

White paper on Elements of an Eastern Canada Energy Strategy

Summary

Following an initial proposition in July 2012, the Premiers of all provinces and territories have agreed to work together to develop a “Canadian Energy Strategy”. As the national strategy is being developed, many particular energy issues would also benefit from a more regionally-based consensus as demonstrated by a recent energy-trade agreement announced by the Premiers of Ontario and Quebec in November. The interest for a wider Eastern Canada common energy strategy that goes beyond these two provinces was also explored in a workshop held on November 3rd 2014, which brought together participants from Ontario to Newfoundland and Labrador. Produced following the workshop, this white paper identifies key goals and priorities for action on energy from the perspective of Eastern Canada.

Goals for an Eastern Canada Energy Policy

Multistakeholder collaborations for the development of an energy strategy, whether bilateral or multilateral, can be beneficial for all parties. Such benefits have been shown through initiatives undertaken both in North America and Europe. In this spirit, the provinces of Eastern Canada would benefit from working together on a number of shared goals:

1. To facilitate the transition towards a low-carbon economy while advancing energy efficiency and sustainability more broadly.
2. To strengthen the resilience, adaptive capacity, and security of supply in energy system, infrastructure and investment.
3. To further the adoption of renewable and low-impact energy sources.
4. To enhance economic efficiency considered on a full cost life-cycle basis.
5. To encourage innovation in the development and delivery of energy services.
6. To promote social acceptance and equity amongst stakeholders with respect to the decision making process, the costs, risks, impacts and benefits of energy development, transportation and use.

Priorities for action

In order to advance these goals, we propose that the Premiers address a number of actions that can take place over a range of time scales.

1. ***Opportunities for short term cooperation***
 - a. Building on the November Ontario/Quebec Agreement, expand common policies and initiatives to reduce greenhouse gas emissions.
 - b. Building on the Ontario/Quebec November agreement, establish a strategic plan regarding the strengthening of system interconnections and long-term electricity supply in Eastern Canada.

- c. Develop a common position/approach for evaluating and managing the risks, costs and benefits associated with the interprovincial transportation of energy, including fossil fuels.

2. *Priorities for a long-term transformation*

- a. Promote energy efficiency by implementing more stringent regulatory frameworks (e.g., building codes; appliance and equipment efficiency standards; fuel standards) and effective price signals.
- b. Use existing hydroelectric storage capacity to support large-scale renewable energy development and integration across Eastern Canada.
- c. Strengthen the focus on sustainable transportation, including the role of the electrification of transportation, intermodal shift for commercial transportation and improved commercial and passenger fuel standards.
- d. Develop and implement a common regulatory framework for evaluating the impacts and benefits of non-conventional hydrocarbon exploration and development.

A strategy that will benefit all provinces

Together, these actions aim to deliver significant short- and long-term economic, social and environmental gains for all participating provinces, by facilitating exchanges between the different markets, developing common positions that will simplify investments, encouraging a more efficient economy and better leveraging the important renewable and low-impact energy resources found in Eastern Canada.

A reflection that is part of a larger national exercise

The workshop “What is there to gain from a common energy policy for the Eastern Provinces” at the origin of this white paper is one of the first public activities organized as part of an initiative known as the “Sustainable Canada Dialogues”, which will propose various courses of action on climate across Canada over the next year.

Prepared and supported by

Miguel Anjos (Institut de l'énergie Trottier, Polytechnique Montréal)
François Bouffard (McGill University and GERAD)
Claudio A. Cañizares (Waterloo University)
Evariste Feurtey (Université du Québec à Rimouski)
Jack Gibbons (Ontario Clean Air Alliance)
L.D. Danny Harvey (University of Toronto)
Roger Lanoue (Montréal)
Wade Locke (Memorial University)
Guy Marleau (Polytechnique Montréal)
James Meadowcroft (Carleton University)
Normand Mousseau (Université de Montréal)
Pierre-Olivier Pineau (Chair in Energy Sector Management, HEC Montréal)
Catherine Potvin (McGill University)
Ian H. Rowlands (Waterloo University)
Hugo Tremblay (Université de Montréal)
Lorne Trottier (Trottier Family Foundation)

Mark S. Winfield (York University)
Johanne Withmore (HEC Montréal)
Emmanuel Yiridoe

(Dalhousie University)

White paper on

Elements of an Eastern Canada Energy Strategy

In July 2012, a number of Premiers established a working group to develop a “Canadian Energy Strategy”¹. This proposal was very well received and, over two years, it brought together the Premiers of all provinces and territories.

