



Pipelines, Paris, and Decarbonization: The Future of Canadian Energy and Climate Policy

March 3, 2017

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Hosted by the Environmental Governance Lab at the Munk School of Global Affairs in partnership with the University of Toronto Faculty of Law

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Executive Summary

On March 3, 2017, a diverse group of thought leaders, scholars and practitioners met to discuss Canada’s transition to a low-carbon future. The purpose of the workshop – hosted by the Environmental Governance Lab (EGL) at the Munk School of Global Affairs in partnership with the University of Toronto Faculty of Law – was to further the national and provincial conversations around Canada’s low-carbon transition by bringing together multiple stakeholders and sectors.

This workshop was held as a response to the *Pan-Canadian Framework on Clean Growth and Climate Change* (hereafter the PCF) released by the Government of Canada in January 2017. The PCF is Canada’s framework to address climate change and meet its commitment in the Paris Agreement to decrease greenhouse gas (GHG) emissions 30 percent (from 2005 levels) by 2030. Within this context, workshop participants reflected on the implications of the PCF as well as the challenges to implementing the framework.

The workshop brought together individuals from national and global non-governmental organizations (Greenpeace Canada, Pembina Institute, Oil Change International), think tanks (IISD), as well as practitioners from a variety of settings (MARS, Sustainability Co-Lab, Zizzo Strategy, and the Ontario Ministry of Energy), activists, and scholars from a variety of disciplines (Biology, Business Management, Engineering, Environmental Studies, Geography, Law, Political Science, Public Affairs).

The workshop consisted of breakout sessions along four themes: (i) how the global context influences Canadian climate and energy policy; (ii) the role of pipelines and economic, energy and climate goals, (iii) whether the PCF can foster a “just” energy transition, and (iv) challenges for implementing the PCF. Each of the four sessions was held twice (each with different group of participants) and the second session often developed the themes discussed in the first. The workshop highlighted key opportunities as well as challenges facing multiple levels of governance and from all sectors in Canada. This report summarizes the discussion in each session. Multiple themes and lessons were gathered across the sessions; a summary of these lessons is provided below.

Ten lessons for Canada’s low-carbon transition

1. The PCF is not robust enough to guide Canada to a low-carbon transition, let alone a “just” one. The PCF is largely a catalogue of existing activities, which will not allow Canada to meet its Paris contributions.
2. A just transition must recognize the political fragility of the PCF and address the losers in the transition. A just transition must work to build political support to transition in politically fragile jurisdictions like Alberta.

3. The core alliance of international environmental leadership is changing. The change in leadership in the United States will be felt globally both as a norm entrepreneur and potentially in terms of climate financing. The federal government must think about how it can position Canada in relation to China who has emerged as a new leader of climate policy.
4. Canada has an opportunity to become a leader in North America on climate change and leverage its moral authority despite significant obstacles.
5. The continued expansion of the fossil-fuel industry is not compatible with Canada's emissions reduction goals or the Paris Agreement and is likely to lead to carbon lock-in.
6. Federal guidance is needed in some areas more than others. For example, federal leadership is needed to increase transparency around fossil fuel subsidies, tighten fuel efficiency standards (and coordinate them with OECD countries), incentivize and invest in green growth and technology, support regional best practices, and provide an enabling tax environment.
7. Technological change requires steering to ensure it is compatible with an equitable energy transition.
8. Place-based campaigns have been effective in raising the political costs of pipelines and mobilizing support for climate action.
9. Greater climate action is possible through reframing the issue to both the Canadian public and policymakers. This new frame must be robust across a complex and dynamic landscape and should incorporate lessons from the populist backlash in the United States (e.g., respond to fears about economic and job insecurity).
10. Coalitions are needed to maintain the political pressure necessary for climate friendly policies. While developing a broad-based climate change coalition in Canada is challenging, building a coalition with the minimum number of necessary actors may be more effective in the short term. Grassroots alliances will continue to be important in local contexts and place-based campaigns. More work is needed to engage the public in conversations about a low-carbon transition.

Workshop participants

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Steven Bernstein – University of Toronto
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Romea Dennis – York University
John Drexhage – International Institute for Sustainable Development (IISD)
Jose Etcheverry – York University
Erin Flanagan – Pembina Institute
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Chris Gore – Ryerson University
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Liat Margolis – University of Toronto
James Meadowcroft – Carlton University
Mike Morrice – Sustainability Co-Lab
Kate Neville – University of Toronto
Andrea Olive – University of Toronto
Catherin Potvin – McGill University
Ben Powless – Climate Justice and First Nations Rights activist
Stefan Renckens – University of Toronto
John Robinson – University of Toronto
Adam Scott – Oil Change International
Keith Stewart – Greenpeace Canada
Mark Winfield – York University
Joerg Wittenbrinck – Ontario Ministry of Energy
Laura Zizzo – Lawyer and CEO of Zizzo Strategy Inc.

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¹ Potvin, Catherine et al. 2017. *Re-Energizing Canada: Pathways to a Low-Carbon Future*. Sustainable Canada Dialogues. <http://sustainablecanadadialogues.ca/en/scd/energy>.

1.0 Canada and the global climate context

The purpose of this session was to discuss emerging global trends, and how the changing global context will influence the development of the Canadian climate policy. Participants were also asked to consider Canada's potential role as a climate leader. The discussion identified a range of non-linear political and technological trends, challenges and opportunities.

