quebec endorsing these seven conditions for Energy East.[31]

These conditions confirm what legal scholars continue to speculate about — that provinces have the authority to consider both positive and negative impacts in their determination of the public interest. According to legal scholar Martin Olszynski, environmental assessment is understood in Canada as "simply descriptive of a process of decision-making."[32] As such, provincial decisions to conduct assessments or reviews that consider greenhouse gas emissions likely do not constitute frustration of the NEB process, or of the federal government's interests. This conclusion appears to apply even more so in

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[26] Erin Flanagan and Clare Demerse, *Climate Implications of the Proposed Energy East Pipeline: A Preliminary Assessment* (The Pembina Institute, 2014). http://www.pembina.org/pub/2519

[27] Geoffrey Morgan, "Activists pepper NEB with copies of letter demanding Energy East pipeline review cover climate issues", *Financial Post*, March 14, 2014, 2012. http://business.financialpost.com/2015/03/04/national-energy-board-receives-1801-applications-to-participate-in-transcanada-corp-pipeline-project-hearings/?__lsa=d188-6b0a

[28] Alexandre Shields, "Les Québécois rejettent Énergie Est en masse: Sondage," *Le Devoir*, November 21, 2014. http://www.ledevoir.com/environnement/actualites-sur-l-environnement/424620/sondage-les-quebecois-rejettent-energie-est-en-masse

[29] Reuters, "TransCanada Corp faces new hurdle as Quebec imposes seven conditions on Energy East pipeline," *Financial Post,* November 20, 2014. http://business.financialpost.com/2014/11/20/transcanada-corp-faces-new-hurdle-as-quebec-imposes-seven-conditions-on-energy-east-pipeline/?__lsa=6da3-71be

[30] Daniel Breton, "TransCanada: motion unanime à l'Assemblée Nationale," Journal de Montreal, November 6, 2014. http://www.journaldemontreal.com/2014/11/06/transcanada-motion-unanime-a-lassemblee-nationale

[31] Government of Ontario, "*Memorandum Of Understanding Between The Government Of Ontario And Le Gouvernement Du Québec Concerning Concerted Climate Change Actions 2014*," November 24, 2014. http://news.ontario.ca/opo/en/2014/11/memorandum-of-understanding-between-the-government-of-ontario-and-le-gouvernement-du-quebec-concerni.html

[32] Martin Olszynski, "Whose (Pipe)line is it anyway?" *ABlawg*, December 3, 2014. http://ablawg.ca/2014/12/03/whose-pipeline-is-it-anyway/

this case because the NEB continues to re-affirm that it will exclude upstream greenhouse gas emissions from its own assessment of Energy East.

Megaprojects could jeopardize Council of the Federation's shared goals on climate

While the provinces have so far agreed to collaborate on issues of energy and climate, they have not determined how they will address energy-intensive megaprojects and the consequences their approval presents for achieving shared climate objectives. Because of the role pipeline infrastructure plays in the expansion of the oilsands, the Canadian Energy Strategy's goals will not be achieved without due consideration of how infrastructure decisions would impact the pace and scale of oilsands development.

Oilsands expansion remains the single largest barrier to Canada taking constructive action on climate change. Without the growth in emissions from oilsands expansion, Canada would be better positioned to achieve its climate targets. If new pipeline capacity is approved and oilsands emissions continue to rise, more emissions will need to be reduced elsewhere in Canada if the country still intends to meet its aggregate emissions reductions targets. Projects like Energy East would lock Canada into poor climate performance, and are likely to overshadow existing efforts to reduce greenhouse gas emissions.

Slower oilsands growth in a climate-safe world

The IEA has concluded that — to ensure the planet has a 50% chance of limiting atmospheric warming to 2°C — two-thirds of the earth's known oil, gas, and coal reserves must remain unburned between now and 2050. Tracing this back to production in Alberta's oilsands, the IEA had modeled scenarios that include up to 3.3 mbpd of oilsands production. This is a far cry from the 5.2 mbpd already approved by the Government of Alberta, and even further still from the nearly 10 mbpd worth of projects disclosed to investors.

