



Day 7 - September 18, 2012 - Edmonton

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Order of Appearances

Northern Gateway Pipelines Inc. (NGP) - Panel 1

- Mr. John Carruthers [[B90-17 CV](#)]
- Mr. Paul Fisher [[B90-22 CV](#)]
- Mr. Neil Earnest [[B90-20 CV](#)]
- Dr. Robert Mansell [[B91-5 CV](#)]
- Mr. Roland Priddle [[B91-12 CV](#)]
- Dr. Jack Ruitenbeek [[B91-15 CV](#)]
- Mr. Mark Anielski [[B90-7 CV](#)]

Features for enhanced use:

- Links to reference documents provided throughout the notes
- Frequent paragraph numbers to the relevant text or discussion in the transcript

- Examination by Ms. Boye (continued) 21849

Examination by Hana Boye for the Haisla Nation (continued) 21849

Ms. Boye had Mr. Earnest confirm the statement in the application that over ten years after startup, sweet synthetic crude prices would rise to an average of \$2.04 per barrel more than if the project were not to proceed and Athabaskan dilbit prices would increase on average by \$3.00 per barrel. Mr. Earnest clarified that this is a benefit to the Canadian oil industry; it is not a net Canadian benefit nor a net producer benefit.

Referring to [Muse Stancil 2012](#), she had Mr. Earnest explain that "...the calculation of the gross benefit [Table 3] is performed by multiplying the change in Canadian crude prices (by grade) [Table A-17] by the corresponding volume of the various Canadian crude grades [Table A-1]. Appendix Table A-18 provides the details "

Calendar Day vs Stream Day

In trying to understand what is meant by "calendar day", Ms. Boye's questions elicit the information that the 525,000 bpd average capacity of the oil pipeline is made up of "stream days" days when the pipeline could be operating at its "design capacity" of 583,000 bpd and stream days when the pipeline is operating at less than its average capacity, such as during maintenance. Also, the pipeline could not be expected to operate at 583,000 bpd on an annual basis. 21904

Supply Forecasts

Ms Boye explored matters related to supply forecasts, starting with the statement in Muse Stancil that "The June 2011 CAPP forecast is the basis for the Western Canadian crude supply projection, with an extension from 2026 to 2035 generated by Enbridge." The NEB also provides a supply forecast, and the two are compared in Muse Stancil. Ms. Boye observed that, "they track quite similar up to year 2018, and after that the difference increases." Mr. Roth referred to [B31-2](#) and [B31-3](#) which explain and provide the Enbridge supply forecast extension from 2026-2035 which was created at the request of the Panel. Dr. Mansell affirmed that his report took the Muse Stancil net revenue uplift figures and extended the 2035 value out to 2048. 21960

Having established this, Ms. Boye brought up two Enbridge investor presentations from 2011 which compare CAPP supply forecasts with Enbridge forecasts. She cites from one that CAPP forecasts a 5.2% growth rate for the Western Canadian Basin to 2020 compared to Enbridge's 4.4% forecast. 22016

Mr. Roth for Enbridge, and Chairperson Leggett both get involved at this point. Ms. Boye is instructed to get to her question, which is, "Have you given a different supply forecast to your shareholders and investors than the forecast provided to the Panel in these hearings?" 22133

Mr. Carruthers explained that they regularly create and update forecasts, they change with time, and differences between them are to be expected. The Western Canadian Basin has "a lot of production potential," all the forecasts consistently show that, and they "don't predicate the project on the basis of any one year's supply."

Ms. Boye asked Mr. Earnest "If 500,000 barrels per day less were available than your model predicted would that lower your price lifts?" He replied that it depends on the composition of the supply. The correlation between volume and revenues would have to be factored with the higher impact on the uplift from heavier grades. By 2020, "substantially all the volume being transported down Northern Gateway is a heavy grade." 22166

Calculating netbacks

Starting with the statement in Muse-Stancil that “The netback price is the price that a specific grade of crude is sold for at its market-clearing point, less the transportation cost between Edmonton and the market-clearing point,” Ms. Boye’s questions attempted to obtain an understanding of the concept of the netback price, the methods Mr. Earnest used to calculate it, whether shipping costs are included and why NGP tolling costs are subtracted to “make the derivation of the [Canadian] benefit fully transparent.”. It is not apparent that Ms. Boye obtained the information or the clarity she was seeking. 22212

Tolling

In the application, Northern Gateway estimates the 2016 average term shipper to be \$3.21 per barrel on the oil pipeline and \$4.88 per barrel on the condensate pipeline. Mr. Earnest explained that this is a nominal toll, made up of committed and spot tolls. Mr. Fisher said the addition of \$500 million in capital costs associated with marine activity which would increase the toll.

NGP Response to JRP IR No. 2.8 (a.1) states that “an increase in ROE...from 11% to 12% and the funding of Aboriginal Participation, ... have increased the tolls from \$3.21/bbl to \$3.68/bbl for crude and from \$4.88/bbl to \$5.23/bbl for condensate.” 22288

Condensate line

Ms. Boye confirmed with Dr. Mansell that in the 2012 Wright Mansell report, the amount of \$24,932,000,000 in pipeline revenues includes both committed and uncommitted tolls, for both the oil and the condensate pipelines.