1.1 The Paris Agreement and global climate leadership beyond 2017

Participants agreed that the Paris Agreement is helpful for setting a framework and goals that are intended to push states to realize their nationally determined contributions. It is now up to states to determine their national plans and the PCF is Canada's attempt to do so. It remains unclear how useful the Paris Agreement will be in nudging countries to increase their climate action because it has no enforcement mechanisms. Participants expressed concern about the rise of populism and economic nationalism in the United States and beyond, as well as the vulnerability of climate science to populist messaging.

Participants suggested the core alliance of international environmental leadership is changing and China is emerging as a leader of climate policy. China represents the largest market for clean and green technology (e.g., wind turbines, solar panels, heating systems, etc.). China is also tightening their fuel efficiency standards (a trend to watch also in Europe), closing loopholes, and investing in transportation infrastructure like high-speed trains and subways. In China and India, the conversation on the environment has been driven by concerns about urban air pollution. This frame has mobilized the emerging middle classes in both countries. Although China's GHG emissions have declined slightly they have since stabilized and China remains the biggest emitter globally. While China's coal use has declined for three years now, it remains to be seen whether this trend will continue. Participants concluded this discussion by suggesting that Canada must think about how it can position itself in relation to China, a new leader of climate policy.

1.2 The impact of the United States presidential election

The United States presidential election – and the resulting change in environmental leadership – is significant because the United States is responsible for 16 percent of global emissions. Participants noted that rolling back climate policy in the United States might be more difficult than President Trump anticipates. However, budget cuts have substantial implications for domestic and international climate programs. For example,

the 2018 proposed budget would eliminate the Global Climate Change Initiative – run by the State Department’s Office of the Special Envoy on Climate Change and USAID – which includes funding bilateral efforts with China, the United Nations Framework on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change, and clean energy and climate initiatives in developing countries.² Before the 2016 presidential election, the United States pledged \$2 billion USD in climate financing through the Green Climate Fund; withdrawing from the Paris Agreement would mean these funds would not be dispersed.

Participants discussed the implications of the United States withdrawing from the Paris Agreement (most likely a reality in 2020³) for Canada. One participant noted that Canada has been a norm taker in bilateral relations with the United States. Canada may now need to engage bilaterally with sub-national or non-state actors in the United States. There was some optimism that Trump’s election could help Canada distinguish itself as a climate leader. According to one participant, Canada could become the “designated driver” of climate action in North America, similar to how Germany now appears to be the “designated driver” in Europe. Participants suggested Canada has an opportunity to become a leader in North America on climate change and leverage its moral authority. Others were skeptical about Canada realizing this position and suggested Canada may not have enough moral authority on climate change given its withdrawal from Kyoto, and the strong likelihood that Canada will miss its Copenhagen target by a large margin.⁴ Participants also expressed doubt about whether Canada will meet its Paris target;⁵ some participants questioned the moral efficacy of the target itself.⁶ Participants were also unsure whether it was realistic for Canada to take on a climate leadership role outside of North America.

Canada must overcome several challenges in order to become a climate leader (moral or not). These include increasing transparency around fossil fuel subsidies and

² Hirji, Zahra. 2017. Trump Budget Would Cripple U.S. International Climate Change Work. *Inside Climate News*. May 17. <https://insideclimatenews.org/news/16032017/us-climate-change-donald-trump-budget-un-unfccc>.

³ Volcovici, Valerie. 2017. U.S. submits formal notice of withdrawal from Paris climate pact. *Reuters*. August 4. <https://www.reuters.com/article/us-un-climate-usa-paris/u-s-submits-formal-notice-of-withdrawal-from-paris-climate-pact-idUSKBN1AK2FM>.

⁴ See for example Munson, James. 2017. Canada will miss 2020 climate target, says environment commissioner. *iPolitics*. October 3. <https://ipolitics.ca/2017/10/03/canada-will-miss-2020-climate-target-says-environment-commissioner/>.

⁵ Raftery, Adrian E., Alec Zimmer, Dargan M. W. Frierson, Richard Startz, and Peiran Liu. 2017. Less than 2 °C Warming by 2100 Unlikely. *Nature Climate Change* 7 (9): 637-41. <https://doi.org/10.1038/nclimate3352>.

⁶ Participants pointed out that the 2030 target in the PCF is not in line with the commitments needed to reach target of the Paris Agreement, to limit global temperature rise to below 2°C above pre-industrial levels.

plans to reduce them, and making renewable technology more competitive globally. In terms of the latter, participants expressed some concern about how the feed-in tariff programs were rolled out in the provinces: in particular, the problem of over-supply of energy. Another concern was that Canada does not adequately consider transitions in its official development assistance programs. Participants suggested Canada must first deploy green technologies domestically so there is proof of concept before thinking about green development. One participant suggested Canada could learn from the United Kingdom's approach to green procurement. Participants also identified areas where the federal government has potential to highlight sub-national transition successes; for example, Ontario is seen as a leader for decommissioning coal and rolling out smart grid technologies. Greater federal leadership is needed in some areas more than others. For example, federal leadership is needed to discuss fuel efficiency standards and building codes with counterparts in OECD countries.

