

Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Wednesday, February 10, 2016 12:31 PM
To: Chin, Ben PREM:EX
Subject: As discussed
Attachments: KM_Interim Fed Env Assessment GHGs_PNW LNG_Woodfibre LNG_DRAFT wMOE
inpu....docx; KM_Pacific NorthWest LNG_Science & Safety_Feb 9 FINAL.docx;
IN_EAO_Pacific_Northwest_LNG_Prov_EA_Federal_Interim_Approach_09Feb2016.doc

Importance: High

Thoughts?

Thank you,

Martina Kapac de Frias
Chief of Staff to the Hon. Mary Polak
Minister of Environment
Ph: 250.387.1187 | E: Martina.Kapacdefrias@gov.bc.ca

BRIEFING NOTE

February 25, 2016

From: First Nations Financial Management Board

Re: First Nations Major Projects Coalition Environmental Technical Work

PURPOSE

This note clarifies the role of the First Nations Financial Management Board (FMB) in supporting the work of the First Nations Major Projects Coalition, the undertaking of environmental technical work related to the Coalition's Terms of Reference, and the deliverables outlined in the funding agreement with Indigenous Affairs Canada, administered in trust to the Coalition by the FMB.

BACKGROUND

Beginning in 2014, FMB was asked by First Nations in northern BC to support the development of options of how they could work together become owners in proposed major projects, and to address strategic common issues related to major project development within their territories. Recent meetings of the Coalition have attracted the participation of 25 or more communities from the northwest to the northeast of British Columbia.

Section 49(c) of the *First Nations Fiscal Management Act* provides FMB with the purposes to respond to requests from First Nations and to provide assistance to these areas of work.

This work has resulted in the development and establishment of the Coalition over two years of internal meetings with interested First Nations. The Coalition was established on October 9, 2015 at a meeting of First Nations leaders in Prince George, BC. First Nations adopted a Terms of Reference and appointed Coalition members to a Steering Committee in order to oversee a work plan.

The Terms of Reference identify the mandate and scope of work of the Coalition to develop business models that contemplate two core themes:

- First Nations economic interests in major projects, including ownership.
- First Nations environmental interests concerning cumulative impacts of major projects.

The funding agreement with Indigenous Affairs outlines the following deliverables related to the environmental technical work:

- A report on the technical proceedings that took place to consider issues related to an Environmental Term Sheet. The report must consider recommendations for models to address cumulative environmental impacts.

TECHNICAL WORK

Upon receiving resources from Indigenous Affairs in December of 2015, the Coalition's Steering Committee members, with the assistance of FMB, assembled a team of experts to carry out the deliverables of both the economic and environmental technical work. A team comprised of land use planners, legal experts, hydrologists, and people with experience in First Nations commercial business activities are carrying out the environmental technical work. This group includes a cross section of First Nation representation from Metlakatla within the Tsimshian Nations, members of the Carrier Sekani Nations, and Fort Nelson First Nations within Treaty 8 Territory in BC's northeast.

The deliverables of this work will produce a technical report by March 31, 2016 that will scope out a number of the necessary considerations for developing a First Nations environmental term sheet. Elements of the report will address the following:

- Identify criteria for what is a major project impacting First Nations interests
- Identify First Nations interests in environmental stewardship and how those interests may be impacted by proposed major projects
- A comparative review of existing First Nations environmental practices
- Compare and contrast First Nations approaches to environmental stewardship with that of BC's and Canada's.
- Identify "next steps" for creating a basis for term sheets to be considered.

REASONS FOR THIS WORK

During the development of the Coalition, consistent messages from First Nations were received. First Nations stated their interest in realizing a new level of economic participation as a result the harvesting of resources off of their traditional lands, including obtaining access to capital for equity arrangements allowing for influence as ownership partners in such projects. They also stated that their economic participation was secondary to their interests in having a senior role in mitigating the environmental impacts of major projects.

Two recent precedents concerning First Nations and major project development exemplify these views:

1) ^{s.16}

2)

CONCLUDING COMMENTS

Addressing First Nations concerns about the environmental impacts of proposed major projects is a prerequisite to their consideration of economic participation. The environmental technical work undertaken by the coalition will provide First Nation led options to address these concerns.

It should not be lost that the main focus of the Coalition is of an economic orientation concentrated on assessing a range of options and business models for First Nation participation in major projects. However, in order to address the primary concerns of First Nations participating in this process, the work of the Coalition must demonstrate options providing for First Nations influence over environmental impacts of major projects as a means to consider their economic participation in those projects they choose to support.



Ministry of
Aboriginal Relations
and Reconciliation

BC Aboriginal Investments and Outcomes

Presentation to Caucus
December 16, 2015

Principles Guiding Government's Aboriginal Investments

s.14

- 
- Advance a more collaborative and partnering relationship with a First Nation(s) through long-term agreements that contribute to reconciliation
- Build on shared interest for sustainable communities, economic development and environmental stewardship
- Deliver investment certainty for major projects
- Link revenue sharing to economic development
- Link progress to First Nations' capacity
- Focus on what can be achieved bilaterally, and bring fed government in as necessary
- Develop social license to proceed with major projects

Government Aboriginal Investments: Forestry and Mining

Forestry: 2014/15 Actual \$40M. 2015/16 Estimated s.13,s.17

- Investments growing due to increasing forestry revenues.
- Outcomes: \$663M in provincial forestry revenue in 2014/15. First Nation revenue sharing agreements covering about 65% of BC's total harvestable land base. \$32.8M shared with over 170 First Nations.

Mining: 2014/15 Actual \$11M. 2015/16 Estimated s.13,s.17

- Payments are largely based on sharing previous year's mineral taxes, but some adjustments for prior year amounts are included in both 14/15 and 15/16.
- Outcomes: 10 new mines, generating almost 6,000 jobs and \$15.7M in mineral tax revenue in 2014/15. \$4.7M shared with 19 First Nations.

Government Investments: Oil and Gas/LNG

Oil and Gas/LNG: 2014/15 Actual \$42M. 2015/16 Estimated: ^{s.13,s.17}

- Development of agreements across upstream, midstream and downstream.
- LNG Environmental Stewardship Initiative - \$30M over three years
- Aboriginal Skills Training - \$30M over three years

Outcomes:

- Four pipelines supported through three Economic Benefit Agreements with Treaty 8, 62 First Nation Pipeline Benefit Agreements, two Revenue Sharing Agreements on Grassy Point/Digby, and agreements with Haisla for Kitimat LNG facility on Indian Reserve.
- Helped lever \$20B in industry investments in LNG in BC since 2012.

Government Investments: Transportation and RAEG

Transportation: 2014/15 Actual \$8M. 2015/16 Estimated

s.13,s.17

- Implementation of the “BC on the Move” plan and its associated infrastructure projects.
- Investments include Highway 97 4-lane through WLIB Reserve, Monte Creek to Pritchard, Pritchard to Hoffman's, Malakwa/North Fork and Dunn Lake Road (all in Southern Interior).

Accommodation paid for Surplus Property Sales: 2014/15 Actual \$7M. 2015/16 Estimated

s.13,s.17

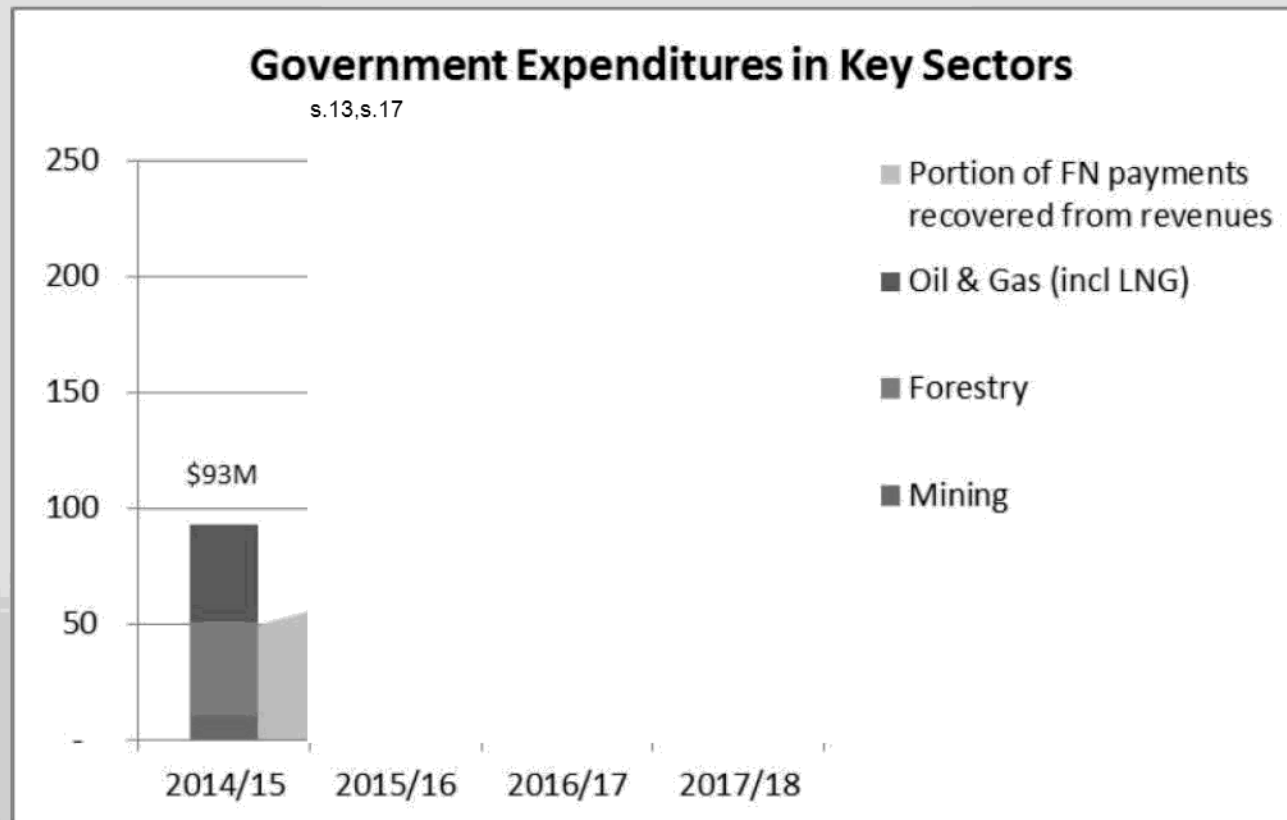
s.13,s.17

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Treaties

- BC's treaty investment was \$16M in 2014/15 and will be ^{s.13,s.16} _{,s.17} in 2015/16, including implementation costs for treaties and funding for treaty process
- Additionally, BC provides most of the land for treaties which doesn't normally create a fiscal impact – Canada primarily provides cash for treaties, and most of the funding for the treaty process itself
- Provincial Crown land contributions to nine signed treaties to date totals over 225,000 hectares, with a notional value of over \$400M
- Treaties provide overall positive fiscal impact to BC by bringing federal cash to BC First Nations and improving First Nations and surrounding economies
- Recent SFU study found Canada's modern treaties increased average incomes of treaty nation members by 17 per cent and increased income of workers living in neighbouring communities by almost nine percent

Government Investments: NRS Sectors



Government Investments: NRS/Economic Sector Summary

Sector	2014/15 Actuals	2015/16 Estimated
Forestry	\$40m	s.13,s.17
Mining	\$11M	
Release of Assets for Economic Generation (RAEG)	\$7M	
Transportation	\$8M	
Oil and Gas (incl. LNG)	\$42M	
Other	\$47M	
Total	\$155M	

Government Investments by NRS/Economic Function

Function	2014/15 Actuals	2015/16 Estimated
Economic Development	\$74M	s.13,s.17
RAEG	\$7M	
Socio-cultural/Skills Training	\$8M	
Treaty	\$16M	
Capacity	\$21M	
Negotiations Support	\$15M	
Other	\$14M	
Total	\$155M	

Government Investments: PSE and Skills

AVED, JTST, and SDSI together spend approximately \$17M annually to support increased access and better outcomes for Aboriginal post-secondary students; various skills and trades training and employment readiness programs for aboriginal students; Job Creation Partnerships; and, individual employment supports & services.

- Outcome: Aboriginal unemployment rates dropped from 22.5% in 2001 to 16.4% in 2011 (compared to 7.4% for non-Aboriginal)

Government Investments: K-12

Education is spending approximately ^{s.13,s.17} annually to support Aboriginal language and culture programs, Aboriginal support service programs, and other locally developed Aboriginal education programs in schools.

- Outcome: Aboriginal high school completing rate increased from 47% in 2006 to 60% in 2012 (compared to 86% for non-Aboriginal)

Government Investments: Children, Families and Communities

s.13,s.16,s.17

Outcomes:

- Aboriginal youth in custody (per 10,000) dropped from 20 in 2006/07 to 9 in 2014/15 (compared to one for non-Aboriginal)
- The suicide rate for Aboriginal youth is four times higher than that for non-Aboriginal youth but the gap is slowly narrowing
- Aboriginal children in care (ages 0-18) per 1,000 dropped from 63.1 in Sept. 2006 to 55.4 in Sept. 2015 (compared to 3.6 for non-Aboriginal)
- Aboriginal infant mortality dropped from 8.7 per 1,000 births in 2001/05 to 7.2 in 2011 (compared to 3.5 for non-Aboriginal)

Government Investments: Social Programs Summary

Sector	2014/15 Actuals	2015/16 Estimated
Children and Families	\$136M	s.13,s.17
Education (incl. PSE)	\$79M	
Training/Employment	\$44M	
Health	\$33M	
Community	\$6M	
Justice	\$7M	
Total	\$305M	

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s.16;s.13;s.17

Overall Outcomes

- Government's Aboriginal investments are resulting in stronger economic growth in First Nations communities and, by enabling major resource projects to proceed, are driving economic growth and job creation across BC
- Mines, timber harvesting and other resource activities associated with First Nation revenue sharing agreements would not have occurred without these agreements
 - And revenue sharing agreements are affordable because benefits are linked to incremental new provincial revenues – if the Province does not receive incremental revenues, First Nations do not receive benefits

Page 020

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s.14;s.16;s.13

Going Forward

- Engage with federal government to take on a greater investment share:
 1. ensure they maintain their commitments to increase social funding for First Nations and close socio-economic gaps, thereby reducing fiscal pressures on BC
 2. have them support non-treaty agreements and LNG initiatives such as ESI and skills training
 3. build their support for BC's proposed focus tables strategy to treaty negotiations

Going Forward (cont'd)

- In making Aboriginal investments, focus on:
 - affordability to government
 - economic development, job creation and investment certainty
 - NRS business planning / prioritization effort
 - addressing future labour market needs/shortages
 - reducing significant economic / social outcomes gaps
 - First Nations becoming more self-sustaining

s.13,s.16

- measurable outcomes

s.13,s.16

Page 023 to/à Page 040

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DUPLICATE

Barlow, John ENV:EX

From: Shiff, Alexander ENV:EX
Sent: Monday, April 11, 2016 5:22 PM
To: Scott, Heidi ENV:EX
Subject: FOI records re: Lelu Island

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Here are my responsive records for the Lelu Island FOI.

Thanks,

Alex Shiff

Executive Assistant to the Hon. Mary Polak
Minister of Environment
Ph: [\(250\) 387-1187](tel:2503871187) | E: Alex.Shiff@gov.bc.ca

From: Carr, Michelle EAO:EX
Sent: Monday, March 14, 2016 4:26 PM
To: Kapac de Frias, Martina E ENV:EX
Cc: Craven, Paul EAO:EX; Braun, Nathan EAO:EX; Shiff, Alexander ENV:EX; Knudsen, Mark ENV:EX; Loiacono, Sabrina EAO:EX
Subject: Heads up: PGRT Challenge
Importance: High

Hi, Martina.

Please see article below. We were asked to provide some bullets to MNGD. Here are the bullets from an EA perspective. I'll let you know if I hear anything more.

Michelle

- The Prince Rupert Gas Transmission Project (PRGT) is owned by Prince Rupert Gas Transmission Ltd., which is wholly owned by TransCanada Corp.
- On Feb. 18, 2016, the Federal Court of Appeal granted leave for an application for judicial review of the National Energy Board determination that the PRGT project did not require a federal National Energy Board (NEB) decision.
- PRGT was issued a provincial environmental assessment (EA) certificate on November 25, 2014 and has been working to fulfill EA certificate requirements. Pipeline permits have been issued by the Oil and Gas Commission.
- A federal environmental assessment was not required under the Canadian Environmental Assessment Act or by National Energy Board Act.
- The Province is aware of legal challenge presented by Mr. Mike Sawyer. This challenge is specific to whether or not the NEB was required to undertake an environmental assessment for PRGT, and does not impact the provincial EA decision, although there could be implications for the construction of the project, should the Federal Court determine that a NEB decision is required.

- The purpose of PRGT would be to provide natural gas to Petronas' Pacific Northwest LNG facility. It would receive natural gas from the North Montney Mainline Project. North Montney received approval from NEB in April 2015, and, following a recent BC Supreme Court decision, now requires a provincial environmental assessment certificate prior to proceeding.
- Any decision rendered by the Federal Court may have implications for other intra-provincial pipelines; EAO is working with MNGD to identify whether there are other pipelines with similar circumstances.
- If judicial review were to be successful the NEB would need to determine appropriate process for review under the NEB Act.
- The next step is for Mr. Sawyer to file a notice of appeal.

