

TransCanada's Energy East

An Export Pipeline,
NOT for Domestic Gain

TransCanada's Energy East: An Export Pipeline, Not For Domestic Gain

TransCanada's proposed Energy East pipeline is not a made-in-Canada energy solution. As this analysis shows, almost all of Energy East's crude oil would be exported. Canadian oil refineries would refine only a very small amount of Energy East's oil. The vast majority of the oil would be shipped unrefined out of Canada.

» Energy East – An Export Pipeline

TransCanada's proposed Energy East pipeline would have the capacity to carry 1.1 million barrels of crude oil a day from Alberta to Quebec and New Brunswick. The vast majority of this oil, between an estimated 750,000 to 1 million barrels, would likely be shipped unrefined to places like India, Europe and possibly, the United States.¹

TransCanada has acknowledged² that some of Energy East's oil would be exported. The rest of the oil, the company has stated, would be refined in eastern Canada to develop a stronger refining industry by increasing access to crude supplies that are less expensive than traditional overseas imports.³ However, the evidence suggests this isn't true. Publicly available information from TransCanada, as well as sources from industry, government reports and legal documents⁴ show that most of the pipeline's oil would be exported unrefined, with little benefit to Canadians.

» Energy East Will Supply Far More Crude Than Eastern Canadian Refineries Need

TransCanada has implied that Canadian refineries will process a lot of Energy East's oil.⁵ But, when we look

closely at the refineries along the pipeline's route, it's clear they don't have enough capacity to take all of Energy East's oil. Canadian refineries would be able to accept only a small amount of the crude that the Energy East pipeline would carry.

Our analysis shows refineries located along the Energy East pipeline route are able to process up to 672,000 barrels of crude a day (combined), and some of that total capacity is already being met by two other sources of oil

In 2013, TransCanada Corporation announced its intention to build the Energy East pipeline, which would carry tar sands oil from Alberta to New Brunswick. If approved, Energy East would be even bigger than the Keystone XL pipeline.

The pipeline plan includes converting 3,000 kilometres (km) of existing natural gas pipeline in Saskatchewan, Manitoba, and Ontario and building over 1,500 km of new pipeline through Quebec and New Brunswick.

The \$12 billion pipeline would have the capacity to carry 1.1 million barrels per day (bpd) of tar sands and conventional oil. Nearly all of it could be for export.

(U.S. crude and crude from Atlantic Canada), with a major third source soon to come from Enbridge’s Line 9. These three sources will likely meet most of the crude demands (and capacity) of Canadian refineries, leaving little room for Energy East’s oil.

» Eastern Canada Refineries Have Other North American Oil Supplies

TransCanada suggests eastern Canadian refineries would welcome the chance to process Energy East oil because that pipeline will increase access to crude supplies that are less expensive than traditional overseas imports.⁶ But, this logic ignores the fact eastern Canadian refineries currently operate using crude from a mixture of sources, not all of which are foreign, overseas sources.

Canadian refineries have other North American oil supplies: U.S. crude, Atlantic crude and soon, Line 9’s crude.

Table 1
Refinery Capacity on Energy East’s Path⁷

Refinery	Capacity (barrels per day)
Suncor	137,000
Valero	235,000 ⁸
Irving	300,000
Total	672,000

Table 2
Projected Crude Oil Supply on Energy East’s Path in 2020[†]

Eastern Supply Sources of Crude	Amount (barrels per day)
Enbridge’s Line 9	250,000
Atlantic Canada offshore ⁹	100,000 ¹⁰
U.S. Crude by tanker and rail ¹¹	200,000
Total	550,000

[†]The evaluation used 2020 as a reference point¹² during Energy East’s projected early years of operation, and relied primarily upon industry sources, since government data on eastern Canada crude movements is limited.¹³

“If we’re going to be an oil-exporting nation, we’re going to have to get oil exported on the water.”