1.3 Other trends

Participants pointed to exogenous technological changes in the energy sector like smart grids and electric battery storage. These innovations reduce the cost of clean energy and green goods. These innovations will have their own momentum with the potential to “disrupt” Canada's carbon consumption trajectory. However, there was some debate about the extent to which a fundamental or transformational energy shift is taking place. For example, in order for Canada to reduce its dependence on the oil and gas sector, there must be a global move away from fossil fuels.⁷ Others were more optimistic and pointed out that Canada's clean technology sector is the biggest in the world as a proportion of the economy. More generally, participants acknowledged the complex nature of systems and the unpredictability of transformation; participants suggested scenario planning as one method to combat this unpredictability both in terms of technological development and beyond.

Lastly, participants mentioned the increasing role for non-state actors. Even if policy-makers are not taking climate change seriously, companies and other non-state actors are. Scholars suggested the need to think beyond statist conceptions of the climate change problem. Participants pointed to the role of private finance, for example the emerging markets in green energy bonds. Another trend to watch is international investment practices – like those of the World Bank – related to fossil fuels.

⁷ Half of Canada's total carbon produced is exported as oil, gas or coal and the emissions 'count' towards those of the importing country (largely the United States). See Layzell, David B., Ralph Torrie, Benjamin Israel and Bastiaan Staatman. 2017. "It's the Carbon, Stupid:" Visualizing Canada's Carbon Flows. Canadian Energy Systems Analysis Research (CESAR). June 6. <http://www.cesarnet.ca/blog/it-s-carbon-stupid-visualizing-canada-s-carbon-flows>.

1.4 Session lessons

1. Technological, environmental and political trends will continue to be nonlinear.
2. The core alliance of international environmental leadership appears to be changing. The change in United States leadership will be felt globally both as a norm entrepreneur and potentially in terms of climate financing. The federal government must think about how it can position Canada in relation to China, a new leader of climate policy.
3. Canada has an opportunity to become a leader in North America on climate change and leverage its moral authority despite significant obstacles.

2.0 Pipelines, politics and resistance

The purpose of this session was to discuss whether pipelines are compatible with climate policy, and whether pipeline expansion is compatible with Canada's economic, environmental and social goals. Participants discussed several issues including the role of fossil fuel subsidies, the risk of carbon-lock in, the political economy of pipelines, and the effects of place-based resistance on energy politics.

2.1 Subsidies to the oil and gas industry in Canada

Participants began by discussing the role of fossil fuel subsidies, which are absent in the PCF.⁸ Participants referenced a document by IISD, which found that each year \$3.3 billion is given to the oil and gas industry in subsidies.⁹ Relatedly, around \$15.7 billion is collected from the oil and gas industry by governments per year.¹⁰ As one practitioner pointed out, the federal government is only giving back a fraction of those royalties to the oil and gas industry, which is used as a rationale to continue subsidizing the industry. In order to reduce fossil fuel subsidies, participants suggested that this rationale must be challenged. There was also a discussion about how fossil fuel subsidies are measured: there was concern that subsidies are higher because of tax breaks and taxes not collected, something the federal Department of Finance has not acknowledged. More generally, participants expressed concern over the lack of transparency around fossil fuel subsidies.¹¹

The quantity of fossil fuel subsidies contrasts with the subsidies and support given to the green energy sector. According to the PCF, the federal government will invest \$50 million CAD over two years in technologies to reduce GHG emissions from the oil and gas sector.¹² The federal government will also invest \$50 million over four years to Sustainable Development Technology Canada (SDTC) for the SD Tech Fund.¹³ While these investments are a step in the right direction, participants agreed this level of

⁸ The only mention of fossil fuel subsidies in the PCF is a reference to the commitment made in June 2016 during the North American Leaders Summit to phase out fossil fuel subsidies by 2025 alongside Mexico and the United States.

⁹ IISD. Unpacking Canada's Fossil Fuel Subsidies. <http://www.iisd.org/faq/unpacking-canadas-fossil-fuel-subsidies>.

¹⁰ Natural Resources Canada. Energy and the economy. <https://www.nrcan.gc.ca/energy/facts/energy-economy/20062>.

¹¹ See for example Pedwell, Terry. 2017. Finance refused to release details on fossil fuel subsidies, auditor general says. *The Star*. May 16. <https://www.thestar.com/news/canada/2017/05/16/finance-refused-to-release-details-on-fossil-fuel-subsidies-auditor-general-says.html>.

¹² Government of Canada. 2017. *Pan-Canadian Framework on Clean Growth and Climate Change*. 48.

¹³ *Ibid.*, 48.

support pales in comparison to the given to the fossil fuel industry. Participants suggested these investments are not sufficient if the goal is a low-carbon transition.

2.2 Canada's climate change commitments and carbon lock-in

Participants spoke about the inequalities in the PCF around sectoral contributions to GHG emissions reductions. The PCF allows the fossil fuel industry to increase GHG emissions, while proposing emission cuts in every other sector. The federal government also continues to support the construction and expansion of pipelines. As one participant noted, if Canada continues to rely on the fossil fuel industry, by 2020, fifty percent of the country's GHG emissions would come from the oil and gas industry.¹⁴ In this context, Canada will not be able to meet its nationally determined contribution in the Paris Agreement. While it appears that the federal government has decided to allow certain pipelines to be built in exchange for a price on carbon, the participants in this session were opposed to this strategy and suggested pipeline expansion is contradictory to any climate change mitigation plan.