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DUPLICATE

Barlow, John ENV:EX

From: Pougnet, Jennifer ENV:EX
Sent: Monday, July 13, 2015 11:10 AM
To: Scott, Heidi ENV:EX
Cc: Kapac de Frias, Martina E ENV:EX; Petryshyn, Yarko SBRT:EX
Subject: FW: Bill 30 - The LNG Project Development Agreement Enabling Act
Attachments: Bill 30 - The LNG Project Development Agreement Enabling Act - Final.docx

They are here!!

From: Olson, Marissa [<mailto:Marissa.Olson@leg.bc.ca>]
Sent: Monday, July 13, 2015 11:07 AM
Subject: Bill 30 - The LNG Project Development Agreement Enabling Act

*** This message has been sent directly to Government MLAs, MAs, EAs and Caucus staff ***

Good Morning,

Please find attached the final copy of the speaking notes for Bill 30 (*The LNG Project Development Agreement Enabling Act*), which will be up for second reading debate this afternoon.

Thanks for your patience,

Marissa Olson
Acting Executive Assistant to the Government Caucus Whip
Legislative Assistant
Eric Foster MLA, Vernon-Monashee
Doug Horne MLA, Coquitlam-Burke Mountain
Linda Larson MLA, Boundary-Similkameen

Room 243 | Parliament Buildings | Victoria | British Columbia | V8V 1X4
Phone: 250-387-5736/250-356-6546 | Fax: 250-356-0596

Barlow, John ENV:EX

From: Knudsen, Mark ENV:EX
Sent: Friday, March 18, 2016 6:38 PM
To: Polak, Mary ENV:EX; Kapac de Frias, Martina E ENV:EX
Subject: FW: CHAN: Conditional LNG support

FYI

s.3

Barlow, John ENV:EX

From: Chin, Ben PREM:EX
Sent: Wednesday, February 10, 2016 2:21 PM
To: Crebo, David GCPE:EX; Woolley, Paul GCPE:EX
Cc: Kapac de Frias, Martina E ENV:EX; Myers, Tobie A MNGD:EX
Subject: Fw:

FYI...from PNW

Ben Chin
Executive Director
Communications and Issues Mgmt
Office of Premier Christy Clark
250-588-3113

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Spencer Sproule
Sent: Wednesday, February 10, 2016 2:17 PM
To: Chin, Ben PREM:EX
Subject:

KEY MESSAGES FOR YOUR CONSIDERATION:

- We are currently reviewing the draft report and the conditions attached. It's important to take our time on the report before getting into specifics on the report itself.
- Pacific NorthWest LNG has been committed to protecting the marine environment in and around Lelu Island from day one.
- The exhaustive scientific work done to-date has been independently assessed by scientists from the Government of Canada. Our conclusions, that Pacific NorthWest LNG will not impact Flora Bank and the livelihood of the Skeena River salmon fishery have been confirmed by the Government of Canada.
- Our work with the community and First Nations doesn't stop here. We'll continue to solicit input about our project and strive to incorporate that input into our project design and ongoing operations.
- We encourage all those who have an opinion about our project to submit their comments to the Canadian Environmental Assessment Agency during the comment period.

IF PRESSED ON GHG ACCOMPANYING REPORT:

- The Government of Canada has been clear that they will consider greenhouse gas emissions from major projects will inform their deliberations.
- We agree with Prime Minister Trudeau that Canada has to do its part to limit GHG's.
 - o Our facility will displace heavier emitting power generation in Asia by supplying clean LNG to their domestic markets.

o In fact, if our projects exports were to replace coal or oil burning power generation, it would represent a significant net reduction

- Pacific NorthWest LNG took the time and effort to carefully choose the technology for liquefying natural gas.

o The result, we believe, will lead to one of the worlds cleanest and most efficient LNG facilities in the world.

- PNW LNG and the Government of BC are continuing to work together in a collaborative fashion as we move forward on the facility itself and upstream operations.

Spencer Sproule

Senior Advisor, Corporate Affairs

C: 604.828.7680



CANADIAN ENERGY. GLOBAL REACH.

Oceanic Plaza, Suite 1900
1066 West Hastings Street
Vancouver, BC V6E 3X1

www.PacificNorthWestLNG.com

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Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Wednesday, February 10, 2016 8:43 PM
To: Polak, Mary ENV:EX
Subject: Fwd: CP News: Concerns raised over LNG proposal over predicted greenhouse gas emissions

FYI

Begin forwarded message:

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Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Wednesday, March 9, 2016 5:54 AM
To: Knudsen, Mark ENV:EX
Subject: Fwd: FYI: PNW Media Call - CBC Radio Prince Rupert
Attachments: Scientific_Flaws_CEEA_distribution_final_distribution.pdf; ATT00001.htm

FYI from CEEA.

Begin forwarded message:

From: Walls,Lisa [CEAA] [mailto:Lisa.Walls@ceaa-acee.gc.ca]
Sent: Tuesday, March 8, 2016 3:47 PM
To: Coley, Simon J JAG:EX; Carr, Michelle EAO:EX
Subject: PNW Media Call - CBC Radio Prince Rupert
Importance: High

Hi Simon and Michelle,

We received a media call from CBC Radio Prince Rupert seeking CEEA's views on a letter from Dr. Jonathan Moore regarding CEEA's draft environmental assessment report on the PNW LNG Project. The reporter provided a copy of the letter and indicated that Dr. Moore will be joining them tomorrow morning. I am forwarding the letter and our response, as a heads up.

Lisa Walls

Regional Director | Directrice régionale

Canadian Environmental Assessment Agency | Agence canadienne d'évaluation
environnementale

Media Call

Name of Reporter: George Baker

Media Outlet: CBC Radio Prince Rupert

Project: Pacific NorthWest LNG Project

Questions:

Dr. Jonathan Moore will be joining us tomorrow morning to talk about what he says are flaws in CEEA's draft EA Report. I have provided the letter to you in hopes of response.

Response:

The Government of Canada is committed to conducting high-quality, thorough and science-based environmental assessments that are fair, transparent and that take into account the views of Canadians and Indigenous Peoples. Consistent with the interim approach and principles for environmental assessments, this project has benefitted from a science-based review and several public and Indigenous comment periods, including an assessment of greenhouse gas emissions.

The Canadian Environmental Assessment Agency is currently conducting public consultation on its report for the Pacific NorthWest LNG Project in B.C. until March 11, 2016 and all comments and studies related to the environmental assessment will be considered. This includes over 10,000 public comments and new information just provided to us by the proponent. The Agency welcomes any comments submitted by Dr. Jonathan Moore and will take these comments into consideration as the environmental assessment report is finalized.

Environmental assessments ensure projects are carefully considered to protect the environment while supporting our natural resources sector. As part of the federal environmental assessment for the Project, the Agency has diligently examined the potential impacts of the project on fish and fish habitat, in collaboration with experts from Fisheries and Oceans Canada and Natural Resources Canada. The assessment included a detailed examination of the potential effects on Flora Bank, marine fish species and cumulative effects, with the aim to prevent or mitigate these potential effects.

In addition, if the Project is ultimately allowed to proceed to the permitting phase, mitigation measures to protect salmon habitat within Flora Bank and the Skeena River estuary, identified during the federal environmental assessment, would be developed into legally-binding conditions. The proponent would have to comply with these conditions throughout the life of the Project.

Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Tuesday, January 26, 2016 9:31 AM
To: Polak, Mary ENV:EX
Subject: Fwd: HEADS UP

FYI.

Begin forwarded message:

From: "Loiacono, Sabrina EAO:EX" <Sabrina.Loiacono@gov.bc.ca>
Date: January 26, 2016 at 8:59:58 AM PST
To: "Kapac de Frias, Martina E ENV:EX" <Martina.KapacdeFrias@gov.bc.ca>
Cc: "Knudsen, Mark ENV:EX" <Mark.Knudsen@gov.bc.ca>, "Jardine, Kevin EAO:EX" <Kevin.Jardine@gov.bc.ca>
Subject: HEADS UP

Hi Martina,

I received a call from CEAA asking who the COS was in MOE. You might be receiving a phone call or an email from Minister McKenna's COS. From what I pieced together it was about this article.

Sorry I don't have more. They also asked who MRC COS was. Can you give Tobie a heads up or would you like me to?

s.3

Page 057

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s.3

Sabrina Loiacono

*Manager- Executive Operations
Environmental Assessment Office
Ministry of Environment
Government of British Columbia
250-356-7475*



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Barlow, John ENV:EX

From: Crebo, David GCPE:EX
Sent: Wednesday, March 9, 2016 12:44 PM
To: Kapac de Frias, Martina E ENV:EX; Knudsen, Mark ENV:EX; Shiff, Alexander ENV:EX
Subject: Fwd: km_CEEA PNW report (ENV)_update March 9 (4) (3)
Attachments: km_CEEA PNW report (ENV)_update March 9 (4) (3).docx; ATT00001.htm

Dave Crebo
Communications Director
Ministry of Environment
(250) 812-5747 (cell)

Begin forwarded message:

From: "Woolley, Paul GCPE:EX" <Paul.Woolley@gov.bc.ca>
Date: March 9, 2016 at 12:39:32 PM PST
To: "Koolsbergen, Nick GCPE:EX" <Nick.Koolsbergen@gov.bc.ca>, "Crebo, David GCPE:EX" <David.Crebo@gov.bc.ca>
Subject: km_CEEA PNW report (ENV)_update March 9 (4) (3)

Few more changes.

From: Kapac de Frias, Martina E ENV:EX
Sent: Wednesday, November 11, 2015 6:06 PM
To: Crebo, David GCPE:EX; Karn, David GCPE:EX
Subject: Fwd: Media Report for Tuesday, November 10, 2015

see mmpps notes below, thanks, m

Begin forwarded message:

From: "Polak, Mary ENV:EX" <Mary.Polak@gov.bc.ca>
Date: November 10, 2015 at 6:57:47 PM PST
To: "Kapac de Frias, Martina E ENV:EX" <Martina.KapacdeFrias@gov.bc.ca>
Cc: "Denniston, Tristan M ENV:EX" <Tristan.Denniston@gov.bc.ca>
Subject: Fwd: Media Report for Tuesday, November 10, 2015

We should look to accommodate the first one.

On the second one - we should consider not including the third bullet. I think it just muddies the water

Sent from my iPad
Begin forwarded message:

From: "Karn, David GCPE:EX" <David.Karn@gov.bc.ca>
Date: November 10, 2015 at 4:28:21 PM PST
Subject: Media Report for Tuesday, November 10, 2015

Media Report for Tuesday, November 10, 2015

Awaiting M.O. approval

Vice Media (Hazel Cho, Producer – Rise) Deadline: Nov 24

Request: Seeking interview with MMP regarding Mt Polley First Nations. part of a documentary series about how the BC government is working with First Nations communities toward reconciliation, consultation, and resource development. Specifically, we are interested in the Mount Polley spill and the ministry's relationship with the Secwepemc Nation, which will be a focus within the episode. We understand the Ministry of Environment's objective is to provide continual environmental monitoring, impact assessment, mitigation, and remediation of the area impacted as a result of the Mount Polley Mine tailings breach, and is working closely with First Nations, local governments, provincial and federal agencies, and public representatives.

We would like to showcase the Ministry's proactive stance toward improving relations with First Nations and believe that an interview with Mary Polak - Minister of Environment, will be key to reflecting this position.

ECOREport (Roy Hales) - Friends of the Earth will soon be releasing statistics showing that if all the proposed oil, coal & LNG projects go forward, an estimated 5,300 new

fossil fuel "transits" could be passing through the strait of Juan de Fuca every year. (Turns out there were 12,394 in 2013). This is both US and Canadian traffic.

Suggested response:

1. There have been many small spills of coal, oil and other fossil fuels. Has there ever been a major spill?

2. Has a vessel transporting fossil fuels (barge or tanker) been involved in any incident?

- The 1988 Nestucca spill which occurred in the waters off of Washington State resulted in impacts along the west coast of Vancouver Island as far north as the Scott Islands. This incident involved a tug boat towing an oil transport barge. This incident precipitated the formation of the province's environmental emergency program and the formation of the Pacific States/British Columbia Oil Spill Task Force.
- Ship source spill response primarily falls under Federal jurisdiction and the Province is primarily responsible for spills that impact terrestrial environment, including inland water bodies and coastal shorelines, regardless of the source. Ministry of Environment is the lead provincial agency for all spills affecting the province and works with the spiller, lead federal agencies, and impacted local governments and First Nations to coordinate and manage the response to spills.
- Between 2005 and 2012, an average of 3500 land-based spills were reported annually and responded to in some capacity by Environmental Emergency Response Officers of the Ministry of Environment's Environmental Emergency Program who are located strategically around the Province. At least 13 of these incidents were considered major hazardous material spills, 9 of which were fossil fuels.

3. Please comment on the increased probability of a major spill?

- Increased economic development means an increase in hazardous materials being moved across the province which comes with an increased risk of a spill.
- It is with that recognition that the ministry has identified improving spill response capacity and capability as a priority and the Premier has indicated that need for both a world leading spill regime to protect the province as part of the 5 conditions for provincial support of increased movement of heavy oil in the province.

4. Are we ready to handle a major spill?

- The Province recognizes there is additional work required by the Province, Federal Agencies and industry to ensure that a world leading regime is in place to handle any major spill event.
- In June 2015, B.C. announced plans for the creation of a world-leading provincial spill regime. Government intends to introduce the new legislation in spring 2016. The new regime, including detailed regulations, is expected to be in place beginning in 2017. Many of the proposed requirements would apply equally to spills into or affecting the marine environment. Examples include spill reporting, restoration, notification, and geographic response plans.
- We envision setting standards in both the land and marine environments which will help close the gaps with respect to spill response in the marine environment. For example, if we propose standards for spill response times in the marine environment that are more stringent than Transport Canada's, we can require the spiller to take immediate action and activate the Provincial Response Organization immediately.
- In 2013, the Province commissioned Nuka Research, to assess current marine spill preparedness and response capabilities for B.C.'s coastline. These studies lay the

foundation for building a world-leading regime for marine spills; we will use it in our discussions with the federal government as we work together on next steps. The study can be found here: <http://www.env.gov.bc.ca/main/west-coast-spill-response-study/>

Today's calls

Globe and Mail (Justine Hunter) – seeking stories on South Okanagan Park, Lelu Island, Karst cave protection.

GCPE responded and referred to FLNRO

CTV (Peter Grainger) Global (Ted Field) - about dead pythons found by mountain bikers just off Mount Seymour parkway in North Van.

COS Stg Todd Hunter responded

CTV (Scott Weston) - seeking on-camera interview w CO in the Campbell River area this morning at the location of the carcasses.

It is reported there are multiple bear carcasses found across from a Timberwest Log Sort and it includes the remains of a baby bear.

COS responded

Infotel News (John MacDonald) - seeking an interview with COS about the bear season in general. It seems CO's were quite a bit busier this year than last.

COS responding

Previous calls completed

CBC (Kiran Dhillon) - reporter asking who regulates marine vessel GHG emissions.

GCPE responded

- The federal government's jurisdiction to regulate shipping includes the jurisdiction to regulate emissions from ships and boats, including sewage, oil and ballast water discharges.
- B.C. monitors GHG's from marine vessels that are fuelled domestically in B.C. In 2013, marine vessels made up only 3% of BC's emissions from the transportation sector.

Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Friday, March 18, 2016 11:52 AM
To: Polak, Mary ENV:EX
Subject: Fwd: PNW

FYI

Begin forwarded message:

From: "Jardine, Kevin EAO:EX" <Kevin.Jardine@gov.bc.ca>
Date: March 18, 2016 at 11:47:15 AM PDT
To: "Carr, Steve PREM:EX" <Steve.Carr@gov.bc.ca>, "Cadario, Michele PREM:EX" <Michele.Cadario@gov.bc.ca>, "Chin, Ben PREM:EX" <Ben.Chin@gov.bc.ca>
Cc: "Nikolejsin, Dave MNGD:EX" <Dave.Nikolejsin@gov.bc.ca>, "Kapac de Frias, Martina E ENV:EX" <Martina.KapacdeFrias@gov.bc.ca>
Subject: Fwd: PNW

Here's the exact wording. Note that the Condition 1 of our certificate references their management plan as detailed in the Application. The specific references to night time activities are found in the Application.

I'll draft a second note (I sent this to them a week ago). back to CEAA making it clear that we always knew that construction activities - both terrestrial and marine - were planned for 24/7 operations for the entire construction period.

Rgds,
K.
250-361-6753

*sent from my iPhone. please excuse any inadvertent spelling or grammatical errors.

Summary Response:

- The Application references night time construction activities and specifically identifies limiting noise
- There are other noise and light mitigations committed to in proponent provided mitigation lists and management plans they committed to
- There are no restrictions set out in the Certified Project Description or the Table of Conditions regarding night time construction, but there are conditions that relate to effects and activities that could occur at night:
 - Provincial Condition # 1 Requires the Certificate Holder to develop management plans as they committed to in the

Application. This includes a Noise, Vibration and Ambient Light Vibration Management Plan that explicitly references restrictions to night time operations

- o Provincial Condition #7 Requires the maintenance of a 30 M buffer around Lelu Island, which has a number of objectives, including mitigation of noise and light (though not explicit to night time operations)

Below is more detail.