Despite this promising start, the strategy has yet to be fully developed or implemented by any province although announcements by the Premiers of Ontario and Quebec at the end of November 2014 show a real desire to move forward on a number of energy issues.

The energy agenda is only one of the agenda items shared by the Premiers and it must be developed with the question of climate change as its center. Interprovincial cooperation regarding climate change mitigation has not crystalized yet. Although most provinces have explicit emissions reduction targets, they are generally much lower than those suggested by IPCC to avoid a warming of more than 2°C. As several provinces in Canada are elaborating climate action plans, would cooperation in the energy sector facilitate the implementation of climate change mitigation actions?

These and other possible elements for an Eastern Canada energy strategy were discussed at a recent workshop on the theme “What is there to gain from a common energy policy for the Eastern Provinces” held at the Université de Montréal on November 3rd, 2014. The workshop, building on contributed papers by the participants, brought together more than 20 participants from Ontario to Newfoundland and Labrador, and its conclusions are presented in this white paper. The participants identified key energy related principles and priorities for action from the perspective of Eastern Canada. They also suggested that several specific energy issues, with climate change at the top of list, would benefit from a regionally-based cooperation. Their main conclusions are presented below.

Why Eastern Canada?

Canadians are used to thinking of energy on a per province basis. However, a number of issues are relevant to Eastern Canada as a whole and they would certainly greatly benefit from reflections at this level:

- There is a common desire to meaningfully address climate change;
- The region possesses significant but largely undervalued resources and capacity in energy efficiency as well as renewable and low-impact energy;
- The region is largely dependent on imported hydrocarbon fuels;
- In absence of a national energy policy, the *de facto modus operandi* of Canada is dominated by the current realities of Alberta that do not represent fully the interests of Eastern Canada;
- There may be potential to develop non-conventional hydrocarbon resources across the region;

¹ <http://www.councilofthefederation.ca/en/initiatives/130-energy-working-group>

- There are a number of challenges regarding energy transportation, particularly, but not solely, related to the movement of fossil fuels to and through the region.

Goals for an Eastern Canada Energy Policy

Collaborations around energy strategy, especially in the context of climate change mitigation, whether bilateral or multilateral, have the potential to be advantageous for all parties. Numerous examples have demonstrated this interest both for developing joint programs and policies, such as the Northwest Energy Efficiency Alliance,² and for supporting common research and policy such as the Nordic Energy Research, for example.³ In our view, it is important that discussions on energy take place among governments of the Eastern Canadian provinces on the following common goals:

1. To facilitate the transition towards a low-carbon economy while advancing energy efficiency and sustainability more broadly.
2. To strengthen the resilience, adaptive capacity, and security of supply in energy system, infrastructure and investment.
3. To further the adoption of renewable and low-impact energy sources.
4. To enhance economic efficiency considered on a full cost life-cycle basis.
5. To encourage innovation in the development and delivery of energy services
6. To promote social acceptance and equity amongst stakeholders social acceptance with respect to the decision making process, the costs, risks, impacts and benefits of energy development, transportation and use.

Priorities for action

To achieve these goals, we suggest that the provinces cooperate on a number of actions that can take place over a range of time scales.

OPPORTUNITIES FOR SHORT TERM COOPERATION

Building on the November Ontario/Quebec Agreement, expand common policies and initiatives to reduce greenhouse gas emissions. Recently, Quebec and California have created a common carbon market with ambitious emission reduction goals. By joining the Western Climate Initiative, all Eastern Canadian provinces could benefit from a system already in place while participating in the definition of its goals and means beyond 2020. Such a move, especially if it included Ontario, could also secure a more uniform price signal for renewable vs. hydrocarbon energy for a large fraction of the Canadian population.