The fossil fuel extraction process is one of the major sources of Canadian GHG emissions, even though much of Canada's oil and gas is produced for export. This is also why, as one practitioner mentioned, there are international movements (e.g., Keep It In The Ground) targeting Canada and demanding oil and gas stay in the ground. If Canadian oil production continues to expand, emissions would exhaust seven percent of the world's total carbon budget (in a 2°C temperature rise scenario).¹⁵ Similarly, recent research finds that 85 percent of Canada's bitumen reserves are unburnable if the goal is keeping global temperature rise below 2°C.¹⁶

Practitioners expressed fear about the rationale in the oil and gas industry that once pipelines are built, in both Canada and the United States, continued fossil fuel extraction is required to pay capital costs. Participants expressed concern that if pipelines are constructed, they will transport oil and gas even if the price drops, fostering carbon lock-in. Pipelines could function until resources are depleted or until market forces cause them to shut down, which would be politically difficult (see also section 4.0 of this report). Participants also pointed out that industry projections on the future of the oil and gas industry are based on optimistic assumptions about oil prices.

¹⁴ See Environment Canada. 2013. Canada's Emissions Trends. October, 21. <https://tinyurl.com/yanjfbllu>.

¹⁵ Scott, Adam and Greg Muttitt. 2017. Climate on the Line: Why New Tar Sands Pipelines are Incompatible with the Paris Goals. Oil Change International. January, 1. http://priceofoil.org/content/uploads/2017/01/climate_on_the_line_FINAL-OCI.pdf.

¹⁶ McGlade, Christophe and Ekins, Paul. 2015. The geographical distribution of fossil fuels unused when limiting global warming to 2°C. *Nature* 517: 187-190. Cited in Oil Change International. 2016. The Sky's Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production. September, 14. http://priceofoil.org/content/uploads/2016/09/OCI_the_skys_limit_2016_FINAL_2.pdf.

2.3 The politics and economics of pipelines

Participants were largely in agreement that it does not make economic sense to build new pipelines. Continued low oil prices means that building new pipelines is not an economically sound investment.¹⁷ Relatedly, several major oil companies have exited the oil sands.¹⁸

Participants also pointed out the increased political costs of pipelines. Widespread resistance to pipelines has raised political costs of building fossil fuel infrastructure. Pipelines are now a very politically divisive issue. Participants noted however that there is still a lot strong constituency that supports pipelines in Alberta. As one practitioner highlighted, the NDP (the provincial party currently in power) have done enough polling on this to realize they cannot attack pipelines but as a result they do not know how to talk about them.

Another participant suggested the need to understand how institutional veto points and political risk (drawing on the work of George Hoberg¹⁹) affect the likelihood of a proposed pipeline being built. Using this lens, pipelines that cross multiple jurisdictions are more vulnerable to opposition because there are more veto points. In Alberta where oil sands companies have concentrated economic benefits and the government is dependent on royalties, mobilizing around the risk of these pipelines is much more difficult.²⁰

Another discussion involved dealing with losers from a low-carbon transition (see also section 3.0). One participant suggested the need for complementary policies that help ensure economic viability in the absence of revenue from fossil fuels. There was concern that debates around carbon pricing have become very technical; as a result, discussions about the goals of these policies and the role of complementary policies are sidelined. This discussion ended by asking whether it is viable to reframe resistance to pipeline projects in terms of complementary policies around alternative fuels.

Lastly, there was discussion about the role of the National Energy Board (NEB). The NEB makes decisions on major fossil fuel infrastructure and, at the time of the workshop, their assessments did not include emissions data (other than those

¹⁷ For a similar argument see Rubin, Jeff. 2017. Evaluating the Need for Pipelines: A False Narrative for the Canadian Economy. Centre for International Governance Innovation (CIGI). Policy Brief No. 115, September, 3. <https://www.cigionline.org/sites/default/files/documents/PB%20no115web.pdf>

¹⁸ Ibid., 3-4.

¹⁹ Hoberg, George. 2013. The Battle Over Oil Sands Access to Tidewater: A Political Risk Analysis of Pipeline Alternatives. *Canadian Public Policy* 39(3): 371-391.

²⁰ Ibid., 373-4.

associated with the construction and operation of a pipeline).²¹ A participant also pointed out that the NEB's scenario planning document – Canada's Energy Future²² – has not been updated to reflect the Paris Agreement or Canada's nationally determined contribution (NDC) and does not make any assumptions about Canada's climate change progress. Rather, it takes a snap shot of the policy landscape based on climate policies currently in place.²³ Participants felt this approach does not sufficiently capture the potential momentum from these policies or the potential reduction in demand. The discussion concluded with the suggestion that academics should engage with the NEB about the parameters it considers when developing assessments.

2.4 The role of pipeline campaigns

Participants identified a shift in the way activists frame climate change. There has been a move away from abstract concerns about climate change to ones that are more salient and place-based. One scholar attributed this shift in part due to the work of Bill McKibben – co-founder of 350.org – who connected place-based concerns about water to abstract concerns about climate. The consensus was that this framing shift has been successful in mobilizing support for climate action.

An activist spoke about the success of pipeline resistance movements. When the Keystone XL project was first proposed in 2008, the prospect of stopping it seemed impossible; however, over several years, activists were able to build a powerful movement. Although President Trump may ultimately approve Keystone XL,²⁴ it is being challenged in the courts. The same activist noted that Indigenous rights frameworks have brought pipeline resistance movements together. This has been an effective strategy in Northern Gateway and Trans Mountain pipeline campaigns.