**A) FROM TABLE IN APPLICATION – THE MANAGEMENT PLANS NOTED
BELOW ARE REQUIRED UNDER PROVINCIAL CONDITION #1**

http://a100.gov.bc.ca/appsdata/epic/documents/p396/d37423/1395766333986_4c3e62c6c9b21ab36431891ca349aaa232612bd636fdc3a890dfb7d030c90064.pdf

Acoustic Environment –

EFFECT: Increase in noise levels

MITIGATIONS:

♣ Nighttime construction activity will be limited to low noise activities (no impact type pile driving or blasting activities).

♣ All construction equipment with gas or diesel engines will be fitted with a muffler system (alternatives such as hydraulic or electric

controlled units will be considered where feasible).

♣ If diesel power generators are required, enclosed units equipped with ventilation, combustion air inlet, and gas exhaust silencers will

be considered. The provision of electrical power supplied by the BC Power and Hydro Authority to the construction site on Lelu Island

is under consideration and may replace the need for on-site diesel power.

♣ Vibro-hammer piling equipment will be used where conditions permit for piling operations.

♣ Equipment enclosure doors will be kept closed when not in use.

♣ Exhaust vents will be equipped with commercially available silencers.

♣ Large machinery such as gas turbine generators and refrigerant compressors will be located in enclosure with minimum acoustic

sound transmission loss rating.

♣ Inlet and exhaust silencers will be installed on gas turbines if required to meet regulatory limits.

♣ Acoustic performance of noise emission equipment will be specified to manufacturers or suppliers (not exceeding 85 dBA at 1 m from

equipment and 120 dBA for emergencies).

♣ A Noise Management Plan will be implemented.

♣ A policy will be implemented to keep windows and doors closed when not in use.

♣ A noise complaint mechanism will be implemented to address any noise complaints in a timely manner.

Ambient Light –

EFFECT: Increase in ambient lighting

MITIGATIONS:

♣ Retain a 30 m mature vegetation buffer around Lelu Island to reduce effects of increased light. – PROVINCIAL CONDITION #7 REQUIRES THIS 30M BUFFER

♣ Construction lighting and operational lighting to be selected to reduce spill-over light and will include shielded fixtures, where

appropriate.

♣ Design principles (such as those within the Canada Green Building Council LEED guidelines (LEED 2004) and the International

Commission on Illumination (CIE 2003)) will be used where applicable and consistent with overarching requirements of safety and

security

♣ A centralized lighting control system will be used to selectively turn off lights when not required.

B) FROM MANAGEMENT PLAN DESCRIPTIONS IN APPLICATION – the FOLLOWING MANAGEMENT PLAN IS REQUIRED UNDER PROVINCIAL CONDITION #1

http://a100.gov.bc.ca/appsdata/epic/documents/p396/d37423/1395766105344_4c3e62c6c9b21ab36431891ca349aaa232612bd636fdc3a890dfb7d030c90064.pdf

24.4.2 Noise, Vibration, and Ambient Light Management Plan

The Noise, Vibration, and Ambient Light Management Plan will be developed to reduce noise and

light effects on the surrounding environment. Noise, vibration, and light will result from blasting, pile

driving, and general facility operations. Mitigation measures will be implemented to reduce effects on

local communities and wildlife.

Noise and vibration will be reduced by implementing best practice strategies from regulatory

directives and international guidelines. These mitigation measures will require short- and long-term

monitoring, with regular reporting to address noise complaints or compliance issues. Mitigation

strategies will include specific instructions to reduce and muffle noise caused by machinery during

construction and operations. Equipment that emits noise and vibrations will be calibrated to perform

using manufacturer specifications, and construction will occur during predetermined daytime hours.

Nighttime activities will be limited to lower noise activities.

Lighting may be required throughout the day, depending on daytime ambient light levels, and at night

during construction and operations of the Project and this may affect wildlife habitat, behaviour, and

movement. Directional lighting and motion-activated security lighting will be implemented to reduce

light pollution and effects on local residents during construction. During operations, facility luminaries

will be selected to reduce wasted light, allow for light level control, and actively turn off lights when

not required. These guidelines will be designed following the goals provided in the Canada Green

Building Council Leadership in Energy and Environmental Design (LEED) guidelines.

Barlow, John ENV:EX

From: Jardine, Kevin EAO:EX
Sent: Friday, March 18, 2016 11:47 AM
To: Carr, Steve PREM:EX; Cadario, Michele PREM:EX; Chin, Ben PREM:EX
Cc: Nikolejsin, Dave MNGD:EX; Kapac de Frias, Martina E ENV:EX
Subject: Fwd: PNW

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http://a100.gov.bc.ca/appsddata/epic/documents/p396/d37423/1395766333986_4c3e62c6c9b21ab36431891ca349aaa232612bd636fdc3a890dfb7d030c90064.pdf

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EFFECT: Increase in ambient lighting

MITIGATIONS:

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not required. These guidelines will be designed following the goals provided in the Canada Green

Building Council Leadership in Energy and Environmental Design (LEED) guidelines.

Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Thursday, March 17, 2016 7:07 AM
To: Polak, Mary ENV:EX
Cc: Knudsen, Mark ENV:EX; Shiff, Alexander ENV:EX
Subject: Fwd: TNO: LNG terminal decision to go to cabinet - Iain Marlow - Globe and Mail

FYI

Begin forwarded message:

s.3

Page 072

Withheld pursuant to/removed as

s.3

Barlow, John ENV:EX

From: Crebo, David GCPE:EX
Sent: Wednesday, March 9, 2016 7:13 AM
To: Kapac de Frias, Martina E ENV:EX; Shiff, Alexander ENV:EX; Knudsen, Mark ENV:EX
Cc: Murphy, Bernadette GCPE:EX
Subject: Fwd:
Attachments: KM_Pacific NorthWest LNG_Science & Safety_CEEA_Jan 18 2016.docx; ATT00001.htm

NGD's messaging re: scientific rigour of PNW assessment.

Dave Crebo
Communications Director
Ministry of Environment
(250) 812-5747 (cell)

Begin forwarded message:

From: "Woolley, Paul GCPE:EX" <Paul.Woolley@gov.bc.ca>
Date: March 9, 2016 at 6:48:43 AM PST
To: "Koolsbergen, Nick GCPE:EX" <Nick.Koolsbergen@gov.bc.ca>, "Crebo, David GCPE:EX" <David.Crebo@gov.bc.ca>

We'll review our lines in the context of the letter, but they appear to still hold up.

Sent from my BlackBerry 10 smartphone on the TELUS network.

Barlow, John ENV:EX

From: Carr, Michelle EAO:EX
Sent: Tuesday, March 8, 2016 3:55 PM
To: Jardine, Kevin EAO:EX; Loiacono, Sabrina EAO:EX; Kapac de Frias, Martina E ENV:EX
Subject: FYI: PNW Media Call - CBC Radio Prince Rupert
Attachments: Scientific_Flaws_CEEA_distribution_final_distribution.pdf

Importance: High

FYI

From: Walls, Lisa [CEAA] [<mailto:Lisa.Walls@ceaa-acee.gc.ca>]
Sent: Tuesday, March 8, 2016 3:47 PM
To: Coley, Simon J JAG:EX; Carr, Michelle EAO:EX
Subject: PNW Media Call - CBC Radio Prince Rupert
Importance: High

Hi Simon and Michelle,

We received a media call from CBC Radio Prince Rupert seeking CEAA's views on a letter from Dr. Jonathan Moore regarding CEAA's draft environmental assessment report on the PNW LNG Project. The reporter provided a copy of the letter and indicated that Dr. Moore will be joining them tomorrow morning. I am forwarding the letter and our response, as a heads up.

Lisa Walls
Regional Director | Directrice régionale
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale

Media Call

Name of Reporter: George Baker

Media Outlet: CBC Radio Prince Rupert

Project: Pacific NorthWest LNG Project

Questions:

Dr. Jonathan Moore will be joining us tomorrow morning to talk about what he says are flaws in CEAA's draft EA Report. I have provided the letter to you in hopes of response.

Response:

The Government of Canada is committed to conducting high-quality, thorough and science-based environmental assessments that are fair, transparent and that take into account the views of Canadians and Indigenous Peoples. Consistent with the interim approach and [principles](#) for environmental assessments, this project has benefitted from a science-based review and several public and Indigenous comment periods, including an assessment of greenhouse gas emissions.

The Canadian Environmental Assessment Agency is currently conducting public consultation on its report for the Pacific NorthWest LNG Project in B.C. until March 11, 2016 and all comments and studies related to the environmental assessment will be considered. This includes over 10,000 public comments and new information just provided to us by the proponent. The Agency welcomes any comments submitted by Dr. Jonathan Moore and will take these comments into consideration as the environmental assessment report is finalized.

Environmental assessments ensure projects are carefully considered to protect the environment while supporting our natural resources sector. As part of the federal environmental assessment for the Project, the Agency has diligently examined the potential impacts of the project on fish and fish habitat, in collaboration with experts from Fisheries and Oceans Canada and Natural Resources Canada. The assessment included a detailed examination of the potential effects on Flora Bank, marine fish species and cumulative effects, with the aim to prevent or mitigate these potential effects.

In addition, if the Project is ultimately allowed to proceed to the permitting phase, mitigation measures to protect salmon habitat within Flora Bank and the Skeena River estuary, identified during the federal environmental assessment, would be developed into legally-binding conditions. The proponent would have to comply with these conditions throughout the life of the Project.

Barlow, John ENV:EX

From: Carr, Michelle EAO:EX
Sent: Monday, March 14, 2016 4:26 PM
To: Kapac de Frias, Martina E ENV:EX
Cc: Craven, Paul EAO:EX; Braun, Nathan EAO:EX; Shiff, Alexander ENV:EX; Knudsen, Mark ENV:EX; Loiacono, Sabrina EAO:EX
Subject: Heads up: PGRT Challenge
Importance: High

Hi, Martina.

Please see article below. We were asked to provide some bullets to MNGD. Here are the bullets from an EA perspective. I'll let you know if I hear anything more.

Michelle

- The Prince Rupert Gas Transmission Project (PRGT) is owned by Prince Rupert Gas Transmission Ltd., which is wholly owned by TransCanada Corp.
- On Feb. 18, 2016, the Federal Court of Appeal granted leave for an application for judicial review of the National Energy Board determination that the PRGT project did not require a federal National Energy Board (NEB) decision.
- PRGT was issued a provincial environmental assessment (EA) certificate on November 25, 2014 and has been working to fulfill EA certificate requirements. Pipeline permits have been issued by the Oil and Gas Commission.
- A federal environmental assessment was not required under the Canadian Environmental Assessment Act or by National Energy Board Act.
- The Province is aware of legal challenge presented by Mr. Mike Sawyer. This challenge is specific to whether or not the NEB was required to undertake an environmental assessment for PRGT, and does not impact the provincial EA decision, although there could be implications for the construction of the project, should the Federal Court determine that a NEB decision is required.
- The purpose of PRGT would be to provide natural gas to Petronas' Pacific Northwest LNG facility. It would receive natural gas from the North Montney Mainline Project. North Montney received approval from NEB in April 2015, and, following a recent BC Supreme Court decision, now requires a provincial environmental assessment certificate prior to proceeding.
- Any decision rendered by the Federal Court may have implications for other intra-provincial pipelines; EAO is working with MNGD to identify whether there are other pipelines with similar circumstances.
- If judicial review were to be successful the NEB would need to determine appropriate process for review under the NEB Act.
- The next step is for Mr. Sawyer to file a notice of appeal.

Page 077 to/à Page 078

Withheld pursuant to/removed as

s.3

Barlow, John ENV:EX

From: Loiacono, Sabrina EAO:EX
Sent: Thursday, February 11, 2016 11:10 AM
To: Knudsen, Mark ENV:EX; Kapac de Frias, Martina E ENV:EX; Bajwa, Raman AVED:EX
Cc: Rollheiser, Kate ENV:EX; Scott, Heidi ENV:EX; Murphy, Bernadette GCPE:EX; Crebo, David GCPE:EX
Subject: IN PNW LNG
Attachments: IN_EAO_Pacific_Northwest_LNG_Federal_Interim_Approach_Prov_EA_11Feb2016.docx

Hi MO,

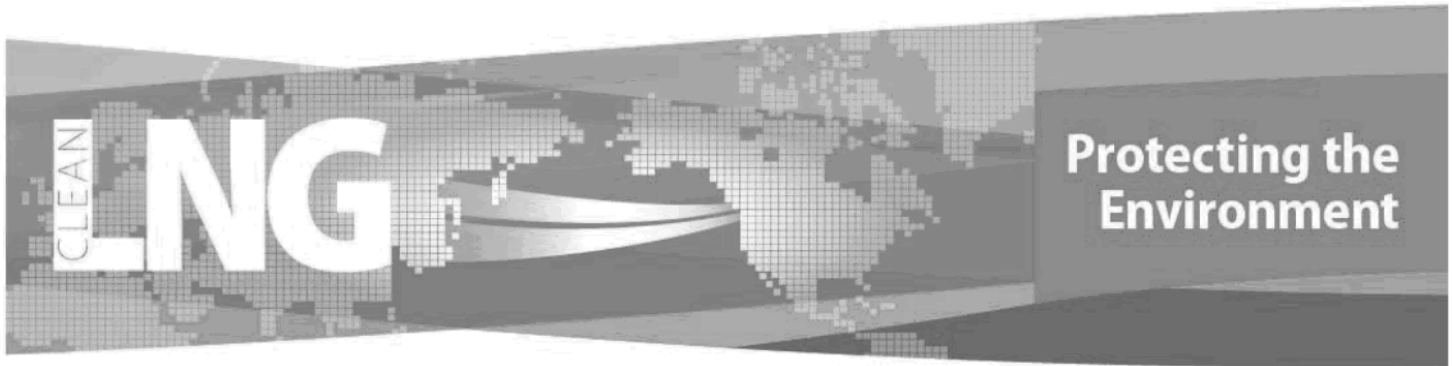
Attached is our IN on PNW LNG. I will add this to the Minister's SharePoint momentarily.

S.

Sabrina Loiacono
*Manager- Executive Operations
Environmental Assessment Office
Ministry of Environment
Government of British Columbia
250-356-7475*



This e-mail is intended only for the person to whom it is addressed (the "addressee") and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use that a person other than the addressee makes of this communication is prohibited and any reliance or decisions made based on it, are the responsibility of such person. We accept no responsibility for any loss or damages suffered by any person other than the addressee as a result of decisions made or actions taken based on this communication or otherwise. If you received this in error, please contact the sender and destroy all copies of this e-mail.



BC Oil & Gas Commission

British Columbia has been a leader in safe, responsible natural gas development for more than 50 years.

The BC Oil and Gas Commission (OGC) is the provincial regulator with responsibilities for overseeing all natural gas operations, including exploration, development, pipeline transportation, and reclamation.

SAFE AND SOUND

- ▶ British Columbia's regulations start with the Oil and Gas Activities Act. The OGC has legislative authority to regulate the natural-gas sector under this act.
- ▶ Regulations are responsive to modern industry practices, public safety and the environment.

EXPERIENCE AND EXPERTISE

- ▶ The OGC has almost two decades of experience regulating all aspects of oil and gas activity. They have over 200 skilled professionals – including geologists, hydrologists, engineers and environmental specialists – overseeing operations in British Columbia. These are the province's experts who understand and regulate the technology and practices used by industry, including hydraulic fracturing.

PERMITTING

- ▶ Industry requires the appropriate permits before any operation can move forward. Reviews are conducted for all industry applications, including LNG facilities.
- ▶ Environmental protection and public safety are important considerations during the review process:
 - There are 23 permits linked to LNG currently approved, and 6 permits under review.

SAFETY FOR A NEW INDUSTRY

- ▶ British Columbia has strict regulatory requirements for LNG facilities in place. These requirements will be enforced by the OGC under the liquefied natural gas facility regulation.
- ▶ This regulation is based on a national standard on LNG production, storage and handling. It sets out rules around hazard analysis, safety and loss-management programs, risk assessment, emergency planning and response. A dedicated team will monitor pipeline and facility operations so issues are rectified immediately.

Benefits to Canada

Employment:

- ▶ *Up to 430,000+ person-years of construction employment*
- ▶ *Up to 114,000+ person-years of annual, operations employment*

Gross Domestic Product:

- ▶ *Construction benefit of up to \$50 billion total*
- ▶ *Up to \$39 billion annually once operations start*

Government Revenue

- ▶ *Total benefit of up to \$5.2 billion during construction*
- ▶ *Annual benefit of up to \$6.4 billion during operations*

EMPLOYMENT

	12 MTPA FTE Person Years		27.5 MTPA FTE Person Years		82 MTPA FTE Person Years	
	Low	High	Low	High	Low	High
Construction (total impact)	35,564	63,785	81,501	146,173	243,021	435,862
Operations (annual impact)	6,330	16,809	14,506	38,521	43,255	114,864

*MTPA – million tonnes per annum

**employment includes direct, indirect and induced jobs

GROSS DOMESTIC PRODUCT (GDP)

	12 MTPA (\$ millions)		27.5 MTPA (\$ millions)		82 MTPA (\$ millions)	
	Low	High	Low	High	Low	High
Construction (total impact)	3,741	7,347	8,572	16,836	25,561	50,201
Operations (annual impact)	1,237	5,804	2,836	13,301	8,455	39,662

GOVERNMENT REVENUE

		12 MTPA (\$ millions)		27.5 MTPA (\$ millions)		82 MTPA (\$ millions)	
		Low	High	Low	High	Low	High
Corporate Income Tax	Construction (total impact)	94	178	215	407	641	1,214
	Operations (annual impact)	525	655	1,203	1,500	3,588	4,473
Goods and Services Tax	Construction (total impact)	17	65	39	148	115	442
	Operations (annual impact)	44	75	101	172	301	513
Personal Income Tax	Construction (total impact)	303	524	694	1,200	2,069	3,580
	Operations (annual impact)	51	208	116	476	346	1,419

*Based on publicly available information from LNG Canada and Pacific NorthWest LNG, key economic and financial benefits for Canada have been extrapolated into three separate scenarios. The single-plant case is based on LNG Canada. Four projects generate the 27.5 MTPA production scenarios. The 82-MTPA scenario assumes two additional projects take final investment decision (FID), plus three plants are expanded beyond initial phase capacity.

