

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Natural Gas Development
- II ISSUE:** Meeting with Rio Tinto Alcan (RTA) regarding the Kitimat Modernization Project
- III BACKGROUND**

Minister Coleman, along with Ministers Rustad and Bennett, are scheduled to meet with RTA to receive updates on the following topics:

- status of the RTA ~~s.13, s.21~~ Kitimat Modernization Project (the Project);
- ~~s.13, s.21~~ related matters for the Kitimat and Terrace area;
- ~~s.13, s.21~~ and,
- RTA experience working cooperatively with First Nations in north central British Columbia.

Kitimat Modernization Project

- Initiated in 2010, the Project will modernize the Kitimat aluminium smelter to provide long-term viability of the smelter and sustain 1,000 jobs. When complete, the Project will result in increased production of 48 percent to ~ 420,000 tonnes/year.
- RTA has advised ministry staff that close to 60 percent of the Project is complete and production is planned to start in fall 2014.
- While the Project will reduce some air emissions by 30-50 percent annually, there will be an increase in sulphur dioxide (SO₂) emissions. A permit amendment was granted under the *Environmental Management Act* to authorize these emission increases.
- Following the issuance of the RTA permit amendment, eight appeals have been filed with the Environmental Appeal Board and a hearing has been scheduled for fall 2013.

LNG Development in Kitimat

- There are three LNG projects proposed for the Kitimat Valley: Kitimat LNG (Apache/Chevron), LNG Canada (Shell, PetroChina, Korea Gas and Mitsubishi) and Douglas Channel Energy Project (includes the Haisla First Nation).
- All three facilities have received export certificates from the National Energy Board. Kitimat LNG received its environmental assessment (EA) certificate in 2009. LNG Canada entered the BC EA process in April 2013.
- ~~s.21~~ is negotiating the leasing of several key RTA owned parcels of land for facility construction. ~~s.21~~ is also seeking a right-of-way through RTA owned lands for the purpose of connecting to their proposed LNG terminal site.

~~s.21~~

~~s.21~~

- The proposed LNG export terminal facilities have raised awareness around the need to coordinate the management of marine services and marine safety/security at the Port of Kitimat.
- The Port of Kitimat is currently a private port. On March 18, 2013, the federal government announced that it “will designate Kitimat as a public port under the *Canada Marine Act*. This designation will allow the port to put in place better traffic control measures to facilitate the safe movement of vessels.”
- The Ministries of Transportation and Infrastructure, Energy and Mines and Natural Gas Development are working with the Federal government and will be consulting with industry and local stakeholders to explore options for port governance.
- Douglas Channel at Kitimat presents a significant challenge as a result of the existing narrow corridor that will need to accommodate a range of new and existing roads, rail and utilities to support new industrial development. The Province, the District of Kitimat, First Nations and industry are working together to develop strategies to address potential challenges. An alternative roadway to provide access to each site has been identified as a funding issue that needs to be resolved by industry. RTA has been an active participant in these discussions.

IV DISCUSSION

s.13, s.21, s.16

V CONCLUSION

- The key provincial interest is in seeing the s.21 project and other LNG projects planned for the Douglas Channel proceed and reach their Final Investment Decisions. This will require support from RTA as new industrial development interest advances with the support of the Haisla Nation and the District of Kitimat.
- The province should continue to urge RTA to be accommodating with respect to LNG development.

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Steve Carr, DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Minister Coleman's meeting with Graeme Doak, Vice President, Human Resources and Government Relations, Pacific Northern Gas Limited (PNG).

III BACKGROUND:

- PNG, a wholly-owned subsidiary of AltaGas Ltd., delivers natural gas to customers in west-central British Columbia (B.C.), and through its subsidiary Pacific Northern Gas (N.E.) Ltd. ("PNG (N.E.)"), to customers in the province's northeast (APPENDIX A).
- PNG is proposing to upgrade its transmission pipeline capacity by looping its existing natural gas transmission system between Summit Lake, B.C. and Kitimat, B.C. in order to serve new small scale Liquefied Natural Gas (LNG) Projects proposed for construction in Kitimat.
- The PNG Looping Project (the Project) involves the construction and operation of approximately 525km pipe between Summit Lake (north of Prince George) and Kitimat and is estimated to cost between s.21 The Project is intended to generally parallel the existing PNG pipeline between Summit Lake and Telkwa as well as between the Lakelse Lake area and Kitimat.
- The proposed pipeline facilities will increase the capacity of the PNG system for the purpose of transporting natural gas from the Spectra Energy pipeline system at Summit Lake to the proposed LNG export facilities at Kitimat. The initial capacity of the project will be approximately 600 million standard cubic feet per day.
- The Project entered the Environment Assessment process in July 2013. Construction of the Project is scheduled to commence in the fourth quarter of 2015, with completion of construction and an in-service date in late 2016, subject to LNG plants proceeding to a final investment decision.
- A Non-Disclosure Agreement (NDA) was signed between the Ministry of Natural Gas Development and Pacific Northern Gas Ltd. on June 6, 2013.

IV DISCUSSION:

- The creation of the Project is proposed to minimize linear disturbance and reduce environmental impacts as well as provide benefits to regional districts and opportunities for individuals and business along the pipeline route.

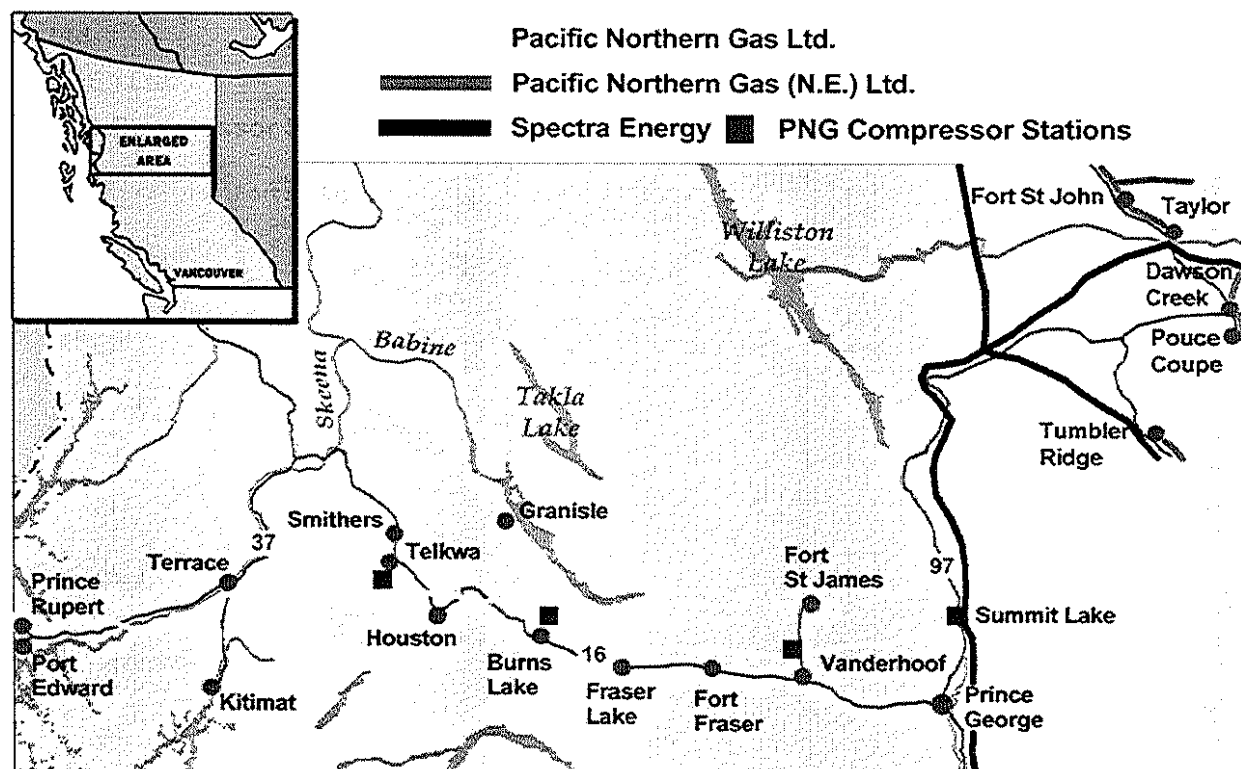
V CONCLUSION:

- PNG's Looping Project would be a positive addition to B.C.'s LNG industry; the pipeline expansion will help increase the production capacity of natural gas for LNG export facilities while minimizing linear disturbance and reducing environmental impacts by utilizing a portion of the existing pipeline right of way.

REVIEWED BY:
Brian Hansen, ADM ✓

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Steve Carr, DM ✓

APPENDIX A: PNG SYSTEMS MAP



MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Minister Coleman meeting with Geoscience BC.

III BACKGROUND:

Geoscience BC is an industry-led, industry-focused, not-for-profit, non-government organization with a mandate to collect, interpret and market geoscience data to help ensure that British Columbia's mineral exploration and mining and oil and gas industries remain innovative, competitive and sustainable. Geoscience BC awards grants to contractors and consultants to do geoscience projects that are intended to establish long-term, predictable funding to foster oil, gas and mineral exploration and development in British Columbia.

Geoscience BC has received \$48.7 million in grants from the British Columbia government to fund minerals and oil and gas related geoscience since 2005. Platform 2013 commits to working with Geoscience BC to establish long term and predictable funding.

IV DISCUSSION:

- Geoscience BC's key roles are to:
 - Take advantage of emerging opportunities by funding large, multi-million dollar geoscience projects;
 - Design and deliver high-profile geoscience programs in response to immediate industry needs and priorities;
 - Rapidly release project results and data with industry, academia, governments, First Nations, and communities;
 - Undertake community outreach and promote awareness of geoscience;
 - Market material and work with the Province in trade shows and trade missions to attract more resource investment to British Columbia.
- British Columbia is the only jurisdiction in Canada that uses a non-governmental organization like Geoscience BC to assist in the delivery of public geoscience:
 - Benefit: Emerging opportunities may be targeted for immediate geoscience work.
 - Drawback: Government has no oversight over the geoscience projects and plays no role in deciding which projects are selected;
 - Consequently, Geoscience BC projects are not considered government geoscience and are ineligible for matching federal funds for programs such as Geo-Mapping for Energy and Minerals (GEM2).
- Unlike a geological survey, Geoscience BC employees do not undertake technical geoscience work—all project work is contracted out.

V GEOSCIENCE BC MAJOR PROJECTS

On the Geoscience BC website there are over 200 projects listed under 6 project types (Data Compilations, Geochemistry, Geophysics, Mapping and Mineral Potential, Mineral Deposits and Oil & Gas) with 10 listed as 'Major Projects':

1. QUEST Project: Regional geophysics (airborne gravity and electromagnetics) and geochemistry in the Williams Lake-Prince George-Mackenzie region. Subsequent follow-up work has included analysis and inversion of datasets and updating the regional bedrock geology map. Project started in 2007.
2. QUEST-West Project: Regional geophysics (airborne gravity and electromagnetics) and geochemistry in the Terrace-Burns Lake-Vanderhoof region. Project started in 2008.
3. Horn River Basin Aquifer Project: Aquifer study of the Horn River Basin. This project is a partnership project with the Horn River Basin Producers Group. Project started in 2009.
4. QUEST-South Project: Regional geophysics (airborne gravity) and geochemistry in the Williams Lake-Kamloops-Princeton region. Project started in 2009.
5. Montney Water Project: Database compilation of surface water, ground water and deep saline aquifers in the Montney Shale Gas Play area. Project started in 2010.
6. Porphyry Integration Project: Study of geochemical, geological and geophysical signatures for select alkalic and calc-alkalic porphyry districts. Project started in 2010.
7. QUEST-Northwest Project: Regional geophysics, geochemistry and geological mapping in northwestern BC. Project started in summer 2011.
8. Northern Vancouver Island Project: Regional geophysics and geochemistry on northern Vancouver Island. Project started in summer 2012.
9. TREK Project: Regional geophysics, geochemistry and mapping in central BC. The project also has a geothermal component. Project started in spring 2013.
10. Nechako Seismic Project: Vibroseis seismic survey west of Quesnel. Seismic survey completed in 2008.

VI CONCLUSION

The Province is exploring options with Geoscience BC for implementing the Platform 2013 commitment to establish long-term and predictable funding for this organization.

Oil and Gas projects are now a larger component of Geoscience BC's program and account for approximately half of the grants awarded. The Ministry of Energy and Mines is currently working with a consultant to assess the effectiveness of Geoscience BC's geoscience program. The consultant is also examining options for more stable funding and a governance structure that allows for Geoscience BC grants to be matched by the Federal government.

Ministry of Natural Gas Development staff from both LNG Initiatives and the Oil and Gas Division will work closely with Geoscience BC to identify priorities for new geoscience research in support of development of the LNG industry in the Province.

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Steve Carr, DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Natural Gas Development and Minister Responsible for Housing
- II ISSUE:** Meeting with Art Sterritt and Garry Wouters representing the Coastal First Nations

III BACKGROUND:

- The Coastal First Nations (CFN) is an alliance of First Nations on B.C.'s north and central coast (from the Alaskan border in the north to Vancouver Island), and Haida Gwaii.
- Art Sterritt recently wrote to Minister Coleman providing an update on the CFN's interests related to proposed LNG development on the north coast and requested a meeting to discuss these interests.

s.16

CFN - Province Framework Agreement

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s.16

- Topics for discussion include:
 - Emissions (GHG and air emissions);
 - Marine shipping (emergency response, shipping volumes and routes, cumulative impacts, collaborative oversight, monitoring and research);
 - Carbon offsets (assessment of policy direction and First Nation offset supply opportunities);
 - Regional renewable energy supply (assessment of total electricity demands for ancillary facility functions and First Nation opportunities for procurement); and
 - Economic Benefits (regional benefits sharing opportunities and approaches to jobs, skills training and commercial opportunities).
- Any subsequent agreements related to these topics will include provisions to address member First Nations' support for LNG development.

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- The CFN has, however, also sought additional capacity funding from LNG proponents, provincial and federal ministries to support their ability to engage on these topics.

Work to Date

- On September 2013, the Province convened a shipping workshop with the CFN, other First Nations, industry and the federal government.
- Future actions resulting from this workshop will include the establishment of a working group (with membership from the CFN, other First Nations, the federal and provincial government, and proponents). It is anticipated that a Terms of Reference for this working group will be established and the working group will be convened within 6 months.
- An additional LNG shipping workshop in Prince Rupert is planned with CFN before the end of 2013.
- Some analysis and modeling has also been undertaken by the Climate Action Secretariat with regard to LNG facility GHG emissions. This has been provided to the CFN.

IV DISCUSSION:

- The Ministry of Aboriginal Relations and Reconciliation (MARR), as represented by Chief Negotiator Heinz Dyck, will lead engagement with the CFN in the development of a work plan.
- MARR and the LNG Task Force are assessing initiatives related to identified topics for discussion with CFN and options for further work.
- Engagement with the CFN may provide a productive means to address “regional issues” related to LNG development. However, the CFN does not comprehensively represent all First Nations on the coast (some of which may be directly impacted by LNG development).

