



## Proceedings of the Gateway Series conference of September 17, 2014

### **The Rewards and Risks of Western Resource Trade: Towards a Meeting of Minds**

held at the Sutton Place Hotel, 845 Burrard Street, Vancouver, British Columbia

In keeping with CILT's goals of educating its members and promoting professionalism in the logistics and transportation field, the Pacific Chapter organized a 2014 fall conference.

**Disclaimer:** This Summary of Proceedings was prepared under the guidance of Martin Crilly, FCILT with the help of seven students from the BC Institute of Technology, Capilano University and the University of BC, whose names appear in the credits under "The Organizers" on the back page. Its preparation served both as an educational exercise and as a contribution to the ongoing work of the Chartered Institute of Logistics and Transport.

The Summary is also intended as a reference document for those interested in current issues surrounding the extraction and export of western resources. The main source materials for the Summary are notes and recordings made by the students during the CILTNA conference and from copies of presentation materials subsequently supplied by speakers.

Every effort has been made to ensure that the summary records the proceedings accurately. Any error or omissions remain the responsibility of those who prepared it.

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## Why This Conference Topic Now?

Western Canada ships huge volumes of coal, grains, sulphur, potash, forest products, and oil through BC's coast. Overseas markets are demanding expansion. Extracting, processing, moving and handling these resources creates profits, tax revenues and jobs, but also involves costs and risks. Some people point to the hazards and unsustainable aspects of these activities from local and global perspectives. Some residents, municipalities and First Nations around ports and near road, rail and pipeline corridors express concern over more industrial activity, including the potential for dangerous commodity spills.

Debate on the risks and rewards of western resource trade has grown in recent years, with interest groups on all sides seeking to shape public opinion. Underlying this are difficult questions about society's decision-making process. Are there enough agreed facts for a true debate? How can widely divergent views on development, including for energy products, be reconciled? Who has veto

power? Is a hard collision of interests and values unavoidable and if so what will be its fall-out? How can Canadian society find an optimum policy, choosing what rewards to pursue, and what risks are acceptable?

The conference brought together those representing a range of interests and viewpoints. CILTNA members from the transportation and logistics industry, consultants and academics, and our many student members were joined by invited guests from the media, First Nations, all orders of government, and NGOs advocating greater environmental protection and conservation.

With CILTNA as a non-partisan forum, speakers reviewed the current state of the resource development debate. They aimed to educate and inform each other, and to move towards a meeting of minds on how to answer the difficult questions.

## A One-Page Summary of the Conference

In the opening keynote, Christopher Harvey, Q.C., acknowledged BC's "truly unique" ecosystem and aboriginal communities, which industrial developments cannot ignore out of both legal and moral obligations. Unfortunately, historic cases of misconception and miscommunications between business, governments and local communities has delayed or destroyed projects before a discussion of facts.

A panel moderated by UBC's Dr. David Gillen followed, in which Ian Anderson of Kinder Morgan and Dr. Judith Sayers of Hupacasath First Nation offered industry and aboriginal perspectives. Stressing the economic significance of pipeline infrastructures, Mr. Anderson urged use of a risk-based evaluation for accurate understanding and proper weighing of the costs and benefits of pipeline developments. Dr. Sayers, on the other hand, emphasized the importance of aboriginal title and rights: to gain solid support from First Nations communities, any development must incorporate aboriginal project ownership, training and capacity building, revenue sharing and protection of resources.

Mediating the differing perspectives, Dr. Tom Gunton of SFU spoke of the crucial need for discussion and decision-making based on facts. Dr. Gunton proposed a process that allows direct conversation and joint fact-finding by people who are "opposed, support, or unsure". A joint research and review process improves the level of collaboration between opposing parties, and could in practice alleviate the lack of

trust and disagreement on facts. During question period, Dr. Gillen added that the government would be a perfect mediator to set up such a process.

A structured discussion followed during which representatives from businesses and community including Port Metro Vancouver, the Corporation of Delta and the Dogwood Initiative discussed the issue from their own perspectives.

In the lunch keynote, Andy Calitz of LNG Canada surveyed the global natural gas market, pointing to an unprecedented opportunity for Canada to supply Asia. He flagged the challenges: oppositions to pipelines, labour supply, tax, aboriginal relations, cost structure and local attitude towards foreign investments.

In trying to find a meeting of minds, the Conference did not claim to close the debate on the Canadian resource trade. Some elements of consensus emerged from the day: we are at a historical decision point when action is required; the natural and cultural heritage of British Columbia must be valued and preserved; future dialogues should be based on facts or the effort towards fact-finding. Although small steps, these common grounds offer a foundation on which further consensus can be reached in the future.

*Prepared by **Xu Wu**,  
Secretary, CILTNA Pacific Executive*

## Conference Programme

8:00 am	Breakfast served, Sponsored by BC Marine Terminal Operators Association	10:40 am	Health Break, Sponsored by Port Alberni Port Authority and Nanaimo Port Authority
8:45 am	Welcome, <b>Marian Robson</b> , Chair, Pacific Chapter	11:00am to	
8:50 am	Introduction, <b>Ata Pazouki</b> , Capilano University	12:30 pm	Structured Discussion, <b>David Gillen</b> , PhD moderator
8:55 am	Breakfast Keynote “Commodity Trade Rewards and Risks: The Current State of Play” by <b>Christopher Harvey</b> , Q.C. Mackenzie Fujisawa LLP Q&A		Q&A and 5 minute speakers <b>J. Singh Biln</b> , P.Eng., Southern Railway of BC <b>Malcolm Smith</b> , Hemmera <b>Kai Nagata</b> , Dogwood Initiative <b>Peter Xotta</b> , Port Metro Vancouver <b>Mark Gordienko</b> , ILWU, Canada <b>Tony Nardi</b> , Neptune Terminals <b>Bruce McDonald</b> , Corporation of Delta
9:20 am	Thanks, <b>Adam Henn</b> , BCIT		
9:25 am	Introduction, <b>Martin Crilly</b> , Treasurer, Pacific Chapter		
9:30 am	Panel introduction by Moderator <b>David Gillen</b> , PhD, Director Center for Transportation Studies, UBC	12:30 pm	Lunch Served, Sponsored by Port Metro Vancouver
9:40 am	Industry Perspective, <b>Ian Anderson</b> , President, Kinder Morgan Canada	1:00 pm	Introduction of Keynote Speaker, by <b>Peter Xotta</b> , Port Metro Vancouver
10:00 am	First Nations Perspective, <b>Judith Sayers</b> PhD, Member and former Chief of Hupacasath First Nation, Adjunct Professor, Peter B Gustavson School of Business, University of Victoria	1:05 pm	Luncheon Keynote Speaker, <b>Andy Calitz</b> , CEO, LNG Canada Q&A
10:20 am	Environmental Perspective, <b>Tom Gunton</b> PhD, Director, Resource and Environmental Planning, SFU	1:40 pm	Thanks, <b>Marian Robson</b> , Chair, Pacific Chapter
		1:45 pm	Closing Remarks, <b>Hon. David Collette</b> , CILTNA Chair

Conference Adjourns

## Breakfast Keynote: The Current State of Play

### Speaker: Mr. Christopher Harvey

*Chris Harvey, Q.C., was born and raised in British Columbia. He took his legal education in London, England where he practised as a barrister from 1968 until his return to Canada in 1975. Mr. Harvey was called to the British Columbia Bar in 1976 and practised with Russell & DuMoulin (now Fasken Martineau DuMoulin) before becoming associate counsel with MacKenzie Fujisawa in 2003. He was appointed Queen's Counsel in 1990.*

*Mr. Harvey specializes in civil and regulatory litigation. His wide-ranging practice includes: environmental and regulatory law, aviation, products liability, marine, defamation, aboriginal, commercial, constitutional and trade-related litigation. Mr. Harvey has appeared as counsel in courts and tribunals throughout Canada and in arbitrations in the United States, Canada and England.*

*Mr. Harvey's appellate practice in the Federal Court of Appeal, the B.C. and Alberta Courts of Appeal and the Supreme Court of Canada has included Charter of Rights issues, aboriginal governance issues, aviation and marine insurance issues and cases concerning agricultural marketing and other regulatory schemes. He occasionally sits as a single arbitrator or as chair of a panel of arbitrators.*

*Mr. Harvey devotes a significant amount of his time to volunteer community work and pro-bono professional work. He has served in leadership roles with Scouts Canada, various youth sports organizations, environmental and land trust organizations. He is an honorary director of the West Coast Environ-*

*mental Law Association, and he has taught in numerous Continuing Legal Education sessions. He is currently the editor of the Advocate, a magazine, published six times per year by the Vancouver Bar Association. Most recently Mr. Harvey was nominated by his peers for inclusion in the 6th edition of the Best Lawyers® list for Canada in the practice area of Transportation Law.*

### Summary

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Mr. Harvey outlined the current state of play, current developments in British Columbia and the changes that we've been facing. He posed the question at the beginning of his presentation, why in B.C. is it difficult to get approvals and how does the uncertainty in the B.C. environment contribute to the issue of getting projects approved?