**Estimates are based on publicly available information disclosed by LNG proponents and have not been validated or approved by the Province. The information presents indicative and directional ranges for potential federal impacts resulting from development of BC's LNG industry. Details based on information available as of November 27, 2015.

The potential benefits to Canada, under each of these scenarios, are defined by a range (identified highs and lows) for each scenario.

PROJECT CAPACITY

Project	Capacity (MTA)		
	First Phase(s)	Full Build Out	
LNG Canada ¹	12	24	12 MTA Scenario
FortisBC LNG ²	1.5	4	
Woodfibre LNG ³	2	2	27.5 MTA Scenario
PNW LNG ⁴	12	18	
Kitimat LNG ⁵		10	82 MTA Scenario
WCC LNG ⁶		24	

1. Project led by Shell in Kitimat. Assumes 2 LNG trains are operational by 2020. An additional 24 MTA is proposed in subsequent phases

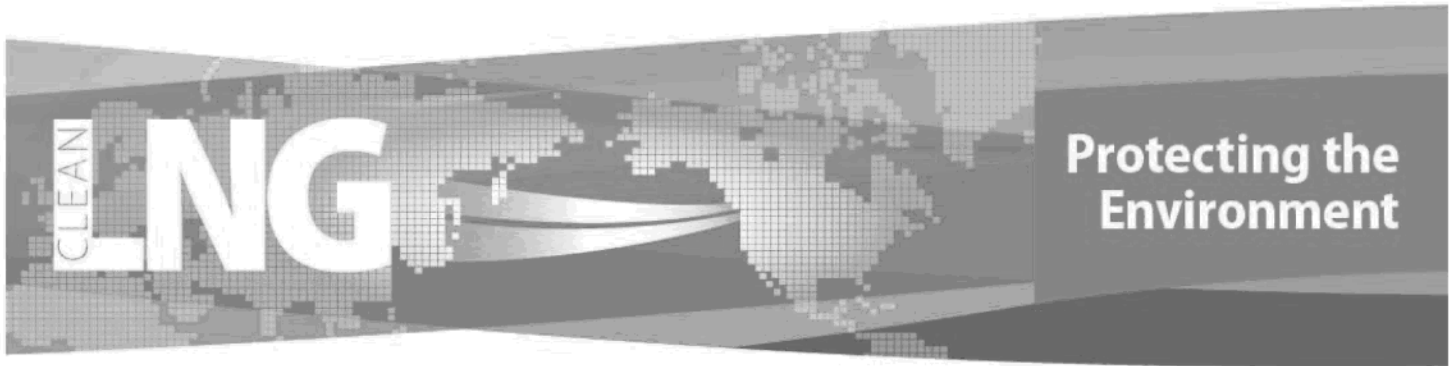
2. Expansions 1A and 1B at the location of the existing LNG facility in Tilbury

3. Based on capacity estimate for the location in Squamish provided by project proponent during pipeline capacity negotiations with FortisBC

4. Project led by Petronas in Prince Rupert. Assumes 2 LNG trains are operational by 2021. An additional 6 MTA is proposed in a subsequent phase

5. Project led by Chevron/Woodside in Kitimat. Assumes 2 LNG trains

6. Project led by Exxon in Prince Rupert. 30 MTA proposed by 2024



World's Cleanest Liquefied Natural Gas Facilities

Since the introduction of our first Climate Action Plan, British Columbia has been recognized as a world leader in addressing climate change. B.C.'s climate leadership guides the development of our liquefied natural gas (LNG) industry. Our approach is not only about reducing emissions. It's designed to benefit both the environment and the economy.

- ▶ The B.C. LNG industry will pay the same carbon tax as other industries in the province. At \$30 per tonne, B.C.'s carbon tax is the highest in North America.
- ▶ In addition, the Greenhouse Gas Industrial Reporting and Control Act (GGIRCA) ensures B.C.'s LNG facilities will be the cleanest in the world.
- ▶ GGIRCA supports competitiveness and also fosters innovative approaches to managing natural gas sector emissions.
- ▶ In consultation with industry, a realistic greenhouse gas (GHG) emissions intensity benchmark for LNG facilities was set at 0.16 carbon dioxide equivalent tonnes for each tonne of LNG produced.
- ▶ This includes all facility GHG emissions (combustion, electricity generation, venting and fugitives) from the point when gas enters a facility to where it is loaded onto a ship or rail car to go to market.
- ▶ Companies whose emissions exceed the cap can still meet the benchmark through flexible options – including purchasing offsets and contributing to a technology fund – that are most effective at meeting the Province's goals while maintaining LNG industry competitiveness.
- ▶ Money from the new technology fund will go towards the development of clean technologies with significant potential to reduce B.C.'s emissions in the long term.
- ▶ In addition, the LNG Environmental Incentive Program provides a pro-rated incentive to companies for achieving the benchmark based on the LNG industry's compliance costs. This ensures the competitive investment environment continues.
- ▶ By encouraging investment in advanced technology and rewarding achievement of world-leading performance, the program will help ensure the development of the cleanest LNG facilities in the world.
- ▶ The public, First Nations and stakeholders were all consulted through the development of the GGIRCA, including regulations.

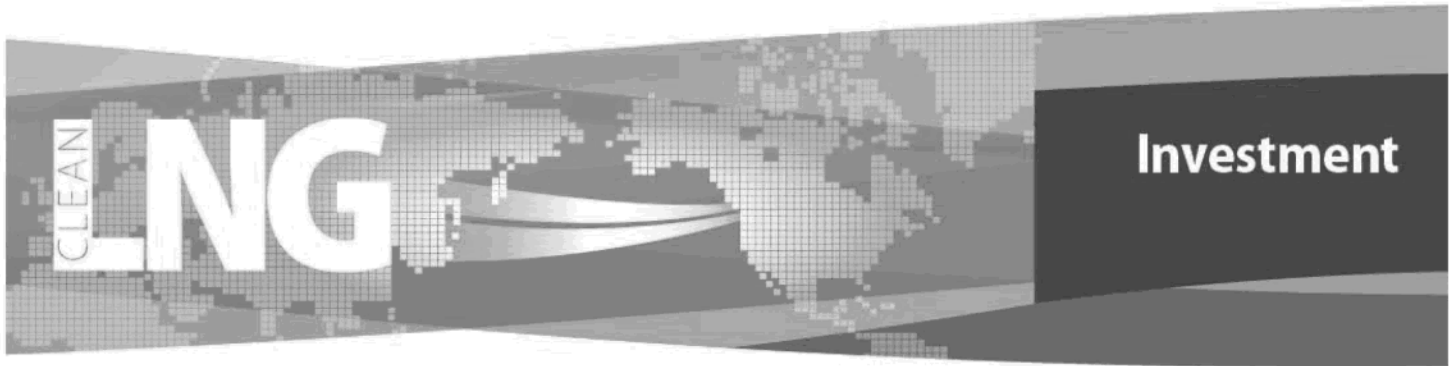




Global benefit of Liquefied Natural Gas

Climate change is a global issue. By supplying the cleanest burning fossil fuel possible, B.C. can contribute to global development and the fight against climate change.

- ▶ As a transition fuel, natural gas will play a strong role in both energy and economic security for several more decades as renewable technologies, energy storage, and smart grid systems evolve.
- ▶ For example, China has set a goal of almost doubling the role of natural gas in its energy portfolio and displacing coal use by 2020.
- ▶ B.C.'s Liquefied Natural Gas (LNG) could play a critical role in helping the country reduce its use of coal-fired electricity.
- ▶ Analysis shows that lifecycle greenhouse gas (GHG) emissions from the production and consumption of B.C. LNG would be more than 20% lower than those from coal produced and consumed in China.
- ▶ The amount of emissions China could avoid, through large-scale use of B.C. LNG, is more than B.C.'s current annual GHG emissions.
- ▶ A recent Bloomberg report states that, in 2014, China's coal consumption dropped 2.9% and GHG emissions fell by 2%.
- ▶ This report demonstrates how switching to lower emission fuels—like B.C. LNG—can lead to lower GHG emissions.



Project Development Agreements: A strong framework for a new B.C. liquefied natural gas industry

Project development agreements (PDAs) provide liquefied natural gas (LNG) proponents with the certainty they need to make long-term plans for doing business in British Columbia communities. PDAs provide proponents with assurances about certain provincial taxation, environmental laws and regulations applicable to LNG facilities.

WHY CREATE PDAS?

Building an LNG facility is a major long-term investment and would represent one of the largest private-sector capital investments in B.C.'s history. In order to make the investment, proponents need the long-term certainty that their investment will be treated fairly and consistently.

A PDA provides outlines how a proponent may be eligible for compensation if they face significant increases in certain LNG-specific taxes or discriminatory greenhouse gas charges during the term of the agreement. A PDA requires the Province to indemnify the proponent for certain losses or expenditure resulting from future changes to:

- ▶ Liquefied Natural Gas Income Tax
- ▶ Natural Gas Tax Credit
- ▶ Carbon Tax (changes must apply exclusively to LNG)
- ▶ Greenhouse Gas Industrial Reporting and Control Act (changes must increase the cost of compliance)

Proponents won't be eligible for compensation unless the increased cost caused by the change exceeds a specific dollar amount threshold defined in the PDA. The amount varies by proponent and project size.

ABOUT THE LIQUEFIED NATURAL GAS PROJECT AGREEMENT ACT

The act provides authority for the B.C. minister of finance to enter into a PDA with LNG proponents. It also defines some key features that must be in a PDA, such as:

- ▶ Threshold above which indemnification applies.
- ▶ Indemnity does not apply until the minister of finance is assured a final investment decision has been reached with respect to the facility.
- ▶ PDA must be made public.
- ▶ Term of the PDA cannot be longer than 25 years from the later of the effective date of the agreement or start of commercial operations.

The Province ratified the Pacific Northwest LNG Project PDA agreement on July 23, 2015.





Liquefied Natural Gas Income Tax Framework

The Liquefied Natural Gas Income Tax Act applies to the net income from liquefaction activities at a liquefied natural gas (LNG) facility in B.C. The LNG income tax is separate from the federal income tax and B.C. corporate income tax.

B.C. has taken a phased approach to LNG taxation to allow proponents to build a strong foundation in the communities where they operate before the full extent of the tax is applied. This also ensures guaranteed revenue flow for the next generation of British Columbians.

CONSTRUCTION PHASE

Operating losses and capital investment costs may be accumulated during construction of an LNG facility. Costs incurred during this phase are deductible if they were incurred to earn income from liquefaction activities in future years.

LNG START-UP PHASE

A minimum tax rate of 1.5% applies to net operating income (revenue less expenses less investment deduction allowance) during the period when net operating losses and capital investment costs are being recovered.

INITIAL INVESTMENT DEDUCTED

Once operating losses and capital investment costs have been fully deducted, the LNG income tax rate on net income will be 3.5%, effective for taxation years beginning on or after Jan. 1,

2017. The minimum tax paid at the rate of 1.5% during the start-up phase is creditable against the 3.5% tax. In 2037, the LNG Income Tax rate will increase to 5%.

REDUCING TAXES OWED

A natural gas tax credit is available to reduce B.C. corporate income taxes to as low as 8% from 11%, encouraging proponents to allocate income to B.C. for corporate income tax purposes.

OTHER REVENUE STREAMS FROM LNG

Some LNG income taxpayers will be subject to the federal, provincial and LNG income taxes, while others will be subject to the LNG income tax only.

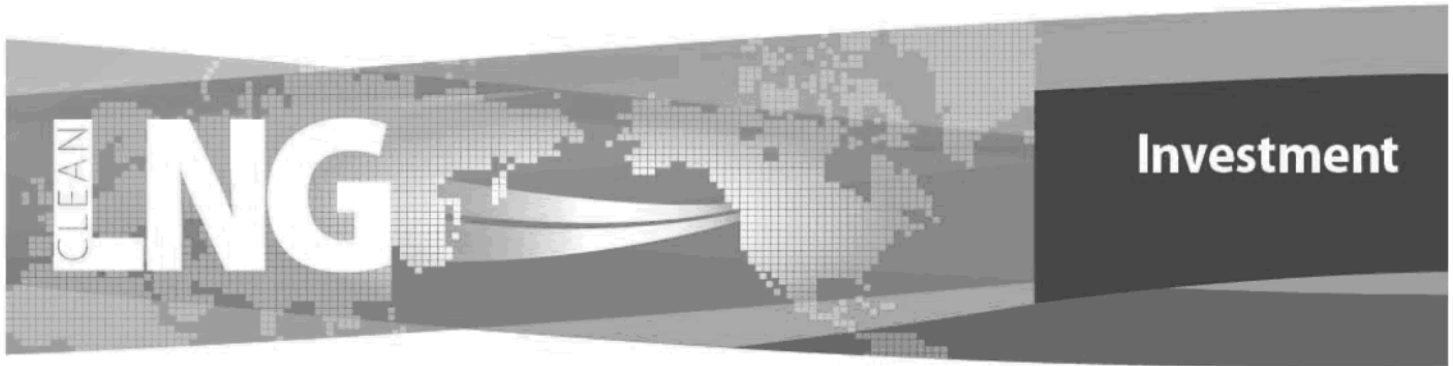
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CLEAN LNG

Provincial revenue streams from LNG Facilities will include:

- ▶ Provincial sales tax.
- ▶ Corporate and personal income taxes.
- ▶ Carbon and motor fuel taxes.
- ▶ LNG income taxes.

B.C. royalties will also increase as LNG facilities use B.C.-sourced gas. The Province and municipalities will also receive increased property taxes.



Long-Term Royalty Agreements

A long-term royalty agreement specifies the royalty rate owed to the Province, by a natural-gas producer, as well as a minimum amount of production that must occur each year.

These agreements are advantageous for any producer who has a long-term arrangement to supply natural gas to customers, both domestically and overseas.

STABILITY FOR THE PROVINCIAL GOVERNMENT

Each agreement stipulates minimum levels of annual production:

- ▶ If a company does not produce to these agreed-to levels, it must remit royalties to government up to the minimum amount.
- ▶ If the company produces more than the agreed-to level, it will pay royalties on the total amount of natural gas.

As a result, government revenue is stabilized for the duration of the agreement. If production exceeds the minimum amount, or the price of gas increases, the provincial government will collect excess revenue.

STABILITY FOR THE PRODUCER

As part of each agreement, the royalty rate is pre-set each year. Customarily, royalty rates are subject to fluctuations with the marketplace.

This stability provides the producer with certainty because the royalty rate applied to their production is known in advance.

INVESTMENT AND ECONOMIC GROWTH

In addition to minimum levels of natural gas production, the agreements can also stipulate additional investments that must occur by the producing company. These investments can support everything from construction to drilling activity.

Continued on back...



NORTH MONTNEY JOINT VENTURE

The first long-term royalty agreement was completed in May 2015, with the North Montney Joint Venture (NMJV). Its natural gas will be supplied to Pacific NorthWest LNG.

The agreement:

- ▶ Three-year term.
- ▶ Pre-sets royalty rates from 6.06% in the first year and climbing to 13.36% in the final year.
- ▶ Commits the NMJV to minimum levels of commercial investment.
 - A total of \$3 billion on infrastructure between until 2020.
 - A total of \$1 billion per year on infrastructure and development, including drilling activities, from the commencement of the agreement until production reaches 1.85 billion cubic feet per day.
- ▶ Prospect of the provincial government collecting almost \$7.7 billion in royalty revenue.

**This agreement is not initiated until the company makes a Final Investment Decision.*

Partnering with First Nations

First Nations support for opportunities in the liquefied natural gas (LNG) sector is strong: more than 90% of First Nations along B.C.'s proposed northern pipeline routes have endorsed projects by signing agreements with the Province.

LNG represents unprecedented opportunities for First Nations in British Columbia. As part of reconciliation, closing socio-economic gaps and ensuring British Columbia has a strong labour force, the Province is dedicated to ensuring First Nations communities can be a part of the emerging sector.

Government is working directly with First Nations on a three-pillared approach – financial benefits, skills training, and environmental stewardship projects – so they can take full advantage of the LNG opportunity for their communities and their members.