Participants talked about a number of potential effects of place-based resistance to pipelines. First, these campaigns have raised awareness of supply-side politics by targeting specific projects. Second, these campaigns have raised the political and environmental costs of pipelines. Third, these campaigns are attempting to shift narratives about climate change through the idea that building more pipelines creates

²¹ Since the workshop, the NEB announced that it would include upstream and downstream GHG emissions in its review of the now cancelled Energy East pipeline. See Cattaneo, Claudia. 2017. Environmentalists cheer, industry jeers: NEB to examine climate change in Energy East review. *Financial Post*. August 23. <https://tinyurl.com/y9umqu57>.

²² National Energy Board. 2017. Canada's Energy Future 2017: Energy Supply and Demand Projections to 2040. October. <https://www.neb-one.gc.ca/nrg/ntgrtd/fttr/index-eng.html>

²³ *Ibid.*, 82.

²⁴ Trump announced the approval of Keystone XL shortly after the workshop. See Trump announces at White House: I've approved the Keystone XL pipeline. *CTV News*. March 24, 2017. <http://www.ctvnews.ca/business/trump-announces-at-white-house-i-ve-approved-the-keystone-xl-pipeline-1.3338909>

carbon “lock-in,” which is irresponsible and unethical. Fourth, these campaigns are attempting to make effective climate policy a political necessity, not just a moral good.

2.5 Session lessons

1. There is a need for greater transparency and conversation around fossil fuel subsidies in Canada.
2. The continued expansion of the fossil-fuel industry is not compatible with Canada’s emissions reduction goals or the Paris Agreement and is likely to lead to carbon lock-in.
3. The politics and economics of oil is changing globally and nationally, requiring leadership at multiple levels of governance.
4. Place-based campaigns have been effective in raising the political costs of pipelines and mobilizing support for climate action.

3.0 Transitions and justice

This session discussed the prospects of the Pan-Canadian Framework to foster a just energy transition. Participants discussed the role of the PCF and relatedly, technology, in facilitating a just low carbon transition. Participants also discussed what type of justice we should aim for, and for whom. The session identified two major barriers to a just transition: (i) the political capital of incumbent industries and, relatedly, (ii) the need to deal with the ‘losers’ in a low-carbon transition. The session concluded with a number of suggestions for how to embark on a just transition.

3.1 The PCF, technology and Canada’s low carbon transition

While the PCF does not have energy transition as a goal, it is valuable because it helps generate momentum for a potential transition. Participants debated to what extent the PCF is a building block in a just transition. The language of the PCF centers on efficiency and technology rather than system change. The most transformative policy in the PCF is the clean fuel standard for buildings, industry and transportation. Participants also noted that discussion of the fossil fuel industry is conspicuously absent in the framework. Participants identified the political capital of incumbent industries (i.e., oil and gas) as a key challenge to be overcome for a just transition. Another practitioner noted that the oil industry backed Alberta Premier Rachel Notley against the Wildrose, an illustration that oil companies are recognizing the need for climate policy. Participants suggested the federal government should take advantage of this growing understanding by raising awareness of the political costs of not having sound climate policy.

Scholars noted that transitions require multiple disruptions (e.g., social and technological). It remains to be seen whether place-based resistance around pipelines will provide the disruptive potential needed to catalyze a low-carbon transition. In terms of technological disruption, the extent to which technology and climate policy changes will drive transitions to low carbon is unclear. Participants suggested that while technological development and the costs associated with this development are moving in the “right direction,” political, rather than exogenous forces drive these changes. This raised a host of questions: how can technological developments be steered and be sped up? How do social relations shape technology? How does technology shape social relations? Who is responsible for managing these relations and their impacts on society? There was agreement that technological change requires steering to ensure it is compatible with an equitable energy transition.

3.2 What is justice and for whom do we need it for?

Participants asked what type of justice engaged scholars and practitioners should work towards. Participants identified two main forms of justice – procedural and distributive – and as well as a third form, ecological justice. Participants suggested that the federal government has failed at thinking procedurally about how to deliberate concerns around pipelines; as a result, there has been deference to the legal sphere to adjudicate these issues. Another practitioner added that we do not have a robust system for adjudicating pipeline issues because communities have little opportunity to resist them. As a result, Canada’s institutional framework for understanding and assessing fossil fuel infrastructure needs to be addressed.

There was awareness that procedural justice does not always lead to distributive justice. An example raised was the Mackenzie Valley Pipeline, which was celebrated for its consultation process but has yet to be built; as a result, the affected Indigenous communities have not received the expected economic benefits. A just transition thus requires careful attention to the indirect effects of transition processes.

A related discussion was about justice for whom. Participants identified two major groups as losers of the transition: the people affected by the transition (especially those who are least able to adapt to these changes), and the people and companies currently directly benefiting from the fossil fuel industry. One participant observed that “losers” of climate transitions have driven popular gains in both Brexit and the United States 2016 presidential election. There was also concern about the lack of alternative narrative regarding low carbon economies in Alberta, where there is a perception that much of the population believes that the Albertan economy can only function on revenue from the oil and gas industry.²⁵ Oil is culturally embedded as the base of Alberta’s economy and identity. This is a result of attitudes but is also a reflection of deeply held power and an interest in maintaining the status quo.²⁶

3.3 Where do we begin?

In this discussion, participants asked whether Canada might begin to realize a just transition. Participants acknowledged that we (as a society) are not starting from a place of justice. Past injustices must be addressed, namely those committed against Indigenous peoples and reflected in ongoing struggles over land rights.