### Outline of Remarks

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#### 1. The theme of B.C. regulatory process

- a. Have to understand the diversity of B.C.'s natural environment.
- b. B.C. has a large and bountiful natural environment. Has one of the most diverse natural habitats in North America.
- c. It is truly unique in regards to the ecosystem as well as geographically and biologically.
- d. This has led to difficulties for B.C. resource development.
- e. Finally, B.C.'s people are unique as well – isolated communities, aboriginal inhabitants. 198 different B.C. First Nations, 7 of the 11 Canadian First Nations languages are unique to B.C.

## **2. B.C. First Nation History**

- a. Aboriginal policy, protection of aboriginal occupied land.
- b. Aboriginal Title – no transportation can proceed without permission of the land’s owner.
- c. Complications can arise when seeking a definition of ‘occupation.’
- d. The Crown has a legal duty to consult and, if appropriate, accommodate Aboriginal groups.

## **3. Developments**

- a. TASEKO Mines.
  - i. Project promised jobs and investment, as well as an increase in provincial GDP.
  - ii. Proceeded through the permit process.
  - iii. Found adverse environmental effects from the environmental review panel.
  - iv. Federal government did not provide federal approval.
  - v. Project is dead.
  - vi. Message from that project: if a project has environmental effects and no support from aboriginal communities, it doesn’t have a chance.
- b. Red Chris Mine.
  - i. Proposed to dam streams for the storage of mining waste.
  - ii. Was subjected to strong local objection from residents and aboriginal groups.
  - iii. The mine was approved but challenged by Ecojustice.

- iv. Supreme Court found the environmental assessment was insufficient.
- v. Project was allowed to proceed.

## **c. Northern Gateway**

- i. Proceeding through joint review panel and environmental assessment.
- ii. An issued report recommended the project.
- iii. Subject to 209 conditions.
- iv. Decision was appealed by environmental groups.
- v. Northern Gateway has large public opposition.

## **d. LNG Projects.**

- i. Currently 9 projects supported by provincial government.
- ii. Review process is mainly provincial, environmental review is provincial as well.
- iii. LNG “is somewhat flying under the radar.”

## **e. Kinder Morgan**

- i. Pipeline project. Expansion of existing project, not new project.
- ii. Used to ship diluted bitumen from Alberta to Burrard Inlet.
- iii. Want to twin the line and increase capacity and output.
- iv. If this project was a new proposed project today and not an existing project, it



wouldn't have a hope of getting approved.

- v. Legal action taken by North Vancouver First Nations band because it goes through their land.
- vi. Burnaby objects the project.
- vii. National Energy board says it doesn't need municipal approval.

British Columbia is a unique area for project approvals due to the environmental concern and environmental watchdogs surrounding protected the area. New and expansion projects should get the aboriginal involvement and support for their success.

## Q and A with Mr. Harvey

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*Question 1: How close would you say we are to that ideal in B.C. regarding fact based decisions and if we are not meeting that ideal then what would you say are the main stumbling points?*

Each project is unique. In an ideal world there would be sufficient certainty in the law and the environmental process and government regulations so that a lawyer could advise a client that this project will or will not succeed, having gone through all of the background. Therefore, investors would decide whether to support the project or not. In B.C., that simply is not the case. I think the best we can do in advising clients is to outline the process to say here are the things you have to look at. One of is of course what you mentioned, reaching

out to the various groups involved, meeting with them, listening to their concerns, dealing with their concerns, and doing this through consultants, meaning experts in the field. The unusual thing is that not only does the proponent have to retain its own experts to do that work, in the present situation you have to retain experts of first nations and capacity builders for first nations groups and get advice from their side as to how this will affect their traditional rights and to deal with complex environmental and technical issues. But as you say, you go through that process and advance as much as you can and get the facts discussed and settled as far as you can and then you can go into the process with a better chance of succeeding than otherwise.

*Question 2: I wanted to comment quickly on what you mentioned about the review process and want to get your take on what has probably been the most wholesome review process in any industry. I want to hear your opinion on what we could do better in Canada to ensure regulatory certainty and also what the role is for the dual standard that I see with campaigns against certain projects.*

One of the things we could do better is to draft legislation with more specificity. I recall one of the main differences in the U.S., you know the regulators are confined to laws with much greater certainty than Canada. We tend to adopt a style of drafting legislation with a broad area of discretion in the government, which must

be frustrating when trying to do business in B.C. When it comes to looking at the regulations, it is hard to say which side of the regulations you fall on. That is the principle area, as an industry you could persuade the legislative branch to bring some certainty into the laws that govern us.

***Question 3: What is the current Opting-Out formula in Canada in respect to provinces that want to leave a federally administered project or if there is a federal opposition can BC go alone?***

“In short, there is not much scope for Opting out.” It is difficult to imagine a project that is exclusively federal or provincial. In Canada, a project dealing with natural resources will fall under both provincial and federal jurisdictions. And for inter-provincial projects, it will fall heavily under federal jurisdiction. For instance, navigation and shipping fall under federal jurisdiction and therefore federal government will be involved. In an ideal world, the scope for opting-out will be clear but it is not the case in Canada. However, what the business-orientated Provincial/Federal governments have currently done is streamline the process to a certain extent. As for a federal and provincial agreement, a joint review panel is in order to delegate the components. Review panels, such as a provincial one, cannot terminate federal involvement.

***Question 4: Expanding on what was talked about earlier about the duty to consult, can you explain the notion of First Nations’ approval for a project?***

We know that aboriginal titles exist and are a part of Canadian law. When it comes to government projects that fall under aboriginal land claims, the government has the duty to consult for any decisions that will affect an aboriginal group. They will then have to accommodate to that group. And what is exactly accommodation? It is a notion of where the project is adjusted after consulting and understanding the aboriginals’ concerns. But the real question is, do the aboriginal groups have an effective veto? And the practical answer to that is that they really do. Therefore, relationship building with the aboriginal is critical when it comes to getting a project approved. It can be difficult, especially in B.C., to meet the demands of all the affected aboriginal groups. The risks that aboriginal opposition brings to the project, are delays to the process which can ultimately lead to a project not getting approved.

## PANEL: Selected Perspectives

### Moderator: Dr David Gillen

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*Dr. Gillen graduated in 1975 from the University of Toronto with a Ph.D in Economics. He currently holds the positions of YVR Professor of Transportation Policy in the Sauder School of Business and Director Centre for Transportation Studies, University of British Columbia. In addition he is Research Economist at the Institute of Transportation Studies at the University of California, Berkeley. He has held teaching and research positions at the University of Alberta, Wilfrid Laurier University and Queen's University as well as Adjunct Professor of Economics at the University of Western Ontario and Adjunct Professor of Engineering and Environment and Planning at the University of Waterloo.*

*Dr. Gillen has published over 100 books, technical reports, journal papers, conference presentations, and other articles in various areas of transportation economics, including airline competition and industry structure, airport economics and noise externalities, and transportation policy in Canada and the United States. His current research includes evaluating investment in Intelligent Transportation Systems, pricing and auction mechanisms roadways and runways, the impact of taxation and user charges on firm com-*

*petitiveness, differing rules and mechanisms for allocating revenues and costs across different users, measuring performance of transportation infrastructure, vertical contracts in aviation and evolving strategies and business models in airlines and airports.*

*In addition he has served as a consultant in various areas of transportation economics to a variety of firms and agencies in Canada, US, New Zealand, Ghana, Hamburg, Germany, UK, Ireland and Thailand. He has also undertaken work on behalf of Hamburg Airport, Pearson International Airport, Edmonton Air Services Authority, Airports Council International, WestJet, Air Canada and Ghana Airways.*