Academics, economists and scientists continue to show the world cannot safely burn all of its fossil fuels.[33,34] If the oilsands are developed to rates above 3.3 mbpd, other carbon-intensive resources in Canada and around the world must stay in the ground.

Recommendations

Address climate-intensive infrastructure projects within the Canadian Energy Strategy

The increasing scrutiny of the NEB's review process for energy projects indicates that Canadians from coast to coast are eager to examine the link between carbon-intensive infrastructure projects and Canada's efforts to mitigate climate change. We recommend the premiers and the federal government work to ensure the Canadian Energy Strategy accounts for the full carbon emissions associated with our energy infrastructure, including those upstream of projects.

The Council of the Federation could begin this work by conducting a comprehensive review of the impact of Energy East on Canada's climate objectives. A review of this nature could include an evaluation of the

[33] BusinessGreen, "Mark Carney: most fossil fuel reserves can't be burned", *The Guardian*, October 13, 2014. http://www.theguardian.com/environment/2014/oct/13/mark-carney-fossil-fuel-reserves-burned-carbon-bubble

[34] Mark Hertsgaard, "Giving Up Fossil Fuels to Save the Climate: The $28 Trillion Writedown", *Bloomberg Business*, June 26, 2014. http://www.bloomberg.com/bw/articles/2014-06-26/climate-change-and-the-two-thirds-imperative

long-term economic and environmental risks associated with rapidly developing a climate-intensive fossil fuel resource.

In the long run, a Canadian Energy Strategy with an accompanying pan-Canadian climate policy could allow the country to return to single review processes for carbon-intensive infrastructure projects. In the meantime, new oilsands projects — and associated pipelines or other infrastructure — should not be approved until a comprehensive greenhouse gas management framework exists to ensure Canada will cut emissions in 2020 and beyond.

Create a climate and energy advisory committee within the Canadian Energy Strategy

It is in the interest of all Canadians for the provinces to collectively raise the bar on climate action and for all governments to put stronger climate change policies in place. Canada formerly had a body designed to advise on just that — the National Round Table on the Environment and the Economy. The NRTEE provided invaluable insights in to the policies and actions required for Canada to meet its climate change objectives and was one of the most constructive and informed voices on climate change in the country. The loss of this organization has created a critical gap in Canada's climate and energy conversation.

To that end, we suggest the Council of the Federation create an advisory committee in the model of the former NRTEE, comprised of experts versed in climate and energy issues. This committee would advise the premiers on the optimal path forward as they work to decarbonize their energy systems while growing their economies.

Conclusion

The development of a Canadian Energy Strategy presents an important opportunity for the country to realign its policies and processes with the urgent need to transition away from carbon-intensive fossil fuels. The Canadian Energy Strategy must ensure sub-national governments make the emissions reductions necessary to position Canada to contribute meaningfully to post-2020 international climate change commitments. In doing so, it must consider the emissions associated with fossil fuel production and the infrastructure that enables it to occur.

Importantly, the Canadian Energy Strategy Working Group must grapple with the role megaprojects like Energy East play in curtailing existing efforts to reduce greenhouse gas emissions. Because Alberta has yet to meaningfully regulate the climate impacts associated with rapid expansion of the oilsands, projects such as Energy East stand in the way of the Federation's efforts to address climate change. However, megaprojects such as this one can also be a catalyst to ensure the Canadian Energy Strategy meaningfully considers the positive and negative impacts associated with fossil fuel production.

Over the past decade, some provinces — notably British Columbia, Ontario and Quebec — have made important contributions to Canada's climate objectives. The Canadian Energy Strategy presents an opportunity to build on existing positive carbon pricing efforts in B.C. and Quebec, and to extend Ontario's coal phase out to the rest of the country.

Collectively, the provinces and territories have significant technical and policy expertise that should be leveraged in a coordinated effort consistent with national-level climate objectives. In doing so, the Council of the Federation can position the country to reap the sizeable economic returns associated with Canada's share of the global clean energy economy. At an estimated $2.5 trillion dollars by 2022, the economic opportunity is too great — and the imperative to decarbonize is too urgent — to pass up.

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