²⁵ Public opinion research (Mildenberger et al. 2016, 7) finds that “belief that climate change is human-caused is lowest in the more greenhouse gas intensive parts of Canada, including parts of northern Alberta ... where oil sands developments are located.” Mildenberger, Matto, Peter Howe, Erick Lachapelle, Leah Stokes, Jennifer Marlon, and Timothy Gravelle. 2016. The Distribution of Climate Change Public Opinion in Canada. *PLoS ONE* 11(8). doi:10.1371/journal.pone.0159774.

²⁶ For a discussion of influence of oil and gas industry on environmental regulation see Carter, Angela, Gail Fraser, and Anna Zalik. 2017. Canada’s Fossil Fuel Provinces? Regulatory Streamlining, Impediments, and Drift. *Canadian Public Policy*. March. doi:10.3138/cpp.2016-041.

Multiple levers exist to help facilitate a just transition: political, legal, regulatory and economic. A successful strategy should use as many as possible. In terms of policy levers, a just transition requires iterative, adaptive policy based on the needs of the provinces and entailing the support of other stakeholders like municipalities. A just transition also requires policy resilience, and one participant used British Columbia's carbon tax as an example: the tax was embedded in a revenue stream, which brought finance bureaucrats on board.²⁷

Significant discussion is needed regarding how a transition toward a non-fossil fuel energy system will affect the provinces that are most heavily reliant on fossil fuels. These provinces and their citizens must be offered something in return for a managed decline of the oil and gas industry. The Iron & Earth initiative²⁸ is one way to ensure justice for workers and aid in economic diversification. This type of initiative would build on the newly announced carbon tax in Alberta where some of the revenue will go to communities that are affected by an accelerated coal phase-out. Compensating workers in this way was seen as a step in the right direction.

3.4 Session lessons

1. The PCF is not robust enough to guide Canada into a low-carbon transition, let alone a just one. The PCF is largely a catalogue of existing activities, which is not enough for Canada to meet its Paris contributions.
2. The absence of the fossil fuel industry or pipelines in the PCF is indicative of the power and political capital of incumbent industries that stand to lose from a transition. Participants identified the political capital of incumbent industries (namely oil and gas) as a key challenge to overcome.
3. While cost structures and technological development are generally positive, political – rather than exogenous – forces guide them. Technological change requires steering to ensure it is compatible with an equitable energy transition.
4. Participants identified several areas where procedural justice is lacking such as the institutions to address concerns around pipelines, as well as how to get to a just low-carbon transition more generally.
5. A just transition must recognize the political fragility of the PCF and the losers in the transition. A just transition must work to build political support to transition in politically fragile jurisdictions like Alberta.

²⁷ See Harrison, Kathryn. 2012. A Tale of Two Taxes: The Fate of Environmental Tax Reform in Canada. *Review of Policy Research* 29(3): 383-406. doi 10.1111/j.1541-1338.2012.00565.x.

²⁸ See http://www.ironandearth.org/national_petition_splash?splash=1.

4.0 Implementation challenges

This session asked participants to identify the key political, legal, and economic implementation challenges for the PCF and to discuss how they can be overcome. The largest group of challenges identified was around the fossil fuel industry, but there was disagreement among participants about whether more attention should be focused on supply or demand side-action. There was also discussion about the division of labour and the role of various actors including the federal government, cities, and the public.

4.1 The future of the fossil fuel industry

The federal government holds that climate change mitigation is not in opposition to pipeline construction and gas and oil extraction. As a result, the PCF nearly exempts the entire oil and gas industry from emissions reductions, and allows the sector to continue to grow.²⁹ This was seen as major obstacle to fulfilling Canada's climate action commitments and goals. This federal policy is largely the result of diverging provincial approaches to energy.

A participant raised the question about whether (and how) it is possible to reconcile Canada as a climate change leader and as a leader in fossil fuel exports. They also suggested that fossil fuel extraction cannot be stopped in the short term. Political feasibility aside, the discussants contested the idea that extraction of fossil fuels (at its current rate) could be compatible with Canada's climate commitments. Participants agreed that the continued expansion of the fossil-fuel industry is not compatible with climate action. One potential solution raised was a carbon border tax adjustment (CBTA), a tax on goods imported from countries with a lower carbon price. However, a CBTA may contribute to trade instability and undermine narratives about the benefits of a carbon price. To date, there has been little analysis of the potential impacts of CBTAs on carbon pricing.

This conversation led to a discussion about whether it is politically easier to shut down the oil and gas industry now or in fifty years. One discussant argued that it will be politically easier to shut down oil and gas extraction in fifty years, as oil and gas will be seen as an out-dated energy source like coal. However, there is a risk that Alberta will continue to grow more dependent on the royalties from the oil and gas industry.