*He served as special advisor on aviation policy to Transport Minister Lloyd Axworthy in the early 1980's. From 1992 to 1994 he served as special research advisor to the Royal Commission on National Passenger Transportation. He has and continues to provide consulting to Transport Canada in the area of aviation policy both domestic and international. He has also been actively involved in advising Transport Canada and airports on the privatization process and the application of current management strategies to modern airport management. He led the airport research on pricing and investment for the Canadian Transportation Act Review Committee in 2001.*

## Industry: Ian Anderson, President, Kinder Morgan Canada

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*Mr. Ian Anderson has been the President of Kinder Morgan Canada Inc. since November 2005. Prior to his current position, Mr. Anderson was the Vice President, Finance and Corporate Services, Terasen Pipelines Inc. from July 2004 to November 2005. Mr. Anderson has been involved and working with Oil and Gas Pipelines since October 2003. Ian is a member of the Association of Oil Pipe Lines, a board member of the Canadian Energy Pipeline Association. Mr. Anderson is a graduate of University of Michigan Executive Program since 1997.*

Trans Mountain is proposing an expansion of its current pipeline between Strathcona County (near Edmonton), Alberta and Burnaby, BC. The proposed expansion, if approved, would create a twinned pipeline that would increase the nominal capacity of the system from 300,000 barrels per day, to 890,000 barrels per day. The existing 1,150-kilometre pipeline carries refined products, synthetic crude oils, and light crude oils with capability for heavy crude oils. The new 994-kilometre pipeline will carry heavier oils with capability for transporting light crude oils.

The economic benefit is projected to be \$3.3 billion labor income across Canada and employment of up to

108,000 personnel during construction and 20 years of operation. The benefits to governments of tax revenue from construction and operation is estimated to be \$2.1 billion to federal, \$1.7 billion to provincial, and \$500 million to local governments.

Kinder Morgan's planning and analysis for both pipeline and marine transport has resulted in the development of a risk-based design. This puts a high degree of emphasis on environmental protection and restoration, state of the art control systems, operating and maintenance procedures, and spill modeling to guide emergency response plans and procedures.

The continual aim is to communicate accurate facts, understand the issues of the people that are involved, reconcile the interests of the community, and find ways to share the wealth and prosperity. The company hopes to build the trust, confidence, and respect for what they're trying to accomplish.

Mr. Anderson's slide deck follows overleaf.



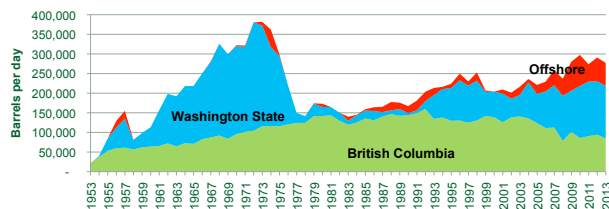
Vancouver, BC

**TRANS**MOUNTAIN

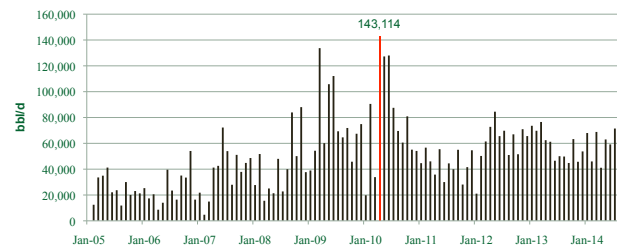


KINDER MORGAN

## Trans Mountain – West Coast Connected



## Trans Mountain History



## Tanker Volumes



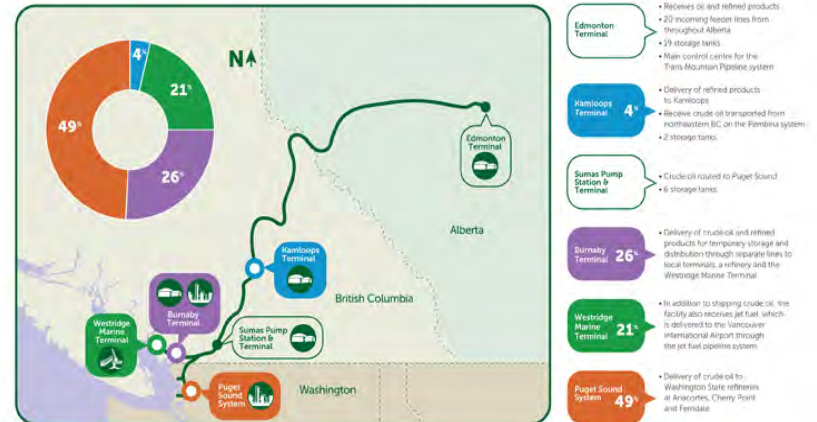
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## Trans Mountain Product Distribution



**TRANS**MOUNTAIN

### 2013 PRODUCT DISTRIBUTION - Current Operations

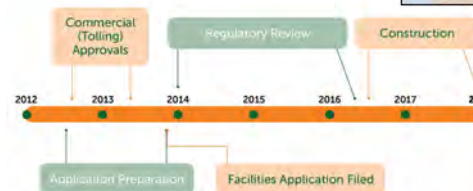


2

## Trans Mountain Proposed Expansion



- Long term commitments from 13 shippers. Expansion to increase capacity to 890,000 barrels per day.
- Projected capital cost is \$5.4 billion
- A dual-line operation – twinned pipeline with:
  - Existing line for lighter products
  - The proposed new line for heavier oils
  - Approximately 980 km of new pipeline
- Commercial Terms NEB Approved May, 2013
- NEB Facilities Application Filed December 16, 2013



4

## Economic Benefits



KINDER MORGAN

All figures based on project plans as of February 2014

5

## Benefits to Governments



### Estimated Tax Revenue from Construction & 20 Years Operation:



KINDER MORGAN

All figures based on project plans as of November 2013

6



## RISK

KINDER MORGAN

7



## Assessing and Mitigating - Pipeline



- Risk mitigation throughout project lifecycle:
  - **Risk assessment** to identify threats along the route and their probability – Examples: third party damage, geotechnical hazards
  - **Ecological Assessments** conducted to assess potential consequences at water crossings

- **Risk based design** guides key decisions such as pipe material selection and wall thickness, depth of cover, valve locations, quality and integrity management programs
- **Environmental protection and restoration** reinforced through Environmental Compliance Plan
- **Operations** includes state of the art control systems, operating and maintenance procedures, and trained staff guided by 60 years of knowledge
- **Spill modelling** results will be used to guide Emergency response plans and resources



KINDER MORGAN

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## Assessing and Mitigating - Marine



- Risk assessment conducted to address changes in Salish Sea marine traffic
- Main elements included
  - Growth of all traffic forecast to in-service date
  - Hazards identified by professional mariners
  - Quantitative analysis of probability and consequence
  - Fate and behaviour tests and spill modelling
- Results used as the basis for recommendations enhancements:
  - Tug escorts and moving exclusion zone
  - Implementation would result in risk comparable to existing despite increased traffic



- Results also used to establish recommendations for enhanced marine spill response
  - Double the existing capacity
  - Halving the maximum time allowed to cascade resources top tier spills
  - New bases along the shipping route, 100 people, \$100 million of new resources all for response to any incidents in the Salish Sea



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## Processes for Permission



- Legal / Regulatory / Political
  - National Energy Board
  - BC Five conditions



- Broader Dialogue
  - Aboriginal Consultation and Involvement
  - Landowners Impacts
  - Stakeholders
    - Local government
    - Pipeline and marine corridor communities
    - ENGOS
    - Public at large



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## HAVING THE FULL DISCUSSION



10

## Broader Dialogue



- Trust
  - Pipeline performance, history and integrity
- Transparency
  - Regulatory processes and accessible engagement
- First Nations
  - Involved and Engaged
- Collaboration
  - Community investment opportunities
  - Industry coordination
- Fact Versus Emotion
  - Approached debate with facts, underestimated strength of emotions-based opposition



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## We Want To Hear From You



### CONTACT US:


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## First Nations: Dr. Judith Sayers

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*Kelkinsuqs, Dr. J Sayers is a member of the Hupacasath First Nation. Her current position is a Strategic Adviser to First Nations and a professor at School of Business at University of Victoria. Dr. Sayers has been the Chief Negotiator for 15 years and her duties include industrial expanding, sustainable development and restoring and maintaining the Hupacasath territory located in Port Alberni, BC.*

First Nations in BC have enjoyed a healthy ecosystem both on land and in water. Their way of life includes the ability to exercise their rights like hunting, fishing, trapping, gathering, and the right to a livelihood. Their territories are full of rich resources such as forestry, water, minerals, coal, energy, fish and other sea resources. In 2006, The Supreme Court of Canada recognized the existence of aboriginal title that allows First Nations to hold an exclusive right to decide how to possess, use, enjoy, occupy and control the land. The restrictions are that it is a collective right of all the people and its use must not deprive future generations of the benefit of the land.

