



**Day 16 - September 28, 2012 - Edmonton**

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- Links to specific topics and discussions

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**Order of Appearances**

**Coastal First Nations**

Dr. Tom Gunton [[D35-32-2 CV](#) (replaced by D35-34)]

- Examination by Ms. Gaertner 3630

**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 Mr. Neufeld 3773
- Examination by Ms. Hales 4428
- Examination by Member Matthews 4502
- Examination by Member Bateman 4523
- Examination by the Chairperson 4552
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## **Introduction of Coastal First Nations Panel by Brenda Gaertner 3630**

Ms. Gaertner introduced Dr. Tom Gunton.

Dr. Tom Gunton, Professor & Director of the Resource and Environmental Planning Program at Simon Fraser University, PhD Planning from UBC, [[D35-32-2 CV](#) (replaced by D35-34)] [[D35-14-2 Public Interest Report](#)] [[D35-14-4 Impacts to Coastal First Nations Review](#)] [[D35-21-1 IR Reply](#)]

The Panel accepted Dr. Gunton as an expert witness qualified to provide evidence in relation to the analysis of oil and energy markets and the costs and benefits of project development.

## **Examination by Richard Neufeld for Northern Gateway Pipelines 3773**

Mr. Neufeld questioned when Dr. Gunton served as an expert witness in a NEB proceeding and discovered that it was in the 1980s.

He then reiterated the purpose of the public interest report ([D35-14-2](#)) which was to assess whether the project meets the criteria for project approval for pipelines as set out in the National Energy Board Act specifically with respect to the need and the public interest.

### **Dr. Gunton's supply/demand balance assessment**

Quoting the report that a detailed examination is required of the supply/demand balance for pipelines to assess the need for new capacity, Mr. Neufeld asked Dr. Gunton if the Panel had asked for such an assessment in its IR, and noted that Dr. Gunton had “taken a stab at it.” Dr. Gunton was not aware of such a request by the Panel. 3808

Mr. Neufeld questioned where in the pipeline capacity reports prepared by ENSYS for US Dept of Energy a specific quote could be found. This led to a lengthy but unresolved discussion about pipelines and capacities and the ENSYS reports. Dr. Gunton quotes from one of the ENSYS reports that expansion of existing pipelines and especially evolution of the “Tier 3” transportation options of rail, barge and tankers “could deliver capacity much above” two million barrels per day. ENSYS is very positive about the potential of rail to meet demand for capacity up to 2030. 3871

## **Risk of overbuilding pipeline capacity**

Dr. Gunton explained his concern that the Board must be careful not to permit excessive capacity to be built. “Both the ENSYS report and my own analysis suggest that there is a number of very large pipeline projects that are on the horizon that if you add all of these up, we may end getting significant overcapacity and overhang in the market. And every year or every day that capacity is underutilized, there is a cost on the entire system. So I’m saying that is something that has to be taken into account. The Board has to be very cognizant of that. That’s why the Board exists, to try to ensure that surplus capacity is not created.” 3929

“We call that a pre-emptive strike in these industries where pipeline companies will go in and start trying to build to beat out their competitor. We see that between Kinder Morgan and Enbridge, the competition for West Coast option.” 3934

## **Those receiving the benefits are not the ones who pay the costs**

Mr. Neufeld’s next topic was the first of two options presented by Dr. Gunton related to a surplus capacity issue. The first option is approving NGP as planned, and the capacity is surplus to demand. Dr. Gunton stated that this surplus capacity will impose costs to the entire WCSB transportation system. He argued that, “the problem is that the people who are receiving the benefits, to the extent that there are benefits . . . , are not the ones who will pay the costs. . . . It’s a classic case of an economic environment of an externality where the costs will be imposed on other parties.” 3946

He continued, “A large proportion of those costs will also be borne by the public in terms of reduced tax payments because when you reduce the profits, the returns of the industry, public will end up receiving lower tax revenue.” 3951

Mr. Neufeld asked if Dr. Gunton had calculated the cost of shutting in production if there is insufficient capacity. Dr. Gunton replied that he did not estimate it, because in all the information he reviewed, he did not see shut-in as occurring. 3965