FINANCIAL BENEFITS

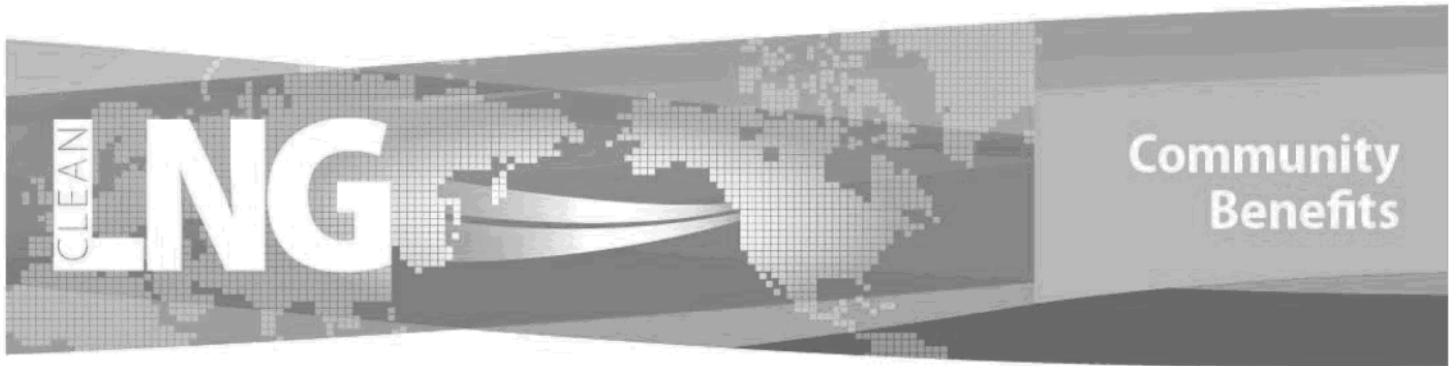
- ▶ 32 First Nations are eligible for Pipeline Benefits Agreements because natural gas pipelines are proposed through their traditional territories.
- ▶ To date, 62 agreements have been reached with 29 First Nations (approx. 90%) for four proposed natural gas pipelines: Prince Rupert Gas Transmission (PRGT), Coastal GasLink (CGL), Pacific Trail Pipeline (PTP) and the Westcoast Connector Gas Transmission (WCGT) natural gas pipeline projects.
- ▶ Pipeline benefits are both immediate and long-term: nations receive one-time payments as they reach agreement with the Province, during construction milestones and ongoing benefits throughout the life of the project.
- ▶ Three Economic Benefit Agreements have been completed with Treaty 8 First Nations; negotiations with three other Treaty 8 First Nations are ongoing. These benefits include initial payments supplemented by annual benefits linked to resource development activity levels for gas, coal and forestry.
- ▶ For LNG facilities and marine shipping terminals, B.C. has completed benefit agreements with Haisla Nation for Kitmat LNG (Chevron/Woodside) and is in advanced discussions on other proposed projects in the Douglas Channel, including LNG Canada. The Province is also advancing negotiations with Kitselas First Nation (LNG Canada), Lax Kw'alaams (PNW LNG/Petronas) and Squamish Nation (Woodfibre LNG).
- ▶ These benefits include immediate payments, ongoing payments linked to size of LNG facilities, pipeline benefit agreements, and provision of provincial Crown lands.
- ▶ In addition to benefits from the Province, LNG proponents have made a commitment to enter their own agreements with First Nations and have completed a number of agreements with First Nations that include financial payments, preferred contracting opportunities and employment commitments.

SKILLS TRAINING

- ▶ Unemployment among First Nations is significantly higher than the general population, yet Aboriginal people are the fastest growing demographic in Canada. B.C. wants Aboriginal people to be poised for success in an expanding labour market, and for this they need support.
- ▶ In 2015, the B.C. government established the Aboriginal Skills Training Development Fund, providing up to \$30M over three years. By March 2016, 1,000 Aboriginal people will have received community-based skills training – training designed with First Nations communities.

ENVIRONMENTAL STEWARDSHIP

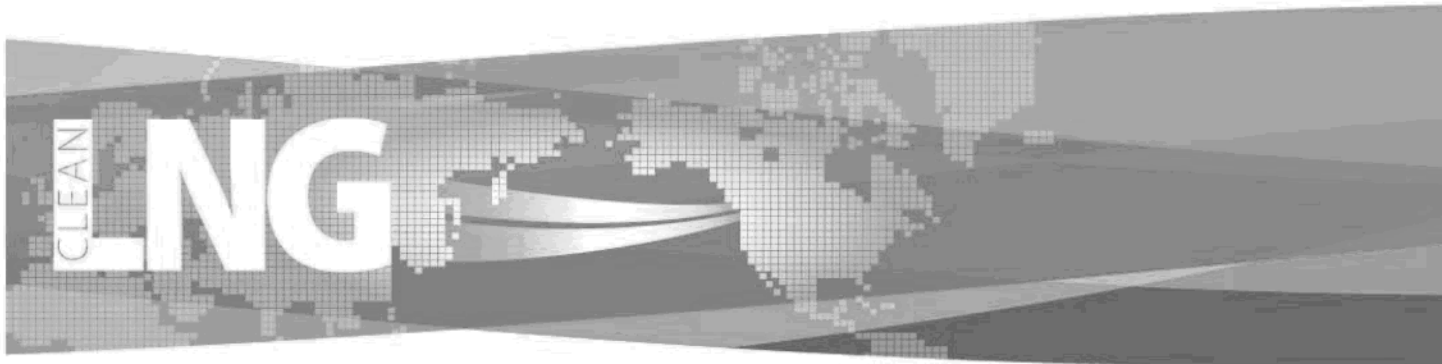
- ▶ The B.C. government has also launched the LNG Environmental Stewardship Initiative, another project co-designed with First Nations and industry to provide a long-term environmental legacy from LNG that focuses on research, monitoring and education.
- ▶ This partnership has advanced to identify research projects in the Northeast, Omineca and Skeena regions.
- ▶ It is anticipated that projects will begin to roll out in 2016.



LNG-Buy BC

Liquefied Natural Gas has the potential to unleash incredible opportunities for British Columbia and for business in every corner of the province.

- ▶ The LNG-Buy BC program ensures businesses throughout the province benefit from economic opportunities associated with LNG.
- ▶ It connects major investors across a range of industries with local B.C. businesses.
- ▶ An important part of the LNG-Buy BC program is supporting First Nations economic development with a focus on the advancement of Aboriginal businesses.
- ▶ Part of the program is the LNG-Buy BC online tool through which B.C. businesses can engage the LNG industry and other major projects.
- ▶ The LNG-Buy BC tool was introduced in November 2014 and as of January 2016, over 1,100 businesses have used it to profile their companies.
- ▶ More than 72% of these companies are small businesses and nearly 10% have Aboriginal affiliation.
- ▶ In October 2015, the B.C. Government also released the LNG-Buy BC Business Kit, a downloadable toolkit designed to help B.C. companies, large and small, prepare for LNG opportunities in the province.
- ▶ The LNG-Buy BC Business Kit outlines key considerations for local contractors and suppliers to become qualified and competitive to bid on proposals to provide the goods and services needed to support LNG projects in the province.
- ▶ Businesses can register to promote their products and services as well as download the Business kit at: www.LNGBuyBC.ca
- ▶ The LNG opportunity is strengthening B.C.'s economic future. If five LNG plants are built in B.C., they could:
 - Generate a total investment of \$175 billion.
 - Contribute up to \$1 trillion to the province's gross domestic product.
 - Create up to 100,000 direct, indirect and induced LNG-related jobs.
- ▶ As of September 2015, there are 20 projects proposing to produce LNG for export along B.C.'s coast and 18 have already received federal export permits.
- ▶ To date, industry has invested more than \$20 billion dollars to advance development and have created hundreds of jobs that come with that investment.
- ▶ A large resource base of natural gas in northeastern B.C. – almost 2,800 trillion cubic feet – could support domestic and export markets for the next 150 years.



British Columbia's LNG Accomplishments

Liquefied natural gas (LNG) is gaining momentum in British Columbia.

Developing this new export industry builds on B.C.'s 50-year history of safe exploration and makes the province's most promising natural resource into an exportable commodity, creating new middle-class jobs, new opportunities for First Nations, and securing new economic growth for all of Canada.

LNG INDUSTRY STATUS

- ▶ Five years ago: 2 proposals
- ▶ Today: 20 export proposals
 - 18 export licenses approved

Examples:

- ▶ One proposal (Pacific NorthWest LNG) announced a conditional final investment decision, representing an investment of up to \$36 billion, 4,500 new construction jobs and close to 350 permanent positions.
- ▶ LNG Canada received a facility permit from the BC Oil and Gas Commission, as well as a 40-year export permit from the National Energy Board. LNG Canada represents 7,200 construction jobs (at peak) and up to 450 long-term operational jobs.

INVESTMENT AND JOBS

Industry has invested over \$20 billion to acquire natural gas assets and move development forward, including exploration and production activities. This work is being done to prepare LNG facilities for export.

Examples:

- ▶ FortisBC's Tilbury LNG expansion has provided \$50 million in contract work to over 100 companies in communities like Vancouver, Langley, Abbotsford, Coquitlam, and more.
- ▶ Progress Energy Canada and their partners are investing \$2 billion-plus annually, representing 4,000 sustainable jobs in upstream (exploration and production) development.

PERMITS AND APPROVALS

The Government of British Columbia certified eight LNG related projects following the environmental assessment process, including pipelines:

- ▶ LNG Canada and the Coastal GasLink Pipeline
- ▶ Kitimat LNG and the Pacific Trail Pipelines
- ▶ Pacific Northwest LNG and the Prince Rupert Gas Transmission pipeline
- ▶ Westcoast Connector Gas Transmission pipeline (for Prince Rupert LNG)
- ▶ Woodfibre LNG

Continued on back...





FIRST NATIONS

British Columbia has 62 agreements with 32 First Nations for proposed pipeline routes linked to an LNG export proposal.

Benefits accrue, jobs are maintained, if LNG proposals reach a final investment decision.

WHY IS IT NECESSARY TO PURSUE LNG IN B.C.?

Building this new industry will benefit British Columbia and Canada.

It is creating jobs for middle-class Canadians and will continue to increase employment prospects. If five LNG facilities are built, up to 100,000 jobs are possible (construction and operations, including direct, indirect and induced).

It will provide other markets with the world's cleanest-burning fossil fuel and cut global emissions by helping Asia transition away from coal energy. B.C. LNG facilities will be the cleanest in the world.

Access to new skills training and environmental stewardship programs are benefiting First Nations. Agreements linked to financial benefits – both immediate and long-term – are making a difference in communities that have been on the periphery of economic development for far too long.

Building a new, long-term export industry benefits the entire country.

These benefits rely on all of us – from British Columbia and Canada – working together.



Major LNG Projects

PACIFIC NORTHWEST LNG (PRINCE RUPERT)

Proponents: PETRONAS / JAPEX / Sinopec / Huadian / Indian Oil Corp / PetroleumBRUNEI

- ▶ Phase 1: 12 MTPA; Phase 2: 6 MTPA
- ▶ Export license and provincial EA approved
- ▶ Federal environmental approval pending
- ▶ Facility permit application under review
- ▶ Project Development Agreement & Long Term Royalty Agreement
- ▶ Preliminary Final Investment Decision
- ▶ Estimated investment: \$36B (upstream, facility & pipeline)

KEY ISSUE

- ▶ *Timely decision on the environmental assessment and approval from federal cabinet*

LNG CANADA (KITIMAT)

Proponents: Shell / Mitsubishi / PetroChina / KOGAS

- ▶ Phase 1: 12 MTPA; Phase 2: 12 MTPA
- ▶ Export license approved
- ▶ Provincial and federal environmental approval
- ▶ First project to receive an LNG Facility permit
- ▶ Estimated investment: \$25B – \$40B (facility & pipeline)

KEY ISSUES

- ▶ *Federal support on Labour Market Information Assessment exemption*
- ▶ *Timely decisions on Fisheries Act authorizations*

DOUGLAS CHANNEL LNG (KITIMAT)

Proponents: AltaGas & Idemitsu Joint Venture / EXMAR / EDF Trading

- ▶ Single train (0.55 MTPA)
- ▶ Export license approved
- ▶ Provincial and Federal Environmental Assessment not required
- ▶ LNG facility permit application under consideration
- ▶ Estimate investment: \$600M (facility)

KEY ISSUE

- ▶ *Timely decision on the requested tariff exemption*

WOODFIBRE LNG (SQUAMISH)

Proponent: Pacific Oil and Gas

- ▶ Two trains (2.1 MTPA)
- ▶ Export license approved
- ▶ Provincial EA certificate issued
- ▶ Federal environmental approval pending
- ▶ Estimated investment: \$1.6B (facility)

KEY ISSUES

- ▶ *Timely federal decision on the environmental assessment*
- ▶ *Timely decision on the requested tariff exemption*

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KITIMAT LNG (KITIMAT)

(Chevron / Woodside)

- ▶ Phase 1: one train (5 MTPA); Phase 2: one train (5 MTPA)
- ▶ Export license granted (10 MTPA)
- ▶ Federal and Provincial EA Approval granted

TILBURY LNG / WESPAC LNG MARINE JETTY (DELTA)

(FortisBC / WesPac Midstream)

- ▶ FortisBC Tilbury expansion being completed by Bechtel
- ▶ Export license granted – approved to export 3 MTPA
- ▶ Substituted environmental assessment in progress (Jetty)

AURORA LNG (PRINCE RUPERT)

(Nexen / Inpex / JGC)

- ▶ Phase 1: two trains (12 MTPA); Phase 2: two trains (12 MTPA)
- ▶ Export license granted (24 MTPA)
- ▶ Substituted environmental assessment in progress

WCC LNG (PRINCE RUPERT)

(ExxonMobil / Imperial Oil)

- ▶ Initial capacity of up to 15 MTPA; 30 MTPA maximum production
- ▶ Export license granted (30 MTPA)
- ▶ Substituted environmental assessment in progress

GRASSY POINT LNG (PRINCE RUPERT)

(Woodside)

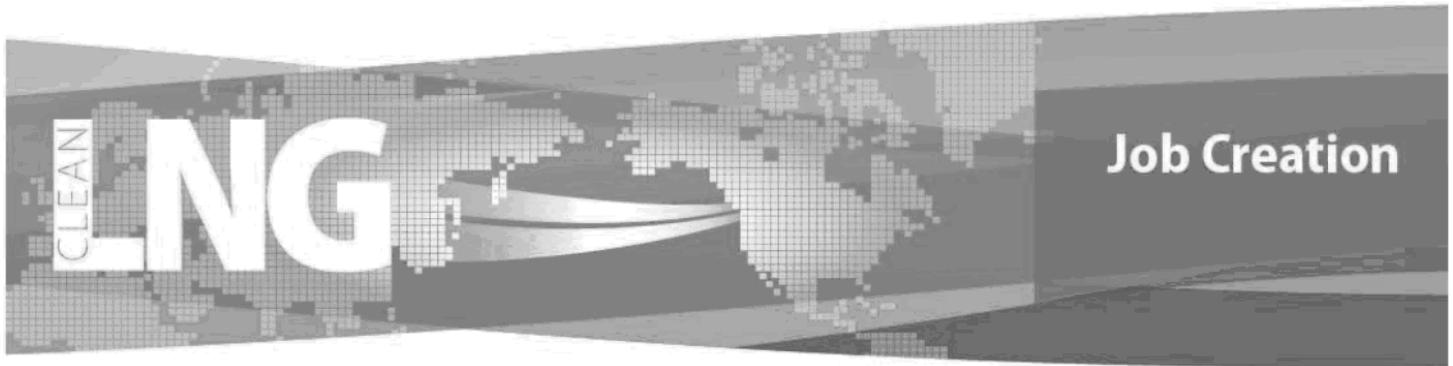
- ▶ Phase 1: between 6 and 15 MTPA; Full Build: 20 MTPA
- ▶ Export license granted (20 MTPA)
- ▶ Substituted environmental assessment in progress

PRINCE RUPERT LNG (PRINCE RUPERT)

(BG)

- ▶ Phase 1: two trains (14 MTPA); Phase 2: one train (7 MTPA)
- ▶ Export license granted (21 MTPA)
- ▶ Co-ordinated environmental assessment in progress

For information on all projects please refer to: <http://engage.gov.bc.ca/Inginbc/>



Access to Labour for the LNG Industry

BACKGROUND

- ▶ The Liquefied Natural Gas opportunity is strengthening B.C.'s economic future. LNG has the potential to unleash incredible opportunities for British Columbia and for business in every corner of the province.
- ▶ If five LNG plants are built in B.C., they could generate a total investment of \$175 billion and create up to 100,000 direct, indirect and induced LNG-related jobs.
- ▶ As of September 2015, there were 20 projects proposing to produce LNG for export along B.C.'s coast and 18 have already received federal export permits.
- ▶ To date, industry has invested more than \$20 billion to advance development, creating hundreds of jobs.

B.C. SKILLS FOR JOBS BLUEPRINT

- ▶ We want to ensure that British Columbians have the skills and training necessary to take advantage of the LNG opportunity.
- ▶ That is why we introduced B.C.'s Skills for Jobs Blueprint, which is re-engineering our education and skills training programs to focus on in-demand jobs, like those in the LNG industry.
- ▶ Since launching the Blueprint, an additional \$108 million has been dedicated to the trades at post-secondary institutions, including:
 - \$13 million to date to add 2,917 training seats in 14 public post-secondary institutions in critical trade seats to reduce LNG related trade occupation waitlists;
 - \$17 million in new trades training equipment at 14 public post-secondary institutions to support students entering in-demand sectors such as LNG. The funding is part of the \$185 million being invested in trades training infrastructure and equipment.
- ▶ Our priority is clear: getting British Columbians the skills they need to be first in line for the jobs in our growing economy, including the future job opportunities in the LNG sector.
- ▶ With the development of hundreds of major projects expected in B.C. over the next 10 years, including the LNG opportunity, we know that in certain times we will have peak labour demands and have a need for specific highly specialized skills.
- ▶ Economic immigration will play a role in meeting the labour demands of our diverse, strong and growing economy.
- ▶ Our new Skills Immigration Registration System (SIRS) for the Provincial Nominee Program (PNP) aligns applications with British Columbia's labour market and economic development priorities.