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s.16, s.13

- CFN will be a useful organization for the Province consulting further on the development

s.13, s.16, s.17

V CONCLUSION:

- The Province remains committed to working with First Nations in understanding their interests related to LNG development and in ensuring their communities meaningfully realize associated benefits.
- The Province is committed to working with the CFN on the regional issues

s.13, s.16, s.17

- MARR will remain the lead s.13, s.17, s.16
with the support of the Ministry of Natural Gas Development.
- Capacity support to continue discussions on identified topics s.13, s.16, s.17
s.13, s.16, s.17

REVIEWED BY:
Brian Hansen, ADM

APPROVED BY:
Steve Carr, DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT
BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Christy Clark, Premier
and Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Premier Christy Clark and Honourable Coleman's Meeting with
Chris Finlayson, Chief Executive of BG Energy Group

III BACKGROUND:

- BG Group is an integrated oil and gas company, headquartered in the United Kingdom. BG Group is active in more than 25 countries with a broad portfolio of exploration and production, LNG, and transmission and distribution business interests.
- BG Group is proposing the Prince Rupert LNG terminal on Ridley Island; Federal Crown land administered by the Prince Rupert Port Authority. In April 2013, the project entered both the federal and provincial Environmental Assessments processes. On June 19, 2013, BG submitted an application to the National Energy Board for a 25-year export license for 21.6 million tons per annum of LNG. BG Group anticipates making a final investment decision in 2015 and an in-service date of 2019.
- In September 2012, Spectra and British Gas (BG) announced a 50/50 joint venture partnership for a pipeline to support Prince Rupert LNG. The pipeline project entered the BC Environmental Assessment process in October 2012. The expected in-service date for the pipeline is 2019.
- BG Group estimates more than 3,500 jobs during construction and 250 permanent employees to support ongoing operations and capital expenditures to eventually approach s.21 upstream, midstream and downstream.

IV DISCUSSION:

Regulatory Process – Environmental Assessment

- The Prince Rupert LNG project is primarily located on federal lands, but will have potential environmental, social and economic impacts beyond federal lands, therefore, triggers federal and provincial environmental assessments. The Canadian Environmental Assessment Agency will be the lead, but each government will make its own decisions on issuance of an Environmental Assessment Certificate. A work plan has been agreed upon for a coordinated process that provides efficiency and avoids, where possible, duplication of process

Power

- BC Hydro provided BG Group with a listing of the input data required to complete a partial system impact study for a load of up to s.21 on August 8, 2013. A response has not yet been received from BG Group.

Prince Rupert Port

- The Ministry of Natural Gas Development is leading negotiations between the provincial and federal government on a Memorandum of Understanding that establishes regulatory clarity for proposed LNG facilities in the Prince Rupert Port Authority.

- BG Group supports the Oil and Gas Commission as the primary regulator for their proposed facility and has been informed that the province and the federal government are contemplating a regulation, similar to the new federal regulation for the Kitimat LNG facility, to enable their role as a regulator.

First Nations

s.13, s.16, s.17

Tax

- On October 3, 2013, the provincial tax team met with BG Group officials to review the LNG taxation design. BG signaled that they need to model the tax into their economic model, and have committed to subsequent meetings with the tax team to provide a response to the various design elements.

s.13, s.17

s.13, s.17

Grassy Point

- On February 23, 2013, government released a Request for Expression of Interest for the development of LNG facilities on Crown land at Grassy Point. The process is open, transparent and responsive to LNG proponents wanting to confirm a site. Four proponents expressed interest. Government has met with each of the proponents individually and provided a Provincial response to their submissions.

s.13, s.17

s.13, s.17

British Columbia is interested in maximizing the LNG opportunity and is working through a competitive process with respect to Grassy Point and the outcome of that process will be announced in November 2013.

V CONCLUSION:

- The Province is very pleased that BG Group is in the planning process for an LNG project in BC and that they are working closely with officials in the Ministry of Natural Gas Development.
- The Province understands that BG Group has been exploring options on sourcing upstream natural gas assets and would be interested in an update on those discussions and any other progress related to possible partnerships respecting their LNG project.

REVIEWED BY:

Brian Hansen, ADM✓

APPROVED BY:

Steve Carr, DM✓

Chris Finlayson



Chief Executive

Appointed as an Executive Director in 2011; Chief Executive from 1 January 2013.

Skills and experience: Before joining BG Group, Chris gained over 33 years' technical and commercial experience in the oil and gas industry, with Royal Dutch Shell plc, where he was a member of the Exploration and Production leadership team, serving in Russia, Nigeria, Brunei and the North Sea.

Prior to his appointment as Chief Executive, Chris was responsible for BG Advance, including BG Group's exploration team, the Group's major capital projects programme, contracts and procurement, and technology.

Other appointments: non-executive director, Lloyd's Register Group Limited.

Sub-committee membership:

- Exploration and Appraisal*
- Governance*
- Investment**

* Committee Chairman.

** Interim Committee Chairman, since 1 January 2013.

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

I ISSUE: Minister Coleman is meeting with Imperial's Senior Vice President, Glenn Scott, to discuss LNG and Imperial's plans.

II BACKGROUND:

T.G. (Glenn) Scott was appointed senior vice-president, resources division in June 2010. Prior to his current assignment, Mr. Scott was appointed president, ExxonMobil Canada Limited and production manager for ExxonMobil Canada East in 2006.

Imperial Oil Ltd. (Imperial) and its parent company ExxonMobil Corporation (EMC) are in the planning stages of their proposal that will eventually include gas field development, pipelines, an LNG plant, export terminal and maritime shipment of LNG.

Imperial and EMC., under the jointly owned affiliate WCC LNG Ltd., filed an application on June 19, 2013, with the National Energy Board for approval to export up to 30 million tonnes of LNG per year for 25 years from a proposed terminal on the coast of BC. Several prospective sites for a liquefaction plant, and storage and marine loading facilities are under assessment, including locations near Kitimat and Prince Rupert.

III DISCUSSION:

Grassy Point Land Disposition

The Ministry of Natural Gas Development (MNGD) in partnership with the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) released a Request for Expression of Interest (REOI) with regard to Crown Land for LNG Plant Development at Grassy Point on February 23, 2013. The REOI ensures the Crown Land disposition process for LNG is open, transparent and responsive to LNG proponents wanting to confirm a site.

Four majors have expressed interest in Grassy Point:

- SK E&S Co. Ltd. SK Group, Inc.;
- Aurora LNG (CNOOC, Nexen, Inpex, & JGC);
- Woodside LNG; and
- Imperial Oil and ExxonMobil Canada.

MNGD and FLNRO have met with each of the proponents individually and have provided a Provincial response to their submissions.

Imperial Oil may ask the Minister to comment on the current state of the Grassy Point Land Disposition:

- The Minister can communicate that ministry staff have been working with Exxon/Imperial on the sole proponent process at Grassy Point.
- Ministry staff has informed proponents that on October 25th a detailed package and supporting materials on next steps in the sole proponent auction process will be provided.
- The process will result in the successful proponent entering into sole proponent agreements, furthering advancement towards final investment decision (FID) in the northwest.

LNG Taxation Framework

The Ministry of Finance in conjunction with the Ministry of Natural Gas Development has been advancing a new LNG taxation framework that will generate revenues for BC to ensure we remain the most competitive regime for LNG development relative similar jurisdictions.

A negotiating team is meeting with industry to confirm details of the new tax design including deductibility features and capital recovery. ExxonMobil/Imperial has not yet had an opportunity to be briefed on the LNG Taxation framework, and immediately before or following the land disposition process for Grassy Point, the Ministry will try to confirm a date for a discussion, subject to finalizing the terms of the non-disclosure agreement. .

IV CONCLUSION:

Imperial Oil's land position, emerging partnerships, and significant ongoing investments in the Province confirm the company's continuing confidence in investing in BC.

REVIEWED BY:
Brian Hansen, ADM

APPROVED BY:
Ines Piccinino, A/DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: The Honourable Christy Clark, Premier

II ISSUE: Premier Clark's meeting with Pacific Northwest LNG, PETRONAS and Progress Energy

III BACKGROUND:

Pacific Northwest LNG

- Pacific Northwest LNG is a proposed LNG liquefaction and export facility located on Lelu Island, BC. The project partners are PETRONAS/Progress Energy in partnership with Japan Petroleum Exploration Co., Ltd. (JAPEX).
- The project site on Lelu Island is located adjacent to Port Edward on the mainland, roughly 30 kilometers south of Prince Rupert, and is located on federal Crown land with a water lease administered by the Prince Rupert Port Authority.
- The proposed Project triggers both a provincial and federal Environmental Assessment and coordinated assessments are occurring.
- On July 5, 2013, Progress Energy applied to the National Energy Board for a license to export up to 19.68 million tonnes/yr for 25 years.
- Final investment decision is expected in late 2014 and breaking ground and site clearing by early 2015.

Natural Gas Pipeline

- Pacific Northwest LNG selected TransCanada to build a new 750-kilometre natural gas pipeline. The Prince Rupert Gas Transmission Project would deliver natural gas from Fort St. John, BC to the proposed LNG facility. TransCanada has also proposed to extend its existing NOVA Gas Transmission Ltd. system and connect both lines to the proposed facility. The pipeline project is currently in the pre-application stage of the BC Environmental Assessment process.

IV DISCUSSION:

Environmental Assessment Process

- The Pacific Northwest LNG project site is located primarily on federal Crown lands, but may also have environmental, social, economic, health and heritage impacts on surrounding provincial jurisdictions, triggering the need for both federal and provincial environmental assessments. As such, the Canadian Environmental Assessment Agency is the lead agency regarding the environmental assessment process, but both the federal and provincial governments will make their own decisions regarding issuance of individual environmental assessment certificates. A work plan has been agreed upon for a coordinated environmental assessment process

between the federal and provincial agencies that provides efficiency and avoids, where possible, duplication.

Regulatory Authority

Pacific Northwest LNG is supportive of the BC Oil and Gas Commission (OGC) being the primary regulator for their proposed facility. Government staff have worked closely with Progress Energy and recently informed them that the federal government, led by Transport Canada, prefers to develop a federal regulation for the Port, which would enable OGC to be a regulator. The Ministry of Natural Gas Development (MNDG) is leading provincial negotiations with Transport Canada and the Port on the development of this enabling regulation, which should be complete in 2014. Progress Energy is working with the Prince Rupert Port Authority to determine best practices for LNG carriers using the export facility.

First Nations and the Facility

s.13, s.16

First Nations and the Pipeline

s.13, s.16, s.17

V CONCLUSION:

- Government has the framework in place for seamless federal/provincial environmental assessments.

- MNGD is hopeful that a federal regulation may be negotiated in an expedited way with Transport Canada to enable the OGC to regulate the project on federal lands.
- Government encourages close coordination with Pacific Northwest LNG and TransCanada
s.13, s.16, s.17
- The taxation regime has been discussed with the Project Proponents and a follow up meeting to receive comments is planned prior to the end of October.

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Steve Carr, DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

I ISSUE: Minister Coleman is meeting with Spectra Energy to review base business activities and a LNG update.

II BACKGROUND:

- In September 2012, Spectra and British Gas (BG) announced a 50/50 joint venture partnership for a pipeline to support Prince Rupert LNG on Ridley Island ("Westcoast Connector Gas Transmission"). The expected in-service date for the pipeline is 2019.
- The pipeline will be approximately 850 km in length and will have a size of 48 inches in diameter from Station 2 (SW Ft. St. John) to Ridley Island, Prince Rupert. This natural gas transportation system will be capable of transporting up to 4.2 Bcf/d of natural gas.
- Spectra filed a project description for the pipeline project, Natural Gas Transmission System, with the BC Environmental Assessment Office (BC EAO) in October 2012.
- Spectra Energy's proposed project has been accepted by BC EAO, which has determined that an environmental assessment is required.
- Spectra plans include a comprehensive First Nations and community engagement initiative with the objective of achieving economic benefit agreements with First Nations along the pipeline corridor.

III DISCUSSION:

s.13, s.16, s.17

IV CONCLUSION:

- Spectra's emerging partnerships and significant ongoing investments in the Province confirm the company's confidence in investing in BC.

Attachment: Executive Summary of Spectra Project Description

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Steve Carr, DM ✓

1.0 EXECUTIVE SUMMARY

Spectra Energy Corp's British Columbia ("BC") pipeline system has been the backbone of British Columbia's natural gas industry since 1957. With over 2,800 kilometres ("km") of pipeline and total installed compression of 685,000 horsepower ("HP"), the system transports approximately 2.4 billion cubic feet ("bcf") of natural gas on a daily basis. The company proposes to utilize this experience and expertise towards the provision of new pipeline transportation capacity to the north coast of the province through its British Columbia affiliate, 0948090 B.C. Ltd. (hereinafter collectively referred to as "Spectra Energy" or the "Company").

More specifically, the Company proposes to develop a natural gas transportation infrastructure system from northeast British Columbia to the Prince Rupert area of the province to support the export of liquefied natural gas ("LNG"). The northeast BC to Prince Rupert area pipeline project (referred to herein as the "Project"), is expected to involve the construction of a pipeline system consisting of either one or two adjacent pipelines, approximately 851 to 872 km in length and having a diameter of 914 mm (36 inch) to 1,219 mm (48 inch). The Project is considered a reviewable project under Part 4 of the *Reviewable Project Regulation of the BC Environmental Assessment Act* because the pipeline will have a diameter of greater than 323.9 mm and a length of greater than 40 km.

The proposed pipeline would start in the general area of Cypress, located in northeast BC, approximately 210 km south of Fort Nelson and terminate on Ridley Island, on the north coast of BC near Prince Rupert (Figure 1). A route is proposed from Cypress to Cranberry Junction (the "Primary Route"). However, as described in more detail below, three route options are being considered west of Cranberry Junction in order to access Ridley Island. It is anticipated that only one of such routes west of Cranberry Junction will ultimately be selected and constructed.

From Cypress the Primary Route would traverse south to Hasler Flat, paralleling both immediately adjacent to and offset by up to 1 km to the existing Spectra Energy transmission pipeline right of way; west through the Pine Pass, across the Parsnip Reach of the Williston Lake Reservoir just north of Mackenzie; west around the northern tips of Takla Lake and the upper Babine River near Kisgegas; and across the headwaters of the Skeena River, the Kispiox River and on into the Nass River watershed to Cranberry Junction. West of Cranberry Junction three route options are being considered. These consist of a land route ("Land Route") through the north Coast Mountains and two routes ("Kitsault Route" and "Nasoga Gulf Route") with marine segments (Figures 1 and 2).

The Land Route (Figure 2) would follow southwest along the Nass River Valley through Nisga'a Lands deviating near the village of Laxgalts'ap (formerly known as Greenville) to traverse south along the Ishkheenickh River, west through Kwinamaas Pass in the Ksl X'anmas Conservancy, southwest along Mouse Creek, across Khutzeymateen Inlet, Khutzeymateen Inlet Conservancy, Khutzeymateen Inlet West Conservancy, Work Channel and the Tsimpsaan Peninsula to Ridley Island.

The Kitsault Route (Figure 2) would traverse northwest from Cranberry Junction and cross the Nass River enroute to Kitsault on the north coast and then offshore into the Pacific Ocean through Alice Arm, Observatory Inlet, Portland Inlet, and Chatham Sound before terminating at Ridley Island.

The Nasoga Gulf Route (Figure 2) would traverse the same alignment as the Land Route southwest from Cranberry Junction along the lower Nass River, but would depart near KP 720, continuing across Nisga'a Lands south of the Nass River. The route parallels the south bank of

the Nass River, then bears west and south, near the head of Iceberg Bay, then turns south, before heading west, connecting to the Chambers Creek Valley and terminating in vegetated land at the head of Nasoga Gulf. From the head of Nasoga Gulf the pipeline would traverse offshore into the Pacific Ocean through Nasoga Gulf, Portland Inlet and Chatham Sound before terminating at Ridley Island, along the same route as described above for the Kitsault Route.