## **Supply, demand, equilibrating markets, & assumptions in Wood Mackenzie & Muse Stancil**

Mr. Neufeld asked if Dr. Gunton had performed a quantitative analysis of the impact on prices of shifting 500,000 bpd from North America to offshore markets. Dr. Gunton’s answer is lengthy, and instructive. 3974

Dr. Gunton said he had read the materials submitted by the Government of Alberta and Muse Stancil and concluded that there were a number of deficiencies, and that the assumptions they had made essentially drove the results. Starting with the virtual consensus, even at this hearing, that the world is one large integrated oil market, and that prices equilibrate the distribution of supply, Dr. Gunton said these studies started off assuming that there would be no change in supply or demand. Consequently, over time, you should not get a change in prices. These models assumed no market responses to

shifting oil from one market to another – in the case of Muse Stancil - until 2035. No change in refineries until 2048. No change in transportation facilities other than what was announced until 2048. No change in other suppliers' destinations. "If you take those assumptions away and allow the market to operate over time, the market will equilibrate and will remove those differentials." 3977

### **Strong reservations about forecasting +/- 2% over a long period**

"The other thing that concerns me ... they're trying to forecast a plus or minus 2 percent difference in price out over a long period of time." If somebody is forecasting a difference of plus or minus 2 percent over a long period of time, "you should have strong reservations about that forecast to be able to forecast with that degree of accuracy." 3983

"So what I'm concluding is that the evidence is not persuasive to me and that it would be imprudent to make a decision on the basis of those price forecasts." 3984

### **How much confidence can you have in Muse Stancil?**

Dr. Gunton pointed to the fact that Muse Stancil did not pick up on the supply glut in Cushing, and the huge disparity that occurred, ... \$18 disparity between WTI and Brent. "If two years out, it missed a price shift of that magnitude, how much confidence can you have in a price forecast of \$1.50 or \$2.00 difference in a barrel, particularly when there's no change in supply or demand out over 20, 30 years? 3991

### **Muse Stancil and Wright Mansell in conflict**

"The Muse Stancil report forecasts no change in supply or demand and states that very clearly. Then the Wright Mansell report forecasts a significant increase in what I could call induced production as a result of the forecast price uplift. This is significant. It's about 50,000 incremental barrels per day each year over the forecast period. And they use that to argue that the price lift will stimulate this induced production." 4005

"There is no attempt by Muse Stancil to estimate the consequences of that increased supply forecast by Wright Mansell on prices. That's another deficiency with the way the pricing was done. You get a significant increase in supply resulting from Northern Gateway and then it's ... just assumed away. You do have to take that into account and, if the analyses are consistent, Muse Stancil would have to conclude that that increased supply that's induced by the price uplift would ... begin to erode very quickly the entire price uplift by pushing extra supply into the market." 4006

### **Defer the application**

Dr. Gunton's report says there are two options for the Panel with the NGP oil pipeline application. One is approval, in case it's needed. The other is deferred approval, "and only consider the the application if and when there is a much higher likelihood of sufficient demand to justify its construction." 4057

## Benefit cost analysis: no benefits until 2022

Dr. Gunton confirmed that he assumed no benefits associated with NGP until 2022.

Mr. Neufeld turned to Dr. Gunton’s “Review of Potential Impacts to Coastal First Nations from an Oil Tanker Spill Associated with the Northern Gateway Project” ([D35-14-4](#)). The report had three main objectives: 1. to identify economic activities of the Coastal First Nations, including non-market traditional and subsistence activities; 2. to evaluate environmental impacts of an oil spill and assess potential impacts of a spill on CFN commercial and traditional activities, 3. to examine the consequences of approving the project prior to completion of the PNCIMA planning process. 4102

## Map of Coastal First Nations Communities

Dr. Gunton said that the Coastal First Nations territories and the PNCIMA (Pacific North Coast Integrated Management Area.) boundaries are approximately the same, approximately 88,000 square kilometres.