TOP 10 LNG OCCUPATIONS:

- Construction Craft Worker
- Steamfitters and pipefitters
- Welders
- Concrete finishers
- Transport truck drivers
- Carpenters
- Heavy Equipment Operators
- Gas fitters
- Purchasing agents and officers
- Crane operators

CONSTRUCTION CRAFT WORKER:

- ▶ In response to the LNG industry's demand for skilled tradespeople in B.C.'s North, specifically Construction Trades Helpers and Labourers, we introduced the Construction Craft Worker (CCW) trades classification, B.C.'s 48th Red Seal trade.
- ▶ Construction Craft Workers are one of the most in-demand LNG occupations with 11,800 potential job openings.

APPRENTICES ON PUBLIC PROJECTS

- ▶ The Apprentices on Public Projects policy was introduced to help get more young people in B.C. connected with skills training and apprenticeship opportunities.
- ▶ This new policy requires all contractors that work on major public construction projects, with provincial investments over \$15 million, to demonstrate that they are engaged in apprenticeship training.
- ▶ By finding ways to increase the number of employer sponsors, we can increase the number of apprentices and increase the supply of tradespeople to meet future labour market demands, like those in LNG.

LNG-Buy BC Success Stories

IDEAL WELDERS – ANNACIS ISLAND, DELTA, BC <http://www.idealwelders.com/>

From its beginnings as a one-man operation 46 years ago to an organization that now boasts over 18,580 square metres (200,000 square feet) of fabrication space for pressure piping and pressure vessels, 100% of Ideal Welders' fabrication process happens in B.C.

For the LNG industry, Ideal Welders has participated in a number of bids since scaling up their operations and developing the framework to compete in these opportunities. Ideal is currently working on the Fortis Tilbury LNG expansion.

Ideal Welders' facilities are well placed on the Fraser River on Annacis Island, where they can manufacture and ship directly to the LNG sites, and outfitted with the right technology to handle those logistics effectively.

LAPOINTE ENGINEERING LTD. – KITIMAT <http://www.lapointe-eng.com/>



Robin Lapointe started Kitimat's first engineering company in a friend's basement during an economic boom in 1980. The company rode the wave of a growth spurt in Kitimat with the construction of the Ocelot methanol plant in 1981 and the modernization of the Rio Tinto Alcan smelter in 2011. Now the multi-discipline engineering firm has 45 employees with numerous contractors in 14,000 square feet of office space.

Lapointe expects further expansion from the establishment of LNG plants in the area.

Photo: Robin Lapointe

Lapointe expects further expansion from the establishment of LNG plants in the Kitimat area. "During my 35 years in business we experienced a number of ups and downs in the local economy, but fortunately we were able to always build on the local economic booms."

HEMMERA – BURNABY, B.C. <http://www.hemmera.com/>

Having started as an enterprise of two, Hemmera is now an agency with more than 250 professionals offering environmental consulting services in site assessment and remediation, environmental planning and management, and community engagement and social sciences since 1994 with offices in Burnaby, Victoria, Calgary, Whitehorse and Toronto.

Hemmera has been helping proponents navigate through the regulatory framework to achieve environmental compliance and minimize costly delays. With a history of established relationships with local, provincial and federal regulators, it's been facilitating the management of negotiations and building support for proponents' projects that safeguard the environment and support economic opportunities.

XANATOS MARINE – NORTH VANCOUVER <http://www.xanatosmarine.com/>

In North Vancouver-Lonsdale a father and his son, Bill and Kris English, have built Xanatos Marine into a world class marine safety company with the help of a supply chain that links nine other small BC businesses from Castlegar to Saanich. Their system of ship monitoring which they call the Marine Electronic Highway is currently being tested by Bernie Dumas and Edward Dahlgren at the Nanaimo Port Authority and to date far exceeds expectations. This system is being reviewed by several LNG proponent companies and may well become a critical component to LNG shipping safety in BC waters.

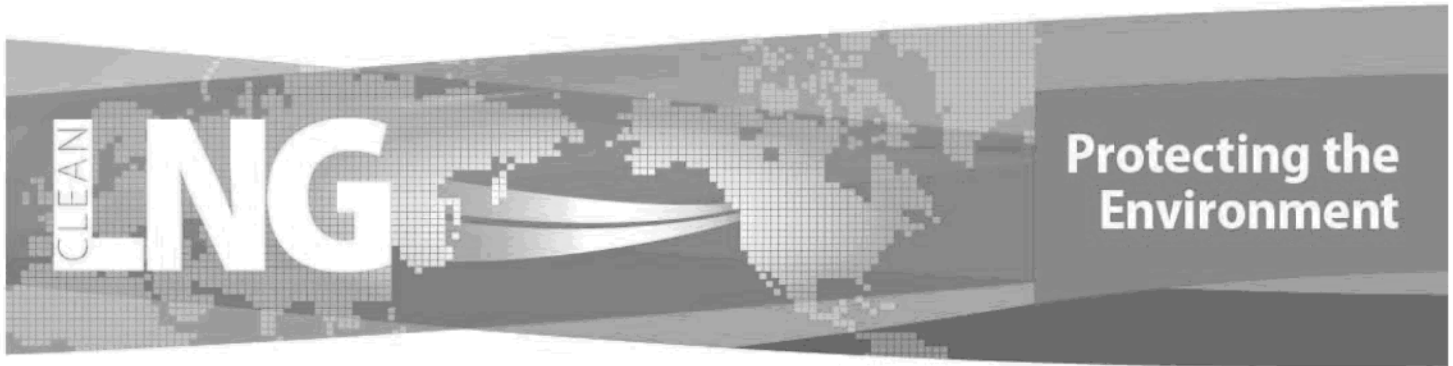
FILAPRINT 3D – TUMBLER RIDGE, BC <http://www.filaprint.ca/>

Jody Mitchell of Tumbler Ridge has always had an entrepreneurial spirit. She comes from a family of business owners with an interest in 3D. With the downturn in the coal industry, Mitchell decided to open Filaprint 3D in the basement of her home in early 2015.

Filaprint 3D is one of northeastern B.C.'s first 3D printing companies geared toward eco-friendly manufacturing and education. Business owner Jody Mitchell uses her 3D printer to create custom gifts, table top displays and land models geared to the tourism industry.

The printer transforms files into 3D then slices them into layers. She has created topography maps of B.C. so visitors can see their vacation spots while planning a trip, breaking down language barriers.

Mitchell already has expansion plans. With support from the District of Tumbler Ridge and Community Futures Peace Liard, she hopes to move into outside office space early next year and is training future employees with the hopes of hiring in the New Year. Mitchell believes there is enormous potential to grow her business into the LNG sector as her models would be a superior tool to market the emerging sector as they replicate the topography of the land.



Protecting the Environment

Upstream Development

British Columbia has one of the cleanest upstream natural gas sectors in the world with actions to lower the environmental impact of exploration and production (upstream development). The provincial government is working with industry to incorporate a sustainable plan to further reduce emissions.

REDUCING METHANE EMISSIONS IN THE UPSTREAM

- ▶ Opportunity: 0.5 - 1 Megatons (Mt)/year of carbon dioxide (CO₂) equivalent, or approximately 25-40% of industry's total current methane emissions (approximately 2.2 Mt/year)
- ▶ As part of the new Climate Leadership Plan, the provincial government is working with industry on a hybrid approach to methane reduction, using a combination of regulations, targets and adaptation.
 - Establishing stronger standards for new technologies and applications.
- Exploring a non-regulated program to address legacy pneumatics with clear targets – potential to coordinate timelines with Alberta's program.
- Establish standards to regulate leak detection and repair (LDAR).
- ▶ The provincial government is working with stakeholders to explore new technologies and design smart regulations as needed.

REDUCING GHG EMISSIONS BY INCREASING UPSTREAM ELECTRIFICATION

- ▶ Opportunity: 3 – 4 Mt CO₂/year may be mitigated by electrifying six billion cubic feet (Bcf) of production a day (current B.C. production 4 Bcf per day).
 - This is equivalent to reducing LNG-linked production emissions by approximately 25%.
- ▶ BC Hydro committed to serve new energy needs in northeast B.C. by expediting the construction of the Peace River Electricity Supply.
 - BC Hydro would be able to back-up delays by installing temporary generation, or contract temporary power from third parties.
- ▶ The provincial government is aware of the gap between natural gas prices and electricity rates. Options to address economic challenges are being analyzed.
- ▶ Example: A project the size of Pacific Northwest LNG (first two trains), upstream emissions could essentially be eliminated by using electric drives (as opposed to 1.2 Mt/year if natural gas drives were used).

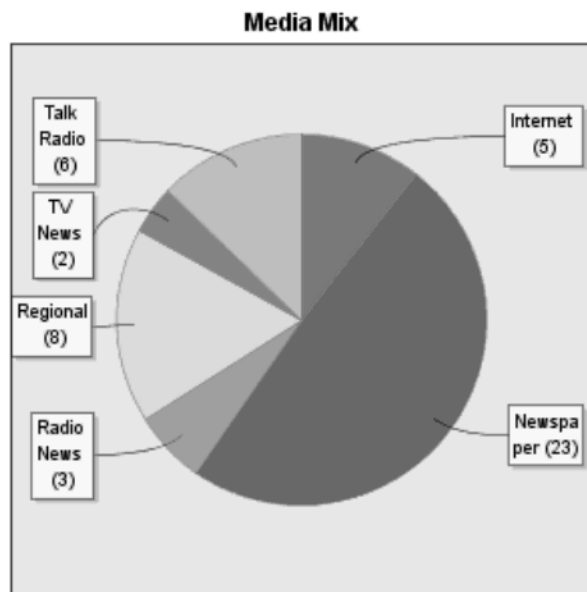
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- **FLNRO**
 - City hopes to turf Gorge boats by fall; Zoning change would only allow short-term anchoring - Cindy E. Harnett - Times Colonist (Victoria) - 25-Feb-2016
 - Saanich's derelict-boat fund passes hurdle - Cindy E. Harnett And Katherine Dedyna - Times Colonist (Victoria) - 25-Feb-2016
 - City to allow short-term anchoring in Gorge Waterway - Pamela Roth - Victoria News - 24-Feb-2016
 - Taking another look at that logging debris - Cam Fortems - Kamloops This Week - 24-Feb-2016
- **Federal Government, Environment Canada & Parks Canada**
 - CEAA report's science not satisfactory: Cullen - Kevin Campbell - The Northern View - 24-Feb-2016
- **Pipelines**
 - Many landowners believe Kinder Morgan doing their due diligence - Staff - Chilliwack Times - 25-Feb-2016
 - Enbridge set to raise \$2B of equity - Barry Critchley - National Post - 25-Feb-2016
 - Enbridge to raise \$2-billion - Kelly Cryderman - Globe and Mail - 25-Feb-2016
 - NEB admits faults, says it's working to improve trust with Canadians - Mike Carter - Alaska Highway News - 24-Feb-2016
 - Chilliwack farmer says he's among silent majority in favour of oil pipelines - Paul J. Henderson - Chilliwack Times - 24-Feb-2016
 - Deputy fire chief says Kinder Morgan is violating city bylaws - Jennifer Moreau - Burnaby Now - 24-Feb-2016
 - MLA clarifies position on Trans Mountain expansion - Terry Lake - Barriere Star Journal - 24-Feb-2016
- **LNG**
 - Nikiforuk speaks on LNG, fracking - Katya Slepian - Alberni Valley News - 24-Feb-2016
- **Recycling, Waste Management**
 - McLoughlin, Clover, Macaulay points back on table for sewage - Bill Cleverley - Times Colonist (Victoria) - 25-Feb-2016
 - Non-profit proposes three ways Toronto can become a 'zero-waste' city - Gilbert Ngabo - Metro - metronews.ca - 25-Feb-2016
 - Ikea turns to mushrooms for green packaging; Biodegradable - National Post - 25-Feb-2016
 - Desjardins - CRD sewage - CFX Morning with Al Ferraby - CFX - 24-Feb-2016

- [Emerson - sewage debate - CFX - CFX - 24-Feb-2016](#)
- [Jensen/Day - CRD sewage - CFX Terry Moore - CFX - 24-Feb-2016](#)
- [Jensen/Desjardins - McLoughlin Point sewage - CHEK News at Five - CHEK - 24-Feb-2016](#)
- [Oak Bay pitches staged sewer separation - Christine van Reeuyk - Oak Bay News - 24-Feb-2016](#)
- **Air Quality**
- [Burns Lake road dust advisory - CKPG at Noon - CKPG - 24-Feb-2016](#)
- [City at 'fork in road,' air-quality report says - News Kamloops - News Kamloops - 24-Feb-2016](#)
- [Schemenauer - Kamloops air quality - CHNL - CHNL - 24-Feb-2016](#)
- **Species & Ecosystems**
- [B.C. village at odds over 'carpet' of toads - Dirk Meissner - National Post - 25-Feb-2016](#)
- [Pitaoulis - toad blockade - CBC Daybreak South - CBTK - 24-Feb-2016](#)
- [Tiny toads put squeeze on B.C. village - Global News: BC 1 - Global News: BC 1 - 24-Feb-2016](#)
- [Toad block: hundreds sign petition to stop logging in sensitive habitat - CBC Online - CBC Online - 24-Feb-2016](#)
- [TRU a provincial hub for invasive species research - Castanet - Castanet - 24-Feb-2016](#)
- **Wildlife, Fisheries**
- [Bears waking from winter slumber; Black bear sightings reported; in Glenmerry Wildsafe reminds residents to secure garbage - Sheri Regnier - Trail Daily Times - 25-Feb-2016](#)
- [Bos - salmon revitalization - CFX Frank Stanford - CFX - 24-Feb-2016](#)
- [Cullen - salmon radiation testing - CBC Daybreak North - CBYG - 24-Feb-2016](#)

Site C

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s.3

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From: s.22
To: Minister, MEM MEM:EX; Minister, ENV ENV:EX; OfficeofthePremier, Office PREM:EX; Dix.MLA, Adrian LASS:EX
Subject: Food For Thought Christy
Date: Wednesday, May 6, 2015 11:57:12 AM

s.3

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Withheld pursuant to/removed as

s.3

Ainsworth, Diana ENV:EX

s.22

From: -----
Sent: Thursday, August 27, 2015 5:55 PM
To: Minister, MNGD MNGD:EX; Anton.MLA, Suzanne LASS:EX; Dix.MLA, Adrian LASS:EX; OfficeofthePremier, Office PREM:EX
Cc: Minister, ENV ENV:EX; Minister, FIN FIN:EX
Subject: Now We're Making Headway Against The Corrupt Petronas... Partner of The BC Lieberal Party. You Reap What You Sow.

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Info/File

s.3

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From: s.22
Sent: Sunday, September 13, 2015 11:18 AM
To: Prime Minister Harper; OfficeofthePremier, Office PREM:EX; Honourable Leona Aglukkaq; Minister Gail Shea; rona.ambrose@parl.gc.ca; Minister Joe Oliver; Minister Bernard Valcourt; Minister Maxime Bernier; Minister, ENV ENV:EX; Minister, MNGD MNGD:EX; Minister, ABR ABR:EX; Minister, ABR ABR:EX; Minister, FLNR FLNR:EX; Minister, HLTH HLTH:EX; Minister, JTST JTST:EX; Minister, ENV ENV:EX
Cc: MP John Weston; Simons.MLA, Nicholas LASS:EX
Subject: Flawed process/Pacific Northwest LNG /Lelu Island/2015

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Info/File, EAO

Dear Ministers,

We understand that the Prince Rupert Port Authority has stated that starting Saturday, September 12 workers contracted by Pacific Northwest LNG will attempt to begin drilling near Flora Bank and Lax Eula (Lelu Island). The proposed development has not been authorized by the Gitwilgyoots and was unanimously rejected by Lax Kw'alaams earlier this year.

We recognize this as a flawed process.

We do not want a single drill to touch the island or the bank. The area is crucial to the life of the salmon in the entire watershed.

It's a sad day when the Corporate giants call the shots. Yes, shareholders come before the salmon!!

Please tell me what good are jobs and all the money, when the environment is so fouled, that you can't breath the air, drink unpolluted water, or find unpolluted soil for planting in.

May the Almighty help us all.

s.22

Ainsworth, Diana ENV:EX

From: Minister, ENV ENV:EX
Sent: Tuesday, September 29, 2015 9:09 AM
To: Correspondence Unit ENV:EX
Subject: FW: Response to your September 13, 2015 email to Minister Rustad - Flawed process/Pacific Northwest LNG/Lelu Island

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Amy

From: Darling, May Y ABR:EX
Sent: Wednesday, September 23, 2015 4:23 PM
To: s.22
Cc: 'pm@pm.gc.ca'; 'Honourable Leona Aglukkaq'; 'Minister Gail Shea'; 'rona.ambrose@parl.gc.ca'; 'Minister Joe Oliver'; 'Minister Bernard Valcourt'; 'Minister Maxime Bernier'; Minister, ENV ENV:EX; Minister, MNGD MNGD:EX; Minister, ABR ABR:EX; Minister, ABR ABR:EX; Minister, FLNR FLNR:EX; Minister, HLTH HLTH:EX; Minister, JTST JTST:EX; Minister, ENV ENV:EX; 'MP John Weston'; Simons.MLA, Nicholas LASS:EX
Subject: Response to your September 13, 2015 email to Minister Rustad - Flawed process/Pacific Northwest LNG/Lelu Island

Ref: 37773

s.22

Dear s.22

Your email of September 13, 2015 to the Honourable John Rustad, Minister of Aboriginal Relations and Reconciliation, regarding current investigative drilling activity on Lelu Island has been forwarded to me for response.