—TransCanada CEO Russ Girling, on exports and Energy East³¹

» U.S. crude

Eastern Canadian refineries currently import around 200,000 barrels per day of light crude from the United States¹⁴ by tanker and by rail. These imports will likely continue as long as imported U.S. oil remains inexpensive. U.S. crude imports are so attractive for eastern Canadian refineries that prominent crude markets analysts recently projected that U.S. imports may double, exceeding 400,000 barrels per day by the end of this year.¹⁵

» Atlantic Canada offshore

Closer to home, Atlantic Canada currently produces about 200,000 barrels per day of crude from offshore operations near Newfoundland and New Brunswick.¹⁶ While some decline in production is expected, new offshore oil resources from existing and new fields are coming on stream.¹⁷ The largest of these, the Hebron field, will start producing in 2017, before Energy East is built. This will boost Atlantic offshore production to approximately 320,000 barrels per day for a few years before tapering off.¹⁸ In the future, new massive fields, like the recently discovered Bay du Nord (which may hold as much as 600 million barrels of recoverable oil)¹⁹ could potentially add to Atlantic production. Eastern refineries are being supplied in part by a stable supply of domestic crude, reducing the need for additional supplies from a new pipeline.

» Enbridge Line 9 crude

The largest portion of crude oil supplied to refineries on Energy East’s path – around 37 per cent – will soon come from Enbridge’s recently approved “Line 9B Reversal and

Line 9 Capacity Expansion Project.” This new project will send at least 250,000 barrels per day to two of the same Quebec refineries that Energy East would serve: Suncor in Montreal and Valero in Lévis.²⁰ With Quebec refineries already receiving most of their oil from Line 9, new pipeline capacity would largely bypass the province. Enbridge publically questioned the need for Energy East to supply eastern refineries with North American crude, given the approval of their Line 9 reversal project.

Combined, the Line 9 crude, US crude imports²¹, and Atlantic offshore crude will supply the lion’s share of the crude oil processed by eastern refineries, leaving little demand for oil supplied by Energy East. The refineries will already have enough oil – with little appetite or capacity for oil from Energy East.

Table 3
Calculating Energy East’s Potential for Export

	Amount (bpd)
Total combined refinery capacity (Table 1)	672,000
Total eastern supply of crude (Table 2)	550,000
Remaining capacity in eastern refineries	122,000
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Total Energy East crude	1,100,000
Remaining capacity in eastern refineries	122,000
Projected Energy East crude available for export	978,000

Only a small part of the crude to be carried by Energy East would be needed or wanted at the refineries along its path.

First, since Suncor’s Montreal refinery is counting on the Enbridge Line 9 reversal to supply most of its needs,²² only Valero’s refinery near Québec City, and Irving Oil’s refinery in Saint John, NB would seek to access Energy East’s crude. Second, publically available information shows that existing Canadian domestic crude supplies from Atlantic Canada offshore production would fill part of the need. Third, with U.S. light crude production expected to be strong for decades to come,²³ it is likely eastern Canadian refineries would continue to supply part

“[After Line 9] any other project would have to be for markets beyond Quebec.”

—Enbridge Strategic Advisor Stephen Wuori, on Line 9 leaving no room for Energy East in Quebec³²

of their needs with those sources, particularly if doing so remains economically beneficial.

With 1.1 million barrels per day heading to eastern Canada through the Energy East pipeline, and a small amount of demand among refineries along the pipeline route in eastern Canada, almost all of the crude would likely be exported.

» Refinery Capacity In Eastern Canada Unlikely To Expand

It is unlikely that the capacity of the three refineries along the pipeline’s path would be expanded, given the substantial expense²⁴ and long payback periods associated with such expansions.²⁵

While new refineries are more expensive, capacity expansions, especially those involving refinery conversion projects (such as retrofitting to be able to receive heavy in addition to light crudes) are very costly.²⁶ Ample supplies of light crude from growing U.S. and offshore production may also dissuade refiners from making costly investments aimed at converting refineries in order to process heavy crude.²⁷ The quantity and capacity of refineries in eastern Canada is unlikely to increase as a result of the Energy East proposal.

» Plans For Export Terminals At End Of Pipeline Route

TransCanada’s own infrastructure proposals further solidify Energy East’s purpose as an export pipeline.