Figure 1: Map of Coastal First Nation Communities



## Marine dependent values in CFN traditional territories

Mr. Neufeld asked about Table ES1 entitled, “Summary of Marine-Dependent Activities in CFN Traditional Territories” and asked what were the sources for the values used there. Dr. Gunton replied that they came from a number of different sources. The Weiker report was one of them. Statistics Canada, B.C. Statistics, a report by Gillison and a report by Pinford. 4111

Their exchange about the values in the table begins at paragraph 4134

Mr. Neufeld noted that the annual economic value is given as \$386 million. Dr. Gunton commented that this is just the marine-dependent activity, so it doesn’t include the economic value of the region. Mr. Neufeld confirmed that the non-use values show quite wide ranges – ranging from \$67 million to over \$1 billion - and that is because they are a function of the different ways people go about evaluating or assessing non-use value. The Non-market Use value called “Ecosystem value” is given as \$28 billion a year.

Dr. Gunton was candid about some of the values. He said that the purpose was to say there’s something called ecological services, they are usually ignored, are very difficult to estimate, and what is given here gives only a general order of magnitude answer to the questions, “Are ecological service values important? Are they significant? Should they be taken into account? And the answer is absolutely yes. 4149

**Table ES-1: Summary of Marine Dependent Activities in CFN Traditional Territories**

<b>Total Economic Value Component</b>		<b>Economic Value</b> (annual value in millions of 2010 CAD)	<b>Total Employment</b>
<b>Use Value</b>	<b>Market Use Value</b>		
	<b>Current Economic Activities</b>		
	Commercial Fishing	\$134.9	1,310
	Seafood Processing	\$88.1	2,470
	Aquaculture	\$18.2	180
	Marine Tourism	\$104.3	2,200
	Marine Transportation	\$18.6	800
	Other	\$22.4	660
	<b>Subtotal</b>	<b>\$386.5</b>	<b>7,620</b>
	<b>Non-Market Use Value</b>		
FSC Salmon Harvests	\$0.7	n/a	
Ecosystem Services*	\$28,484.7	n/a	
<b>Non-Use Value</b>	<b>PNCIMA Marine Environment</b>	\$67.1 - \$1,031.9	n/a
<b>Total</b>		<b>\$ 28,938.9 - 29,903.7</b>	<b>7,620</b>

\*The value of ecosystem services is very challenging to measure and this value should be interpreted as a very rough order of magnitude of the actual value. Some values cannot be monetized and other values are difficult to measure due to data limitations. Therefore, actual values may be higher or lower than estimated values. As documented in the report, the estimates for market use values, FSC salmon harvests, and non-use values are conservative and actual values are higher.

Turning to the heading “Non-use Value” in the report, Mr. Neufeld quoted, “Non-use values reflect the amount people are willing to pay to protect resources they will never use.” These are the \$67 million to \$1 billion calls of values. Dr. Gunton said, these are more specific because they are related to the cost of oil spills. 4157

## **What would you be willing to pay to prevent an oil spill?**

After a discussion about the methods used by Costanza, including surveys and interviews, to obtain the values Dr. Gunton used in his report, he said he would highly recommend doing a similar study for the NGP project. 4180

Two questions he suggested: 1. “What would you be willing to pay to prevent an oil spill in this region by prohibiting tankers through this region?” and 2. “What would you be willing to accept as compensation for the risk that you are expected to endure as a result of this?” 4180

## **Double-hull tankers**

Mr. Neufeld asked if double-hulled tankers and escort tugs will prevent an oil spill. Dr. Gunton replied, “No.” 4187

## **Oil Spills**

Turning to section 5 in Dr. Gunton’s report, which contains an assessment of Enbridge’s approach to estimating impacts of an oil spill in the project area, Mr. Neufeld said he has a couple of questions.