The risks of resource trade for First Nations include the erosion of aboriginal rights, the long-term risks related to oil spills on land or on water, and the decrease in the quality of life of First Nations from the negative impact of destroyed lands and resources.

However, if the development is done with the consent of First Nations, with a high degree of environmental standards, and in locations that do not affect the important sites, only then can these projects continue to flourish.

In order to work with Aboriginals effectively, there are a number of rules that should be followed which includes: 1) allowing First Nations to determine their needs, 2) respecting their history, struggles and realities, rights, way of life and territory, 3) approaching First Nations early to establish a solid relationship, 4) keeping a positive attitude, and 5) knowing when to walk away. Overall, companies must build the business together with First Nations.

First Nations want project ownership, long-term training and capacity building, revenue sharing, protection of resources; in turn, they are able to provide a range of benefits including strengthening relationships with governments and communities, creating positive publicity of the partnership, certainty and easier approvals with governments. Although each First Nation is different in terms of their relationship to the land, community processes, and priorities, but it is possible to build a sustainable business relationship if meetings are conducted early and properly, values are considered and respected, and rights and interests are valued.

Dr. Sayers' slide deck follows overleaf.

## Rewards & Risks of Western Resource Trade

First Nations as Rights Holders  
Presented by Kekinusuqs, Judith Sayers  
September 17, 2014



## First Nations Interests

- First Nations in BC have been here since time immemorial and have title to their lands
- First Nations way of life includes the ability to exercise their rights like hunting, fishing, trapping and gathering and the right to a livelihood. And to use the land for spiritual and cultural purposes and preserve historic and burial sites.
- In order to sustain the rights of First Nations people, healthy ecosystems must exist both on the land and in the waters.

## First Nations-Background

- First Nations rights are recognized and affirmed in the Constitution Act, s. 35.
- First Nations territories are full of rich resources- forestry, water, minerals, coal, energy, fish and other sea resources
- The cumulative effects of logging and other developments have decreased the ability of First Nations to exercise their rights as fully as they did before.

## Tsilhqot'in Decision

- The Supreme Court of Canada in June 2014 recognized aboriginal title exists in BC
- Aboriginal title means that First Nations hold an exclusive right to decide how to possess, use, enjoy, occupy and control the land, to benefit from those uses.
- Aboriginal title holders of modern times can use their lands in modern ways, that is their choice.
- The only restrictions on aboriginal title is that it is a collective right of all the people and must be treated as such and that it must be used in such a way that does not deprive future generations of the benefit of the land.

## Risks of Resource trade

How do they affect Aboriginal Title and Rights?



## Risks of Resource Trade

- Increased development will further erode aboriginal rights until they are extinguished unless steps are taken to decrease both the pace and degree of development
- Eg. Some of the risks like oil spills either on land or on water can actually destroy the ability of First Nations to ever exercise their rights again.
- First Nations way of life is in jeopardy if the lands and resources are destroyed or negatively impacted to a degree that First Nations cannot survive.

## What kinds of Projects Create Risks?

In BC there are many projects that First Nations oppose for many reasons. They include

- Enbridge Northern Gateway Project (pipelines and tankers)
- Kinder Morgan Trans Mountain Pipeline.
- Site C Dam (flooding of lands, resources, burial sites, destruction of habitat of wildlife and fish)
- Mines such as Prosperity, Raven Coal, Imperial Metals proposal in Klappan-Red Chris Mine

## What Has Opposition Looked like?

- Blockading roads leading to Mines
- Court challenges on Enbridge and Kinder Morgan
- Social media campaigns
- Education campaigns
- Opposing projects at Joint Review Panels or NEB hearings
- Building networks of supportive people
- Appealing to shareholders of Corporations

# REWARDS

If development is done with the consent of First Nations, with a high degree of environmental standards, and in locations that do not affect the important sites then...

- First Nations can have sustainable economic development
- Includes revenues, training and education and jobs
- Manage their territory by ensuring high environmental standards
- Become part of the economy

## Can there Be a Meeting of Minds?

Working Effectively with First Nations



## Rule 1

- Do not assume or say that a project is good for a First Nation
- Very paternalistic assumption and one taken by federal and provincial governments all the time
- First Nations must determine for themselves what their needs are and what is acceptable to them.
- Do not call First Nation a stake holder. First Nations are rights holders and must be respected as such

## Rule 2: Acknowledge aboriginal rights and title

- Recognition of title and rights is very important
- Company is not a court of law and recognizing title has no legal significance-company lawyers may say differently but an important move forward with First Nations
- Respect of First Nation, its history, struggles and realities, rights, way of life and territory

## Rule 3: Approach First Nation Early

- Meet Chief and Council-get to know First Nation
- Understand how closely FN are connected to the land
- Set up protocol to recognize the First Nations territories you operate in- (can have welcomes by First Nation to their territory)-art work or other recognition in your offices
- Have a community development fund that you can sponsor events/initiatives of First Nation
- What are its successes? Challenges? What is important to First Nation?
- Talk to the First Nation about your proposed business when it is still an idea.

## Rule 4: Positive Attitude

- Work with FN because it makes good business sense
- Not going in with an attitude that you have to (legally through consultation or because the government has made it conditional), or you are going to do as little as possible
- Make it your goal to make this a Best Practice, a model for other Companies and First Nations to follow

## Rule 5: Know when to walk Away

- If a First Nation is adamantly opposed to your project-walk away-
- Timing of this can vary from the beginning of the relationship to after studies are done which show the degree of impact on rights, lands, habitat, etc.
- Begin your negotiations/relationship by acknowledging that the First Nation has right of consent and you will not operate in their territory without their consent-opens more doors-comfort level for First Nation to operate

## Business relationship

- Build the business together-Explore the idea
- Do joint studies on feasibilities and impacts on rights
- Determine what studies need to be done-addressing any First Nation concerns
- Chose who will do studies, terms of reference and what involvement FN members have in the process.
- Negotiate an MOU on how you will work together in exploratory stage-confidentiality, respect for territory, what needs to be studied.
- Develop agreements on business once you agree to go ahead



## What are rights and interests?

- Determine what impacts are on the territory and how they can be avoided or mitigated.
- Or alternatively, if the First Nation feels so strongly about a site that finding an alternative site may be the best business decision instead of a long battle with the First Nation
- Agree on higher environmental standards that the First Nation can be assured the land/resources are being looked after

## Ensure Benefits to First Nations are Positive

- Project Ownership
- Long term training and capacity building leading to meaningful employment
- Revenue sharing
- Protect what is important to the First Nation
- Other benefits as identified by the First Nation

## First Nations Contributions to project

- Recognition of what First Nation brings to project: Cannot value
- Certainty and easier approvals with governments
- Strength of relationships with Governments-valuable government contacts
- Strength of community relations/local governments relations
- Local investment-First Nations home-not all company with no ties to community
- Positive publicity for partnering with First Nations: makes a good news story

## Shared territory issues or overlaps

- Each First Nation should be treated as a Nation, not based on size
- Equality can only be different if a FN brings more equity into the business
- Impact benefit agreements should be fair between the Nations
- Do not get drawn into disputes or conflicts between First Nations-diplomacy is required-do not side with one or the other
- In BC with overlaps, have to work with every FN that has a claim to the proposed development area.

## Consent

- First Nations right of consent on a project has been strengthened by Tsilhqot'in Decision
- Especially where First Nations title it has been established and court recommends consent where it hasn't.
- Governments can override no consent if it follows a 3 pronged test that includes its fiduciary duties, honour of the Crown and compelling and substantial objectives that must include First Nation views.

## Difference in Values

- Each First Nation will be different, different relationship to the land, different things are important. Priorities are different for each First Nation
- Money is not everything to First Nation-Land, resources, rights, way of life, sacred/cultural/heritage sites more important,
- First Nation Community processes are different and take time- timelines not as important. Have lots of patience and don't give up
- not all authority in Chief and Council – members have a role-ensure you are working with proper leadership.