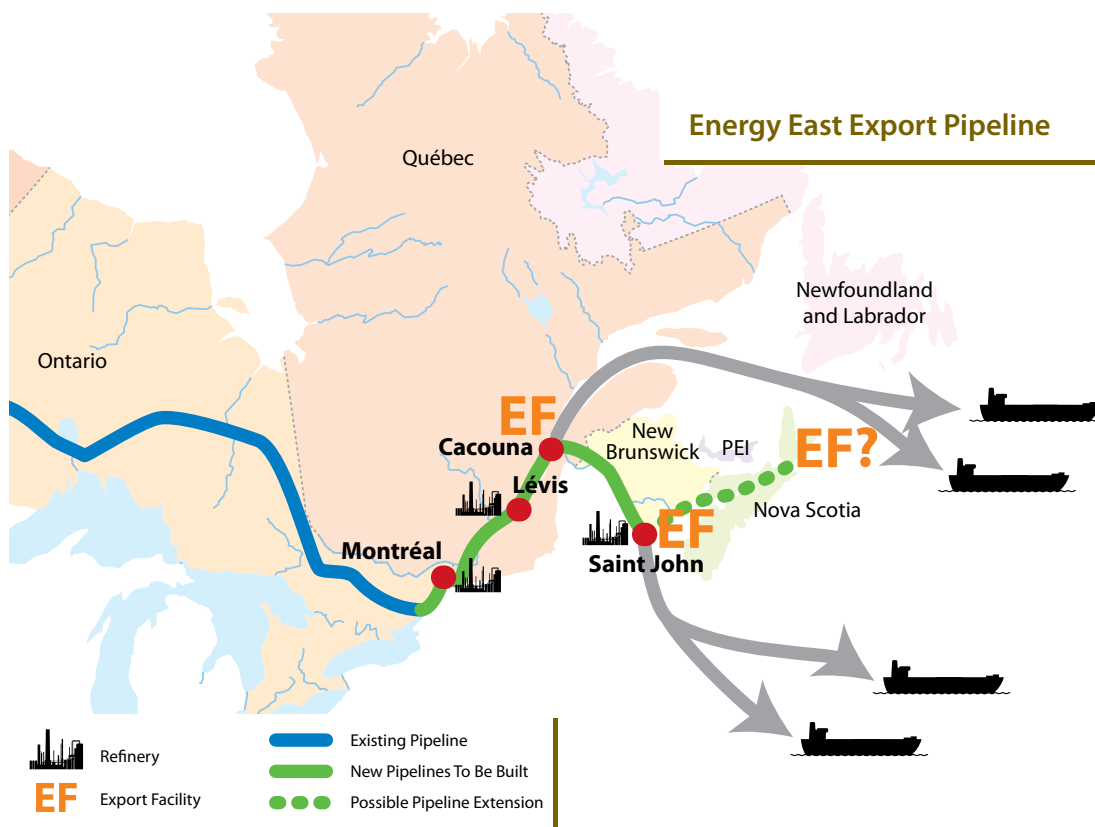
TransCanada has proposed an export terminal to be built at the port of Gros Cacouna, Quebec (about 225 km east of Québec City) and another terminal in Saint John, New

Brunswick.²⁸ (The possibility of a new export point has also been floated by a third party, which owns a large marine terminal on the Strait of Canso, in Nova Scotia.²⁹)

Of these three proposed export points, only one (Saint John, NB) is located near a refinery, underscoring how the purpose of Energy East is for exporting oil, not refining it. In fact, the company’s recently-filed project description for Energy East outlines how the project could serve tankers with a combined maximum capacity of 3.3 million barrels.³⁰

All Signs Point To Export

Energy East is primarily an export pipeline. As our analysis shows, the Energy East project would supply more oil than Canadian eastern refineries need. Their demand for North American crude can be met by other sources, including Enbridge’s Line 9, and U.S. crude. Significant amounts of Energy East’s oil will need to be refined elsewhere. And where will that be? TransCanada’s plan to build two new export terminals highlights the true purpose of this pipeline project – to export crude oil unrefined.



“It’s way more than we would ever use at this refinery, so the bulk of it would all be exported.”