While the Land Route and the Nasoga Gulf Route both contemplate crossing Nisga'a Lands, either option would only be undertaken with the consent of the Nisga'a Nation (the "Nisga'a"). The Company has initiated early discussions with the Nisga'a concerning the Project and is committed to working with the Nisga'a in this regard.

The Project will include two new metering and up to five new compressor stations that would be located along the pipeline system (Figure 1).

The purpose of the Project is to provide the required pipeline transportation capacity to meet the demands of a new LNG terminal being contemplated for the Prince Rupert area of British Columbia. This is in keeping with the Province's Jobs Plan and its goal of establishing up to three LNG facilities on the north coast by 2020.

The Project is expected to provide in the range of 3,000 to 3,600 person years of employment during construction, and approximately 50 to 60 permanent jobs for the life of the Project. The estimated capital cost is still being determined and is highly dependent on the route and pipeline design ultimately selected. At this early stage, capital costs are estimated to be in the range of \$6 to \$8 billion. With respect to property tax associated with the Project, it is estimated at this early stage that property tax could be as much as \$23 million annually.

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Natural Gas Development
- II ISSUE:** Minister's Meeting with Tom Lively, President and CEO of Fraser River Pile and Dredge (FRPD) (GP) Inc., regarding marine construction and the *Coasting Trading Act* (CTA).
- III BACKGROUND:**
- FRPD is a privately owned marine construction and dredging contractor who operates mainly in Western Canada and Northwest Territories.
 - As a federal law, the CTA is the responsibility of the Minister of Transport Canada and the licence application process is administered by the Canadian Transportation Agency and the Canada Border Services Agency.
 - The CTA reserves marine activities of a commercial nature to Canadian registered and duty paid vessels. The CTA also provides for an administrative process to allow a resident of Canada to temporarily import a foreign or Canadian non-duty paid vessel to undertake a specific activity under licence, when no Canadian registered vessel is suitable or available.
 - When proponents intend to undertake a marine activity, they must first verify if a suitable Canadian vessel is available before applying for a coasting trade licence. During the licence application process, the Canadian Transportation Agency notifies Canadian companies of the application to give them the opportunity to offer their vessels for the specified activity. This provides Canadian ship owners opportunities to offer their services before a foreign vessel is imported into Canada.
 - Coasting trade licences are issued for a maximum 12 month period. Therefore, if a specific activity continues beyond 12 months, the proponent must apply for a new licence – thereby providing Canadian ship operators an additional opportunity to offer their services.
 - Priority to engage in Canada's coasting trade is given in the following order:
 1. Canadian registered, duty paid, vessels;
 2. Canadian registered, non-duty paid, vessels under licence;
 3. Foreign vessels under licence.
 - Unlike some other national coasting legislation, the CTA also applies to moveable drilling platforms, seismic vessels and other "vessels" used in the exploration for and extraction of oil and gas in offshore waters of the continental shelf up to the 200 mile limit. As few "vessels" of this type are available in Canada, the CTA governs the temporary admission of foreign equipment.
 - The United States (U.S.) has their Merchant Marine Act (Jones Act) which is similar in purpose to the CTA except it is more restrictive. The Jones Act is more restrictive than the CTA as it includes as a condition to being coastwise qualified that the U.S. registered vessel be built and owned in the US and

created by U.S. citizens. The build requirement does not exist in Canada hence the possibility to register or import foreign built vessels into Canada. In the U.S. the dredging in shallow waters and the outer continental shelf is restricted to U.S. built dredges.

IV DISCUSSION:

- Mr. Lively would like to discuss British Columbia's (B.C.) marine construction industry and its expertise and capabilities with regards to providing services to developing our liquefied natural gas (LNG) industry.
- Mr. Lively is concerned with how the CTA is laid out compared to other jurisdictions, since the CTA allows for foreign vessels to be used if no Canadian vessels are available. With LNG being a new industry in B.C., local companies, like FRPD, may/will not have the equipment and vessels needed to suffice the marine construction requirements to acquire LNG proponents' business; the CTA will then allow (after an approved administrative process) LNG proponents for 12 months to bring in foreign vessels and equipment since no Canadian equipment may be available.
 - If a specific activity continues beyond 12 months, the proponent must apply for a new licence – thereby providing Canadian ship operators and companies like FRPD an additional opportunity to offer their services.
- The CTA supports domestic marine interests by reserving the coasting trade of Canada to Canadian registered vessels, with limited exemptions.
- The Canadian Transportation Agency has faced criticism from the domestic marine industry about allowing foreign vessels into the coasting trade and from those applying for a license for taking longer than the applicants felt was appropriate.
- The administrative process provides Canadian Shippers and users of marine services and equipment the ability to access the larger international fleet when suitable Canadian vessels are not available in Canada for a specific activity – thus responding to business/operation needs when no Canadian option is available.

V CONCLUSION:

- The Minister should reinforce the concept that the Province wants to create jobs and progress B.C.'s economy with the development of LNG and that local companies, like FRPD, will have a fair and equal opportunity to secure marine construction business with LNG proponents within the current CTA.
- The Minister should communicate that the CTA is a federal law and there is no role for the Provincial Government and that the CTA is the responsibility of the Minister of Transport Canada and the licence application process is administered by the Canadian Transportation Agency and the Canada Border Services Agency.
-

REVIEWED BY:

Brian Hansen, ADM ✓

APPROVED BY:

Steve Carr, DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Natural Gas Development
- II ISSUE:** Minister Coleman's meeting with Mr. Zhiqiang Feng (*FUNG*), Vice President of Sinopec International Petroleum Corporation (SIPC) and Chairman of North America Region (bio attached), Mr. Handong Rui (*RAY*), Head of New Business Department, SIPC, and Mr. Brian Tuffs, Executive Vice President of Sinopec Daylight Energy. Mr. Feng and colleagues are interested in discussing potential liquefied natural gas (LNG) sites in British Columbia (B.C.).
- III BACKGROUND:**
- China Petroleum & Chemical Corporation or Sinopec Limited is a Chinese oil and gas company based in Beijing, China. It is listed in Hong Kong and also trades in Shanghai and New York. Sinopec is the world's fifth biggest company by revenue. Sinopec Limited's parent, Sinopec Group, is one of the major petroleum companies in China, headquartered in Chaoyang District, Beijing.
 - Sinopec's business includes oil and gas exploration, refining, and marketing; production and sales of chemical products; storage and pipeline transportation of crude oil and natural gas; and, import and export of crude oil, natural gas, refined oil products, petrochemicals, and other chemicals.
 - Given its legacy asset base from Sinopec Group, analysts have categorized it as a more downstream oil player than PetroChina. Sinopec is the largest oil refiner in Asia by annual volume processed. Sinopec produces around 1/4 as much raw crude oil as PetroChina, but produces 60 percent more refined products per annum.
 - In March 2013, China Petroleum and Chemical Corp agreed to pay \$1.5 billion for Sinopec Group's overseas oil and gas-producing assets.
 - In August 2013, Sinopec acquired a 33 percent stake in Apache Corporation's oil and gas business in Egypt for \$3.1 billion.

IV DISCUSSION:

s.13, s.17, s.21

V CONCLUSION:

s.21

- Minister Coleman should take this opportunity to convey to Mr. Feng that the Province understands B.C.'s LNG development. s.21 for
- The Minister should mention to Mr. Feng that he would like to offer his and the Province's assistance and support in connecting Mr. Feng with potential LNG opportunities while in B.C.
- The Minister should acknowledge that he understands that Suzanne Manahan and Brian Hansen have arranged to meet with Mr. Feng following the Minister's meeting to review the projects currently in play in British Columbia s.17, s.21
- Minister Coleman should mention that the Province is hosting our second international LNG in B.C. conference in Vancouver, B.C. in May 2014. The Minister should advocate for Sinopec to attend the conference. Sinopec should be made aware that there will be sponsorship opportunities available for the May 2014 conference and sponsorship details will be announced in the upcoming months.

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Steve Carr, DM ✓

Feng Zhiqiang

Executive Vice President, SIPC

Chief Executive Officer and Chairman, Sinopec Daylight

Mr. Feng is Chief Executive Officer and Chairman of Sinopec Daylight. He has been working in the oil and gas industry since 1988. Mr. Feng is Executive Vice President of Sinopec International Petroleum Exploration and Production Corporation (SIPC) starting February 2012, and he is a member of the Board of Directors of the Geneva-headquartered Addax Petroleum, also a Sinopec subsidiary. Prior to joining SIPC, Mr. Feng worked for China National Petroleum Corporation (CNPC) in Daqing Oilfield from July 1988 to February 2012, and was Executive Vice President of Daqing Oilfield from November 2005 to February 2012. Mr. Feng holds a PHD Degree from the University of Reading, UK.

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** The Honourable Rich Coleman, Minister of Natural Gas Development
- II ISSUE:** Minister Coleman's meeting with the Ambassador of the European Union (EU) to Canada, Her Excellency, Marie-Anne Coninx.

III BACKGROUND:

- Her Excellency (biography: APPENDIX A) is on her first official visit to British Columbia (BC)
- As the Ambassador of the European Union to Canada, Her Excellency intends to reach out to Canadians to inform about the European Union and to advocate the importance of the European Union's strategic partnership with Canada.
- Her Excellency is working to engage Canadians across the country to strengthen the visibility of the European Union and to highlight the benefits for both partners in cooperating closely to address common objectives and challenges.
- Her Excellency is working to conclude the two major agreements already under negotiation: the Comprehensive Economic and Trade Agreement (CETA) and the Strategic Partnership Agreements.
- There are 12 LNG proposals in BC at various stages of development:
 - Discovery LNG
 - BC LNG (Douglas Channel Energy Project)
 - Kitimat LNG
 - LNG Canada
 - Pacific Northwest LNG
 - Prince Rupert LNG
 - Triton LNG
 - Aurora LNG
 - Woodfibre LNG Project
 - There are additional proponents who we are working with LNG for a development at Grassy Point
- Most of these projects are planned for northwest BC in communities such as Kitimat and Prince Rupert. These projects are of such significance that they represent the largest private sector investment proposals in the Province's history.
- The Montney Basin and Horne River Basin in northeast BC will be key providers of natural gas to the projected LNG export facilities.

s.13, s.17

- BC's competitive clean economy advantages were the focus of the Premier's mission to Washington D.C. in early October and her participation in the Pacific Coast Collaborative with the Governors of California, Oregon and Washington in late October.

IV DISCUSSION:

Key Messages:

- BC has an unprecedented opportunity to create economic growth through the development of a new liquefied natural gas (LNG) industry.
- The market potential is clear and demand for LNG is growing. BC is creating an LNG industry and can help other countries make a transition from a coal fired electrical generation. By exporting natural gas to Asia, BC is providing the world with a cleaner energy alternative, and contributing to positive climate change on a global scale.
- Major industry players have shown a sincere commitment to creating a LNG industry in BC. We are working closely with proponents as they advance their plans to build LNG infrastructure on BC's coastline.

s.13, s.17

- The advantages we provide for industry are clear:
 - Lower ambient temperature on our north coast resulting in energy efficiency for LNG production
 - We have lower shipping costs thanks to our proximity to growing markets.
 - We have a vast supply of natural gas to meet demands.
 - Our long history of safe, responsible natural gas development makes BC a reliable place to invest and conduct business.
 - We have strong relationship with BC's First Nations and continue to facilitate mutually beneficial partnerships.
- BC has a 50-year record of safely recovering oil and gas resources as well as world-leading environmental standards. Our natural gas sector is safe and responsible.
- BC's commitment is to have the cleanest LNG facilities and we are currently in discussion with industry to develop means to achieve this goal. BC already regulates the natural gas sector through its Revenue Neutral Carbon Tax, which, at \$30/tonne CO₂e, creates a significant incentive to reduce fossil fuel combustion emissions within the natural gas sector.
- BC is committed to an LNG industry that operates in an environmentally responsible manner and continues to encourage LNG proponents to use clean energy sources to power their LNG facilities and to choose the best technology.
- The Province is also committed to having the best climate action policies in place that maintain our leadership on climate change and clean energy while facilitating the economic benefits of the LNG industry.
- The Province's Natural Gas Strategy identified the need to explore carbon capture and sequestration in the course of natural gas extraction. We have already made significant gains in carbon capture through our efforts to reduce routine flaring at well sites.

V CONCLUSION:

- BC highly values good political and economic relations with EU, and hopes that the relationship will be further strengthened as Canada and the EU have reached an agreement in principle on the CETA. BC has been an active participant throughout the CETA negotiations.
- BC commends the EU and Canada for reaching an agreement-in-principle for CETA and supports the outcomes we expect it to deliver.
- BC is open to exploring opportunities, in conjunction with our industry partners, for the supply of BC natural gas for use in the EU.

REVIEWED BY:
Brian Hansen, ADM✓

APPROVED BY:
Steve Carr, DM✓

APPENDIX A:

Marie-Anne Coninsx



Marie-Anne Coninsx is the Ambassador of the European Union to Canada. She began her posting as the European Union's top diplomat in Canada in September 2013, after serving four years as Ambassador of the European Union to Mexico. She has been an official of the European Union since 1984.

She started her career in the European Commission at the Legal Service in 1984. From 1985 to 1996, she was a Cabinet Staff Member of the following Commissioners: Commissioner Willy De Clercq, responsible for External Relations and Trade; Commissioner Martin Bangemann responsible for Internal Market and Relations with the European Parliament (EP); and Commissioner Pinheiro, responsible for Development Policy and Relations with the EP.

Ambassador Coninsx has extensive experience dealing with multilateral issues, having served as Minister-Counsellor at the Delegation of the European Union in New York (US) from 1996 to 2000 and as Minister-Counsellor at the Delegation of the European Union in Geneva (CH) from 2000 to 2004.

Prior to heading the European Union Delegation to Mexico, Ambassador Coninsx was Head of Unit at the External Relations Department of the European Commission, overseeing relations between the European Union and Latin America from 2004 to 2009.

Ambassador Coninsx studied law at Gent University in Belgium and did post-graduate studies specializing in international law and European law respectively at Cambridge University (UK) and at European University Centre in Nancy (France).

Ambassador Coninsx is Belgian and her interests include painting, travelling and sports (tennis and skiing). She is fluent in Dutch, French, English and German. She has excellent knowledge of Spanish; basics of Portuguese and Italian.

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Christy Clark, Premier of British Columbia
- II ISSUE:** Premier Clark's meeting with Greg Ebel and Michael Phelps of Spectra Energy regarding update on Westcoast Connector Gas Transmission Project.
- III BACKGROUND:**
- Based in Houston, Texas, Spectra is a FORTUNE 500 company and is one of North America's largest pipeline and midstream companies.
 - Their operations include more than 22,000 miles of natural gas, natural gas liquids, and crude oil pipelines.
 - Spectra's pipeline system has been the backbone of British Columbia's natural gas industry since 1957.
 - Spectra Energy and BG Group have partnered to propose a natural gas pipeline from northeast British Columbia to the Prince Rupert area to support the export of LNG.
 - The project named the Westcoast Connector Gas Transmission Project.
- s.13, s.17
- The Westcoast Connector Gas Transmission Project plans to develop a natural gas transmission system from the Cypress area in northeast BC (approximately 210 km south of Fort Nelson) to Ridley Island, on the north coast of BC near Prince Rupert (see attachments).
 - The first portion of the route will travel from Cypress to Cranberry Junction passing close to Mackenzie.
 - West of Cranberry Junction two routes are being considered – the "Kitsault Route" and the "Nasoga Gulf Route" both of which have marine segments. A terrestrial route through the Kutzeymateen Park is no longer being pursued.
 - Spectra Energy is committed to a high standard of safety and environmental performance, with a culture of continual improvement through its Safety Vision and Environmental, Health & Safety Policy.
- s.13, s.17
- Capital costs are estimated to be in the s.13, s.17 range, dependent on the route and pipeline design selected.
 - Annual property tax is estimated to be s.13, s.17 million.
 - Following a Final Investment Decision on the Prince Rupert LNG project by BG, the Westcoast Connector pipeline project would proceed.