## Meeting of Minds?

- Can be possible if First Nations are approached early and properly.
- Can be possible if what First Nations values is not destroyed or negatively impacted
- There may be some projects that are just unacceptable and will never get First Nations on side
- Do not rely on governments to do consultations properly-build your own relationships

## Environment: Dr. Tom Gunton

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*Dr. Gunton is a faculty member at Simon Fraser University where he is the Director of the Resource and Environmental Planning Program and a Professor. He is former Deputy Minister of Environment, Land and Parks, Deputy Minister of Cabinet Policy Secretariat and Deputy Minister of Finance for the Government of British Columbia. He studied and completed both his Bachelor of Arts and a Masters at University of Waterloo, then completed his Ph.D. for Community and Regional Planning at University of British Columbia.*

Potential benefits of increased oil exports from BC include diversification of markets, increased export prices and economic growth. The costs are increased air emissions (especially greenhouse gases), oil spills, creation of surplus pipeline capacity, and an unfair distribution of costs and benefits among provinces and stakeholders. The major proportion of benefits of new oil pipelines accrue to industry (67%), and to the federal and Alberta governments (30%), with only 3% accruing to BC even though BC takes most of the risks. There is also a lack of agreement on many of the basic facts

such as the number of jobs that these projects will create and the environmental costs and benefits.

Approval of major projects requires both a legal license and a social license. The current process for obtaining legal license for major projects is an adversarial process in which opposing parties appear before entities such as the National Energy Board to argue their respective positions. These adversarial processes increase conflict among stakeholders instead of bringing them closer together. Consequently, projects may receive a legal approval but they do not receive a social license because they are opposed by a large proportion of the population. Without social support it is not possible to build these projects without extensive conflict, which is costly for all parties involved.

An alternative approach to augment legal approval processes is a collaborative approach that encourages stakeholders, government, First Nations and project developers to work together to achieve agreement on whether a project should be built and what conditions should be attached to it if it is approved. BC has had a long history of collaboration in resolving conflicts such as the “war in the



woods”. These collaborative processes have been very successful in the past and should be used to resolve current conflicts over pipelines and other major projects. A collaborative process would involve creating a “table” comprised of all interested parties that would work jointly on evaluating projects and developing strategies for ensuring that the projects meet the public interest. These tables would have their own research staff to help with joint fact finding so all parties have confidence in the information provided. The stakeholder tables would use consensus based decision making to reach agreements on whether projects should be approved and what conditions and mitigation measures would be required. A collaborative process would help reduce conflict by bringing parties together in a cooperative forum and would provide the foundations for both a legal and social license for major projects.

Dr. Gunton’s slide deck follows overleaf.

# Risks and Rewards of Western Resource Trade

Dr. Thomas Gunton  
Director of Resource and Environmental Planning  
Program  
Simon Fraser University  
September 2014

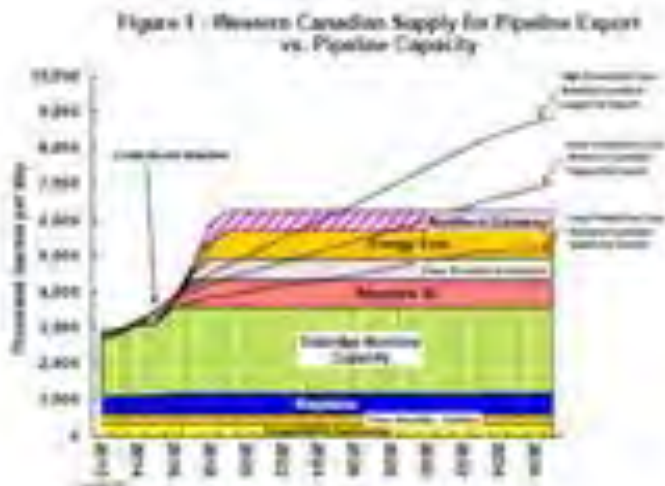
## The Issues: Costs vs Benefits

### Benefits

1. Need Transport
2. Diversify Market
3. Higher Price
4. Economic Growth

### Costs and Risks

1. Surplus Capacity
2. Climate Change
3. Oil Spills
4. Unfair Distribution

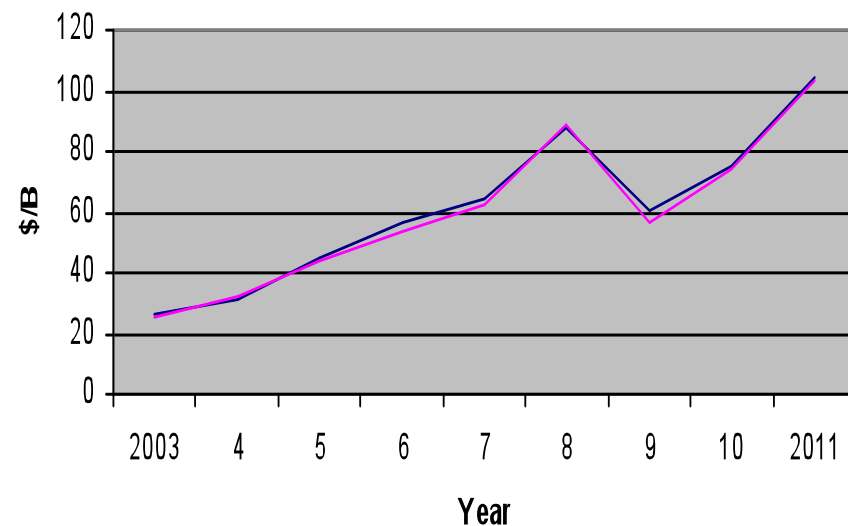


## Transportation Supply/Demand (1000 bpd)

	2020	2025	2030
Supply	7340	7340	7340
Demand	4576	5258	5993
<b>Surplus</b>	<b>2824</b>	<b>2082</b>	<b>1347</b>



US-Asia Prices- 2004-2011



## Economic Development (jobs)

	Enbridge Estimate	Enbridge Actual	Enbridge Direct Only
Canada	907,000	1,150	104
BC	263,000 (70,000)	561	78

## Benefit Distribution (20 years)

	Billions \$	%
Industry	31	67%
Government	14	30%
BC	1	3%
total	46	100

Table 6: Damage Estimates for GHG Emissions from ENGT

GHG Emissions Scenario	Emissions Factor (kg CO <sub>2</sub> e per barrel)	Total Tonnes of CO <sub>2</sub> e produced (in millions)	NPV of GHG Damages*** (2010 CAD in millions)	
			Lower Bound	Upper Bound
1. End of Processing*	55.5	248.4	\$2,150.0	\$6,718.7
2. End of Refining*	127.6	571.2	\$4,943.0	\$15,447.0
3. Total Life Cycle *	511.6	2,290.1	\$19,818.6	\$61,933.2
4. Incremental Life Cycle**	24.5	109.7	\$949.1	\$2,965.9

Source: Computed from data in IRS CERA (2010) and Tol (2006).

Note: CO<sub>2</sub>e represents carbon dioxide equivalent.

\* Based on Canadian oil sands SAGD dilbit.

\*\* Based on difference between Canadian oil sands SAGD dilbit and average US barrel (condensate 500).

\*\*\* A 4.5% discount rate is used based on common standard practice for social costs (Tol 2006).



Table 7: Summary of Selected Environmental Costs Associated with the ENGT

Type of Cost	Damage Estimates (2010 CAD in millions)	
	Lower Bound	Upper Bound
Oil Spill Non-use Value Damages*	\$1,118.1	\$17,198.1
Oil Spill Use Values Damages*	\$4,075.7	\$5,457.5
Damages from GHG Emissions**	\$949.1	\$61,933.2
Other Social-environmental Costs	unknown	unknown

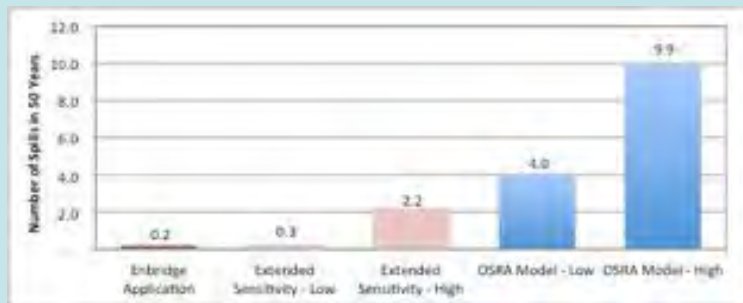
Source: Connor and Broadbent (2011); IRS CERA (2010); Tol (2006).