Mark Sherman, Plant Manager, Irving Oil refinery (Canada’s largest refinery), on the fate of Energy East’s crude³³

» Endnotes

1. See e.g., Jeff Lewis, “TransCanada to proceed with ‘nation building’ Energy East pipeline between Alberta, New Brunswick, National Post, August 1, 2013, http://business.financialpost.com/2013/08/01/transcanada-going-ahead-with-energy-east-pipeline-between-alberta-and-new-brunswick/?_lsa=b4aa-cabf.
2. TransCanada, “TransCanada to proceed with 1.1 Million Barrel/Day Energy East Pipeline Project to Saint John,” Media Release, August 1, 2013, <http://www.energyeastpipeline.com/wp-content/uploads/2013/08/Energy-East-News-Release-2013-08-01.pdf>, and “Energy East Pipeline: Project Overview Factsheet”, http://www.energyeastpipeline.com/wp-content/uploads/2013/07/TC_Media_factsheets-E-Overview.pdf.
3. Ibid, TransCanada August 1, 2013 media release. See also Deloitte and Touche LLP, “Energy East: The economic benefits of TransCanada’s Canadian Mainline conversion project”, September 2013, page 4, <http://www.energyeastpipeline.com/wp-content/uploads/2013/09/Energy-East-Deloitte-Economic-Benefits-Report.pdf>. This report, on economic issues, was commissioned by TransCanada.
4. “Legal documents” here refers to documents filed by Enbridge and Eastern Canadian refiners in the Enbridge “Line 9B Reversal and Line 9 Capacity Expansion Project” hearing held last year before the National Energy Board, OH-002-2013, <http://www.neb-one.gc.ca/clf-nsi/rthnb/pplctnsbfrthnb/nbrdgl9brvrs1/nbrdgl9brvrs1-eng.html>.
5. TransCanada, Energy East website, “Need for a pipeline,” <http://www.energyeastpipeline.com/home/need-for-a-pipeline/>.
6. Ibid, TransCanada August 1, 2013 media release. See also Deloitte and Touche LLP, “Energy East: The economic benefits of TransCanada’s Canadian Mainline conversion project”, September 2013, page 4, <http://www.energyeastpipeline.com/wp-content/uploads/2013/09/Energy-East-Deloitte-Economic-Benefits-Report.pdf>. This report, on economic issues, was commissioned by TransCanada.
7. Deloitte and Touche LLP, “Energy East: The economic benefits of TransCanada’s Canadian Mainline conversion project”, September 2013, page 7, <http://www.energyeastpipeline.com/wp-content/uploads/2013/09/Energy-East-Deloitte-Economic-Benefits-Report.pdf>. This report, on economic issues, was commissioned by TransCanada.
8. Although it has been reported in the media that the capacity at Valero’s refinery is 265,000 bpd, evidence submitted by Valero as an intervenor in the Enbridge “Line 9B Reversal and Line 9 Capacity Expansion Project” case, states clearly that the capacity for its Québec City refinery is 235,000 bpd: IHS Global Canada Limited, “Outlook for Enbridge Line 9 Re-Reversal Impact on Quebec Refineries,” July 2013 (filed with the NEB August 6, 2013), page 13, available on NEB website, Enbridge “Line 9B Reversal and Line 9 Capacity Expansion Project” case, https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/981197/C34%2D2%2D4_%2D_Gowlings_BennettJones_IHSEvidence_2Aug2013_%2D_A3J8A7.pdf?func=doc.Fetch&nodeid=981197.
9. Atlantic Canada offshore crude is produced primarily offshore Newfoundland, with very small amounts from New Brunswick. CAPP, June 2013, page 37.
10. This note explains the 100,000 bpd supply figure for Atlantic Canada offshore crude. According to CAPP’s June 2013 forecast (see Endnote 5, above), in 2012, Atlantic Canada’s offshore crude production was 197,000 bpd, and approximately 110,000 bpd of that was refined in Canada (CAPP, Crude Oil Forecast, Markets and Transportation, June 2013, pages 2 and 10). This means that a little over half (56%) of Atlantic Canada’s crude was refined in Canada in 2012, presumably at Eastern Canadian refineries. (None of the government or publicly available industry sources we consulted mentioned where the remainder of the Atlantic Canadian offshore crude is refined). CAPP predicts that Atlantic Canada crude production will reach 247,000 bpd in 2020 (CAPP, June 2013, page 36). Assuming that in 2020, the Eastern refineries will process roughly the same proportion of Atlantic Canadian offshore crude as they did in 2012 (approximately 56%), then all other things being equal, Eastern refineries would have access to a supply of about 138,320 bpd of Atlantic offshore crude in 2020. We chose a lower figure (100,000 bpd) for our evaluation, to reflect the fact that some Atlantic Canadian crude is refined in Newfoundland, at the North Atlantic Refinery in Come by