Building on the Ontario/Quebec November agreement, establish a strategic plan regarding the strengthening of system interconnections and long-term electricity supply. Transition to a low-carbon economy would be facilitated by a better access to renewable energy,

² The Northwest Power and Conservation Council (NPCC) was created in the early 1980's and regroups Idaho, Montana, Oregon and Washington. It is responsible, among others, with electricity power planning for the region. The NPCC is also at the origin of the 18-year old Northwest Energy Efficiency Alliance which brings together regional utilities and energy efficiency organization and has had considerable success in achieving energy efficiency across the states.

³ The 25-year old Nordic Energy Research center assists the Nordic Council of Ministers from Scandinavian countries. It provides analyses to the member countries and funds collaborative research projects.

particularly electricity. Important hydro and wind electricity resources exist in Eastern Canada, particularly in Quebec and Newfoundland and Labrador and many provinces are undertaking a major deployment of wind and solar generation. While Ontario's and Quebec have recently announced a 500 MW exchange deal, there is a need to extend the range of bilateral and multilateral agreements regarding short-term and long-term sharing of these resources and strengthened electrical interconnections among the provinces that could improve economic efficiency, reduce energy costs for consumers over the region and contribute to significant reductions in GHG emissions.

Develop a common position/approach to evaluate the risks, costs, environmental impacts and benefits associated with the interprovincial transportation of energy, including, but not limited to, fossil fuels. The Energy East pipeline could potentially pass through at least three Eastern provinces. This significant investment would impact access to natural gas in Quebec and Ontario, cross a large number of waterways and affect many communities along its projected path. In addition, the rapid growth in North American oil production has resulted in a major surge in the transportation of oil by rail. As the Lac-Mégantic tragedy has shown, this development imposes safety risks on the public, and environmental and economic risks on provinces and communities who do not necessarily benefit directly from the increased traffic. These points to the urgent need for establishing a common position from the Premiers of the affected provinces regarding safety, economic and energy security risks and environmental impacts, including climate change, with respect to these and other energy transportation developments, would be an important step as was recognized by Premiers Wynne and Couillard recently.

PRIORITIES FOR A LONGER TERM TRANSFORMATION

Support energy efficiency with more stringent common standards and codes, and effective prices signals. Together, Eastern Canadian provinces should push for improved norms and regulations regarding energy use in buildings and transportation, setting them as benchmarks for the rest of Canada. Well-thought harmonized pricing policies could also lead to a better use of energy resources over the region.

Use the large existing hydroelectric storage capacity for developing renewable energy across eastern Canada. The coupling of Newfoundland and Labrador's and Quebec's large hydraulic reservoirs with wind and solar production across Eastern Canada could facilitate major increases in the use of these sustainable energy sources. Political commitment from the highest levels in each province will be needed to ensure this potential is fully evaluated and that the best overall plan is realized.

Strengthen the focus on sustainable transportation infrastructure and modes, including the role of the electrification of transportation. The St-Lawrence seaway, a jointly planned rail network for goods and people, as well as coordinated natural gas refueling stations and electric charging stations would greatly support a more sustainable approach to transportation. In addition, Ontario's well-established transportation equipment manufacturing sector, Quebec's emerging strength in battery technologies and Quebec and Newfoundland and Labrador's large renewable energy resources point to the potential for developing a common strategic plan for the electrification of transportation.

Develop and implement a common regulatory framework for evaluating the impacts and benefits of non-conventional hydrocarbon exploration and development. A number of Eastern Canadian geological structures promise to be potential sources of non-conventional hydrocarbons. At the moment, opposition from the public is strong in spite of considerable sup-

port from governments and the oil and gas industry. The promotion of a common systemic assessment approach that includes a better understanding of the risks, costs social and environmental impacts, as well as the potential benefits associated with these potential resources before any decisions or actions are taken would assist in decision-making about the desirability of future development.

A strategy that will benefit all provinces

Together, these actions could result in significant short- and long-term economic, social and environmental gains for all participating provinces, by increasing exchanges between the different markets, developing common positions that would simplify investments, encouraging a more efficient economy and better leveraging of the important resources in renewable energy found in eastern Canada.