Note: - Sensu-economic costs unavailable.

\* Non-use and use value damage costs are based on the major oil tanker spill and need to be estimated as an expected value to the probability of spills for a range of marine oil spill sizes. The expected damage costs of terrestrial pipeline spills need to be estimated and included as well.

\*\* Costs associated with GHG emissions represent the NPV of potential GHG emissions over the 30-year life of the project, discounted at 4.5% based on the incremental volume that would use the incremental capacity of the ENGT.

Figure ES---1: Number of ENGP Tanker Spills in 50 Years (Oil and Condensate)



## Benefit Cost Summary

Base Case \$ -2.5 billion

Range \$ -.7 to -7.5 billion

## Resolving Disputes

### Adversarial (NEB)

- Positions (for/ against)
- Lack of Trust
- Disagree on Facts
- Win/lose
- Ongoing Opposition

### Collaborative

- Interests (mutual gain)
- Trust
- Joint Fact Finding
- Win/Win
- Agreement with Outcome





## Collaboration

Project Review Table (key stakeholders and First Nations)

Research Secretariat

Mutually agreed Terms of Reference

Integrative Analysis (Multiple Accounts)

Consensus based principled negotiation



## Spill Rates

Methodology	Size and Type of Spill (in barrels)	Return Rates for Spills (in years)	
		Unmitigated	Mitigated
Enbridge	Tanker all spills	78	250
	Tanker all spills: sensitivity analysis	53-58	53-58
	Tanker +31,500	200	550
	Terminal all spills	29	61
	Combined tanker/ terminal all spills	21	49
US Risk Model	Oil spills +1,000	6-10	6-10
	Oil spills +10,000	14-30	14-30



Figure ES---4: Probabilities for ENGP Tanker Spills over 50 Years (Oil or Condensate)

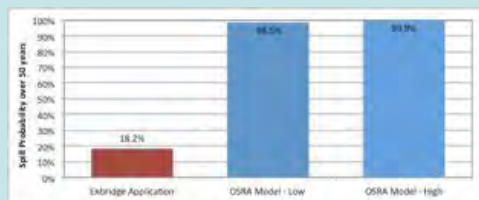
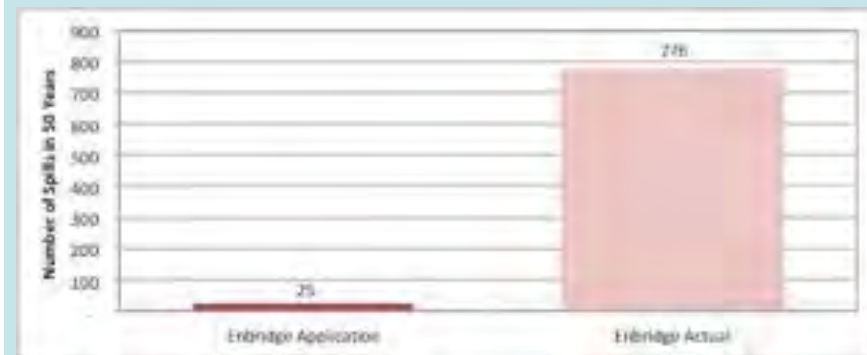


Figure ES---3: Number of ENGP Pipeline Spills in 50 Years (Oil and Condensate)



## Q and A with Panelists

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### ***Question 1: What happens in global markets internationally with regard to setting up contracts when you have political and economic considerations?***

(Tom Gunton): Indexes and assessments of certain jurisdiction are among the areas considered when doing feasibility assessment. Conflicts of interest are also considered as they create political risk for Canada and British Columbia. The key is how can we manage these in a different way in which to reduce potential conflicts from arising.

### ***Question 2: Is collaboration the better way to overcome opposition?***

(Tom Gunton): Here are the facts to consider regarding liability and quantifying risk. With the federal government moving the cap for the Canadian portion of the fund, we have to clearly define what the potential damages are and what processes would we use to determine the value of these damages. There will be a judicial component as well, where some of the disputes will be resolved in court. We will need more dialogue before anything can be finalized.

### ***Question 3: What is your perspective on the theory that environmental impacts cannot be immediately observed, that the results might years to become apparent?***

(Ian Anderson): Pipelines have become lightning rods when it comes to the debate on climate change. The fact of the matter is, there is a long chain of circumstances involved, and the pipeline is just one of the many items

on that list. You have to keep in mind this is a potential 20-year contract.

Internationally, Asia is on an upward trend when it comes to consuming fossil fuels. Since Canada is one of the few countries that can serve this demand, our geopolitical stability makes us a very appealing country for them to source from.

We support the growth of clean technology for clean fossil fuel, and this project is based on that belief and the interest of the nation.

### ***Question 4: You mentioned conflicts of interest earlier. How do you balance issues such the varying beliefs, government expectations, market expectations, and impact on future generations? Are you worried about biases created by so many parties?***

(Tom Gunton): The dialogue has already started; the question is what can we do now to demonstrate our resolve. Pipeline companies are responding to concerns more seriously nowadays. We have created vehicles to continue supporting initiatives that the public cares about. This is a situation where everyone is accountable, and we are all stakeholders in this. We want everyone to come out as winners.

### ***Question 5: What has the First Nation's input been?***

(Judith Sayers): It is difficult to address them as a unified body, since only those whose land is considered have a say in the matter. We have proposed the establishment of policy centers where all the research for this project can be made available to them. This way, they can have access to the background information



can have access to the background information before negotiations begin. Our hope is that they can reach an agreement among themselves so we can address their concerns more effectively. Again, this is difficult, as the ownership of the land in question is not shared among all.

***Question 6: Do you think it is possible to create a forum where people from all sides can come together to discuss environmental issues openly?***

(Tom Gunton): Certainly. We have done so before, and we can do it again!

***Question 7: Is the government, particularly the federal government, acting upon as a neutral party in developing any sort of objective between the parties?***

(David Gillen): The government should be a facilitator, but they should be the last ones who in fact form the panel to create the judgment. They live on the short term and the current government refuses to share current information. If there is anything that we have learned today it is that information sharing is essential. Having been in the transportation business for 35 years, trying to teach and ask Transport Canada for data is still a fruitless exercise.

(Tom Gunton): I agree with what you said. The government should be taking a major role in this case. We do have to have this process and it can be set-up for the companies through independent facilitators and everyone around the table to increase their control. They

should have their own research and joint fact-finding. There are a lot of practices that can be applied and I think the point is to try and get an agreement. You can start at either the beginning of the process or you can wait until the relationship has gone bad then you try to put the pieces together far down into the process and resort to doing a collaborative. If I was a major pipeline company, I would try to get an agreement earlier and discharge the differences, going through the process which prevents any more disagreements.

***Question 8: In the collaboration, how essential is the terms of reference for the committee?***

(Tom Gunton): We have been studying for about 15 to 20 years on collaborative processes around the world and identified the best practices that are required to increase the likelihood of success. Yes, we have to have terms of references and they have to be developed by people around the table. They should have a 100% agreement on the terms of references and should have an independent research staff. It is amazing when you get down to the interest of both parties which looked impossible to find at the beginning. The key for understanding each other is to identify the reason behind why they do support it and why the other party doesn't. As you lay down the interests, you get to see the common ground and look for initiatives which can support and benefit everyone.

## Luncheon Keynote

### Rewards and Challenges of a BC LNG Industry: Andy Calitz

*Mr. Calitz is CEO of LNG Canada, based in Vancouver. He was educated as an Electrical Engineer at the University of Stellenbosch in South Africa, with further qualifications in Commerce, Management and Business Administration at the Harvard Business School in the United States and University of the Witwatersrand, University of South Africa and Insead. He started his working career with Eskom, the South African electricity utility, filling a variety of managerial and executive roles in electricity production planning, pricing, marketing, sector restructuring, and electricity transmission. He joined Shell in 1996, working initially in the Power Group in India and on the Peruvian Camisea projects. Next he served as Shell International Gas's Head of Business Development for Central and Eastern Europe and Russia, where he was actively involved in the Shell-Gazprom alliance, as well as energy projects in Ukraine, Romania, Bulgaria, Russia, Uzbekistan, Turkmenistan and Poland. Then followed an assignment on gas and power in Beijing on the strategic alliances between Shell and CNOOC and SINOPEC. He joined the Shell International Trading and Shipping Company in 2000 as General Manager for Liquefied Natural Gas Shipping. In 2002-4 he was the Commercial Director of Shell-Mitsubishi-Mitsui's Sakhalin Energy, responsible for LNG and crude oil marketing into Japan, Korea, China and the United States of America. From 2005-2009 he was the Shell Project Director for the Shell-Chevron-ExxonMobil Australian Gorgon project. That was followed by a role as Vice-President New Business Development in Shell's Upstream International division in The Hague.*

Every year, 2000 LNG cargos are delivered to Japan, Korea, China, India, and Taiwan. The value of each of the cargoes is approximately \$50 million, resulting in a total value of \$100 billion of LNG imports per year. The largest sources of these imports come from Qatar, Australia, Malaysia, Indonesia, and Russia.