- For the 2013 LNG in B.C. conference, Spectra was a Gold Sponsor and for the 2014 conference has committed – in partnership with BG – to being a Platinum Sponsor.

IV DISCUSSION:

- s.13, s.16
- Spectra expects to submit an application to the Environmental Assessment Office in mid-March 2014. If accepted this could mean that the project would be referred for Ministers' decision in November 2014.

s.13, s.17

V CONCLUSION:

- The Westcoast Connector Gas Transmission Project is well positioned to serve west coast LNG exports.

Attachments: Bios for Gregory Ebel and Michael Phelps; Maps describing pipeline route

REVIEWED BY:
Brian Hansen, ADM

APPROVED BY:
Ines Piccinino, A/DM ✓

Gregory L. Ebel

President and Chief Executive Officer



Greg Ebel is president and chief executive officer of Spectra Energy Corp, a member of the company's board of directors and a board member of DCP Midstream.

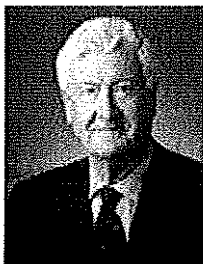
s.22

s.22

Ebel has broad experience in both the finance and energy sectors.

s.22

s.22



Michael E.J. Phelps

Mr. Michael Phelps is Chairman of Dornoch Capital Inc., a private investment company.

s.22

Mr. Phelps chairs Spectra Energy's compensation committee and is a member of Spectra Energy's finance and risk management committee. Phelps serves on the board of Marathon Oil Corporation.

Figure 1 - Existing and Proposed Pipelines

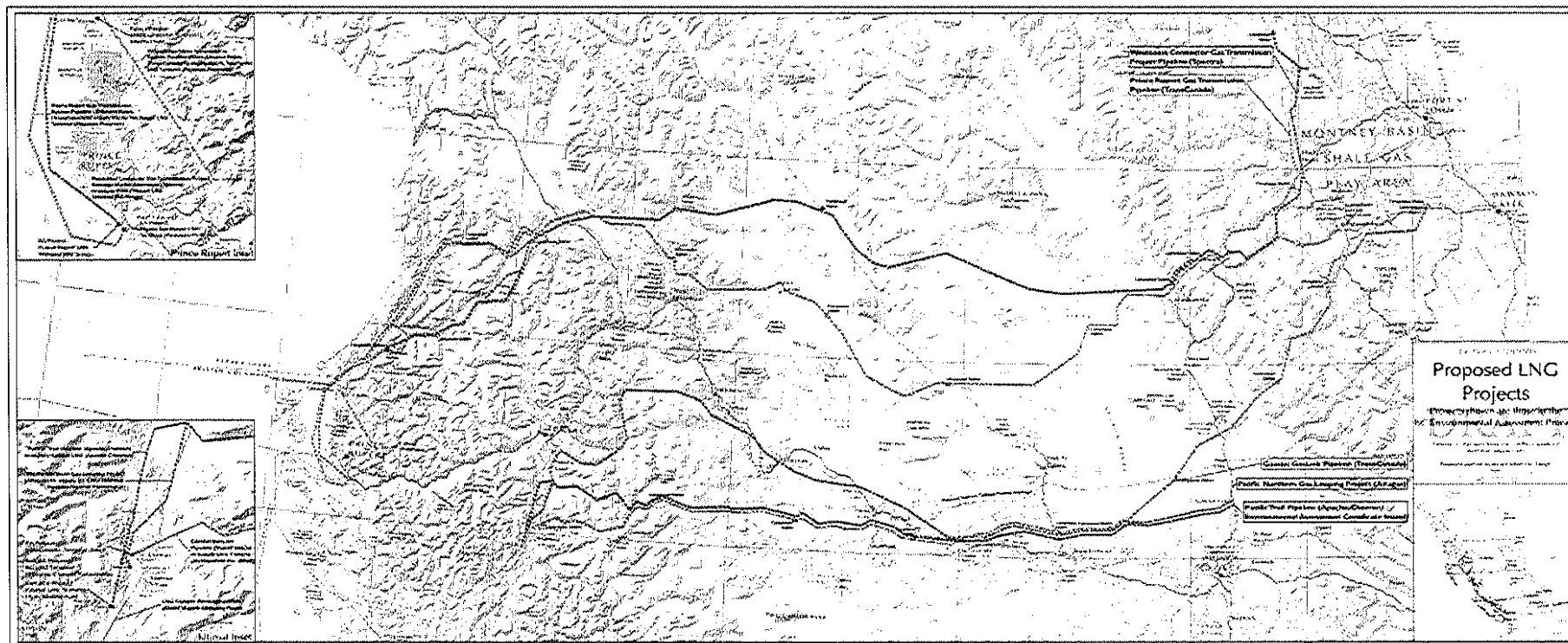
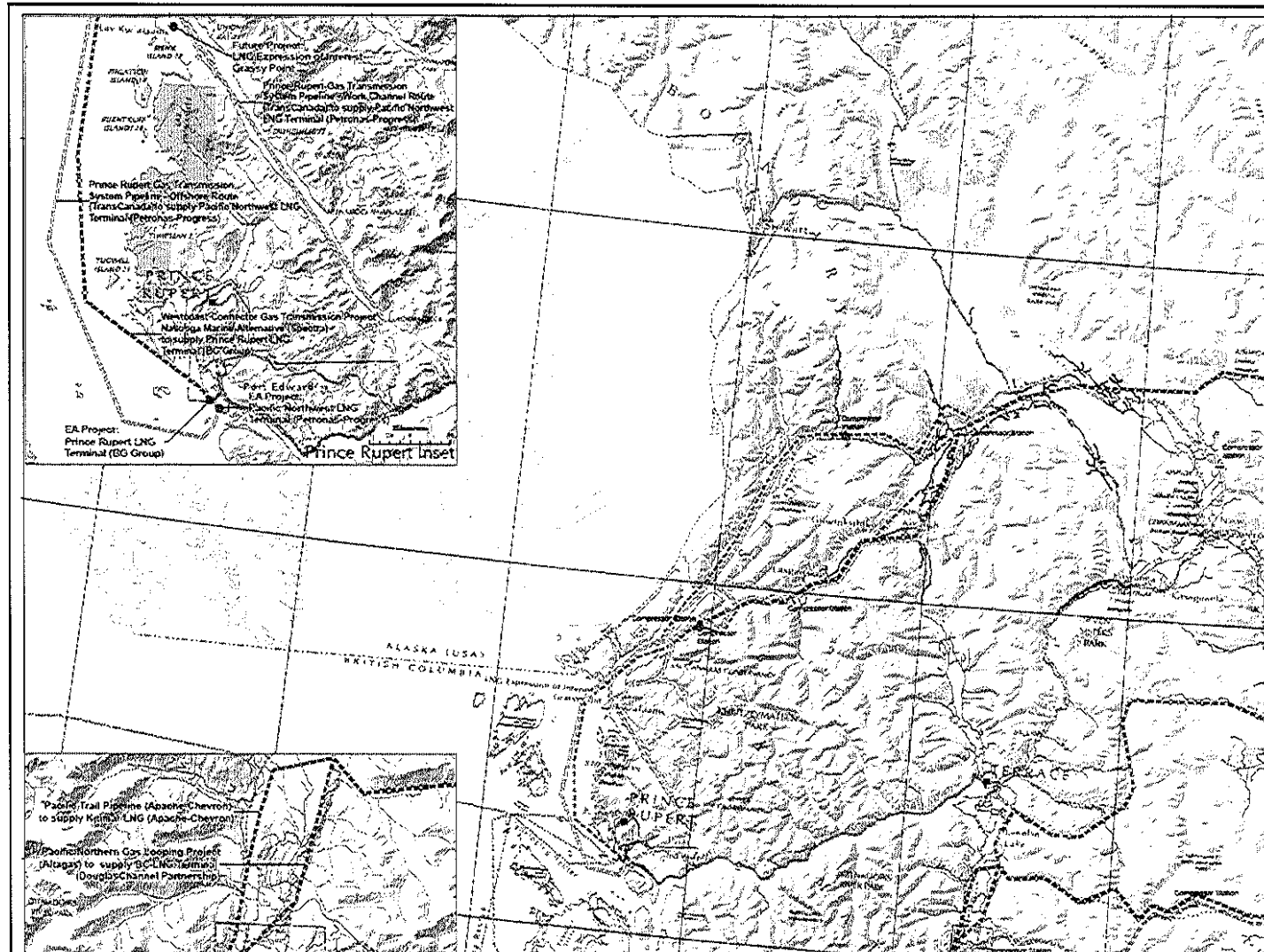


Figure 2 - Proposed Routes after Cranberry Junction



MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Meeting with Business Council of British Columbia (BCBC), Canadian Association of Petroleum Producers (CAPP) and LNG Proponents to discuss the BC LNG Alliance.

III BACKGROUND:

- BCBC is a non-partisan organization whose mission is to produce timely and exceptional public-policy research and advice on issues to enhance BC's competitiveness and prosperity.
- BCBC strives to provide informed, pertinent insight and advice to BC's top decision makers through evidence-based research and interactive input from its members and policy leaders.
- BCBC provides regular economic forecasts and reviews, highlighting the trends that are driving change in the BC economy. Based on this knowledge, the Council produces analysis and advice on the most pressing public-policy issues affecting the economy.
- These include such key issues as skills and labour, productivity, Aboriginal relations, tax competitiveness, transportation and energy infrastructure, and environmental sustainability.
- CAPP represents member companies that produce about 90 per cent of Canada's natural gas and crude oil.
- CAPP's mission is to enhance the economic sustainability of the Canadian upstream petroleum industry in a safe and environmentally and socially responsible manner.
- A number of LNG proponents, including LNG Canada, Kitimat LNG, Pacific Northwest LNG, BG Group along with BCBC and CAPP are in the process of organizing a new, BC-based LNG trade association (tentatively named the BC LNG Alliance).
- The Alliance will work in partnership with BCBC and CAPP but will operate independently and be funded separately by LNG proponents and partners. The purpose of the Alliance is to bring a common voice to the emerging LNG industry and to advocate for and enable the development of a new globally competitive LNG export industry in BC.

IV DISCUSSION:

- On November 19, 2013, Deputy Minister Carr and staff from the Ministry of Natural Gas Development (MNGD) met with members from BCBC, CAPP and LNG proponents;
- Purpose of the meeting was to discuss:
 - Overall framing of LNG value chain analysis
 - Discuss government's LNG Policy Roadmap
 - Identify priority issues and path to resolution (LNG tax, upstream, power / carbon, FNs, etc.)

- BC LNG Alliance governance
- Deputy Minister Carr presented on the LNG policy road map and discussed key priorities for the Province including BCs competitiveness, First Nations, the fiscal regime and the environment.
- BCBC and LNG proponents presented on 3 priorities
 - fiscal competitiveness;
 - communications, and
 - working on establishing a positive framework for working with First Nations.

V CONCLUSION:

BCBC, CAPP and the BC LNG Alliance top priorities are closely aligned with those of the Province. The Minister could communicate that the MNGD would be pleased to continue with regular meetings supporting mutual priorities.

BCBC has been supportive of LNG and its development and should be thanked for their continued involvement and support. BCBC's input regarding key policy decisions is welcomed and we look forward to working with BCBC and their ideas around supporting a new LNG industry.

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Ines Piccinino, A/DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

ISSUE: The City of Prince Rupert (City) request for a municipal boundary extension for the inclusion of a large, undeveloped, municipally-owned parcel.

BACKGROUND:

- The boundaries of the City were established in 1910, and most recently extended in 1967 when Ridley Island was brought within the municipal jurisdiction.
- In 1934 the City acquired District Lot 444 from the Surveyor of Taxes at a tax sale auction. District Lot 444 is located to the north-west of the current boundary across Fern Passage, with water frontage on Tuck Inlet and Shawatlan Lake. The City water supply is acquired in the eastern portion of District Lot 444, which overlaps with the City water shed, and is otherwise largely undeveloped.
- On November 18, 2013 the City submitted a proposal for the inclusion of District Lot 444 to the Ministry of Community, Sport and Cultural Development (CSCD). This latest proposal is considerably smaller in scale than an earlier proposal which was the subject of significant public consultation and referrals to local First Nations and neighbouring local governments.
-

s.16, s.13, s.21

DISCUSSION:

- In the course of a typical municipal boundary process, the proponent municipality is responsible for developing the concept proposal and ensuring that local, immediately affected, parties are aware of the proposal and have been provided with an opportunity to comment.
- The proposal, along with the results of the referrals, is submitted to CSCD for an administrative review and comment. The municipality is expected to address significant concerns in their concept proposal prior to submitting it for CSCD review. In the course of that review, other Ministries are also consulted to ensure that the proposal does not infringe on Provincial interests.
- Once identified risks and concerns have been addressed, either through modification of the proposal geography or negotiation of agreements, the proponent municipality secures approval of the electors to make a formal request to the Minister for the extension of municipal boundaries. Upon the recommendation of the Minister, the Cabinet may make an order establishing the new boundary in Letters Patent.

- On its face, the inclusion of a municipally-owned parcel in close proximity to the existing boundary is a routine and benign municipal boundary extension. But in this case, the parcel is more complex with impacts that need to be fully considered.

s.13, s.16, s.17

- **Fiscal Considerations:** The City has indicated that the inclusion of District Lot 444 will bring a significant financial benefit to the municipality. While owned and occupied by the municipality, District Lot 444 is exempt from property taxation; the Province does not currently derive rural, police or school tax revenue from this property.
- CSCD staff met with the City's Chief Administrative Officer (CAO) and Director of Finance at the UBCM Convention and provided preliminary advice on steps the City could take to ensure the matter was dealt with most expeditiously. This advice emphasized provision of all requested information and broad notification to distinguish this proposal from the previous, contentious concept.

V CONCLUSION:

s.16, s.13

- CSCD staffs are proceeding with the administrative review on a priority basis, but note that there are considerable provincial interests that must be addressed prior to finalizing a recommendation for the Minister. These include:
 - Property owner notification – the proposal does not indicate that the City has notified the owners of private property that was identified for inclusion during the public consultation process of the change in scope (elimination of their parcels).

s.16, s.13, s.17

- Prince Rupert Port Authority and BC Hydro notifications – the proposal does not indicate that either BC Hydro or the Prince Rupert Port Authority have been contacted. The City is being asked to ensure that both entities are made aware of the current proposal and are provided with the opportunity to comment.

s.13, s.16, s.17

- As a result, the City will need to seek the approval of its electors in order to make a request that complies with the statutory requirements.
- CSCD staffs have informally advised the CAO of the essential information that is still required.
- CSCD staffs are available to work with City staff on the details of that information.
- The Province is keen to engage the City in discussions to address Provincial interests.

REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Ines Piccinino, A/DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Bill Bennett, Minister of Energy and Mines
- II ISSUE:** Minister Bennett's meeting with the Prince Rupert Port Authority (PRPA).
- III BACKGROUND:**

Purpose of Meeting

PRPA would like to provide a briefing of the Port Authority's responsibilities, challenges and plans for the Port of Prince Rupert, including how the Port fits into the Province's Jobs Plan and its strategy for LNG industry development.