Dr. Gunton wrote, “[Enbridge] ... responses clearly show that Enbridge does not accept any responsibility for tanker spills in BC waters. Consequently, there is no comprehensive compensation plan”, then Dr. Gunton lists seven items that would be part of such a plan. Dr. Gunton’s reply and discussion with Mr. Neufeld is informative. 4240

“The Applicant here has estimated total costs of all oil spills between now and 2048 to be \$81,000,000. ... If Enbridge has confidence in that number, presumably, they would have no problem accepting full liability for all oil spills and to define precisely the circumstances under which compensation would be paid because ... the risk they believe is very low.” 4266

Mr. Neufeld’s second question was about Dr. Gunton’s recommendation under the heading, “Deficiencies in Oil Spill Occurrence Estimates”, that there’s a lack of evidence on key issues and there’s a need for a collaborative review. Mr. Neufeld says that Northern Gateway tried to pull together a Quantitative Risk Assessment Working Group, invited Coastal First Nations and its member First Nations, and only the Haisla attended, as an observer. Dr. Gunton said, “it’s unfortunate that there was not a collaborative process that was acceptable to all the stakeholders to address this,” but he could not speak to the details. 4285

## **US oil spill risk model is most advanced in the world**

Dr. Gunton stated, “I would also add that when you take a look at the oil spill risk assessments that were done by Enbridge, they are significantly materially different than what would be generated by the U.S. oil spill risk model, and I’m really quite surprised



that the people who were initially doing these studies didn't look at the U.S. oil spill risk model which is the most advanced in the world. 4308

Mr. Neufeld moved to section 7 of the report, entitled, "Potential Impacts of an Oil Spill on Coastal First Nations Interests". In this section potential spills in the CFN area are compared to the Exxon Valdez spill. Given that tankers moving in and out of Kitimat will be both smaller and larger than the Exxon Valdez, Mr. Neufeld how Dr. Gunton concluded that the spill size will be larger. Dr. Gunton replied that they were modelling the potential spill and in that exercise you look at the upper limit. 4324

Dr. Gunton had to repeat himself to Mr. Neufeld that they are looking at the potential spill size, not the probability of it happening.

The questions turned to what is covered in the instance of a spill, and in reference to the Exxon Valdez, Dr. Gunton says there was enormous disagreement resulting in expensive litigation. He reiterated the point that it is important, prior to a catastrophic event, to have these kinds of details worked out, specified. 4357

### **Complete PNCIMA before approving NGP**

It is Dr. Gunton's recommendation that the PNCIMA process be completed before Northern Gateway receives approval. "The ideal time ... is prior to approval so that you can make sure that the application and the approvals are consistent with the findings of those processes. ... When those processes have been completed, it creates a high degree of certainty for all the parties involved, including the applicants for these projects, that they know where they can operate, how they can operate. 4370

### **Best way to accommodate First Nation communities in post-approval processes?**

Mr. Neufeld's last question for Dr. Gunton was "I'd like to get your input as to the best way to accommodate the involvement by Coastal First Nations communities in post-approval processes." Dr. Gunton said he cannot speak for the CFN, but his view is that "you have to allow those stakeholders to design that process in a way that they have confidence and support or it simply will not work;" that the NGP has the potential to be another Clayoquot conflict and that must be considered; and the processes must have a number of tiers because there are local, regional, provincial and national aspects to it. 4395

### **Examination by Carol Hales for the National Energy Board 4428**

#### **Value of the Wright Mansell reports**

Asked by Ms. Hales if the Wright Mansell cost benefit analysis changed his assessment of the public interest of the NGP, Dr. Gunton said, a cost benefit analysis is the best way he knows of you answer difficult questions, that Dr. Mansell's work is a start in the right direction, but it was started late, has serious omissions, unreliable estimates, and lacks the rigour and standard that Enbridge applied to other questions, "such as the price lift." It has not altered his assessment at all. 4431



With respect to Dr. Mansell's economic impact assessment, its results are prone to misinterpretation because the study assumes that all of the economic impacts of the project are increments, that without the project, none of these things would happen.