Well designed, they would ensure significant returns for all participants. Of course, these elements of a common energy strategy for Eastern Canadian provinces could not replace current and coming energy strategies and policies developed by individual provinces. Just as in the Pacific Northwest and in Scandinavia, they would provide, rather, an additional dimension that could help better leverage the provincial directions through regional cooperation, without restraining the scope of action of any provincial government's specific jurisdiction.

A reflection that is part of a larger national exercise

The workshop "What is there to gain from a common energy policy for the eastern Provinces" at the origin of this white paper is one of the first public activities organized as part of an initiative known as the "Sustainable Canada Dialogues", which will propose various courses of action on climate across Canada over the next year.

Indeed, climate change has been quite prominent in the World News in the last months of 2014. Two important international reports have been published; The New Climate Economy⁴ led by Mexico's ex-President Felipe Calderon and economist Sir Nicholas Stern and the IPCC's 5th Assessment Report⁵. These two reports provide the necessary information to stimulate climate mitigation action. On the political front, the Fall of 2014 witnessed a most significant development with the announcement of the USA-China Joint Announcement on Climate Change⁶. These important milestones pave the way to the Paris Climate Conference scheduled for December 2015. In Paris, the countries of the world are expected to come to an international agreement to limit the warming of the planet to no more than 2°C. Progress on climate change mitigation isolates Canada who repeatedly failed to meet its greenhouse gas emissions reduction targets under the UN Framework Convention on Climate Change.

In reaction to this isolation, Quebec's premier, Philippe Couillard, has invited the Premiers of Canada's provinces and territories to a Summit on Climate Change that will take place in the Spring of 2015. This opens the possibility that the void left by the federal government could be filled by ambitious climate change policy at the provincial level.

To support existing climate mitigation efforts, a group of scholars from across Canada started collaborating to propose elements for a climate action in Canada in an initiative known as the

⁴ <http://newclimateeconomy.report/>

⁵ <http://www.ipcc.ch/>

⁶ <http://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>

“Sustainable Canada Dialogues”
(<http://usmapanama.com/dialoguesonsustainability/en/sustainable-canada-dialogues/sustainable-canada-dialogues>). Researchers participating in the Sustainable Canada Dialogues identified energy production as a crucial element for any climate action plan in Canada.

Indeed, in its Sixth National Report on Climate Change⁷, Canada notes that emissions due the electricity generation fell between 2005 and 2011 largely because of the phasing out of coal-based electricity in Ontario. Clearly the energy choices of one province can affect the national greenhouse gas budget, in this case positively. True to its clean energy policy, Ontario is looking for sources of electricity low in carbon. At the same time Quebec and Newfoundland and Labrador are important producers of hydroelectricity. Could there be more benefits stemming from a common energy policy for Eastern Canada with respect to economical, social, environmental or climate issues? This question led to the support for the workshop on “What is there to gain from a common energy policy for the Eastern Provinces”. Following academic tradition, however, the conclusions from the workshop and the ensuing white paper were developed independently from Sustainable Canada Dialogues and cannot be taken to represent its official position.

Funding

The workshop was funded, in part, by the Trottier Institute for Science and Public Policy, the Institut de l'énergie Trottier of Polytechnique Montréal, the Faculté des arts et des sciences of Université de Montréal and the UdeM Research Chair in Complex Materials, Energy and Natural Resources

Prepared and supported by

Miguel Anjos (Institut de l'énergie Trottier, Polytechnique Montréal)

François Bouffard (McGill University and GERAD)

Claudio A. Cañizares (Waterloo University)

Evariste Feurtey (Université du Québec à Rimouski)

Jack Gibbons (Ontario Clean Air Alliance)

L.D. Danny Harvey (University of Toronto)

Roger Lanoue (Montréal)

Wade Locke (Memorial University)

Guy Marleau (Polytechnique Montréal)

James Meadowcroft (Carleton University)

7

Normand Mousseau (Université de Montréal)

Pierre-Olivier Pineau (Chair in Energy Sector Management, HEC Montréal)

Catherine Potvin (McGill University)

Ian H. Rowlands (Waterloo University)

Hugo Tremblay (Université de Montréal)

Lorne Trottier (Trottier Family Foundation)

Mark S. Winfield (York University)

Johanne Withmore (HEC Montréal)

Emmanuel Yiridoe (Dalhousie University)