She next asked Mr. Earnest whether he was “instructed not to include an analysis of condensates“ in his work. He replied that he wouldn’t say he was instructed. “I wasn’t asked to quantify the benefits of the condensate pipeline so I didn’t.”

Mr. Fisher reminded Ms. Boye that there are two applications – one for the oil pipeline, and one for the condensate pipeline. In answer to other questions from Ms. Boye, Mr. Earnest explained that there are a number of oils with which bitumen can be diluted, and that the condensates which may be shipped on NGP may or may not be used to dilute bitumen for the oil pipeline.

Drawing on a 2009 report from CAPP as an aid to questioning, Ms. Boye provided the information that prior to 2008 Canada was self-sufficient in diluent but as of the CAPP report, there was a requirement to import condensates in order to meet the growing needs of bitumen production.

Ms. Boye’s questions confirmed that Enbridge’s Southern Lights/Line 13 diluent import line has a capacity of 180,000 bpd, with a potential of 300,000 with additional pumping, and NGP at 193,000 means Enbridge could own 493,000 bpd of diluent capacity. More, if rail or even trucking is added. 22328

Turing again to Dr. Mansell, Ms Boye asked, “In just your input or input model, did you project the demand for condensates imports as part of your impact analysis?” He replied, “We do not include any impacts associated with the flows.” Repeating from earlier questions, he said that they are assuming that the imports would come from offshore as opposed to the Southern States, for example. “So it's really just a substitution.” It has no impact on the Canadian economy; “We're importing more from country X and less from country Y.” 22431

Ms. Boye established with Mr. Earnest that dilbit is generally a 30:70 mix of condensate and bitumen. If we produce three barrels of bitumen and three of upgraded light crude, total production is six barrels. If instead we use imported diluent, we would start with three barrels of bitumen and end up with 3.3 barrels of dilbit [according to Mr. Earnest, but not according to the arithmetic. It should be four barrels of dilbit.]

Mr. Earnest explained why in his view the supply outlook is exactly the same with and without NGP. “The effect of Northern Gateway has nothing to do with the cost of condensate, or ... how the Canadian crude producers are blending up their heavy crude with lighter hydrocarbons.” 22440

Dilbit blend recipes & the cost of diluent

Mr. Earnest was asked to identify various dilbit blends and the percentage of condensate. Working from memory, he replied: Western Canadian Select, 12%; Cold Lake Blend, 24% or 26%; Athabasca synbit, 50/50; Athabasca dilbit, 28%. 22472

She asked Mr. Carruthers, “For the grades that use condensate, the relative cost of condensate would be important for the value of dilbit; is that correct?” He replied, :”It is not, counsel.” He further explained that this does not mean that the producer is not sensitive to the cost of diluent, but his model doesn’t care.

Natural capital and ecosystem goods and services

Mark Anielski prepared “Evaluation of Natural Capital and Ecological Goods and Services at Risk Associated with the Proposed Enbridge Northern Gateway Pipeline” [B83-6]. In reply to questions by Ms. Boye, he stated that the scope of his assessment, which he calls the Project Development Area, or PDA, is 7,706 ha, plus another 254 ha of wetland at the terminal. The PDA is primarily pipeline right-of-way, and does not include the terminal or any marine area. The total is just under 8,000 ha, whereas the application gives the PDA at 8,276 ha.

Ms. Boye asked why Mr. Anielski did not include those extra spaces, “according to evidence provided to me by Enbridge, we were told that the impact on those areas ecologically would not be material.”22549

Limiting the assessment area?

In its application (B3-4) Northern Gateway sets out its assessment methodology. Ms. Boye said, “There is no category of effects that are anticipated to occur only in the PDA. Mr. Anielski, is limiting your assessment to impacts on vegetation to within the PDA inconsistent with the effects identified by Northern Gateway's application?” Mr. Anielski said it is not, because “My analysis is based on land area impacted directly by the pipeline construction and operations, not the cumulative impact...” “Counsel, this is a prudent analysis. There is no reason for me as a professional ecological economist to assume that the effects extend beyond the PDA area.” 22618

Obfuscation?

Ms. Boye asked about an assessment Mr. Anielski had done in the Mackenzie region where the assessment area included a 500 metre buffer on each side. His response included phrases such as this: “In the study we assess the potential ecological implications of linear disturbance in terms of trying to come up with a proxy for changes in ecological integrity. We were unable to get a strong or a solid number with respect to ecological integrity. Therefore, we're unable to assess the marginal cost of ecological services when monetized. So this study does not -- does not apply to the Enbridge Gateway pipeline analysis.” 22635

Ms. Boye: “Are you saying that there were no impacts within that 500-metre buffer?” Mr. Anielski: “I could spend a whole day -- I teach this stuff “ 22641

“In the Enbridge pipeline, my analysis is based on assuming that the value per hectare ecological services is 100 percent lost, not 50 percent as we did in the [Mackenzie] study.”