Port of Prince Rupert

The Prince Rupert Port Authority (PRPA) is a federally regulated port that oversees port development in Prince Rupert and has a landlord-tenant relationship with port terminals handling containers, grain, coal and cruise passengers. CN is the sole rail service provider from Prince Rupert to destinations in Canada and the United States.

The Port of Prince Rupert has the deepest seaport in North America and is two days closer to Asian ports in travel time than Los Angeles. Because of its intermodal capability (ship to rail) it has the most efficient port/rail interface on the west coast of North America - a competitive advantage over the constrained port/rail/road interfaces at other ports on the west coast.

LNG Projects in the Prince Rupert Area

There are currently two proposed Liquefied Natural Gas (LNG) export facilities proposed for development in the PRPA:

- a. Pacific Northwest LNG project (Progress/PETRONAS) is proposed for Lelu Island; and,
- b. Prince Rupert LNG export Project (British Gas (BG) Group) is proposed for Ridley Island.

Both of these LNG projects are to be located on federal lands in the PRPA area and may include associated infrastructure on adjacent Provincial Crown land and in adjacent marine areas (e.g. pipelines, work camps, staging areas, terminals, jetties and roadways).

s.16, s.13, s.17

s.13, s.16, s.17 Both LNG projects are subject to ongoing environmental assessments, which are coordinated federal and provincial assessments, with the federal government taking the lead.

Outside of the PRPA boundaries, and located on Grassy Point, the province is working closely with:

- Nexen Inc., and joint venture partners INPEX, JGC and CNOOC on the North site and;
- the province continues to negotiate with a proponent on the South site.

The province has entered into Sole Proponent Agreements on the North site with Nexen Inc. which gives exclusive procedural rights to proponents for a period of three years.

Proponents are required to achieve two significant milestones during that period:

- Acquire a National Energy Board export license;
- Under Section 11 of the *Environmental Assessment Act*, receive an order outlining project scope and procedures prior to September 1, 2014; and,
- Before December 1, 2015, proponent is to have received Application Information Requirements for the designated area.

Given the scale and scope of planned developments, a coordinated approach around infrastructure development between industry, the municipalities, Port Authority, First Nations, the Province and Canada will be required.

Canada's Special Federal Representative on West Coast Energy Infrastructure, Douglas Eyford, has released his final report on how to bring aboriginal communities on board as partners in resource development. The report presents B.C.'s approach to working with First Nations as a model for Canada to follow.

IV DISCUSSION:

Federal Provincial Regulatory Initiative for LNG Projects in the PRPA:

The Ministry of Natural Gas Development (MNGD) is leading the negotiation of a new federal regulation with Transport Canada for the incorporation of provincial law on the federal lands where the two LNG projects are proposed. The purpose of the regulation is to ensure the Oil and Gas Commission (OGC) can regulate the LNG facilities in a manner as if the facilities were located on private lands in the Province. This regulatory coordination initiative is occurring with the participation of the PRPA, Transport Canada, the OGC and other provincial ministries. LNG proponents are also supportive of ensuring the OGC will be the primary facility regulator. This regulatory initiative will likely require federal and provincial legislative amendments to implement. The plan is for a new federal regulation to be drafted early in 2014.

The OGC, PRPA and Transport Canada have also agreed on pursuing Interim Regulatory Agreements (IRAs) with the two LNG facility proponents and two gas pipeline proponents which have submerged pipeline proposals in the marine port area (Spectra

and TransCanada) for the purposes of ensuring OGC cost-recovery for early pre-application engagement work with each proponent.

Provincial Industrial Land and Marine Use Planning – Prince Rupert area

MNGD is leading a provincial team, in partnership with the PRPA to develop an Industrial Land and Marine Use Plan to support medium to large LNG and non-LNG developments in the Prince Rupert area. The mapping and planning work will examine integrated rail, roads, pipelines, utility corridors, and water lots as well as expansion plans for existing industry and non-LNG commodities. The PRPA is working with the provincial team to share data and information to support this industrial land analysis.

Memorandum of Understanding (MOU): Ministry of Transportation and Infrastructure (MOTI) and PRPA

Minister Todd Stone's mandate letter includes the deliverable of an MOU between MOTI and PRPA for the development of LNG terminals in the Prince Rupert-Port Edward region.

MOTI and PRPA are in the process of developing a MOU on port related industrial developments for LNG and various other resource sectors. It may also include land use planning to maximize value from port and provincial assets, and seek new opportunities to enter into agreements that optimize trade opportunities and increase volumes of goods through the port while maintaining open, neutral access.

CONCLUSION:

The Province supports the continued development of the Port of Prince Rupert as a key gateway facilitating Asia-Pacific trade. The Province is committed to continuing to work closely with PRPA on LNG development.

The Province is investing \$15 million in the Ridley Island Road Rail Utility Corridor, which will provide key foundational infrastructure for future terminal developments.

MNGD is on track in the negotiations with Transport Canada, the OGC and the PRPA on the development of federal regulation (for 2014) respecting OGC regulation of LNG facilities in the Port.

BC is working closely with the PRPA and Canada to ensure First Nations are appropriately consulted and accommodated with respect to proposed projects in the PRPA. Coordinated approaches to addressing aboriginal claims are being pursued with the involvement of MARR and Transport Canada

LNG proponents have expressed interest in locating terminal facilities in the Prince Rupert area on PRPA lands (Lelu/Ridley Island) and on provincial crown lands at Grassy Point.

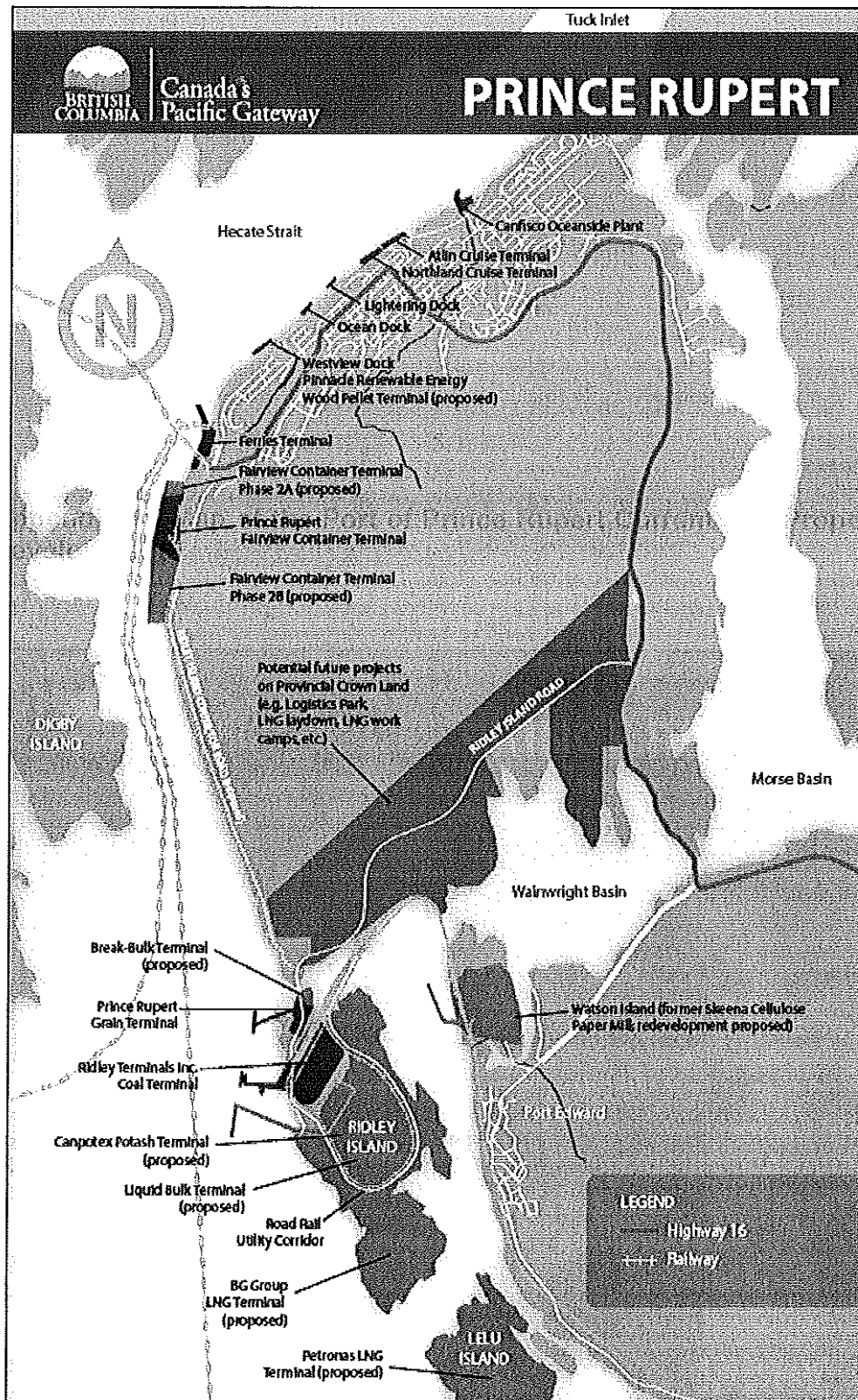
The Province will be engaging industrial proponents, including PRPA, in comprehensive land use planning for the Prince Rupert-Port Edward region.

Attachments: 1) Confidential Issues Note: Eyford Report;
2) Forging Partnerships Building Relationships (Report to Prime Minister by D. Eyford).

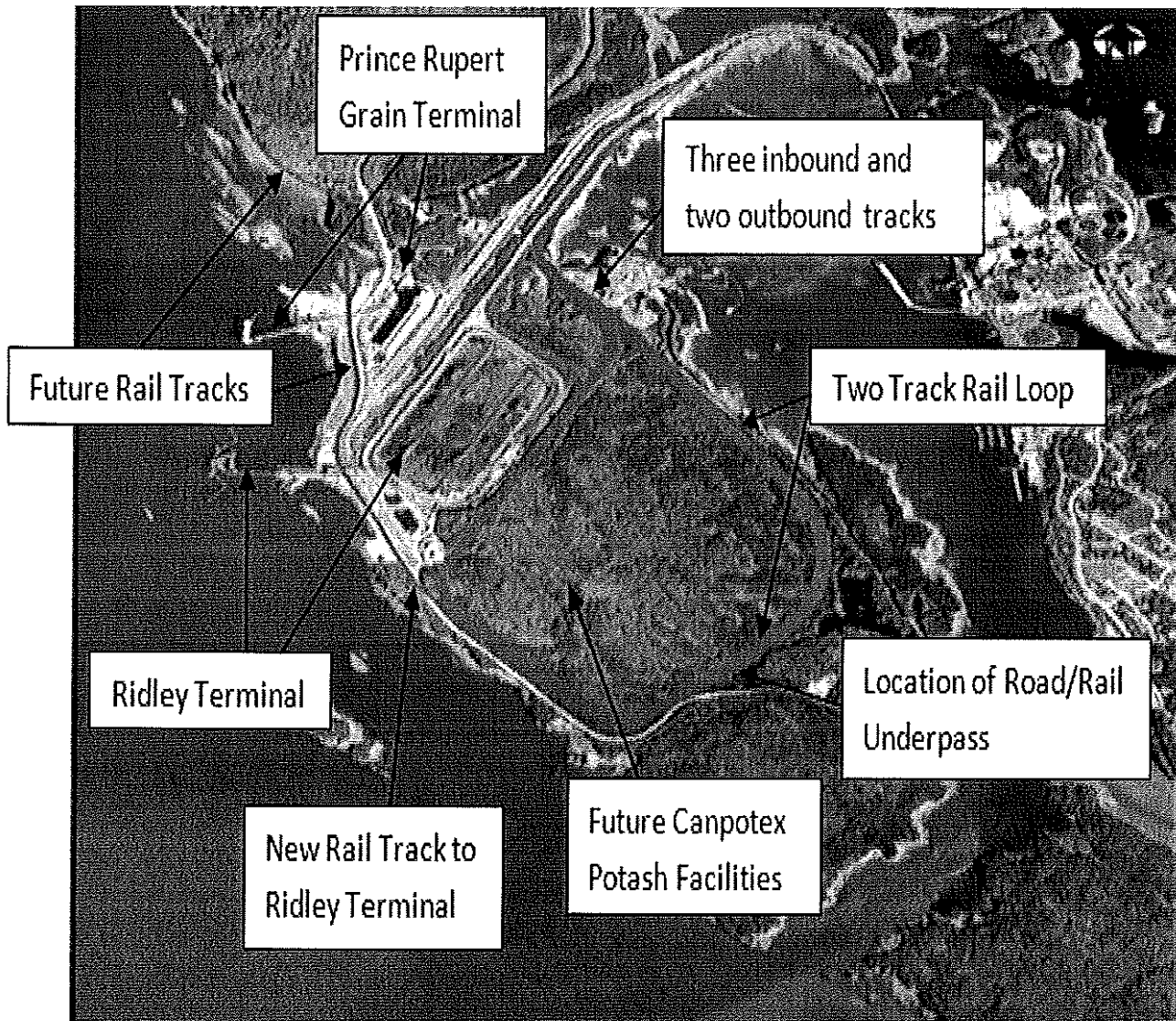
REVIEWED BY:
Brian Hansen, ADM ✓

APPROVED BY:
Ines Piccinino, A/DM ✓

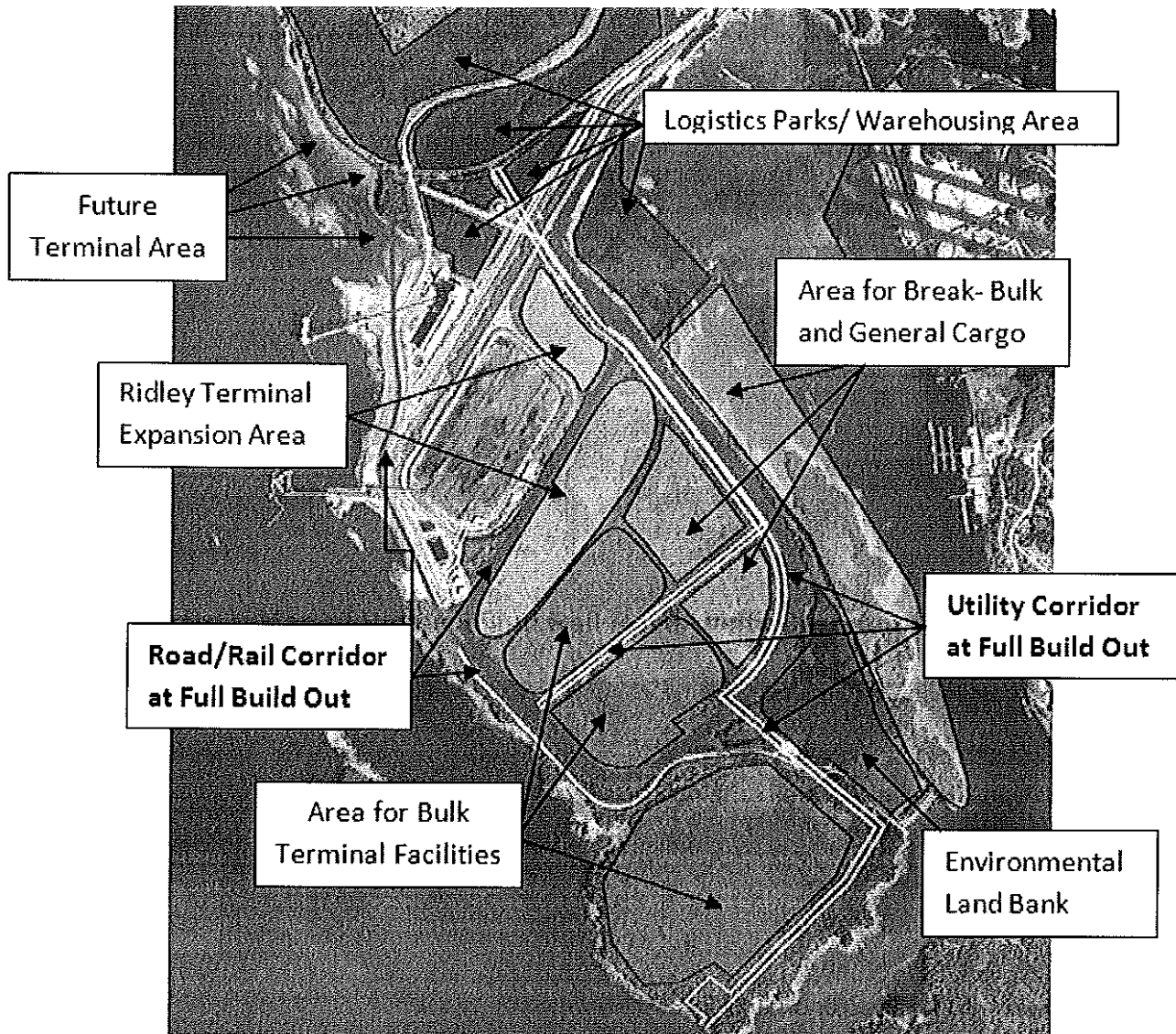
Appendix 1: Map of the Port of Prince Rupert Current and Proposed Developments



**Appendix 2: Map of the Ridley Island Rail Road Utility Corridor –
Phase 1 (RRUC1) Project**



Appendix 3: Map of Ridley Island Rail Road Utility Corridor (RRUC) at Full Build Out



MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Natural Gas Development
- II ISSUE:** Meeting with Mr. Kie-Cheon Lee, the newly appointed Consul General of Korea to Vancouver. The Consul General is interested in discussing BC and Korea business relations and trade opportunities, especially with regards to the LNG industry.