Liquefied Natural Gas (LNG) is chilled to a liquid which makes it transportable in an LNG carrier. In the 50 years of being available, the LNG industry has had no loss of container carriers on record. There are currently 19 proposed LNG projects in BC, largely based around clusters in Prince Rupert to provide immediate access to clean water. Companies supporting these projects include: Shell, Chevron, PetroMas, and BG Group. Stakeholder companies include a variety of Chinese companies, Woodside, and Cedar Energy. Cedar Energy's goal is to be pioneers in a First Nations-driven project in the area. Private equity-driven projects often have the intent of just developing a project, but some would start to develop a project with the intent of selling it.

To leverage the LNG industry in Canada, we need to focus on the following factors:

- Interested Customers in Asia
- Federal and Provincial Support
- Limited tax take by four levels of government (federal, provincial, city/town, and FN levels)\*
- Available skilled Canadian/global labour\*
- LNG project developers

- Developable LNG plant sites
- Supportive/demanding regulator
- First Nations support\*
- Competitive cost structure\*
- Demonstrated Canadian comfort about Chinese investments\*
- Pipelines to coast (Kitimat, Prince Rupert)\*
- Continued acceptance of hydraulic fracturing\*

\*indicates areas of challenge today.

Canadian LNG will benefit BC, Alberta, and Canada in forms of increased government revenues, creation of construction and long-term jobs related to LNG plants, upstream, and pipelines. It will develop a new industry in BC, responsive to the FN community concerns, diversify gas exports away from the sole reliance on the US market, and strengthen key trade links to Asian markets. Most importantly, the export of LNG has the lowest carbon fuel.

Shell, KOGAS, Mitsubishi Corporation and PetroChina (the largest oil company in China) are working together to design, build and operate LNG Canada – a proposed natural gas liquefaction plant and marine terminal export facility near Kitimat, B.C.

A Japanese company has recently completed a project in Papua New Guinea that took 67 million labour hours with no loss-time injury or fatalities. One of LNG Canada's core values is safety. It is critical to LNG Canada's ability to deliver energy responsibly.

LNG Canada is working to overcome several people and logistics challenges in their current projects. Some challenges include handling of the large volume of aggregate brought to site, increased air travel to Terrace, finding marine terminals that can accommodate LNG carriers, and the specialized equipment that is required to carry out the projects. Despite these challenges, LNG Canada is excited to take on these projects and continue their operations to help improve our economy.

Mr. Calitz' slide deck follows overleaf.

# Rewards and Challenges of a B.C. LNG Industry

Andy Calitz – CEO, LNG Canada

**LNGCANADA**  
Opportunity for British Columbia Energy for the world



Number of LNG cargos arriving in Asia each year: **~2,000**

Value of each cargo of LNG **~\$50m**

Total value of LNG imports **~\$100 b**



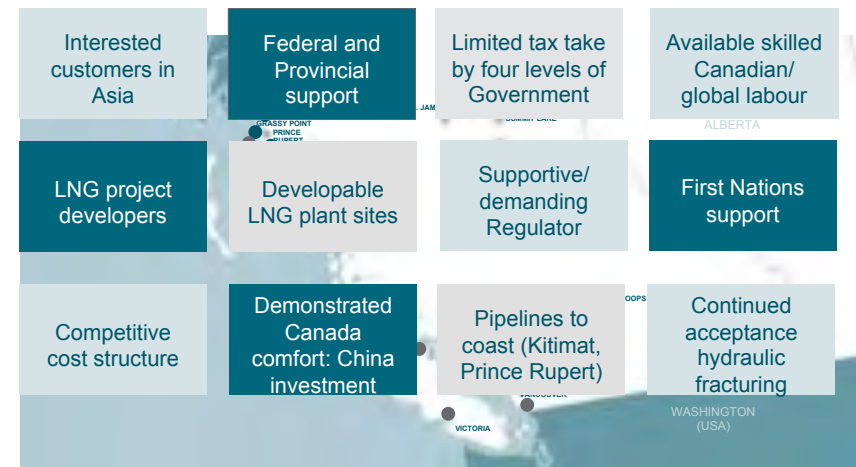
## 19 proposed LNG export projects in Western Canada (as of Sept. 2014)



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July 2014 3

## What will it take to launch LNG industry in Canada?



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## What will it take to launch LNG industry in Canada? What is in place, and what not?



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## Why Canadian LNG matters to BC, Alberta and Canada

- Increased royalty and government revenues
- Construction and long term jobs related to LNG plants, upstream and pipelines
- Developing new industry in BC; responsive to First Nations and community concerns - largest private sector investments in history of Canada
- Diversifying export market for natural gas away from sole reliance on US market
- Strengthening key trade links to Asian markets
- New and expanded business opportunities to support new industry
- Export of natural gas as a lower carbon fuel

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## Working together to bring value to Canada

Shell, KOGAS, Mitsubishi Corporation and PetroChina are working together to design, build and operate LNG Canada – a proposed natural gas liquefaction plant and marine terminal export facility near Kitimat, B.C.



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## LNG Canada will link five gas fields to Kitimat and Asia



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## Safety and logistics

Safety is critical to LNG Canada's ability to deliver energy responsibly, and one of our core values.

What are the safest modes of travel?

- Fixed wing aircraft: 0.003 fatalities per 100 million passenger miles
- Passenger bus: 0.05 fatalities per 100 million passenger miles
- Passenger train: 0.06 fatalities per 100 million passenger miles
- Passenger car: 0.61 fatalities per 100 million passenger miles



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## People and cargo logistic challenges

- Large volume of aggregate to site
- Increased air travel to Terrace
- 18 modules and 12 pipe racks and 110 interconnectors to Kitimat
- 8,000 safe passages of Douglas/Principe
- Early works very logistically focused
- Marine terminal that can accommodate and load LNG carriers, and a barge-unloading ramp
- Multi-modal transportation solutions leveraging existing marine and rail access
- Cranes, self-propelled modular transporters, trucks, rail cars, barges, heavy lift vessels, conveyors required
- Stick-built and modular construction



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**LNG CANADA**  
Opportunity for British Columbia. Energy for the world

Joint venture companies





## Q and A with Mr Calitz

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### *Question 1: Can you give some idea on the world supply of LNG? (Colin Laughlan, Logico Carbon Solutions Inc.)*

World supply reached 250 million tonnes last year. The large exporters are Qatar, Malaysia, Indonesia, Russia, Australia, Nigeria, and the Gulf of Mexico. Energy security is at the core of today's international energy debate: security of demand and security of supply. There are 5 geo-political topics of debate today:

1. The development of unconventional oil and energy in the USA, shifting North America towards a more self-sufficient continent.
2. Russia feels threatened by Europe not wanting to be as reliant to Russia on supply. Russia is planning to create oil and gas pipelines into China, equivalent to 3 energy projects in BC.
3. Japan has the world's largest LNG imports, yet Japan and Korea both do not have any natural energy resources. Nuclear energy was a major energy resource for Japan, but is currently under review since the earthquake in 2011. Korea faces challenges concerning the amount of energy required to keep up with their industrial manufacturing sector.
4. The debate about climate change.
5. Africa is wanting to join the gas market, as the power of Indonesia and Malaysia as an exporter is diminishing.

### *Question 2: Out of the 19 projects that are currently proposed, how many of the projects will go ahead and what is the timing? (Jane McIvor, BC Shipping News)*

Woodfibre says they will start construction next year and start producing in 2017, along with the project led by Petronas and Shell. Each LNG plant will cost between \$13-15 billion, and these projects will take time. It is crucial to stay on schedule for projects of this size.

