CANADIAN GLOBAL AFFAIRS INSTITUTE
INSTITUT CANADIEN DES AFFAIRES MONDIALES

With the latest developments on the North American pipeline landscape, is Energy East necessary?

by Kelly J. Ogle

April, 2017

ENERGY SERIES

WITH THE LATEST DEVELOPMENTS ON THE NORTH AMERICAN PIPELINE LANDSCAPE, IS ENERGY EAST NECESSARY?

by Kelly J. Ogle
CGAI President and CEO

April, 2017

CANADIAN GLOBAL AFFAIRS INSTITUTE
INSTITUT CANADIEN DES AFFAIRES MONDIALES

Prepared for the Canadian Global Affairs Institute
1600, 530 – 8th Avenue S.W., Calgary, AB T2P 3S8
www.cgai.ca

ISBN: 978-1-988493-30-5

With the latest developments on the North American pipeline landscape, is Energy East necessary?

Energy East is a 4,500-kilometre pipeline that would transport approximately 1.1 million barrels of crude oil per day from Alberta and Saskatchewan to the refineries of Eastern Canada and a marine terminal in New Brunswick. Most of the project, from Western Canada to Montreal, is the repurposing of the existing TransCanada gas mainline. The need for the gas mainline may become redundant due to ever-increasing gas supply[1] from the United States into Ontario and Quebec and the eventuality of western Canadian LNG exports from Canada's West Coast.

In November 2016, Prime Minister Justin Trudeau took the controversial step of approving the expansion of the Trans Mountain pipeline from Edmonton to Burnaby and the upgrading of Enbridge's Line 3 from Edmonton to Superior, Wis. Trudeau admitted that these decisions were difficult and controversial but contended that the pipelines were crucial to Canada's national interest.[2] During the 2016 presidential election, Republican candidate Donald Trump promised that if elected he would immediately rescind outgoing President Barack Obama's rejection of the Keystone XL pipeline. Following his inauguration in January 2017, Trump signed an executive order allowing TransCanada to re-start the application process and on March 24, 2017, Trump signed the presidential permit necessary to proceed.[3]

For several decades, nearly 100 per cent of Canadian crude oil exports have gone exclusively to the U.S., for the most part at a deep discount to world prices. If Canada is to continue to produce and sell oil profitably, markets must be enlarged. This paper asks the question: With Keystone XL, Kinder Morgan and Enbridge's Line 3 reconstruction likely to proceed, are the reconfiguration and extension of the TransCanada mainline, otherwise known as Energy East, necessary? Keystone will add approximately 830,000 barrels per day of new oil transport capacity, destined either for refineries in the U.S. Midwest or the U.S. Gulf Coast. The Trans Mountain expansion (TMX) would triple the capacity of an existing pipeline network that links the Edmonton and Vancouver regions, shipping roughly 890,000 barrels of crude oil and petroleum per day. Enbridge's Line 3 would allow western oil producers to ship up to 760,000 barrels of oil per day from Alberta to the U.S. Midwest, doubling the capacity of the existing line that is now facing pressure restrictions. The question remains, however, whether an eastern connection to tidewater is needed given the imminent construction of the Keystone XL, Trans Mountain and Line 3. Perhaps more importantly, will future Canadian oil production require this additional takeaway capacity?

Several political, strategic and economic factors (notwithstanding regulatory and environmental challenges) are inherent to this debate and one could examine a plethora of topics. However, this paper looks at four: the ever-fluid and dynamic global oil trade and Canada's place in it; Canada's asymmetric oil relationship with the U.S.; the safety, economic benefits and relative simplicity of the construction and operation of the Energy East pipeline; and export optionality for this largest of Canadian resources.

According to the International Energy Agency's (IEA) latest *World Energy Outlook* (released in November 2016), oil and natural gas will still supply over 50 per cent of the world's energy in 2040.[4] For example, the IEA projects that by 2030, India will be the world's largest oil importer, ahead of China and the U.S. Canada has ample opportunity to supply this burgeoning market if the nation has the political will. Although this view does not play well with many of Trudeau's supporters, he respects oil's strategic importance to Canada's future. At a conference in Houston in early March, Trudeau emphasized this point when he stated that Canada, with 173 billion barrels of oil reserves, would more aggressively seek global market share.[5]

Until recently, OPEC and Russia were producing at record high levels to protect their share of the global market. In the past several years, the U.S. has become the world's second largest producer behind only Saudi Arabia. However, record production from Texas and North Dakota does not satisfy America's need for oil now or over the next several decades. U.S. energy self-sufficiency assumes that several million barrels a day of supply from Canada continues — supply that is secure. There has been a lot of discussion recently about U.S. oil exports, begging the question: if the U.S. is exporting crude oil, why does it need imports? Most U.S. refining capacity favours oil that is more viscous, i.e., heavier. Most U.S. production — Texas, the Gulf of Mexico, North Dakota and Alaska — is lighter. Canadian crude oil is for the most part a heavier variety well suited to U.S. refining capacity.