In the email, concerns were expressed about the environmental impacts from drilling activities on Lelu Island being carried out by the Pacific Northwest LNG Project proponent. While the activities you are currently referencing are best responded to by the appropriate Federal authorities, I want to share with you my viewpoint with respect to activities that fall under Provincial regulatory jurisdiction.

The Province supports responsible resource development, and requires that proponents conducting activities requiring provincial authorization meet established regulatory requirements, including consultation with First Nations. The proposed project on Lelu Island falls within both Federal and Provincial jurisdiction, each covering different aspects of the proposed project.

For the Provincial components, the proposed project was issued a BC Environmental Assessment (EA) Certificate, on November 25, 2014, to construct and operate the LNG facility on Lelu Island after it successfully underwent an environmental assessment process under the BC *Environmental Assessment Act*. As part of the EA process, the five Tsimshian First Nations (Metlakatla First Nation, Lax Kw'alaams Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation), who asserted aboriginal interests in the

area of the proposed project were consulted. In addition, the public was provided opportunities to provide input in the process. In consideration of mitigation measures PNW LNG has agreed to implement, the Provincial regulatory process determined that the proposed project would not result in any significant adverse residual or cumulative effects on freshwater aquatic resources.

As noted earlier, this project is also required to proceed through the federal environmental assessment process being conducted by the Canadian Environmental Assessment (CEA) Agency. I note that your email was also sent to Federal Government officials, and I will let them respond to their regulatory process and activities under Federal jurisdiction and review.

Again, thank you for writing.

Sincerely,

May Darling
Assistant Negotiator
Ministry of Aboriginal Relations and Reconciliation

Pc: Honourable John Rustad
Minister of Aboriginal Relations and Reconciliation
ABR.Minister@gov.bc.ca

From: s.22
Sent: Monday, September 14, 2015 11:27 AM
To: Honourable Leona Aglukkaq; Minister, ENV ENV:EX
Cc: Prime Minister Harper; OfficeofthePremier, Office PREM:EX; Minister Gail Shea; rona.ambrose@parl.gc.ca; Minister Joe Oliver; Minister Bernard Valcourt; Minister Maxime Bernier; Minister, MNGD MNGD:EX; Minister, ABR ABR:EX; Minister, ABR ABR:EX; Minister, FLNR FLNR:EX; Minister, HLTH HLTH:EX; Minister, JTST JTST:EX; MP John Weston; Simons.MLA, Nicholas LASS:EX; ghoekstra@sunprovince.com; Michael Hume
Subject: First Nation protesters seek to stop test drilling at proposed LNG site
Follow Up Flag: Follow up
Flag Status: Completed
Categories: Reply Direct, EAO

September 14, 2015

Dear Minister Polak, and Minister Aqlukkaq,

How can contractors for Petronas start work in the area of Flora Bank when the Federal Government's environmental assessment of the project is still underway?

I'm certain by now, you are familiar with the audit showing the very serious safety issues on Petronas' offshore Malaysian operations.

<http://www.vancouversun.com/technology/vaughn+palmer+petronas+audit+cause+concern+rich+coleman+say/s/11357728/story.html>

This company cares nothing for their own doorstep, so why should they care about ours? This is not a considerate, community minded company. I fear the best interest of our Province was not foremost in the minds of whoever concocted the deal with Pertonas.

Who actually signed the deal with Petronas? May I please have a copy of that contract?

Respectfully,

s.22

s.3

Page 165 to/à Page 166

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Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Friday, January 8, 2016 9:21 AM
To: Rollheiser, Kate ENV:EX; Scott, Heidi ENV:EX; Denniston, Tristan M MEM:EX; Knudsen, Mark ENV:EX
Subject: RE: Call for Records MOE-2015-54232

No records

From: Rollheiser, Kate ENV:EX
Sent: Friday, January 8, 2016 9:19 AM
To: Kapac de Frias, Martina E ENV:EX; Scott, Heidi ENV:EX; Denniston, Tristan M ENV:EX; Knudsen, Mark ENV:EX
Subject: FW: Call for Records MOE-2015-54232

Hello Team,
Please let me know if you have any responsive records as soon as possible, this one had fallen off my radar.
Cheers,
Kate

From: ENV FOI DMO ENV:EX
Sent: Friday, January 8, 2016 9:15 AM
To: Rollheiser, Kate ENV:EX; Scott, Heidi ENV:EX
Cc: ENV FOI DMO ENV:EX
Subject: RE: Call for Records MOE-2015-54232

Hi Ladies –

Just wanted to confirm if you had any records for this request?

Thanks!
Jennifer.

Jennifer Jonker
Issues Manager
Executive Operations
Deputy Minister's Office
Ministry of Environment
tel: 250.387.9410
fax: 250.387.6003

From: ENV FOI DMO ENV:EX
Sent: Wednesday, December 23, 2015 2:43 PM
To: Rollheiser, Kate ENV:EX; Scott, Heidi ENV:EX; Draper, Ashley ENV:EX
Cc: ENV FOI DMO ENV:EX
Subject: Call for Records MOE-2015-54232

Heidi/Kate/Ashley –

Please advise if you have any records for the following request:

Ministerial briefing notes related to: any concerns that Petronas or Progress Energy may have raised over its Lelu Island site for its proposed Pacific NorthWest LNG project with respect to environmental issues or First Nations concerns; any concerns that First Nations, including the Lax Kw'alaams First Nation, have raised over the proposal including concerns with the project going forward and its impacts on aboriginal rights; First Nations that stand to benefit or support the project expressing concerns about the project not going forward. – Date Format: MM/DD/YYYY

For Dec 30th please.

Thanks!
Jennifer.

Jennifer Jonker
Issues Manager
Executive Operations
Deputy Minister's Office
Ministry of Environment
tel: 250.387.9410
fax: 250.387.6003

From: Peddle, Jennifer [<mailto:IAOResourceTeam@gov.bc.ca>]
Sent: Monday, December 14, 2015 4:10 PM
To: Jonker, Jennifer B ENV:EX
Cc: Barillaro, Scott W ENV:EX
Subject: Call for Records MOE-2015-54232 Due December 30, 2015

Your Ministry has received a formal request made under the *Freedom of Information and Protection of Privacy Act* (FOIPPA). The request is for:

Ministerial briefing notes related to: any concerns that Petronas or Progress Energy may have raised over its Lelu Island site for its proposed Pacific NorthWest LNG project with respect to environmental issues or First Nations concerns; any concerns that First Nations, including the Lax Kw'alaams First Nation, have raised over the proposal including concerns with the project going forward and its impacts on aboriginal rights; First Nations that stand to benefit or support the project expressing concerns about the project not going forward. – Date Format: MM/DD/YYYY

The following public bodies have also received this FOI request: ARR, MOE, NGD.

Please complete the attached Call for Records form.

- If search and retrieval time is anticipated to exceed 3 hours and/or the total volume of records exceeds 200 pages, complete only sections 1 & 2 of the Call for Records form as we may be in a position to issue a fee estimate. Return the form to IAO by December 18, 2015. Please await further instruction from IAO as the records will not be required until the fee estimate process has been completed. Once fees have been paid or waived, IAO will contact you to continue the call for records process.
- If no fees apply then complete the attached Call for Records form and return it to IAO by December 30, 2015.
- Send records via email in PDF format. Before you turn emails into PDFs, ensure that you have included all attachments. If email is not possible, please put the records on the File Share and notify IAO that the records are available.

You should be aware that FOIPPA obligates us to assist the applicant and to respond without delay, openly, accurately, and completely. In the event that your Ministry must defend the adequacy of its

search to the Information and Privacy Commissioner at Inquiry, those involved in searching for records may be required to sign affidavits confirming they have conducted an adequate search for relevant records.

Please do not hesitate to contact IAO to discuss: whether the records may be routinely releasable; whether the information is being prepared for public release or is already publicly available; ways in which an applicant may want to narrow/focus their request to reduce potential fees; and/or any other questions or concerns relating to this request.

Thank you for your assistance,

Jennifer Peddle, CIAPP-P, MSc.

On behalf of,

John Wilson, Senior Analyst FOIPP, Access to Information | Information Access Operations |
Shared Services BC |

FOI e: IAOResourceTeam@gov.bc.ca | Ph: 250 356-5854

Please note: 5-digit calling function is no longer available. To contact me, please dial all 10 digits. Thank you.

Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Wednesday, February 10, 2016 1:35 PM
To: Chin, Ben PREM:EX; Carr, Steve PREM:EX
Cc: Knudsen, Mark ENV:EX; Myers, Tobie A MNGD:EX
Subject: RE: FYI
Attachments: KM_Interim Fed Env Assessment GHGs_PNW LNG_Woodfibre LNG_DRAFT wMOE
inpu....docx; KM_Pacific NorthWest LNG_Science & Safety_Feb 9 FINAL.DOCX;
IN_EAO_Pacific_Northwest_LNG_Prov_EA_Federal_Interim_Approach_09Feb2016.doc

Attached, thanks, M

From: Chin, Ben PREM:EX
Sent: Wednesday, February 10, 2016 1:33 PM
To: Kapac de Frias, Martina E ENV:EX; Carr, Steve PREM:EX
Cc: Knudsen, Mark ENV:EX
Subject: Re: FYI

Are KM's coming?

Ben Chin
Executive Director
Communications and Issues Mgmt
Office of Premier Christy Clark
250-588-3113

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kapac de Frias, Martina E ENV:EX
Sent: Wednesday, February 10, 2016 1:27 PM
To: Chin, Ben PREM:EX; Carr, Steve PREM:EX
Cc: Knudsen, Mark ENV:EX
Subject: FYI

Good afternoon,

This is the CEAA assessment report has been posted here: <http://www.ceaa.gc.ca/050/details-eng.cfm?evaluation=80032> Go to the "List All Documents" link under Documents to access the Draft Assessment Report and more.

Thank you,

Martina Kapac de Frias
Chief of Staff to the Hon. Mary Polak
Minister of Environment
Ph: 250.387.1187 | E: Martina.Kapacdefrias@gov.bc.ca

Barlow, John ENV:EX

From: Loiacono, Sabrina EAO:EX
Sent: Wednesday, February 10, 2016 12:17 PM
To: Knudsen, Mark ENV:EX; Kapac de Frias, Martina E ENV:EX; Bajwa, Raman AVED:EX
Cc: Rollheiser, Kate ENV:EX; Scott, Heidi ENV:EX; Murphy, Bernadette GCPE:EX; Crebo, David GCPE:EX
Subject: RE: House Binder Updates
Attachments: IN_EAO_Pacific_Northwest_LNG_Prov_EA_Federal_Interim_Approach_09Feb2016.doc

Martina

Sorry for the delay. Please see attached IN entitled Pacific Northwest LNG - Federal Interim Approach (#19 in the table of contents) we can add in some process & additional timeline info if needed. Staff have a call with CEAA and it might get updated again today. But I wanted to get you something asap. I did add this to the Minister's SharePoint.

Kind regards,
S.

From: Loiacono, Sabrina EAO:EX
Sent: Tuesday, February 9, 2016 5:07 PM
To: Knudsen, Mark ENV:EX; Kapac de Frias, Martina E ENV:EX; Bajwa, Raman ENV:EX
Cc: Rollheiser, Kate ENV:EX; Scott, Heidi ENV:EX; Murphy, Bernadette GCPE:EX; Crebo, David GCPE:EX
Subject: House Binder Updates
Importance: High

Good evening MO,

Due to CEAA's announcement today we have updated 2 Issues Notes on Eagle Mountain/Woodfibre Gas Pipeline – EA Suspension and Federal Review of the EA Process and Interim Approach. These notes are attached and have been updated in the Minister's Sharepoint.

We are working on adding a new note to the Minister's Issues Binder #19 in the table of contents entitled Pacific Northwest LNG - Federal Interim Approach. I should have this to you by tomorrow morning. I've also attached our updated Table of Contents.

Have a great night.

Sabrina Loiacono
Manager- Executive Operations
Environmental Assessment Office
Ministry of Environment
Government of British Columbia
250-356-7475



This e-mail is intended only for the person to whom it is addressed (the "addressee") and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use that a person other than the addressee makes of this communication is prohibited and any reliance or decisions made based on it, are the responsibility of such person. We accept no responsibility for any loss or damages suffered by any person other than the addressee as a result of decisions made or actions taken based on this communication or otherwise. If you received this in error, please contact the sender and destroy all copies of this e-mail.

Barlow, John ENV:EX

From: Kapac de Frias, Martina E ENV:EX
Sent: Tuesday, July 14, 2015 12:20 PM
To: Scott, Heidi ENV:EX
Cc: Petryshyn, Yarko SBRT:EX; Pougnet, Jennifer ENV:EX
Subject: RE: Request for Meeting re: Outcomes of LNG Cumulative Effects Dialogues

That will be fine – one of us can attend with her. Thanks!

From: Scott, Heidi ENV:EX
Sent: Tuesday, July 14, 2015 12:18 PM
To: Kapac de Frias, Martina E ENV:EX
Cc: Petryshyn, Yarko ENV:EX; Pougnet, Jennifer ENV:EX
Subject: RE: Request for Meeting re: Outcomes of LNG Cumulative Effects Dialogues

Hi Martina,

Since FLNRO has the lead on this meeting and will be providing materials and staff our DMO is asking if its ok that MMP do this meeting without env staff. Are you good with that? Mark Zacharias will attend if you would like our staff there anyways.

Thanks
H

From: Kapac de Frias, Martina E FLNR:EX
Sent: Tuesday, June 23, 2015 9:51 AM
To: Polak, Mary ENV:EX
Cc: Petryshyn, Yarko ENV:EX; Scott, Heidi ENV:EX
Subject: RE: Request for Meeting re: Outcomes of LNG Cumulative Effects Dialogues

Great – Ill seek advice from Wes and we can get a joint meeting set up.

From: Polak, Mary ENV:EX
Sent: Tuesday, June 23, 2015 9:50 AM
To: Kapac de Frias, Martina E FLNR:EX
Cc: Petryshyn, Yarko ENV:EX; Scott, Heidi ENV:EX
Subject: Re: Request for Meeting re: Outcomes of LNG Cumulative Effects Dialogues

I like that idea. I think it will make it a more productive discussion

Sent from my iPad

On Jun 23, 2015, at 11:47 AM, "Kapac de Frias, Martina E FLNR:EX" <Martina.KapacdeFrias@gov.bc.ca> wrote:

Minister,

For this meeting request I am going to seek advice from staff – however I was thinking that this is possibly a good opportunity for a joint meeting with MST? I am just considering the cumulative effects subject matter.....

From: Polak, Mary ENV:EX
Sent: Friday, June 19, 2015 2:21 PM
To: Petryshyn, Yarko ENV:EX; Kapac de Frias, Martina E FLNR:EX
Cc: Scott, Heidi ENV:EX
Subject: Fwd: Request for Meeting re: Outcomes of LNG Cumulative Effects Dialogues

Sent from my iPad

Begin forwarded message:

From: Jessica Clogg <Jessica_Clogg@wcel.org>
Date: June 19, 2015 at 12:58:56 PM PDT
To: "Mary.Polak@gov.bc.ca" <Mary.Polak@gov.bc.ca>, "steve.thomson@gov.bc.ca" <steve.thomson@gov.bc.ca>
Cc: "Matt.Mitschke@gov.bc.ca" <Matt.Mitschke@gov.bc.ca>, "Bruce.Strongitharm@gov.bc.ca" <Bruce.Strongitharm@gov.bc.ca>, Lisa Mattheus <lisa@organizingforchange.org>, Pat Moss <pat@northwestinstitute.ca>
Subject: Request for Meeting re: Outcomes of LNG Cumulative Effects Dialogues

Dear Ministers Polak and Thomson:

West Coast Environmental Law and the Northwest Institute write to request a meeting with you at your earliest convenience to discuss the following issue and opportunity related to LNG development:

Issue: In a recent LNG dialogue series across northern BC, we heard significant concern that the cumulative effects of proposed LNG projects are not being adequately assessed or managed. In the result, potential domestic barriers to LNG development are growing, and will compound current challenges in international markets if left unaddressed (see attached for further detail).

Opportunity: The provincial government has made significant strides recently to introduce policies and initiatives related to regional cumulative effects management, and has engaged directly with First Nations through the Environmental Stewardship Initiative.

Given the slowdown in international markets, there is now a window of opportunity to engage local residents and civil society groups to better ensure their perspectives and values are addressed through regional strategic environmental assessment of different scenarios for LNG development. The risk of not bringing these communities along is even more delay as social licence wanes and opposition grows.

Solution: Having carried out dialogue sessions in six communities throughout the region attracting almost 200 participants from a wide range of sectors we're able to offer insight on some of the key values that are driving increased concerns. We would like to discuss with you an approach to engaging communities on those concerns that would be

timely, efficient and authentic. Doing so may help to change the local perception of LNG development from “free for all” to “thoughtful management”.

Benefit: By bringing residents into the conversation about what really is – and is not – at stake and the future they want for their communities, the Province has an opportunity to build support for projects that do proceed, and to avoid controversy like that which surrounds the proposed LNG facility on Lelu Island adjacent to important salmon rearing habitat.

As you may recall, a commitment to involving First Nations, civil society groups and local residents in a “big picture” regional assessment of different scenarios for LNG development is a current priority of Organizing for Change and our 12 member groups. We will follow up with your offices early next week to discuss scheduling.