III BACKGROUND

Consul General Kie-Cheon Lee:

- Started working with the Korean Ministry of Foreign Affairs (MOFA) in 1979;
- Over his career, Mr. Kie-Cheon Lee has been part of the diplomatic attaché for Korea in Uruguay, Mexico, Austria and at the United Nations;
- Attached to this briefing note is the official Curriculum Vitae for Mr. Kie-Cheon Lee, Consul General of Korea to Vancouver as of September 10, 2013. The CV was provided by the BC Trade and Investment Representative for Korea.

BC/Korea Economic Relations:

- Korea is B.C.'s fourth-largest trading partner and the eleventh-largest economy in the world. Korea is a major investor in BC, especially in the natural resources sectors.
- Korea Gas Corporation is one of the project partners in LNG Canada, which proposes to build a liquefied natural gas (LNG) export terminal in Kitimat. In addition, Korea's SK E&S is one of the companies short-listed on an expression of interest in the Grassy Point LNG terminal site near Prince Rupert.
- B.C. and Korea enjoy strong bilateral relations at the provincial and municipal levels, as exemplified through the B.C.-Gyeonggi sister province agreement and action plan. During the Premier's visit with Governor Kim in 2012, she was made an honorary citizen of Gyeonggi Province.

KOGAS Overview

- Korea Gas Corporation (KOGAS) dominates South Korea's gas sector and it is the largest single LNG importer in the world. The company maintains a monopoly over the purchasing, import and wholesale distribution of natural gas.
- KOGAS operates three of Korea's four LNG receiving terminals and the 1,790-mile national pipeline network as well as wholesales re-gasified LNG to power generation and private gas distribution companies.
- The Korean central government is the largest KOGAS shareholder with 26.9 percent direct equity, and an additional indirect 24.5 percent via the Korean Electric Power Company (KEPCO).

- Korea has 30 private distribution companies, but each has an exclusive sales right within a particular region. These local companies purchase wholesale gas from KOGAS at a government-approved price, and sell gas to end-users.
- KOGAS is participating in 27 overseas exploration and production projects in 16 countries. In the upstream KOGAS has historically focused on overseas LNG liquefaction projects.

KOGAS Activities in British Columbia

- KOGAS signed a contract with EnCana Corporation in February 2010, for a 50 percent share of blocks of Kiwigana in the Horn River, Jackpine and Noel blocks in West Cutbank in British Columbia (BC).
- KOGAS purchased a 10 percent stake of CGR, Cordova Gas Resources Ltd., which has 50 percent of working interest in 4.5 Tcf of a Cordova gas field in August 2011.
- In May, 2012, KOGAS in partnership with Royal Dutch Shell plc, PetroChina Company Limited, and Mitsubishi Corporation formed a joint venture to develop the LNG Canada project at Kitimat, BC.

IV DISCUSSION

- The BC Government recognizes Korea as a priority market in Asia and is committed to pursuing new opportunities to deepen trade, investment and economic cooperation, and government-to-government relations.
- The Consulate is planning to organize a Canada-Korea Energy Forum in Vancouver on November 1-2, 2013. This event is expected to attract over 100 B.C. and Korean companies, providing an ideal opportunity to highlight the Premier's upcoming mission to Korea.
- Consul General Kie-Cheon Lee will make a keynote address at the Canada-Korea Energy Forum in Vancouver November 1 – 2, 2013.

REVIEWED BY:
Brian Hansen, ADM

APPROVED BY:
Steve Carr, DM ✓

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Natural Gas Development
- II ISSUE:** Meeting with Mr. Seiji Okada, Consul General of Japan in Vancouver and Mr. Ryo Minami, Director, Petroleum and Natural Gas Division, Ministry of Economy, Trade and Industry (METI) to discuss British Columbia's upstream gas, LNG and a proposed MOU on Energy Cooperation and Development between METI and the Government of British Columbia.

III BACKGROUND:

Japan is a major investor in British Columbia, especially in the natural resource sectors. There are approximately 230 Japan-affiliated companies within the Province, including general trading, lumber, pulp and paper, construction, mining and tourism sectors.

Japan is the world's largest importer of LNG. Gas-fired generation is replacing nuclear power following the 2011 Fukushima nuclear disaster. Several Japanese companies are major players in the development of British Columbia's natural gas and LNG industry (Attachment 4).

British Columbia has been working closely with the Japan Oil, Gas and Metals National Corporation (JOGMEC) since February 2012. British Columbia's Major Investments Office (MIO) and the former Ministry of Energy, Mines and Natural Gas (EMNG) fostered a strong working relationship with JOGMEC which resulted in the Premier signing an MOU with JOGMEC in Tokyo on May 16, 2012 (Attachment 1). The MOU outlines cooperation on non-confidential information exchange relating to unconventional gas and related technologies, including government and private sector programs, market opportunities and joint projects and collaboration.

IV DISCUSSION:

Proposed MOU on Energy Cooperation and Development

Japan, through METI, is proposing that British Columbia sign another MOU and has shared a draft for consideration (Attachment 2). It seeks to strengthen energy-related business opportunities with British Columbia, particularly in natural gas development and LNG exports to meet market demand in Japan. The draft MOU focuses on accelerating investment, infrastructure construction, technical cooperation and information exchange on energy projects.

The draft MOU might also provide the basis for recurring British Columbia-Japan natural gas meetings or forums. METI has shared the draft MOU for review and initial feedback in this meeting; the document would be considered a starting point for the conversation. The actual signing would likely happen during Premier Christy Clark's mission to Asia in the Fall of 2013.

... /2

LNG Producer Consumer Conference in Japan

Another topic that METI may raise during the courtesy call is the upcoming LNG Producer-Consumer Conference happening on September 10, 2013 in Tokyo, Japan. The conference is sponsored by METI and APERC (Asia Pacific Energy Research Council). Last year was the first time this conference was held and Tim McEwan from British Columbia's Major Investment Office attended. METI is considering inviting Premier Christy Clark to speak at the conference. If the Premier cannot attend, METI may consider inviting Minister Rich Coleman to speak. These scenarios may be raised in this meeting.

British Columbia's LNG Advantage

British Columbia is well positioned to compete for a share of the lucrative Asian LNG market. Our advantages include: lower shipping costs due to our proximity to Asia; a secure stable government; vast natural gas reserves; high environmental standards; potential to access clean electricity; positive relationships with First Nations; a skilled labour force; a well established service sector; and an established and efficient single window regulator.

LNG Taxation

The Ministry of Natural Gas Development is working with the Ministry of Finance to design an LNG taxation framework that would generate revenue for British Columbia, the resource owner, while ensuring British Columbia remains the most competitive regime for LNG development compared to similar jurisdictions. A tax negotiating team is in place and consulting with industry on a new tax design. A review of comparable jurisdictions (e.g., USA and Australia) puts British Columbia as the most competitive jurisdiction with respect to an all in government take under the current set of taxes applicable to natural gas extraction.

Projects and Pipelines

There are currently eight large LNG projects proposed along British Columbia's North coast and several mid-size companies exploring projects in other locations around the province. If five of the largest projects proceed, they are expected to add upwards of \$1 trillion to British Columbia's GDP by 2046, and generate 354,200 FTEs (direct, indirect and induced) during construction and about 75,200 full time jobs once in operation (direct, indirect and induced). Ensuring adequate pipeline infrastructure is vital to the development of British Columbia's emerging LNG industry. A number of gas pipelines are proposed to move natural gas from Northeast British Columbia to meet the demands of new LNG terminals on the Northwest coast of the Province. Exploring collaborative approaches to the development of the pipeline projects is essential to ensuring natural gas reaches markets.

Supply Chain Issues

There is a projected gap in supply to meet projected demand, especially when growth in the Asia Pacific Region is considered. It is estimated that LNG demand would outpace LNG supply by 100.4 MTA by 2020, 174.0 MTA in 2025 and 238.7 MTA in 2030.

V CONCLUSION:

British Columbia's aspirations to build an LNG export industry are quickly taking shape with steady, concentrated action to ensure British Columbia is ready to compete on a global scale.

British Columbia recognizes Japan as one of the Province's four priority markets in Asia and is committed to pursuing new opportunities to deepen trade, investment and economic cooperation.

ATTACHMENTS:

1. JOGMEC-BC MOU on Unconventional Gas Technology
2. Proposed Draft Memorandum on Energy Cooperation and Development
3. Natural Gas Country Profile – Japan
4. Japanese Company Profiles: Mitsubishi, Idemitsu Kosan, JAPEX, JGC.
5. Biography of Mr. Seiji Okada, Consul General of Japan in Vancouver

DRAFTED BY:

Guy Gensey
250-952-0283

APPROVED BY:

Karen Koncohrada, ED, CIB ✓
Steve Carr, DM ✓



MEMORANDUM OF UNDERSTANDING
ON MUTUAL COOPERATION
BETWEEN



JAPAN OIL, GAS AND METALS NATIONAL CORPORATION
AND
THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA, CANADA

Japan Oil, Gas and Metals National Corporation and the Government of the Province of British Columbia, Canada, hereinafter referred to as the "Participants":

- DESIRING to establish a productive working relationship based on equality, reciprocity and mutual benefit;
- RECOGNIZING their shared interest in strengthening technical cooperation within a framework of friendship;
- WISHING to jointly promote sustainable economic development in their respective jurisdictions; and
- DESIRING to explore potential business opportunities in relation to unconventional natural gas and associated technologies, including the market potential of Gas-to-Liquids technologies, products and services in British Columbia.

NOW THEREFORE the Participants have reached the following understanding:

SCOPE

- 1 The Participants will cooperate with respect to the following:
 - a) exchanging non-confidential information in scientific research, technical and regulatory fields with respect to utilization of unconventional gas and associated technologies, including Gas-to-Liquids technologies, products and services;
 - b) sharing non-confidential information about government, institutional and private sector programs, projects and practices related to commercial applications of advanced technologies to the utilization of unconventional natural gas and their products and services;
 - c) examining potential market opportunities for the use of unconventional natural gas resources and associated technologies, products and services in British Columbia;
 - d) exploring the opportunities for establishing projects and collaborations in relation to unconventional natural gas between the institutions and industries of Japan and British Columbia; and
 - e) facilitating contacts and networking opportunities for Japanese and British Columbian business leaders, researchers, and public servants, including sponsoring bilateral symposia or meetings.
- 2 Each of the Participants may propose additional cooperative activities that are consistent with the purpose of this Memorandum of Understanding.

DESIGNATED REPRESENTATIVES

- 3 The Participants will each designate a representative for the coordination and efficient management of the cooperative activities under this Memorandum of Understanding and advise the other Participant as soon as possible.
- 4 The Participants will ensure that cooperative activities undertaken under this Memorandum of Understanding are considered by their respective officers authorized to initiate or approve them.

LIMITATIONS

- 5 Each of the Participants will conduct the cooperative activities under this Memorandum of Understanding at its discretion, subject to availability of resources of the Participant.
- 6 This Memorandum of Understanding is not exclusive and each of the Participants may undertake any discussions or cooperative activities with any other party.
- 7 This Memorandum of Understanding does not create a partnership between the Participants, nor demonstrate an intention to enter into a partnership, nor create any legal, contractual or financial rights or obligations for each of the Participants.


RESOLUTION OF DIFFERENCES

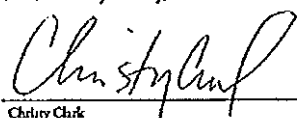
- 8 The Participants will settle any difference in relation to this Memorandum of Understanding, including any question regarding its existence, validity, termination, interpretation or application, amicably by consensus and consultation between the Participants.

EFFECTIVE TERM

- 9 This Memorandum of Understanding:
 - a) is effective on the date of execution and remain in effect for two (2) years;
 - b) may be modified, including extended, by agreement in writing signed by the Participants; and
 - c) may be terminated by either of the Participants by giving one month prior notice in writing.

Signed by duly authorized representatives of each of the Participants at Tokyo on this sixteenth day of May, 2012.


Hirobami Kawano
President - Japan Oil, Gas and Metals National Corporation


Christy Clark
Premier of the Province of British Columbia, Canada

Memorandum
on
Energy Cooperation and Development
between
The Ministry of Economy, Trade and Industry of Japan ("METI")
and
The Government of the Province of British Columbia, Canada ("BC")

The Ministry of Economy, Trade and Industry of Japan and the Government of the Province of British Columbia, Canada, hereinafter referred to as "the Participants";

WHEREAS Japan and BC have a long-standing and mutually respectful relationship;

WHEREAS BC is a global leader with respect to safe, environmentally, responsible and competitive resource development, energy production, and related services;

CONSIDERING that the energy sector offers opportunities for mutually beneficial cooperation between the Participants;

CONSIDERING the drastic rise of new energy development projects in diverse corners of the world;

ACKNOWLEDGING the strategic importance of expanding cooperation between the Participants to strengthen energy-related business opportunities, such as increasing investments toward natural gas development and realizing LNG exports to new markets such as Japan, and of how it will mutually benefit Japan, which strives to secure stable and competitive energy sources through diversifying supply, and the Province of British Columbia, which seeks new export markets;

ACKNOWLEDGING the urgent need to accelerate energy development projects in the Province of British Columbia and provide energy in a timely manner to meet market demands such as those in Japan;

Hereby decide as follows:

1. OBJECTIVE

This Memorandum aims to expand energy cooperation between the Participants by acknowledging the importance of collaborative implementation of policies, and formalizing a framework to discuss possible areas of cooperation and to accelerate such cooperation.