4.2 Do we need more supply- or demand-side action?

Another discussion examined whether groups should focus energy on supply or demand-side action. Some participants were optimistic about substantial progress

²⁹ The PCF aims to reduce methane emissions from the oil and gas sector 40-45 percent from 2012 levels by 2025.

towards decarbonization domestically even if Canada continues to export oil and gas. These participants believed the primary focus should be on the supply side (e.g., pushing for greener transportation policies), because constraining demand to the extent that it would undermine the petroleum industry in Canada is unlikely. One participant suggested the price on carbon would never be high enough to lead to decarbonization. Other participants also felt that carbon pricing is not the primary tool to drive decarbonization in Canada or internationally. Participants indicated that initiatives like carbon taxes or cap and trade are vulnerable to processes behind closed doors, which is part of the appeal to the oil and gas industry. In terms of other areas for action, one expert suggested accelerating the coal phase-out in Alberta is an opportunity to contribute significantly to climate change mitigation³⁰. Another suggested the Canada Infrastructure Bank is showing leadership in clean energy.³¹

Other participants suggested supply-side initiatives receive a lot of attention; there is also a need to look at reducing demand. If pipelines continue to be built, oil and gas will continue to be extracted, independent of demand. Another concern with demand-side policies was the interdependence of the Canadian and American economies and demand for Canadian oil and gas in the United States.

4.3 Responsibility and division of labour

There was a lengthy discussion about the relative importance of the federal government in a low-carbon transition. There was a lot of uncertainty about whether the federal government is going to push heavy emitting provinces further on their reductions strategies. For example, British Columbia and Alberta have a carbon price and it is unclear whether they will be asked to take further action to reduce their GHG emissions. Ontario and Quebec have a different standard with cap and trade and it is also unclear whether they will be asked to do more. This raised the larger question of how much each province is contributing to Canada's overall emissions reduction targets. However, the intergovernmental nature of environmental governance is poorly addressed in the PCF. Although Canada is composed of provinces and territories that operate in very different ways, climate action must be coordinated and proactive.

Participants reiterated that federal guidance is needed in some areas more than others. For example, the negative press coverage of cap and trade in Ontario is shaking

³⁰ See Vriens, Lauren. 2018. The End of Coal: Alberta's Coal Phase Out. IISD Report. May, 1-37. <https://www.iisd.org/sites/default/files/publications/alberta-coal-phase-out.pdf>.

³¹ The Canadian Infrastructure Bank has earmarked \$5 billion for "green infrastructure projects, including those that reduce greenhouse gas emissions, deliver clean air and safe water systems, and promote renewable power." See <https://www.infrastructure.gc.ca/CIB-BIC/index-eng.html>.

business confidence in the initiative;³² therefore, strong federal leadership is needed to restore confidence. Others warned of the federal inertia behind policies that reinforce climate inaction. For example, the federal tax system does not create incentives for a low carbon transition (e.g., the Mineral Exploration Tax Credit).³³

Although participants were critical of the federal government's role, they were weary that attacking the government could dampen political momentum. As one practitioner pointed out, losing the public discourse on climate action will limit future levels of ambition. Another practitioner echoed this concern and suggested the government is negotiating the PCF with industries that are "looking for loopholes in every direction." The conclusion is that we need to defend what was won in the PCF – though it is far from enough – because it is politically fragile.

4.4 The role of the public and public education

According to one practitioner, the general public had little awareness that the Ontario government had a public consultation on the cap and trade program, and had a poor understanding of the proposal. While a lot of expertise is required to develop the details of initiatives like cap and trade and carbon pricing, engaged scholars and practitioners also need to answer voters' concerns about these initiatives, particularly as they relate to issues like employment and economic growth. While more education is needed about the details of a cap and trade or a carbon tax, scholars and practitioners rarely ask the public about the kind of society they want to live in and how climate change can contribute to those societal goals.

4.5 The role of cities

There was significant discussion about the role of cities in a low-carbon transition. There was concern that the PCF ignores the role of cities and is inadequate in guiding a low-carbon transition. Participants suggested cities' actions are critical to the PCF because transportation policy and land-use will most likely be implemented at the city level. As well, building codes and population density are key issues dealt with at this level. Some cities have started using the 2050 target to guide decisions made in the present. This kind of frame guides larger transformations; however, participants were divided on the transformational potential of cities.

As cities depend largely on property tax for revenue, participants pointed to the limited funding of cities for climate action. In a recent report, cities cited funding as one

³² For example see Rushowy, Kristin. 2016. Ontario business groups want cap-and-trade program delayed. *Toronto Star*, December 29. <https://www.thestar.com/news/queenspark/2016/12/29/ontario-business-groups-want-cap-and-trade-program-delayed.html>.

³³ Tedds, Lindsay. 2015. Why the Mineral Exploration Tax Credit is such a bad idea. *Maclean's*. September 2. <https://www.macleans.ca/economy/economicanalysis/why-the-mineral-exploration-tax-credit-is-such-a-bad-idea/>.

of the biggest barriers to taking climate action.³⁴ Integrating climate action into the long-term development strategy of cities will require reliable sources of funding from higher levels of governments. Other participants pointed out that city climate leadership should not be a substitute for national or provincial leadership that can provide capital and a vision for an industry- or economy-wide transition. This type of capital and leadership can develop creative financial structures that go beyond short-term initiatives.

Participants suggested drawing from cities' experiences at the implementation stage to learn about climate change implementation in upper levels of government. According to one practitioner, the province of Ontario is looking to the city of Toronto's TransformTO³⁵ initiative and sophisticated modeling and on the ground projects. Another participant added that Toronto is the "sweet spot" for climate action because this is where things get enabled like building codes. Although there was a lot of optimism about the role of cities, others were more cautious and one participant pointed out the limits to Toronto's Green Standard without greater provincial support.³⁶

4.6 Session lessons

1. Continued expansion of the fossil-fuel industry is not compatible with climate action. However, focusing on reducing the demand for fossil fuels is politically and economically challenging.
2. The intergovernmental nature of environmental governance must be recognized. Federal guidance is needed in some areas more than others.
3. Cities have a role to play in implementing the PCF but their role is constrained due to financial capacity.
4. We are not asking people the outcomes they are looking for when we talk about climate change mitigation.