The Canada-U.S. energy relationship[6] is one of mutual interdependence due in large part to the geographic distribution of oil and gas reserves and the challenges of efficient supply and demand distribution. The Canadian oil industry's rapid growth in the 1950s led the Diefenbaker government to undertake a royal commission on energy. The Borden Commission's[7] findings led to the creation of the National Oil Policy (NOP). The NOP's establishment allowed Canada to co-ordinate and implement a comprehensive energy policy on a national level. However, the NOP divided Canada into two consuming regions separated by the Ottawa Valley. The NOP established a protected market for domestic oil west of the Ottawa Valley, freeing the industry from foreign competition while the five eastern provinces continued to rely on imports. A two-tiered price for oil characterized the NOP as the eastern provinces were reluctant to extend transmission of western Canadian crude oil into their markets because of the existence of cheaper imported oil, a situation that still exists today.

However, a comprehensive, binding bilateral agreement that deregulated energy policy had never gained widespread political acceptance. The ratification of the Canada-U.S. Free Trade Agreement (FTA) in January 1989 changed this. Continental energy policy (under the FTA) was the joint planning of energy production and shipment without regard to borders. During the agreement's negotiation, the bilateral energy fact-finding group considered the special problems in energy trade. It concluded that a broad agreement guaranteeing American access to Canadian supply in return for secure access to the U.S. market was mutually beneficial.

The situation today is much different. As much as the FTA enhanced U.S. energy security, there now exists an equal part of demand insecurity for Canadian oil production and by association the greater Canadian economy. Oil exports continue to flow into Canada at increasing rates. Eastern Canada imported about 558,000 barrels per day from January to July 2016. In Quebec, more than half the oil used is imported. It comes by pipeline from the U.S. or by tanker down the St. Lawrence River from Saudi Arabia, Algeria, Angola or Nigeria. Although Canada has the third largest oil reserves in the world, last year Canadians paid $14 billion to import oil from other countries. Moreover, our primary customer has become our fiercest competitor. Without access to new markets, Canadian oil resources will fight an uphill battle for market share and competitive pricing.

Pipelines are the most environmentally responsible way of transporting oil over long distances. A Fraser Institute study[8] using statistics from the Transportation Safety Board of Canada and Transport Canada concludes pipelines are 4.5 times safer than rail when it comes to transporting crude oil. Pipelines are also the least greenhouse gas-intensive way of transporting crude oil to market. In the case of Energy East, the equivalent of 1,570 rail cars of crude oil per day would be displaced. In its initial application, Energy East conducted a risk assessment[9] for the pipeline facilities associated with the project to determine the worst-case scenario and potential costs that it may incur from an accident or malfunction. Indeed, by the time this pipeline is built, it will be the safest pipeline in the world. Over the next several years, if all goes as planned, TransCanada will have completed Keystone XL, which according to the U.S. Department of State,[10] will result in a project that has a degree of safety greater than any typically constructed domestic oil pipeline system. Energy East will be subject to the same rigour.

Thousands of men and women will be employed in the design and construction of Energy East. According to a September 2014 Conference Board of Canada study,[11] the project is expected to support an average of 14,000 direct and indirect full-time Canadian jobs (over 4,000 in both Quebec and Ontario) during the pipeline's re-purposing, development and construction. Furthermore, over several decades, it will generate more than $7 billion in additional tax revenues for governments ($2.6 billion in tax revenues for Ontario and $2 billion for Quebec) and add approximately $36 billion to Canada's GDP. From an operational economic perspective, shipping oil by rail costs an average $10 to $15 per barrel nationwide, which is up to three times more expensive than the $5 per barrel it costs to move oil by pipeline, according to estimates from Wolfe Trahan & Co.,[12] a New York City-based research firm that focuses on freight transportation costs.

Energy East will also foster substantial economic opportunities for New Brunswick if an upgrader[13] in Saint John near Irving Oil's existing refinery is constructed. The unit would process heavy oilsands bitumen into light, synthetic crude, given the higher demand for lighter grades from refinery customers across the Atlantic. Additionally, Irving plans to build another tank farm in Saint John and in partnership with TransCanada a $300 million deep-water

marine terminal. However, without Energy East, both projects are redundant and will remain on the back burner.