But we know that if that project wasn't built, other projects would be built or other investments would be made and so many of those jobs and activities would occur regardless. 4458

Dr. Gunton lists other concerns with the economic impact assessment. These begin at 4459

### **Wright Mansell's oil spill costs are really stretching it**

"The oil spill costs," he said, "just don't get anywhere close to what the risks are. I mean, to say that pipeline oil spill costs between now and 2048 are going to be \$22 million is really stretching it." 4467

Ms. Hales asked, "How much weight can this Panel give to the cost benefit analysis or benefit cost analysis that have been undertaken in this proceeding? Where do these studies fit in in the ultimate weighing or balancing of the public interest?" Dr. Gunton: benefit cost analyses are the best single-page summary of what all the issues are. 4478

### **If we have a large conflict, everyone loses**

"There are other considerations to take into account. For example, one of the big issues that is faced here is the magnitude of potential conflict. This is the most controversial issue that I have seen before the NEB or any regulatory body in my experience, that it is a very polarized issue. There is no simple solution. If we have a large conflict, everyone loses"

### **Examination by Hans Matthews of the Joint Review Panel 4502**

Mr. Matthews: "We've heard in this hearing ... people trying to quantify or monetize non-use ecosystem values." Is the way you used it in your report similar to the way Mr. Ruitenbeek referred to passive values? Dr. Gunton: "Passive values are one kind of non-use values."

### **Guidance for the Panel in using the wide-ranging values**

Mr. Matthews asked if Dr. Gunton could advise how the Panel should interpret or use the wide range of values they have heard. Dr. Gunton recommended "joint fact finding" He suggested the Panel send him and Dr. Ruitenbeek away to come up with a value or range of values they can both agree on. In the US, all parties develop "best practise guidelines" which regulatory agency staff then use to produce values for the decision makers. More reliable or defensible spill probabilities need to be developed. Many of the factors or numbers presented are of little consequence – unemployment, surplus capacity, "nets" on the operation, etc. The oil price uplift and the degree of confidence you have in

predictions for it out to 2048. (Dr. Gunton would not rely on it, whereas Enbridge would.). Net out the benefits of the price uplift to non-Canadians. 4511

### **Examination by Kenneth Bateman of the Joint Review Panel 4523**

Mr. Bateman quoted the NEB's definition of the public interest: "The public interest is inclusive of all Canadians and refers to a balance of economic, environmental and social considerations that changes as society's values and preferences evolve over time." He asked Dr. Gunton what he thinks of it and how he might refine it.

Dr. Gunton said, "I'd say it's a great definition. Let's go to the next step and try to develop a more detailed comprehensive set of procedures and guidelines for how you define whether something's in the public interest. He compares this to the Canadian Environmental Assessment Agency's "what is the likelihood of significant adverse environmental effects?" where the question is asked, "how you would determine whether something met that criterion?" 4524

### **Alternate mechanisms**

Mr. Bateman asked about earlier references to "alternate mechanisms". Dr. Gunton replied, "With all due respect, I would not want to be in the position that you're in now having to try to make a decision on such a huge controversial issue. It's a tough -- so is there another way of doing it? Yes, there is." His much longer answer begins at 4531.

Mr. Bateman responded, "The decision is not a referendum."

### **Probability zero**

With respect to polarized views by many parties right across Canada, Mr. Bateman asked how these might be balanced. Dr. Gunton replied, "The probability of building a project such as this with this degree of opposition is virtually zero." His answer began, "What needs to happen is the parties need to get together and see if they can work out some of these differences without tossing it out." 4540

### **Compensation frameworks**

"Do you have a perspective of whether or not compensation frameworks ... play into and impact or should impact the public interest determination? Dr. Gunton replied, Yes, I think they're very important because if one party is forced to bear substantial cost while some other party benefits, that's really contrary to the public interest. A compensation plan attempts to balance some of those out. 4545

### **Examination by the Chairperson of the Joint Review Panel 4552**

The Chairperson said she wanted to speak with Dr. Gunton about the collaboration process. Her concern is how do you make it work for you when you cannot get all the parties into the same room? Dr. Gunton suggested that the most effective way might be

for the Panel to request that the parties do that, and defer a decision until it has been done. “At this point, ... if you gave regulatory approval without that happening, it would be very difficult to ever do that.” She explored this topic with a few more questions. 4552

Asked if he would change aspects of his reports, Dr. Gunton said that if the time and money had been available, he would have done a full benefit cost study.4578

The Chairperson closed the Edmonton hearing with a reminder that the Panel will be sitting again on October 9 at 1:00 o’clock in the afternoon in Prince George.