Chance. Since Statistics Canada does not segment data at the refinery level, we are not able to ascertain how much of this crude goes to Newfoundland’s refinery and how much goes to other Eastern Canadian refineries, such as Irving Oil in Saint John and Suncor in Montreal. Last fall, however, Irving Oil CEO Paul Browning told Bloomberg.com news that his company’s largest supply of oil comes from Newfoundland (Rebecca Penty, “Irving Oil boosting crude by rail capacity with Alberta loading,” November 29, 2013, <http://www.bloomberg.com/news/2013-11-29/irving-oil-boosting-crude-by-rail-capacity-with-alberta-loading.html>). Hence, our estimate of 100,000 bpd for Atlantic Canadian offshore crude supply to Eastern refineries in 2020 seems quite reasonable given the fact that the Irving Oil refinery can process up to 300,000 bpd of crude oil.
11. See e.g., Jeff Lewis, “The Hub: Saint John end point of ‘Energy East’ readies for crude revolution,” National Post, November 9, 2013, http://business.financialpost.com/2013/11/09/the-pipeline-that-could-turn-canadas-oil-diet-on-its-head/?_lsa=b4aa-cabf. One analyst explains, “Canadian refiners are taking advantage of cheap US imports to improve their processing margins.” Michael Fitzsimmons, “U.S. Crude Export Ban Benefiting This Canadian Offshore Oil Producer,” SeekingAlpha, December 10, 2013, <http://seekingalpha.com/article/1889761-u-s-crude-export-ban-benefiting-this-canadian-offshore-oil-producer>. Also, “U.S. producers could discount their crude to keep market share in Eastern Canada once western Canadian oil becomes available...” Dave Cooper, “Eastern Canada only option for U.S. crude exports,” Edmonton Journal December 27, 2013, <http://www.edmontonjournal.com/business/Eastern+Canada+only+option+crude+exports/9328143/story.html/>. While some deliveries of US crude to Eastern Canadian refineries by rail and tanker are happening as interim measures until west-to-east pipelines are built, some companies appear to be thinking about US imports over the longer term. For example, Valero spokesman Bill Day, speaking about the supply picture in Eastern Canada after the Enbridge Line 9 reversal is complete, said: “We won’t be importing any more crude from overseas, unless you consider Texas overseas,” Jeff Lewis, “What export ban? How Suncor is taking advantage of cheap prices to bring in crude from the U.S.,” National Post, February 4, 2014, http://business.financialpost.com/2014/02/04/what-export-ban-how-suncor-is-taking-advantage-of-cheap-prices-to-bring-in-crude-from-u-s/?_lsa=b4aa-cabf.
12. In general, the present evaluation did not attempt to look past 2020, and in choosing this approach, the groups wish to point out that these days, long-term predictions about petroleum are risky. As U.S. Energy Information Administrator Adam Sieminski said recently, alluding to the huge light oil boom in the U.S.: “Five or 10 years ago, everybody thought that U.S. oil production would just go down.” (James Stafford, “Could the U.S. become a net oil exporter? Not likely, says EIA Oil Chief,” Oilprice.com, February 21, 2014, http://business.financialpost.com/2014/02/21/could-the-u-s-become-a-net-oil-exporter-not-likely-says-eia-chief/?_lsa=b4aa-cabf). Perhaps it is in part due to these realities that the “Crude Oil Markets” chapter in CAPP’s “Crude Oil Forecast, Markets and Transportation, June 2013 report limits itself mainly to a 2020 timeframe. See Canadian Association of Petroleum Producers (CAPP), “Crude Oil Forecast, Markets and Transportation, June 2013,” (June 5, 2013), pages 9-19, <http://www.capp.ca/getdoc.aspx?DocId=227308>.
13. As the NEB notes in describing the statistical monthly series (45-004) from Statistics Canada on the supply and disposition of crude oil, from April 2013 onwards, information on crude oil imports for Atlantic Canada, Ontario and Quebec has been “suppressed to meet the confidentiality requirements of the Statistics Act.” See NEB, “Crude oil disposition, imports and price report,” <http://www.neb-one.gc.ca/clf-nsi/rnrgvfmtn/sttstc/crdlndprlmpredct/crdldspstnmprtrndprcrprt-eng.html>.
14. Dave Cooper, “Eastern Canada only option for U.S. crude exports,” Edmonton Journal December 27, 2013, <http://www.edmontonjournal.com/business/Eastern+Canada+only+option+crude+exports/9328143/story.html>. See also U.S. Energy Information Administration, data for Nov. 2013, Exports by destination, monthly, thousand barrels per day, http://www.eia.gov/dnav/pet/pet_move_exp_e_epec0_eex_mbbldpd_m.htm.