Sincerely,
Jessica Clogg, Executive Director & Senior Counsel, West Coast
Environmental Law
Pat Moss, Executive Director, Northwest Institute

Jessica Clogg
Executive Director & Senior Counsel
West Coast Environmental Law
200-2006 West 10th Ave
Vancouver, BC V6J 2B3
Cell: 778-327-8964
Direct: 604.601.2501
Toll-free: 1.800.330.WCEL ext 201
Jessica_Clogg@wcel.org

Crozier, Bev ENV:EX

From: Chin, Ben PREM:EX
Sent: Sunday, January 31, 2016 5:36 PM
To: Carr, Steve PREM:EX; Nikolejsin, Dave MNGD:EX
Cc: Shoemaker, Wes ENV:EX; Plecas, Bobbi PREM:EX
Subject: Fw: advance copy - Pembina blog on federal climate test and LNG
Attachments: Climate test for LNG blog - FINAL.docx

Fyi

Ben Chin
Executive Director
Communications and Issues Mgmt
Office of Premier Christy Clark
250-588-3113

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Matt Horne <matth@pembina.org>
Sent: Sunday, January 31, 2016 5:32 PM
To: Chin, Ben PREM:EX
Cc: Josha MacNab
Subject: advance copy - Pembina blog on federal climate test and LNG

Hi Ben,

Attached is an advance copy of a blog we're publishing Monday morning looking at the federal government's commitment to examine upstream carbon pollution in environmental assessment processes. We've used the Pacific Northwest LNG proposal and the associated shale gas development as an illustrative example.

In the BC context, we think the new climate test can help advance an ambitious Climate Leadership Plan so that the carbon pollution from any LNG development is minimized.

Feel free to let me know if you have any questions or comments about the piece.

Best,

Matt

--

Associate Director, British Columbia | Pembina Institute
t: 604-874-8558 x223 c: 778-235-1476
610, 55 Water Street, Vancouver, BC V6B 1A1
www.pembina.org

4 questions for the Canadian government's new climate test

By Matt Horne

Monday, February 1, 2016

Last week, Environment Minister Catherine McKenna and Natural Resources Minister Jim Carr announced Canada's intention to apply a climate test to major energy infrastructure proposals. This was the fifth of five new principles they announced to improve environmental assessments in the country.

The change is good news because it will fill a long-standing gap in the country's environmental assessment process. The standard approach has been to look at individual oil pipeline or LNG terminal proposals without worrying about the oilsands mines or gas fields they're connected to. The new approach will include the carbon pollution from the project being proposed and the carbon pollution from the development associated with it.

What the federal government hasn't said yet is how they plan to evaluate the new information and integrate it into their eventual decisions. Here are four questions I'd like to see included in their climate test, using Petronas's Pacific NorthWest LNG project to illustrate how they might work. In many cases, the federal government ---as opposed to the proponent --- is in the best position to address these questions.

The project is proposed for Lelu Island at the mouth of the Skeena River in northwest B.C. and is a good example of how important it is look at the associated upstream development. The standard approach to environmental assessment would consider the 4 million tonnes of carbon pollution from the LNG terminal --- just shy of the emissions from 900,000 cars on the road. Not a small amount by any means, but if the scope is broadened to include the carbon pollution from the connected pipelines, gas processing facilities and gas wells, the number almost triples to 11 million tonnes.

Question 1: Are there opportunities to cut carbon pollution?

One of the reasons for doing environmental assessments is to ensure that proponents are planning to use the best available processes and technologies. In other words, can we build the same project with fewer impacts on the environment? A climate test should help us do a better job of that for large energy projects by looking at the full range of opportunities to reduce carbon pollution. And the same approach should apply for the newly broadened scope of assessment.

In the case of the Petronas proposal, the results aren't great. Based on our analysis, the 11 million tonnes of carbon pollution the project would be responsible for could be cut in half with better technologies and practices. These include opportunities like using renewable energy instead of gas and reducing methane leaks from gas wells and pipelines.

Some of the opportunities are directly in Petronas's control. For example, Petronas's proposal would be powered entirely by gas, but there's no reason why they couldn't be using renewable energy. For example, the LNG Canada and Woodfibre proposals — both of which are also in B.C. — intend to use about 20% and 100% renewable energy, respectively.

By expanding the scope of assessment, the revised process should also include opportunities outside of Petronas's direct control. This is where it seems more appropriate for the federal government to be considering these opportunities as opposed to asking the proponent to do so.

A specific example is the methane that is released from valves and controls along the gas supply chain. These are a significant source of carbon pollution and can be reduced or eliminated with improved technology and better leak detection programs. A recent study by ICF International found that methane emissions from Canada's oil and gas sector could be reduced by 45% for less than \$3 per tonne of carbon pollution. The federal government has the ability to consider analyses like these to determine if there are further opportunities to cut carbon pollution.

Question 2: Are the policies in place to ensure carbon pollution is minimized?

While there is no shortage of opportunities to reduce carbon pollution, there is also no shortage of opportunities not being pursued because of a lack of effective climate policy. Without carbon prices that increase over time and effective regulations, the business case to reduce carbon pollution isn't strong enough. Where policies are lacking, the federal government can work with the provinces to ensure that any gaps are filled with a mix of provincial and federal policies.

In the case of Petronas, the province's Climate Leadership Team provided a clear statement that those policies aren't yet in place. The team concluded that the province was not on track to meet its targets and that B.C.'s carbon pollution was going to rise without new climate policies. They provided the province a package of recommendations — including a number for LNG and natural gas — that would help the province maintain a strong economy and get back on track to cutting carbon pollution. Those recommendations have yet to be adopted by the government, so the carbon pollution from any development that does proceed will be much higher than necessary.

Question 3: Does the project fit within a plan to meet climate commitments?

Canada has pledged to cut carbon pollution so that the country is responsible for at most 524 million tonnes by 2030. And that number will need to continue dropping post-2030. In assessing the carbon pollution from any proposed project, the government should be able to show how that upward pressure is accounted for in their plan to meet their targets in the medium and long-term.

The 11 million tonnes of carbon pollution from Petronas's LNG project and the associated upstream development would account for over 2% of Canada's 2030 target. If the government decided to approve the project, they'd need to show how that 11 million tonnes fits into a plan that meets their 2030 target and positions them for further reductions post-2030.

Question 4: Is the project viable as world moves away from fossil fuels?

If the world's governments collectively achieve the ambitions they agreed to at the Paris climate talks in December, it will mean a rapid shift away from fossil fuels. If that happens, there will be abundant global supply of oil, gas and coal, without anyone wanting to buy it. In that scenario, will Canadian suppliers of fossil fuels be able to compete for an ever-shrinking market or will they be priced out? While we can't answer these questions definitively today, the cabinet should consider them and the economic risks they could pose to the country.

I co-authored a paper looking at the role of natural gas in a world with strong climate policies. In this scenario, gas demand peaks in 2030 and drops below current levels by mid-century and continues to decline after that. Those numbers are based on scenarios in which the world avoids two degrees of warming. If we get close to avoiding 1.5 degrees of warming, which was the agreement in Paris, the peak in global gas demand will need to be sooner and lower.

Petronas says they want to be operating by 2020, which is 10 years (or less) before global gas demand would peak and then begin a 50-year decline. How robust is their business case to that drop in demand and the accompanying drop in price? It's possible they could be one of the suppliers that manage to stay afloat. It's also possible they could sink. The government should be aware of those risks in making its decision.

So there you have it — four questions that should be on Canada's new climate test when it deliberates on the carbon pollution associated with major energy projects. They aren't easy questions to answer, but tests aren't supposed to be easy. They're supposed to make you think.

Notes:

- In this article, we use a Global Warming Potential (GWP) of 34 for methane emissions in calculating the carbon pollution from the Petronas LNG project and associated upstream development. The backgrounder on the project that we published in July 2014 has slightly lower numbers because we used a GWP of 25 for methane.
- The carbon pollution estimates for the Petronas project and the associated upstream development are based on phases 1 and 2 (19.2 million tonnes of LNG per year) of the proposal going ahead.

Matt Horne is the B.C. associate director at the Pembina Institute, a non-profit think-tank that advocates for strong, effective policies to support Canada's clean-energy transition. Follow him on Twitter: @HorneMatt.

-30-

Crozier, Bev ENV:EX

From: Gibbs, Lisa ABR:EX on behalf of Caul, Doug D ABR:EX
Sent: Friday, September 18, 2015 2:57 PM
To: BCPSA Agency DMC List
Subject: DM update

Deputy Colleagues,

Below please find an overview of ongoing, recent, and emerging critical incidents/emergency management and events.
s.13

EMERGENCY MANAGEMENT

Drought and Wildfires

- Drought levels have been reduced in 8 regions and risks to communities due to wildfires have decreased with recently improved weather conditions. There is a cross-sector working group that includes representation from MARR, AANDC and FNHA to coordinate on preparedness and response with drought conditions predicted to continue through next year. This will be the last drought/wildfire update unless the situation changes.

CRITICAL INCIDENTS

LNG and Pipelines

- s.13,s.15,s.16
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- **Lax Kw'alaams** – Occupation of Lelu Island and protest in opposition to the planned LNG facility at the site continues. Recent surveyor activities have been disrupted by protesters. This is mainly a federally managed situation as Lelu Island falls under the Prince Rupert Port Authority.
s.13,s.15,s.16

Energy - Site C / BC Hydro s.13,s.16

Forests, Lands and Wildlife

- s.13,s.15,s.16
-
-

Environment/Fisheries

- s.13,s.16

Upcoming Events

- **Coal Association of Canada Conference** - (Vancouver) September 16th – 18th.
- **Site C-51 Rally** - (BC Hydro Office, Vancouver) September 23rd. Opposition to Site C dam and impacts of Bill C-51.
- **Natural Gas Summit** - (Vancouver) September 23rd – 24th.
- **Open House (hosted by EAO): Aurora LNG Digby Island Project** - (Prince Rupert) September 23rd.
- **First Nations Summit: Chief Negotiator's Meeting** - (Tsleil-Waututh Nation, North Vancouver) September 24th – 25th.

s.13

To: Honourable Catherine McKenna, Minister of Environment and Climate Change

From: Scientists

cc: Honourable Prime Minister Justin Trudeau
Honourable Hunter Tootoo, Minister of Fisheries, Oceans, and Canadian Coastguard
Honourable Jim Carr, Minister of Natural Resources
Honourable Jody Wilson-Raybould, Minister of Justice and Attorney General of Canada
Canadian Environmental Assessment Agency

Date: March 9, 2016

Re: **Scientific flaws in assessment of environmental risks from the proposed Pacific NorthWest Liquid Natural Gas facility at Lelu Island, Skeena River estuary**

We, the undersigned scientists, conclude that the Canadian Environmental Assessment Agency's (CEAA) draft report of the environmental risks of the Pacific NorthWest Liquid Natural Gas (PNW LNG) project, proposed for the Skeena River estuary at Lelu Island, is scientifically flawed and represents an insufficient base for decision-making. We urge you to reject the CEAA draft report.

Given that the PNW LNG project is proposed for the Flora Bank area of the Skeena River estuary, an area with economically- and culturally-important fishes, such as salmon, eulachon, and herring, we primarily focus our analyses on risks posed to these species. We have identified five primary scientific flaws in the CEAA draft report:

1. **Misrepresentation of the importance of the project area to fish populations, especially salmon.** The CEAA draft report has not accurately characterized the importance of the project area, the Flora Bank region, for fish. The draft CEAA report states that the *"...marine habitats around Lelu Island are representative of marine ecosystems throughout the north coast of B.C."*. In contrast, five decades of science has repeatedly documented that this habitat is NOT representative of other areas along the north coast or in the greater Skeena River estuary, but rather that it is exceptional nursery habitat for salmon^{2 6} that support commercial, recreational, and First Nation fisheries from throughout the Skeena River watershed and beyond⁷. A worse location is unlikely to be found for PNW LNG with regards to potential risks to fish and fisheries. Proponents of previous industrial projects and decision makers have historically avoided development in the Flora Bank region because of its known enormous value to fish. Thus, the draft CEAA report has failed to adequately characterize the potential risks of the project to fish and fisheries.
2. **Assuming lack of information equates to lack of risks.** CEAA's draft report concluded that the project is not likely to cause adverse effects on fish in the estuarine environment, even when their only evidence for some species was an absence of information. For example, eulachon, a fish of paramount importance to First Nations and a Species of Special Concern⁸, likely use the Skeena River estuary and project area during their larval, juvenile, and adult life-stages. There has been no systematic study of eulachon in the project area. Yet CEAA concluded that the project posed minimal risks to this fish. It is scientifically indefensible to conclude that a species will not be negatively impacted when it is unknown how it relies on habitat that would be destroyed. Indeed, there are many aspects of this ecosystem and the proposed PNW LNG project for which there is little scientific understanding⁹. Lack of knowledge does not mean lack of risks.
3. **Disregard for science that was not funded by the proponent.** CEAA's draft report is not a balanced consideration of the best-available science. On the contrary, CEAA relied upon conclusions presented in proponent-funded studies which have not been subjected to independent peer-review and disregarded a large and growing body of relevant independent scientific research, much of it peer-reviewed and published. For example, CEAA marginalized a published peer-reviewed study⁰ that revealed risks of widespread erosion of Flora Bank, a unique marine coastal landform and eelgrass habitat, due to disruption of water

currents by the proposed trestle and suspension bridge. Instead, CEAA adopted the conclusions of a proponent-funded model that claimed “*no harmful effects*” of the PNW LNG project, even though external and professional analyses identified several critical errors in their methods . Similarly, CEAA did not adequately consider decades of scientific research on salmon in the Skeena River estuary^{2 7}, and instead relied on proponent-funded studies that were substantially more limited in scope and duration and that reached different conclusions compared to the larger body of available science. In these and similar cases, the CEAA draft assessment of the PNW LNG project presents an unbalanced assessment of the project’s environmental risks through the disregard of the larger body of independent science.

4. **Inadequate consideration of multiple project impacts and their cumulative effects.** The CEAA draft report did not adequately consider the multiple potential impacts of the project and their cumulative effects and thereby provided an unbalanced assessment of risks. The PNW LNG project presents many different potential risks to the Skeena River estuary and its fish, including, but not limited to, destruction of shoreline habitat, acid rain, accidental spills of fuel and other contaminants, dispersal of contaminated sediments, chronic and acute sound, seafloor destruction by dredging the gas pipeline into the ocean floor, and the erosion and food-web disruption from the trestle structure. Fisheries and Oceans Canada (DFO) and Natural Resources Canada provided detailed reviews ² on only one risk pathway – habitat erosion – while no such detailed reviews were conducted on other potential impacts or their cumulative effects.
5. **Unsubstantiated reliance on mitigation.** CEAA’s draft report concluded that the project posed moderate risks to marine fish but that these risks could be mitigated. However, the proponent has not fully developed their mitigation plans and the plans that they have outlined are scientifically dubious. For example, the draft assessment states that destroyed salmon habitat will be mitigated; the “*proponent identified 90 000 m² of lower productivity habitats within five potential offsetting sites that could be modified to increase the productivity of fisheries*”, when in fact, the proponent did not present data on productivity of Skeena Estuary habitats for fish at any point in the CEAA process. Without understanding relationships between fish and habitat, the proposed mitigation could actually cause additional damage to fishes of the Skeena River estuary. Independent scientific analyses indicate that mitigation frequently fails to recover original levels of ecosystem function ³.

For these stated reasons the CEAA draft report represents a flawed assessment of the environmental risks of the PNW LNG proposal. While we are not decision-makers, we can assess when decisions would be made based on false premises. This is one of those instances. We urge you to reject this draft report.

The CEAA draft report for the Pacific Northwest LNG project is a symbol of what is wrong with environmental decision-making in Canada. An obvious risk of a flawed assessment is that it will arrive at an incorrect conclusion. Indeed, scientific research from other estuaries has found industrial development, such as that proposed by the PNW LNG project, is associated with lasting damage to salmon populations ^{4, 5}.

While our assessment finds that the CEAA draft report is scientifically flawed, the greater body of science also demonstrates that protection of the Lelu Island/Flora Bank area would benefit the second-largest salmon-producing watershed in Canada. Protection of the Flora Bank area would demonstrate the Liberal Government’s commitment to protection of marine ecosystems, rights of indigenous people, and scientific integrity.

Sincerely,

Signed,

Jonathan W. Moore, Ph.D., Liber Ero Chair of Coastal Science and Management, Associate Professor, Simon Fraser University.

Marvin Rosenau, Ph.D., Professor, British Columbia Institute of Technology.

Charmaine Carr-Harris, M.Sc., Biologist, Skeena Fisheries Commission.

Matthew R. Sloat, Ph.D., Director of Science, Wild Salmon Center, and Adjunct Professor, Oregon State University.

Michael H.H. Price, M.Sc., Salmon Ecologist, SkeenaWild Conservation Trust.

Allen Gottesfeld, Ph.D., P. Geo., Head Scientist, Skeena Fisheries Commission.

Co-signed,

Otto E. Langer, M.Sc., Fisheries Biologist, Former Chief of Habitat Assessment, Department of Fisheries and Oceans Canada.

Patrick McLaren, Ph.D., P.Geo., President, SedTrend Analysis Limited.

John G. Stockner, Ph.D., Emeritus Senior Scientist DFO, West Vancouver Laboratory, Adjunct Professor, University of British Columbia.

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