³⁴ C40 Cities Climate Leadership Group. *Unlocking Climate Action in Megacities*. May 2016, 6 <http://www.c40.org/researches/unlocking-climate-action-in-megacities>.

³⁵ More information available at <https://www.toronto.ca/services-payments/water-environment/environmentally-friendly-city-initiatives/transformto/>.

³⁶ See Tozer, Laura. 2018. Waterfront Toronto and the Transformation of the Green Building Market. Environmental Governance Lab Working Paper 2018-6: 1-33. <https://munkschool.utoronto.ca/egl/files/2018/05/EGL-Working-Paper-6-Laura-Tozer.pdf>.

5.0 Concluding session

The purpose of the concluding session was to generate discussion on how to move forward. Rapporteurs first presented summaries of the discussions in each of the sessions. The concluding discussion picked up on previous discussions, reflected on the role of scholars, and focused on ways forward.

5.1 How should we frame the transition?

Greater climate action is possible through reframing the issue to both the Canadian public and policymakers. While workshop participants pointed to strong consciousness around the Paris Agreement, this has since disappeared. Participants suggested that framing must be robust across a complex and dynamic landscape. Being prepared with a frame that works under a wide range of scenarios with nonlinear characteristics is essential. Participants also raised concerns about how to reach the average voter on climate change issues. The populist response to climate action is simple and easy to understand; participants agreed we must learn from the populist backlash in the United States during Trump's election when framing climate action.

Several suggestions were brought forward about how to frame climate action. While discussants did not agree on a frame, suggestions included (in no particular order):

- Framing the transition in terms of clean energy goals (e.g., 100% clean energy) rather than emissions reduction targets;
- Framing climate mitigation around specific environmental issues – such as parks' conservation, conservation, protection of wildlife, and water quality – because there is still strong support for these issues;
- Framing climate action in terms of place-based narratives (e.g., Dakota Access and Keystone XL pipelines);
- Framing climate action in a way that links to labour movements, which happened in Europe (Bernie Sanders had a similar message in the United States during his campaign);
- Framing climate action in terms of health or jobs, not temporally or geographically distant issues; leveraging concern about air pollution in China has been very successful (although the extent to which this will ultimately impact their GHG emissions is unclear);
- Framing climate action in terms of a transition to the society citizens want and presenting a highly compelling vision of the future;
- Framing climate mitigation in terms of what could be lost if no action is taken;

- And finally, framing climate change as a crisis; this could cause a backlash or lead to fatalism if not paired with policy recommendations or other actionable items.

5.2 What is the role of scholars?

Participants expressed support for the idea that academics can lend credibility to initiatives on the ground. Academics can also provide expertise for groups that are crucial for climate change mitigation, such as organizations involved in the labour movement. The general sense was that a lot of the research academics are doing is moving in the right direction. More research was suggested on the gendered impacts of a low-carbon transition.

Academics must better understand what they do as a group and frame their contributions to the broader public based on these strengths. Practitioners suggested that the Canadian public has a huge appetite for academic knowledge, and academics should use this privileged position to contribute more to the public sphere. Scholarly engagement is needed not just with the federal government but with cities and communities as well.

5.3 Ways forward

The Paris Agreement is not a silver bullet for climate action; however, the agreement provides normative expectations and a framework to mobilize support. The final workshop discussion turned to how scholars practitioners can best mobilize support and build alliances to maintain this external pressure. As support for a broad-based climate action coalition in Canada is unlikely, building a coalition with the minimum number of actors needed is a politically effective strategy. This coalition can eventually be scaled up. However, there is still a role for bottom-up approaches and wide-based coalitions at the city level or for place-based campaigns.

Participants also expressed a need to “answer what happened in the United States.” Canada must come out ahead in a sustainable transition no matter what President Trump might do. Participants felt that Canada cannot wait and see what happens in the United States; rather, Canada must maintain political will to move forward toward decarbonization. Also, the changes in the U.S-China relationship might be more useful to help understand the future of global climate action than looking at the United States under Trump’s presidency alone.

Another way forward is to think about ways to engage with the larger public. The public – whose support is necessary for climate change mitigation efforts – are rarely incorporated within policy and academic discussions about Canada’s energy transition. One participant suggested scholars and practitioners should identify the kinds of cities

people want to live in (e.g., shorter commute, more bike lines, etc.), and use those desirable futures to work toward climate change mitigation goals.

5.4 Session lessons

1. Greater climate action is possible through reframing the issue to both the Canadian public and policymakers. This new frame must be robust across a complex and dynamic landscape and should incorporate lessons from the populist backlash in the United States (e.g., respond to fears about economic and job insecurity).
2. Scholars can lend credibility for initiatives on the ground.
3. Coalitions are needed to maintain the political pressure necessary for climate friendly policies. While developing a broadly based climate change coalition in Canada is challenging, building a coalition with the minimum number of actors may be more effective in the short term. Grassroots alliances will continue to be important in local contexts and place-based campaigns.
4. More work is needed to engage the public in conversations about a low-carbon transition.