2. AREAS OF COOPERATION

To expand cooperation in the energy sector, such as natural gas, the Participants have shared their intention to:

- a. Accelerate investments in upstream developments in the Province of British Columbia;
- b. Accelerate infrastructure construction and environmental consideration that will enable expansion of energy exports to new markets such as Japan;
- c. Accelerate industrial cooperation of related industries, such as plant construction, by providing business matching opportunities, etc;
- d. Explore possibilities of technological cooperation in the energy sector, such as GTL (Gas-To-Liquid) technology;
- e. Exchange information between the Participants, such as energy policies, potential of energy supply, market outlooks, etc;
- f. Other forms of cooperation on which both sides decide;

3. Framework to accelerate cooperation

To facilitate direct government-to-government dialogue, the Participants have shared understanding to:

- a. Hold an annual high-level meeting to discuss, review, provide direction and facilitate cooperation activities under this Memorandum;
- b. Ensure the location of the annual high-level meeting alternates between Japan and BC;
- c. Focus on the following three key components for maximizing opportunities through the value chain: i. Upstream, ii. Infrastructure, iii. Finance, iv. Technology;
- d. Invite the private sector, if applicable

4. EXPENSES

Neither side will incur expenses and/or financial obligations on behalf of the other side

5. DURATION AND DENUNCIATION

The cooperation under this Memorandum commences on the date of the signature and continues for three (3) years, which can be renewed for like terms, unless either side informs

the other about Its intention to denounce It, at least three (3) months before the date of termination of cooperation.

This Memorandum does not create any legal, contractual or financial rights or obligations for each of the Participants.

Signed at ***, on this _____ day of **, 20**.

For the Ministry of Economy, Trade
Industry of Japan

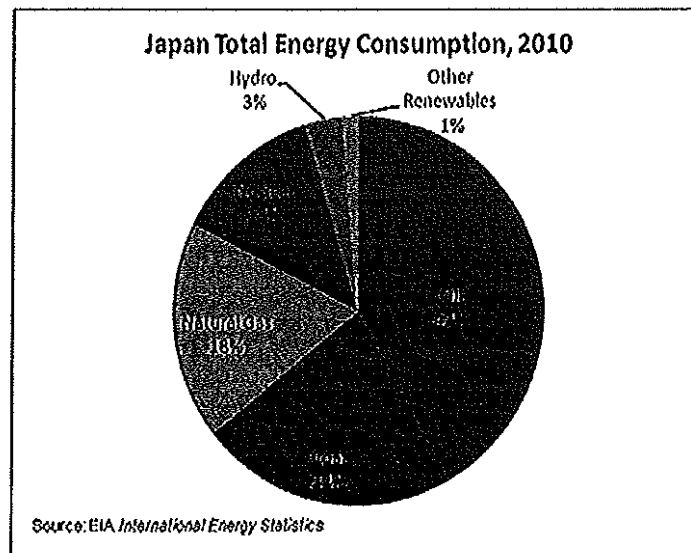
For the Government of the Province and
of British Columbia

Natural Gas Country Profiles-Japan

Overview

- Japan has few domestic energy resources and is only 16 percent energy self-sufficient.
- According to the *Oil and Gas Journal (OGJ)*, Japan had 738 billion cubic feet (Bcf) of proven natural gas reserves as of January 2011. Natural gas proven reserves have declined since 2007, when they measured 1.4 trillion cubic feet (Tcf).
- Natural gas has a relatively low level of penetration in Japan's energy mix, accounting for 18 percent of total final consumption in 2010. Oil is the dominant fuel in Japan, accounting for 42 percent of the country's energy consumption.
- Japan is the world's largest importer of liquefied natural gas (LNG) and relies on LNG imports for most its natural gas needs.
- Japanese companies have actively participated in many resource development projects overseas.
- Japan is one of the major exporters of energy-sector capital equipment and has a strong energy research and development program supported by the government.

Figure 1: Japan Total Energy Consumption, 2010



Sector Organization

- Inpex Corporation (Inpex) and other companies created from the former Japan National Oil Company are the primary actors in Japan's domestic natural gas sector. Inpex, Mitsubishi Group (Mitsubishi), Mitsui Group (Mitsui), and various other Japanese companies are actively involved in domestic as well as overseas natural gas exploration and production.
- Osaka Gas Co., Ltd. (Osaka Gas), Tokyo Gas Co., Ltd. (Tokyo), and Toho Gas Co., Ltd. (Toho Gas) are Japan's largest retail natural gas companies, with a combined share of about 75 percent of the retail

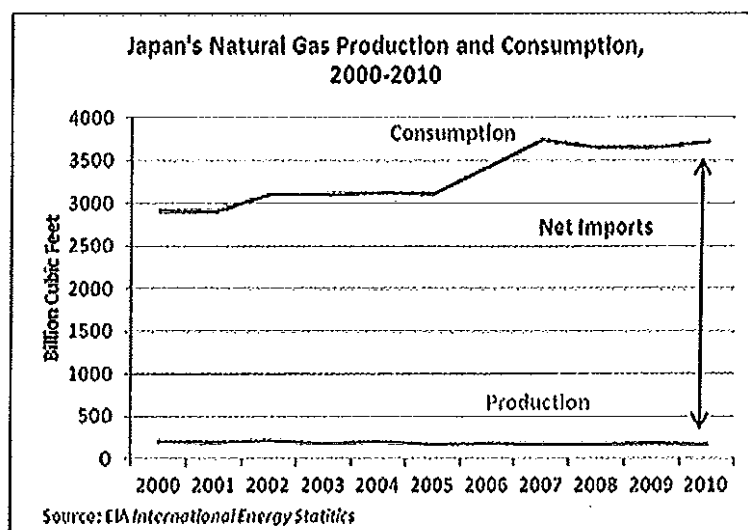
market. Japanese retail gas and electric companies are participating directly in overseas upstream LNG projects to assure reliability of supply.

- Japan has a relatively limited domestic natural gas pipeline transmission system for a consumer of its size. Most of the pipeline infrastructure is concentrated in the north, linking Japan's major demand centre around Tokyo Bay with the cities of Niigata and Sendai (see the Appendix 1 for details). This is partly due to geographical constraints posed by the country's mountainous terrain, but it is also the result of previous regulations that limited investment in the sector. Reforms enacted in 1995 and 1999 helped open the sector to greater competition and a number of new private companies have entered the industry since the reforms.

Natural Gas Domestic Exploration and Production

- Japan produced 174 Bcf of natural gas in 2010. Japan's largest natural gas field is the Minami-Nagaoka on the western coast of Honshu, which produces about 50 percent of Japan's domestic gas.
- The gas produced is transported via an 808-mile pipeline network surrounding the Tokyo metropolitan area.
- Japan Petroleum Exploration Co., Ltd. (Japex) has been involved in locating new domestic reserves in the Niigata, Akita, and Hokkaido regions of Japan, targeting structures near existing oil and gas fields.
- Japanese companies are using innovative methods to produce hydrocarbons and discovered methane hydrates off the country's east coast. Japan estimates about 40 Tcf of methane hydrates may exist and hopes to begin production by 2018.

Figure 2: Japan's Natural Gas Production and Consumption, 2000-2010

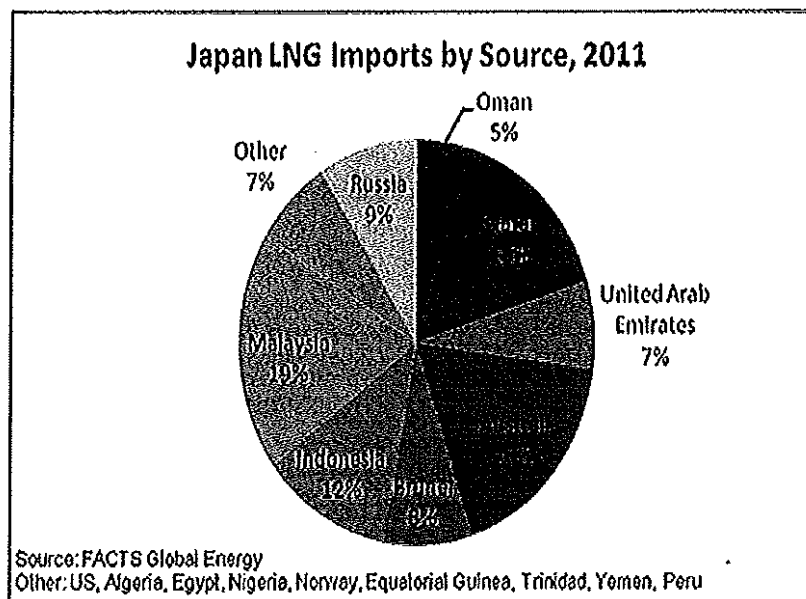


LNG Imports

- Japan is the world's largest LNG importer, holding about 33 percent of the global market in 2011.
- In 2010, Japan consumed about 3.7 Tcf of natural gas, importing over 3.4 Tcf of LNG by tanker.

- Japanese power companies own 32 operating LNG import terminals with a total gas send-out capacity of 8.7 Tcf/y. They are mainly located in Tokyo, Osaka, and Nagoya. Five new terminals are under construction and anticipated to come online by 2015 and could add between 200 to 300 Bcf/y of capacity.
- After earthquakes in 2007, Japan was replacing lost nuclear capacity with more short-term and spot cargo LNG which made up about 20 percent of total LNG imports in 2011. Qatar, Russia, Malaysia and Indonesia offered Japan LNG spot cargoes.
- On September 14th, 2012, Japan announced that the country would phase out nuclear power by 2040.
- In 2011, over 70 percent of Japan's LNG imports originated from Malaysia (19 percent), Australia (18 percent), Qatar (15 percent) and Indonesia (12 percent), and Russia (9 percent). Malaysia was the top supplier of LNG to Japan. Petrolina Nasional Berhad (Petronas), the national oil and gas company of Malaysia, is one of the largest suppliers of LNG to Japan.

Figure 3: Japan LNG Imports by Source, 2011



- The largest LNG supply agreements are held by Tokyo Gas, Osaka Gas, Toho Gas, Chubu Electric Power Co., Inc. (Chubu Electric) and Tokyo Electric Power Co., Ltd. (TEPCO), primarily with countries in Southeast Asia and the Middle East. Japanese firms are interested in acquiring equity stakes in foreign LNG projects because many existing contracts will expire over the next decade.
- Japan has renegotiated many new supply contracts to find good deals with various overseas LNG projects, especially with Indonesia, one of Japan's largest LNG suppliers.

Natural Gas Overseas Exploration and Production

Japanese energy companies have actively participated in natural gas exploration and production projects overseas. They provide engineering, construction, financial, and project management services for energy projects around the world. Some of the major overseas upstream projects that Japan is involved in are:

Canada

- In August 2010, Penn West entered into an agreement with Mitsubishi to develop its assets in the Wildboy and Cordova Embayment areas in Northern British Columbia of Canada. Mitsubishi acquired a 50 percent stake in the project for CAD\$850 million.
- In November 2011, Inpex and JGC Corporation (JGC) announced that they would jointly acquire a 40 percent stake in several shale gas mines in Canada from Nexen Inc., according to the Nikkei business daily. Inpex would take about a 30 percent stake, with JGC owning the rest.
- In February 2012, Mitsubishi acquired a 40 percent stake in 409,000 net acres of Encana's Cutbank Ridge area for CAD\$2.9 billion. The Cutbank Ridge properties, which straddle the Alberta and British Columbia (BC) border, hold around 10 Tcf of recoverable reserves and were producing around 600 mmcf/d at the time of sale. Encana estimated the investment would create 10,000 jobs in BC over the next 20 years.
- In May 2012, Mitsubishi, Shell Canada Limited, Korea Gas Corporation (KOGAS), and PetroChina Company Limited announced that they would be jointly developing an LNG export facility near Kitimat, BC, Canada. KOGAS holds a 20 percent stake in the LNG Canada project, while Shell owns 40 percent, China's state-controlled PetroChina owns 20 percent and Japan's Mitsubishi owns 20 percent.
- China National Offshore Oil Corporation (CNOOC) in partnership with Nexen, Inpex, and JGC proposes to construct LNG facilities in BC. In response to BC Ministry of Forests, Lands and Natural Resources Operations (MFLNRO), in partnership with the Ministry of Energy, Mines and Natural Gas (MEMNR), February 23, 2013, Request for Expression of Interest/Grassy Point (REOI), the JV has expressed its interest in acquiring land tenure over the Grassy Point, Prince Rupert for the purpose of developing an LNG export facility.
- On March 4, 2013, Japex has signed a Heads of Agreement with PETRONAS to acquire a 10 percent interest from the Pacific Northwest LNG project. The company committed to take about 10 percent of the facility's annual LNG production, and a 10 percent interest in Progress Energy's leaseholds in the North Montney in BC.

Indonesia

- Masela Block, Abadi gas field, Timor Sea - Inpex holds a 100 percent stake in this field with approximately 10 Tcf of natural reserves. Inpex plans to build a floating LNG plant with a 220 Bcf/y capacity, and the project will be online and shipping 150-250 Bcf/y of LNG to Japan and elsewhere in 2016.
- Senoro LNG plant, Sulawesi - Mitsubishi holds 51 percent equity with holding about 1.5 Tcf of reserves. Mitsubishi is building a 97 Bcf/y LNG plant and will be the sole buyer of LNG from the plant, which is scheduled to come on-stream in 2012.
- Mahakam Block and Attaka Unit, Offshore Kalimantan Island - Inpex and Total S.A. each hold 50 percent equity. Production started in 1972. Inpex has a 20-year contract extending to 2017 and is currently negotiating to extend it further.
- Berau Block, Tangguh LNG Project, Papua Province - A joint venture between Inpex and Mitsubishi has a 22.9 percent interest in the Berau Block and a 16.5 percent interest in the Tangguh Project. Reserves are estimated at 14.4 Tcf. The first cargo of LNG was shipped in July 2009. China, South Korea, and North America have long-term sales agreements for the 363 Bcf/y of production.

- North Belut gas field, South Natuna Sea - Inpex has a 35 percent interest in this project, which is led by ConocoPhillips Company. The field came online in December 2009 at 97 Bcf/y; the gas is shipped to Malaysia under contract.

Australia

- Ichthys Project, Browse Basin, Western Australia - Inpex holds a 76 percent stake in this offshore LNG project, which is projected to come onstream in 2016. It is expected to produce 377 Bcf/y of LNG, most of which is reportedly intended for export to Japan.
- Mimia Project, Browse Basin - Inpex has a 60 percent stake. The companies are considering linking the development of the Mimia field to the Ichthys project.
- Pluto LNG Project - Tokyo Gas and Kansai Electric each acquired a 5 percent stake in Woodside's Pluto LNG project and signed a deal for 182 Bcf/y of LNG for 15 years. The first train is expected to come online in March 2011, with estimated new capacity of 200 Bcf/y of LNG.
- Timor Sea Joint Petroleum Development Area, including Bayu-Undan gas field - Inpex, Tokyo Gas, and TEPCO combined own 20 percent. An LNG sales agreement was signed in 2005 for annual supply of 146 Bcf/y; first shipment began February 2006.
- Darwin LNG Terminal - Inpex, TEPCO, and Tokyo Gas hold a combined 20.5 percent stake in the 170 Bcf/y Darwin LNG terminals, which came online in 2006. TEPCO and Tokyo Gas have contracts totalling 146 Bcf/y for a period of 17 years.

Russia

- Sakhalin-II-Mitsui and Mitsubishi hold stakes of 22.5 percent combined. Although Shell was originally the main operator of Sakhalin-II, in April 2007 Gazprom became the majority shareholder and the holdings of Shell, Mitsui, and Mitsubishi were reduced to 27.5 percent, 12.5 percent, and 10 percent respectively. Starting from February 2009, Sakhalin-II is expected to produce 468 Bcf/y at its peak and about 60 percent of the project's LNG will be sold to Japan, with 9 Japanese companies as customers.
- Vladivostok LNG terminal - In July 2010, Japan and Russia signed a preliminary agreement to build an LNG terminal with liquefaction capacity of 244 Bcf/y by 2017.