In the next decade, will there be enough supply to fill these pipelines if they are built? Currently, Canada's pipeline network can move about four million barrels per day, which closely matched 2015's average supply of 3.981 million barrels per day. The Canadian Association of Petroleum Producers (CAPP) projects that by 2030, production of Canadian oil will increase 37 per cent,[14] greatly exceeding the current pipeline capacity. More than 850,000 additional barrels per day of oilsands supply will be available by 2021, and between 2021 and 2030 supply from Canada's oilsands is forecast to grow to more than 700,000 barrels per day. Although recent downward price pressure has curtailed oilsands expansion, international interest in accessing Canadian crude oil is still strong. Husky Energy Inc.[15] recently sold a cargo of one million barrels of oil from its projects offshore Newfoundland to China, proving that producers and shippers can close the value gap if the global market is accessible. Additional North American market diversity and access to tidewater are needed so Canada can safely and profitably realize on its enormous resource bounty. The timely development of pipeline infrastructure, including Energy East, is a must.

[1] https://www.forbes.com/sites/judeclemente/2017/03/19/the-importance-of-u-s-oil-and-natural-gas-exports/#70b950f6b952
[2] http://www.huffingtonpost.ca/2016/11/29/pipeline-pronouncement-liberals-to-pass-judgment-on-line-3-northern-gateway_n_13305886.html
[3] http://business.financialpost.com/news/energy/the-u-s-state-department-approves-transcanadas-keystone-pipeline
[4] https://www.forbes.com/sites/judeclemente/2017/03/19/the-importance-of-u-s-oil-and-natural-gas-exports/#70b950f6b952
[5] http://www.cbc.ca/news/business/trudeau-cera-week-in-houston-1.4018708
[6] http://theses.ucalgary.ca/bitstream/11023/1583/2/ucalgary_2014_ogle_kelly.pdf
[7] For a comprehensive overview of the role and importance of Royal Commissions, see: G. Bruce Doern
[8] https://www.fraserinstitute.org/research/safety-transportation-oil-and-gas-pipelines-or-rail
[9] https://apps.neb-one.gc.ca/REGDOCS/Item/View/2967728
[10] https://keystonepipeline-xl.state.gov/documents/organization/181185.pdf
[11] http://www.energyeastpipeline.com/wp-content/uploads/2014/10/Conference-Board-Of-Canada-Report.pdf
[12] https://www.eia.gov/todayinenergy/detail.php?id=7270
[13] http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/irving-oil-studying-expansion-options-post-energy-east/article29636535/
[14] http://www.capp.ca/media/commentary/a-tale-of-two-canadas
[15] http://business.financialpost.com/news/energy/atlantic-canadian-oil-headed-to-china-for-the-first-time-amid-opec-cuts

About the Author

Kelly J. Ogle is President and CEO of the Canadian Global Affairs Institute.

Canadian Global Affairs Institute

The Canadian Global Affairs Institute focuses on the entire range of Canada's international relations in all its forms including (in partnership with the University of Calgary's School of Public Policy), trade investment and international capacity building. Successor to the Canadian Defence and Foreign Affairs Institute (CDFAI, which was established in 2001), the Institute works to inform Canadians about the importance of having a respected and influential voice in those parts of the globe where Canada has significant interests due to trade and investment, origins of Canada's population, geographic security (and especially security of North America in conjunction with the United States), social development, or the peace and freedom of allied nations. The Institute aims to demonstrate to Canadians the importance of comprehensive foreign, defence and trade policies which both express our values and represent our interests.

The Institute was created to bridge the gap between what Canadians need to know about Canadian international activities and what they do know. Historically, Canadians have tended to look abroad out of a search for markets because Canada depends heavily on foreign trade. In the modern post-Cold War world, however, global security and stability have become the bedrocks of global commerce and the free movement of people, goods and ideas across international boundaries. Canada has striven to open the world since the 1930s and was a driving factor behind the adoption of the main structures which underpin globalization such as the International Monetary Fund, the World Bank, the World Trade Organization and emerging free trade networks connecting dozens of international economies. The Canadian Global Affairs Institute recognizes Canada's contribution to a globalized world and aims to inform Canadians about Canada's role in that process and the connection between globalization and security.

In all its activities the Institute is a charitable, non-partisan, non-advocacy organization that provides a platform for a variety of viewpoints. It is supported financially by the contributions of individuals, foundations and corporations. Conclusions or opinions expressed in Institute publications and programs are those of the author(s) and do not necessarily reflect the views of Institute staff, fellows, directors, advisors or any individuals or organizations that provide financial support to the Institute.