Economic rigour

Ms. Boye asked, “Are you recognizing though that there could be soil disturbances or other disturbances that exist one centimetre or one foot outside of the PDA?” Mr. Anielski replied: “Absolutely. But without evidence, material evidence given to me on these potential impacts, I have no basis for calculating it.” 22655

Asked by Mr. Boye, Mr. Anielski and Dr. Ruitenbeek both offer some thoughts regarding what constitutes a prudent analysis. Discussion on this issue will continue in Prince George and Prince Rupert.

50% Restoration

“According to the application, 50% of the land initially cleared for construction (the Pipelined Development Area (PDA) of 7,708 hectares) will ultimately be remediated after construction is completed and restored to a relatively healthy ecosystem. ... You project that after 15 years, 3,854 hectares will have been restored so that no ecosystem service is lost -- ecosystem loss is experienced. Is that correct, ” Ms Boye asked. Mr. Anielski replied, “Yes. Correctly stated, it means that the ecological services that were damaged are returned to their ecological integrity” 22685

Salmon

Ms. Boye said, “You inadvertently overlooked the fact that salmon habitat would be affected by the project.” Mr. Anielski replied in the negative, Dr. Ruitenbeek elaborated, and Mr. Carruthers suggested bringing this up in Prince George. 22707

The pipeline will cross 773 watercourses, 669 of which are fish-bearing. Wouldn't those be within the PDA?”, asked Ms. Boye. Mr. Anielski replied, Yes, but the areas would be categorized as wetlands. “I'm working with land categories that were given to me ... by Enbridge. If I'd received salmon habitat as a class I would have analyzed that area. If I was given rivers and stream area I would have evaluated that area.

Ms. Boye asked questions about a number of ecosystem types, including wetlands and forests. She encountered blank cells in Mr. Anielski's table of ecosystem services, and he reiterated what he said earlier, that blank cells represent the absence of information, of knowledge, and are not to be read to mean a valuation of zero. 22774

Lost and unaccounted ecosystem goods and services

Ms. Boye asked about various costs associated with the loss or impacts to ecological goods and services that have not been accounted for, and for which NGP will not be required to mitigate. So these costs will not be borne by NGP, is that correct? Mr. Anielski: “That's correct.” 22777

Valuation of various waters or habitats

Dr. Ruitenbeek said, “When I say that “Shorelines in Newfoundland are as important to Canadians as the shores of British Columbia, it is an assumption within the cost benefit analysis.” Ms. Boye asked, “Does your cost benefit analysis take into account the value of these locations to Aboriginal populations that rely on marine environments for native food?” Dr. Ruitenbeek's information is lengthy and not easily summarized. “Those cultural values are ... rolled into the overall average values which are being used in our analysis. So I wouldn't say that they did not include the inherent values. Those values to the extent that they have been included in, for example, Mr. Anielski's cultural values are already to some degree in there to the best available information.”

Ms. Boye: But that best available information does not include the Haisla Nation's perception of the cultural values of their land and resources? Dr. Ruitenbeek: “That's correct.” 22796

Condensate pipeline

Dr. Mansell reiterated, “We were not requested to do an independent study of condensate markets.” Questioning apparent condensate supply inconsistencies in NGP evidence, Ms. Boye asked, “How can we be assured that there will be sufficient supply of condensates to fill the Northern Gateway condensate pipeline?” Mr. Carruthers said it comes down to

shippers themselves ensuring the supply is available before they sign on as shippers – because they have to pay to use the pipeline regardless whether they use it or not.

NGP has also said, “The decision to proceed to construct each pipeline will be made independently.” Ms. Boye posits an example of the condensate line proceeding, and the oil pipeline delayed or not approved. 22844

Ms. Boye reviewed some condensate supply information, including CAPP 2009 which envisions constraints: “Western Canadian condensate production plus rail imports is not sufficient to blend with expected bitumen production and, therefore, some producers will blend their bitumen with upgraded light crude to meet pipeline specifications.”, and CAPP 2011, “This latest forecast is not constrained by the availability of condensate imports as new sources of condensate are assumed to be available to meet market requirements.”

Crude forecasts

Ms. Boye examined crude forecasts, attempting to understand discrepancies or inconsistencies where they appear, such as a counterintuitive 8.4% drop between CAPP in 2015 and and Muse Stancil in 2018. Mr. Earnest suggests it may be because CAPP surveys refiners, and does some analytical and statistical work to arrive at forecasts. At the end of the day, Mr. Earnest stated that this was a misreading of the CAPP material, and in fact, the comparative numbers were very close.
22973

Ms. Boye reviewed the decisions made by Muse Stancil to include or not include other pipelines in the analysis. This topic was been covered earlier in questioning by Mr. Robinson for the Coalition, and no significant new information emerged. 23017

Ms. Boye asked a question assuming that NGP would “siphon crude” from other pipelines. Dr. Mansell stated that new capacity comes on stream when it is needed, thereby ensuring that all pipelines remain highly utilized. 23073