15. Platts, "US Crude export restrictions need to be lifted to avoid oil glut: analysts," February 10, 2014, <http://www.platts.com/latest-news/oil/washington/us-crude-export-restrictions-need-to-be-lifted-21198527>. The comments were provided by "several prominent analysts" during a panel discussion hosted by the Center for Strategic and International Studies.
16. Canadian Association of Petroleum Producers (CAPP), "Crude Oil Forecast, Markets and Transportation, June 2013" (June 5, 2013), page ii and 2, <http://www.capp.ca/getdoc.aspx?DocId=227308>. Some recent estimates of recent offshore production are even higher: "According to the Canada-Newfoundland and Labrador Offshore Petroleum Board (the C-NLOBP), offshore production in the province is roughly 280,000 barrels of oil per day – or about 40% of Canada's light crude production." Susan R. Eaton, "A mammoth offshore oil discovery turns the tide for Newfoundland's energy ambitions," Alberta Oil Magazine, January 23, 2014, <http://www.albertaoilmagazine.com/2014/01/light-crude-discovery-newfoundland/>.
17. See e.g., Susan R. Eaton, "A mammoth offshore oil discovery turns the tide for Newfoundland's energy ambitions," Alberta Oil Magazine, January 23, 2014, <http://www.albertaoilmagazine.com/2014/01/light-crude-discovery-newfoundland/>.
18. Ibid.
19. Ibid. See also Ashley Fitzpatrick, "Statoil prioritizes Newfoundland prospects," The Telegram, February 7, 2014, <http://www.thetelegram.com/News/Local/2014-02-07/article-3606980/UPDATE%3A-Statoil-prioritizes-Newfoundland-prospects/1>.
20. Enbridge Inc., in a document filed as evidence in the "Line 9B Reversal and Line 9 Capacity Expansion Project" case, indicated that the proposed throughput of Line 9B to Montreal would consist of 250,000 bpd of the total 300,000 bpd increased capacity of Line 9 (with the remaining 50,000 bpd reserved for Ontario): Demke Management Limited, "An Evaluation of the Economic Impacts on Canada of the Enbridge 'Line 9B Reversal and Line 9 Capacity Expansion Project,'" August 30, 2012, filed with the NEB on June 25, 2013 as Exhibit B18-41 (Attachment 1 to Enbridge Pipeline Inc.'s response to Stratégies Énergétiques IR 1.4.a), page 6, available on NEB website, Enbridge Line 9 Reversal and Capacity Expansion Project case, https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/965026/B18%2D41_%2D_Attachment_1_to_Strategies_Energetiques_IR_1%2E4.a_%2D_A316T6.pdf?func=doc.Fetch&nodeid=965026&vernum=1.
21. The U.S. light crude imported to Eastern Canadian refineries can function to reduce the amount of crude sought by these refineries. Thus, if the current practice of importing U.S. light crude continues or increases, then less crude might be sought from Energy East if factors such as supply and transportation costs (pipeline versus tanker) continue to make such imports attractive to refiners. Transportation by oil tanker can be much less expensive per barrel than transportation by pipeline over long distances such as those involved in the Energy East project: Canadian Fuels Association, "The Economics of Petroleum Refining," December 18, 2013, page 11, <http://canadianfuels.ca/userfiles/file/Economics%20fundamentals%20of%20Refining%20Dec18-2013-Final%20ENG-L.pdf>.
22. Suncor Energy Marketing Inc. has "entered into a long-term contract to ship crude oil by means of the project": "Evidence of Suncor Energy Marketing Inc.," August 6, 2013, page 1, https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/981204/C32%2D2%2D2_%2D_SEMI_Evidence%2DEnglish_A3J8C0.pdf?func=doc.Fetch&nodeid=981204.