### *Question 3: Are Shell projects competing with each other? Why isn't LNG Canada considering something similar to Shell's recent construction of the world's largest barge? (David Hoff, Ledcor Group)*

Shell's "floating energy plan" which is the world's largest floating structure has been considered here but decided not to be used for a variety of reasons. There is an intermediate solution of using a large barge in Prince Rupert and anchor it to bring the pipeline to the barge.

### *Question 4: What are the competitive advantages that Canada has compared to other LNG exporting countries? (Jason Joo, BCIT student)*

Political stability, short distance to Asian gas markets, and adequacy of reserves. Canada is much more stable compared to our competitors in the Pacific Basin. Transporting from the Gulf of Mexico to Asia takes 3 times longer than transporting from

Vancouver to Asia. There are enough reserves here to underpin our commitments to deliver. Complexities include availability of labour, overall cost structure, and the need for consensus regarding the LNG projects within BC.

*Question 5: What will we do when Japan decides to re-launch their nuclear reactors since Korea is currently considering creating pipelines through to Russia? (Jason Joo, BCIT student)*

Not sure if the nuclear reactors will restart. The Prime Minister would like to have that happen. The possibility of a pipeline to go from Korea to Russia through North Korea is unlikely due to the limited accessibility.

*Question 6: What do you see as the biggest hurdle around environmental concerns related to extraction with fracking, pipeline, and shipping lanes? (Jason Bothe, BCMEA)*

Our project will engage with the First Nations, to have a dialogue to discuss their needs and respect them. We will make sure that there is enough benefit, in terms of employment and payment, for us to go ahead with the projects. Today is not only about the proponents wanting to go ahead but whether or not the stakeholders want the project to go ahead. We've taken steps to overcome these hurdles such as spending time in educating Kitimat citizens of the impact of our projects.

*Question 7: Can you comment on BC's stand on the tax regime and the issue of labour availability? (Marian Robson, CILTNA)*

The conversation on tax has gone to a very high level and on an agreement that the government will announce the new deal, I wouldn't want to pre-empt that. There is support for an *LNG tax*, the matter to be discussed is around the quantity. The lower mainland is skill-short, even in the northern parts of BC. The first project will absorb many of the skilled and unskilled people. The global skill pool is also being looked at to work around this issue.



## The Participants

George **Adams** Life Member, FCILT  
Stephanie **Aditadwinanti** Student  
Mohammed **Alabdulwahid** Student  
Ian **Anderson** Kinder Morgan Canada Terminals  
Anton **Andriianov** Student  
Paolo **Apeles** Student  
Kaity **Arsoniadis-Stein** International Ship-Owners Association of Canada  
Rob **Ashton** ILWU Canada  
Timothy **Ayling** Kinder Morgan Canada Terminals  
Lisa **Baratta** WESTAC  
Awab **Batterjee** Student  
Evi **Belikava** Student  
Scott **Bennie** BCIT  
Terry **Bertram** BC Maritime Employers Assoc.  
J. Singh **Biln** Southern Railway of BC  
Jason **Bothe** BC Maritime Employers Assoc.  
Kiersten **Brethour** Student  
Jill **Buchanan** Fraser Surrey Docks  
Alex **Butler** Student  
Andy **Calitz** LNG Canada  
Tim **Chapman** Port Metro Vancouver  
Phoebe **Cheung** TransLink  
Hon. David **Collenette** CILTNA Chair  
Kelly **Couper** CILTNA  
Martin **Crilly** MLC Associates  
Pardis **Daneshyar** Student  
Philip **Davies** Davies Transportation Consulting  
Sonia **Di Palma** Student

Terry **Duggan** BC Maritime Employers Assoc.  
Mark **Duncan** AeroEdge Consulting Inc.  
John **Dymond** BCIT  
Oksana **Exell** Asia Pacific Gateway Skills  
Taomeizi **Gao** Student  
Bonnie **Gee** Chamber of Shipping BC  
David **Gillen** UBC  
Mark **Gordienko** ILWU Canada  
Thomas **Gregoire** Chamber of Shipping BC  
Tom **Gunton** SFU  
Dick **Hampton** RFH Logistics  
Christopher **Harvey** Mackenzie Fujisawa LLP  
Adam **Henn** Student  
Trevor **Heryet** Transport Canada  
Doug **Hinton** Hatch Mott MacDonald  
Teddy **Hoang** Student  
David **Hoff** Ledcor Group  
Mohammed **Ibrahim** Student  
Dan **Jonas** Student  
Jason **Joo** Student  
Sae Joon **Kim** Student  
Raymond **Kan** Metro Vancouver  
Rouzbeh **Keymanesh** Student  
Zoran **Knezevic** Port Alberni Port Authority  
Colin **Laughlan** Logico Carbon Solutions Inc.  
Mike **Leonard** BC Maritime Employers Assoc.  
Haven **Li** Student  
Melissa **Li** Student  
Johann **Lim** Student

Maria **Lozano** Student  
 David **Lucas** Western Stevedoring  
 Rob **MacKay-Dunn** Vancouver Board of Trade  
 Salar **Manoucherian** Student  
 Matthew **May** BST Management  
 Bruce **McDonald** The Corporation of Delta  
 Laine **McDonald** Student  
 Tyler **McDougall** Canpotex  
 Tim **McEwan** Ministry of Jobs (*ADM*)  
 Owen **McHugh** Northern Gateway  
 Jane **McIvor** BC Shipping News  
 Bill **McKinstry** Shipping Federation of Canada  
 Olesya **Mekhalchuck** Student  
 Jason **Michell** Nanaimo Port Authority  
 Kai **Nagata** Dogwood Initiative  
 Tony **Nardi** Neptune Terminals  
 Jennifer **Natland** Port Metro Vancouver  
 Eduardo **Padilla** Student  
 Henry **Pan** Student  
 Georgia **Papadimitriou** International Ship-Owners  
 Association of Canada  
 Jacob **Parry** Staff writer, BC Business  
 Ata **Pazouki** Student  
 Tommy **Pham** Student  
 Marian **Robson** Global Public Affairs  
 Greg **Rogge** Port Metro Vancouver  
 Iain **Rommel** Student  
 Payam **Roshani** Student  
 Brin **Rushbourne** Student  
 Judith **Sayers** Peter B. Gustavson School of  
 Business, University of Victoria

Peter **Severinson** Resource Works  
 Azita **Shafai** Capilano University  
 Andy **Smith** BC Maritime Employers Assoc.  
 Malcolm **Smith** Hemmera  
 Derek **Stanger** CN  
 Lisa **Sugiyama** Student  
 Chris **Tupper** Kinder Morgan Canada Terminals  
 Danilen **Villanueva** Capilano University  
 Amina **Virgolici** Student  
 Rainie **Vu** Student  
 Danielle **Wensauer** Transport Canada  
 Ben **West** Forst Ethics Advocacy  
 Harold **Westerman** Hatch  
 Bob **Wilds** Greater Vancouver Gateway Council, BC  
 Marine Terminal Operators  
 Peter **Xotta** Port Metro Vancouver  
 Wu **Xu** CILTNA  
 Ruby **Y** Student  
 Brian **Yamaguchi** Harbour Link Container Services  
 Kevin **Yau** Student  
 Jessica **Yen** Transport Canada  
 Brian **Zhang** Student  
 May **Zhang** Student  
 Ivan **Zic** Student

## The Organizers

### CILT in N. America: Pacific Chapter Executive

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Marian **Robson** (Chair)  
**Xu** Wu (Secretary)  
Martin **Crilly** (Treasurer)  
George **Adams**  
Darryl **Anderson**  
John **Dymond**  
Oksana **Exell**  
Bonnie **Gee**  
Dick **Hampton**  
Tom **Maville**  
Gordon **Payne**  
Ruth **Sol**  
Bob **Wilds**  
Kelly **Couper** (Admin. Asst)

### Students and Faculty

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#### Capilano University:

Azita **Shifai** (faculty coordinator)  
Sae Joon **Kim** (notetaker, breakfast)  
Ata **Pazouki** (introducer of speaker)  
Iain **Rommel** (notetaker, breakfast)

#### University of BC:

Khanh **Nguyen** (student coordinator)  
Maggie **Gao** (notetaker, panel)  
Johann **Lim** (notetaker, panel)  
May **Zhang** (notetaker, panel)

#### BC Institute of Technology:

John **Dymond** (faculty coordinator)  
Rainie **Dam** (collector of materials)  
Adam **Henn** (thanker of speaker)  
Lisa **Sugiyama** (notetaker, luncheon)  
Amina **Virgolici** (assembler of materials)