23. U.S. Energy Information Administration, "Annual Energy Outlook 2014 Early Release Overview," December 16, 2013, page 13, [http://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2014\).pdf](http://www.eia.gov/forecasts/aeo/er/pdf/0383er(2014).pdf); U.S. Energy Information Administration, "Outlook for U.S. shale oil and gas," Presentation by Adam Sieminski, EIA Administrator, North American Oil and Gas Infrastructure Working Group, Center for Strategic & International Studies Energy Program, February 18, 2014, Washington, DC, page 8, http://csis.org/files/attachments/140218_Sieminski.pdf.
24. One recent refinery expansion in Regina, SK (the Consumers Co-op refinery) cost \$2.7 billion. Canadian Fuels Association, "The Economics of Petroleum Refining," December 2013, page 3, <http://canadianfuels.ca/userfiles/file/Economics%20fundamentals%20of%20Refining%20Dec18-2013-Final%20ENG-L.pdf>.
25. On refinery capacity expansions, the Canadian Fuels Association states: "The stakes are high, with a payback period that is 20 to 30 years long, or more." Ibid, page 15.
26. IHS CERA, "Extracting economic value from the Canadian oil sands: upgrading and refining in Alberta (or not)?" March 2013, page 3, www.ihs.com/pdfs/ihs-cera-upgrading-refining-mar-2013.pdf. While this report deals with Alberta, the observations referenced here may hold true for other areas of Canada as well, since the excerpt in question referred to market conditions in "North America".
27. Ibid.
28. TransCanada, Energy East website, "Marine Terminals", <http://www.energyeastpipeline.com/wp-content/uploads/2013/09/Energy-East-Marine-Terminals1.pdf> and "Route Map" <http://www.energyeastpipeline.com/home/route-map/>. See also, Marc Larouche, "Terminal maritime: TransCanada choisit Cacouna," LeSoleil, November 12, 2013, <http://www.lapresse.ca/le-soleil/actualites/transports/2013/11/12/01-4709836-terminal-maritime-transcanada-choisit-cacouna.php>.
29. Brent Bundale, "NuStar touts pipe to C.B." Chronicle Herald, February 12, 2014, <http://thechronicleherald.ca/business/1186664-nustar-touts-pipe-to-cb>; Sanford Nowlin, "NuStar asking TransCanada to extend Canadian pipeline to its storage operations," February 13, 2014, San Antonio Business Journal, <http://www.bizjournals.com/sanantonio/blog/2014/02/nustar-asking-transcanada-to-extend-canadian.html>; Platts, "Nova Scotia wants Canadian oil pipeline extension terminus: minister," February 17, 2014, <http://www.platts.com/latest-news/oil/calgary/nova-scotia-wants-canadian-oil-pipeline-extension-26723613>.
30. TransCanada, "Energy East Pipeline Project, Project Description, Volume 1, March 2014, page 2-31, https://docs.neb-one.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/2432218/2432401/2428790/Volume_1_Energy_East_Project_Description_ENGLISH_4-Mar-14_-_A3V052.pdf?nodeid=2428599&vernum=2.
31. Kelly Cryderman, "Keystone criticism misplaced, TransCanada insists," The Globe and Mail, April 22, 2013, <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/keystone-criticism-misplaced-transcanada-ceo-insists/article11446046/>.
32. Shawn McCarthy, "Enbridge balks at claims Energy East pipeline boon for Quebec refineries," The Globe and Mail, March 5, 2014, <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/enbridge-balks-at-claims-energy-east-pipeline-boon-for-quebec-refineries/article17311999/>.
33. Jeff Lewis, "The Hub: Saint John end point of 'Energy East' readies for crude revolution," National Post, November 9, 2013 http://business.financialpost.com/2013/11/09/the-pipeline-that-could-turn-canadas-oil-diet-on-its-head/?_lsa=6b4b-c778.

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