Sources:

- Energy Information Administration Country Analysis Briefs-Japan
- Wood Mackenzie - LNG Service
- Nikkei Business Daily

Appendix 1: Selected LNG Terminals in Japan

Facility	Nominal Capacity (mmtpa)	Nominal Capacity (mmcf/d)	Owner	Status	Start Up
Chita I	8.0	1,063	Chubu Electric, Toho Gas	Operational	1978
Chita II	12.1	1,605	Chubu Electric, Toho Gas	Operational	1983
Chita Midorihami Works	5.3	705	Toho Gas	Operational	2001
Fukuoka	1.1	144	Saibu Gas	Operational	1993
Futtsu	20.1	2,658	TEPCO	Operational	1985
Hatsukaichi	0.6	76	Hiroshima Gas	Operational	1996
Higashi-Ogishima	15.4	2,045	TEPCO	Operational	1984
Himeji LNG	8.5	1,125	Kansai Electric	Operational	1979
Himeji	4.9	654	Osaka Gas	Operational	1984
Kagoshima	0.2	31	Kagoshima LNG	Operational	1996
Kawagoe	5.5	726	Kawagoe LNG	Operational	1997
Nagasaki Works	0.2	20	Saibu Gas	Operational	2003
Negishi	12.1	1,595	TEPCO, Tokyo Gas	Operational	1969
Nigata	9.0	1,186	Tohoku Electric, Nihonka LNG	Operational	1984
Ogishima	5.9	787	Tokyo Gas	Operational	1998
Oita	4.8	641	Oita LNG	Operational	1990
Senboku I	2.5	327	Osaka Gas	Operational	1972
Senboku II	12.8	1,697	Osaka Gas	Operational	1977
Shin-Minato Works	0.3	39	Gas Bureau	Operational	1997
Sodegaura	29.2	3,864	TEPCO, Tokyo Gas	Operational	1973
Sodeshi	2.5	112	Shizuoka Gas, Tonen General Petroleum	Operational	1996
Tobata	6.8	900	Kita-Kyushu LNG	Operational	1977
Yanai	2.4	317	Chugoku Electric	Operational	1990
Yokkaichi LNG Centre	7.1	940	Chubu Electric	Operational	1987
Yokkaichi Works	0.7	92	Toho Gas	Operational	1991
Sakai LNG	2.6	342	Cosmo Oil, Kansai Electric, Ube Industries, Iwatani	Operational	2006
Mizushima LNG	0.6	76	Nippon Oil, Chugoku Electric	Operational	2006
Sakai	0.9	112	Cosmo Oil, Shikoku Gas, Shikoku Electric	Operational	2010
Joetsu LNG	2.40	318	Chubu Electric	Under Construction	2012
Okinawa LNG	0.8	101	Okinawa Electric Power	Under Construction	2011
Joetsu (Naoetsu)	2.0	265	INPEX Corporation	Under Construction	2014
Ishikari	1.3	174	Hokkaido Gas	Under Construction	2013
Hachinohe	1.5	200	Nippon Oil	Under Construction	2015
Kita-Kyushu LNG	1.0	127	Kyushu Electric, Saibu	Under Construction	2015
Kushiro LNG	-	-	Nippon Oil	Proposed	2015
Shin-Sendai	1.4	190	Tohoku Electric	Proposed	2016
Hitachi LNG	3.8	500	Tokyo Gas	Proposed	2016
Hokuriku LNG	1.4	190	Hokuriku Electric Power Co	Proposed	2018
Wakayama LNG	-	-	Kansai Electric	Proposed	-

Source: Wood Mackenzie – LNG Service as of November, 2012

Company Profiles - Mitsubishi Corporation

Overview

- Mitsubishi Corporation (Mitsubishi) is a global integrated business enterprise that develops and operates businesses across a variety of industries, including industrial finance, energy, metals, machinery, chemicals, foods, and environmental business.
- Mitsubishi has natural gas upstream assets in Indonesia, Russia and Canada.
- Mitsubishi is partner in six existing LNG export plants (Brunei LNG, two plants in Malaysia, two plants in Oman and one in Russia) and is also part of in at least five proposed LNG export projects worldwide.

Activities in British Columbia

- Mitsubishi has an office in Vancouver, British Columbia (BC).
- Mitsubishi owns 30 percent in a joint venture in the Cordova Embayment in BC with Penn West Exploration, Chubu Electric Power Co. Inc., Tokyo Gas Co. Ltd, Osaka Gas Co. Ltd, Japan Oil, Gas and Metals National Corp. ("JOGMEC") and Korea Gas Corporation (KOGAS).
- On February 20, 2012, Mitsubishi announced it agreed to acquire a 40 percent Partnership Interest in the Cutbank Ridge Partnership (CRP) from EnCana Corporation. CRP holds 409,000 net acres of high-quality undeveloped Montney land, plus additional undeveloped similar size land targeting other opportunities including Cadomin and Doig geological formations.
- Mitsubishi is partnering with Shell Canada Limited, Korea Gas Corporation, and PetroChina Company Limited to develop the LNG Canada project at Kitimat, BC.

Company Profiles- Idemitsu Kosan Co.,Ltd.

Overview

Headquartered in Tokyo, Idemitsu Kosan Co. (Idemitsu), Ltd, with 115 affiliated companies and almost 8300 employees worldwide, is one of the largest energy corporations in Japan.

There pillars of the company's businesses include core businesses, resource businesses and functional material businesses:

- The core businesses are related to crude oil shipping, land/marine transport, refining, basic chemicals, engineering, stockpiling, renewable energy, and fuel products sales.
- The resource businesses are involved in the research, exploration, development and sale of oil and natural gas resources, coal, uranium, and geothermal resources.
- The functional materials businesses are engaged in agricultural biotechnology, performance chemicals, electronic materials, and lubricants.

Global Oil and Gas Activities

Idemitsu is actively developing and producing the oil and gas resources in Norway, the U.K. and Vietnam. With respect to oil and gas fields now operating, the company produced 30,000 bbl of crude oil and natural gas per day¹ in Norwegian North Sea, the U.K. North Sea, and Vietnam.

Idemitsu plans to expand its gas business in North America to adapt to structural changes in energy supply and demand around the globe. The company is considering a wide value chain from upstream to downstream. The proposed Liquefied Natural Gas (LNG) development in British Columbia (BC), Canada is a crucial part of Idemitsu's expansion plan.

LNG Development in BC

On January 28, 2013, Idemitsu and AltaGas Ltd. (AltaGas) signed an agreement to form a 50-50 partnership to pursue opportunities to export LNG from BC to Asia.

The Partnership is conducting feasibility studies for the development and construction of liquefaction facilities. The study is expected to be completed by early 2014. The pipeline is expected to be provided by AltaGas' wholly owned subsidiary Pacific Northern Gas Ltd. Subject to consultations with First Nations, and the completion of the feasibility study, permitting, regulatory approvals, and facility construction, the proposed LNG exports could begin as early as 2017.

¹ After conversion to crude oil

Currently, the partnership is actively seeking opportunities to acquire stakes in gas fields in Canada to secure price-competitive LNG imports to Japan. Detailed information has not yet been publicly disclosed.

Company Profiles- Japan Petroleum Exploration Company Limited

Overview

Founded in 1955, Japan Petroleum Exploration Company Limited (JAPEX) is a hydrocarbon exploration, production, and transportation company. JAPEX explores and produces crude oil, natural gas, and liquefied natural gas (LNG) worldwide. Although currently a private company, the Government of Japan owns a 34% stake in JAPEX.

JAPEX is engaged in oil and natural gas exploration and production activities domestically and overseas. In Japan, its main operating areas are Hokkaido, Akita, Yamagata and Niigata. Overseas, JAPEX has major operations in Canada, Indonesia, Iraq, and Libya.

Oil and Gas Activities in Canada

JAPEX, Nexen Group, Inc., Suncor Energy Inc, and Imperial Oil Limited are jointly developing oil fields in the Hangingstone area in Alberta, Canada. Construction started at the end of 2012. Production of bitumen is scheduled to commence from the first half of 2016.

LNG Development in British Columbia

JAPEX is an active LNG player in British Columbia (BC), Canada. On March 4, 2013, JAPEX has signed a Heads of Agreement with PETRONAS to acquire a 10 percent interest from the Pacific Northwest LNG project. The company committed to take about 10 percent of the facility's annual LNG production, and a 10 percent interest in Progress Energy's leaseholds in the North Montney in BC.

Company Profiles - JGC Corporation

Overview

- JGC Corporation (JGC), in Japan, is a world leading provider of engineering, procurement and construction services, having participated in more than 20,000 projects in over 70 countries.
- Since 1970, JGC has become one of the world's most experienced companies in the design and construction of facilities for the global LNG industry.
- JGC has built a third of the world's LNG capacity including LNG projects in Indonesia, Malaysia, Yemen, Nigeria, Egypt, Australia and Papua New Guinea.

Activities in British Columbia

- In November 2011, Nexen Inc. (Nexen) announced the company had reached agreement to create a strategic partnership with the Japanese INPEX Corporation (INPEX) and JGC to develop shale gas in the Horn River, Cordova and Liard basins of Northeast BC. Nexen would sell a 40 percent working interest in its northeast BC asset. The total consideration for the sale was about \$700 million. Nexen closed the deal in August 2012.
- Nexen, China National Offshore Oil Corporation, INPEX, and JGC propose to develop an liquefied natural gas (LNG) project in BC.
- In response to the BC Ministry of Forests, Lands and Natural Resources Operations in partnership with the Ministry of Natural Gas Development, February 23, 2013, Request for Expression of Interest/Grassy Point (REOI), the joint venture has expressed its interest in acquiring land tenure over the Grassy Point, near Port Simpson, Prince Rupert for the purpose of developing a LNG export facility.

Company Profiles- INPEX Corporation

Overview

- INPEX Corporation (INPEX) is Japan's largest oil and gas exploration and production company with total assets of \$37 billion and interests in 75 projects in 27 countries.
- It is a national flagship company supported by the Japanese government (18.9%) and other government institutions.
- In Asia, INPEX is an industry leader in LNG with interests in the Tangguh, Bontang, Prelude and Darwin LNG projects, among others, and is in the process of developing 2 large company-operated LNG projects: the recently sanctioned US\$34 billion Ichthys LNG Project in Australia and the Abadi LNG Project in Indonesia².

Activities in British Columbia

- In November 2011, Nexen Inc. (Nexen) announced the company had reached agreement to create a strategic partnership with the Japanese INPEX Corporation (INPEX) to develop shale gas in the Horn River, Cordova and Liard basins of Northeast British Columbia (BC). Nexen would sell a 40 percent working interest in its northeast BC asset. The total consideration for the sale was about \$700 million. Nexen closed the INPEX divestiture deal in August 2012.
- Nexen, China National Offshore Oil Corporation (CNOOC), INPEX and JGC Corporation propose to develop a liquefied natural gas (LNG) project in BC.
- In response to the BC Ministry of Forests, Lands and Natural Resources Operations in partnership with the Ministry of Natural Gas Development, February 23, 2013, Request for Expression of Interest/Grassy Point (REOI), the joint venture has expressed its interest in acquiring land tenure over the Grassy Point, near Port Simpson, Prince Rupert for the purpose of developing a LNG export facility.

² According to the joint venture's application to the Ministry Natural Gas Development

Biography
Seiji OKADA (Mr.)

s.22

1981 Joined Ministry of Foreign Affairs
1982 Embassy of Japan in Canada
1984 Embassy of Japan in Bahrain
1987 Embassy of Japan in Canada
1989 First International Organization Division, Ministry of Foreign Affairs
1994 Chief of SOFA Section, Japan-US Security Treaty Affairs Division, MOFA
1997 First Secretary, Embassy of Japan in the United States of America
2000 First Secretary, Embassy of Japan in the Republic of Korea
2002 Deputy Director, Asia Europe Cooperation Division, MOFA
2003 Deputy Director, China Division, MOFA
2006 Director, Japan Korea Economic Division, MOFA
2007 Director, Second Africa Division, MOFA
2009 Minister-Counselor, Embassy of Japan in Kenya
2010 Minister-Counselor, Embassy of Japan in Afghanistan
2012 Consul General, Consulate-General of Japan in Vancouver, Canada

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MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Mandatory Reporting Requirements for Canada's Extractive Industries

III BACKGROUND:

On June 12, 2013, Prime Minister Stephen Harper announced that the Government of Canada (Canada) will be establishing new mandatory reporting standards for Canadian extractive companies. The goal is to enhance the transparency of payments that companies make to governments, including taxes, licence fees and other receipts.

The new reporting regime seeks to:

1. Improve transparency;
2. Ensure Canada's framework is consistent with existing international standards and aligned with other G-8 countries;
3. Ensure a level playing field for companies operating domestically and abroad; enhance investment certainty;
4. Help reinforce the integrity of Canadian extractive companies; and,
5. Help ensure that citizens in resource-rich countries around the world are better informed and benefit from the natural resources in their country.

The new reporting standards would cover payments by oil and gas companies (public, private and state-owned) to all levels of government (national, state, local, First Nations/aboriginal peoples) domestically and internationally.

In the United States, the Securities and Exchange Commission (SEC) requires all resource companies listed on U.S. stock exchanges to reveal what they pay to governments (federal and local) on a project-by-project basis. The European Union also has a mandatory approach to disclosure for its companies.

Canada is currently leading a federal-provincial-territorial working group to inform its decision on the options for mandatory reporting. It is seeking to determine the appropriate mechanism for mandatory reporting (e.g., provincial/territorial securities regulators) and determine the scope of mandatory reporting standards to align with other international processes and to minimize the administrative burden and cost.

IV DISCUSSION:

Revenues from oil, gas and mining companies, in the form of taxes, royalties, signature bonuses and other payments are an important engine for economic growth and social development in developing and transition countries. However, the lack of accountability and transparency in these revenues can exacerbate poor governance and lead to corruption, conflict and poverty.

Natural Resources Canada (NRCan) has indicated that international momentum has been growing around reporting and transparency. NRCan has indicated that the formation of a new federal-industry "Revenue Transparency Working Group" will be a key part of Canada's plan to develop a regime for transparent reporting standards. NRCan has already consulted with Canadian companies, having met with about 100 representatives from mining, oil and gas companies to discuss the new requirements. NRCan has held only very preliminary consultations with provincial and territorial governments.

As a resource rich province, British Columbia s.13, s.17
s.13, s.17 Canadian-based companies would be required to adhere to reporting standards around financial transactions for their global operations. This would contribute to an improved and stable investment climate in Canada and the countries where Canadian companies operate and allow them to better engage with governments and civil society – a key part of good Corporate Social Responsibility (CSR). Disclosure rules would also aid companies' efforts to highlight the benefits of mining investment to local communities.

Mandatory standards could also impact Canadian extractive companies and provincial governments. The most significant impact would be related to the administration of providing greater transparency, accountability and disclosure. This could include regular auditing and costs related to publication of payments by companies to governments and revenues received. In consultations Canada has recognized the importance of respecting provincial jurisdiction over natural resources and securities regulation but its implementation plans remain unclear.

The federal government also intends to extend the reporting requirements to include company payments to First Nations. This issue is challenging since many bands and companies insist on confidentiality, claiming agreements are commercial contracts. The importance of maintaining confidential information captured in Impact Benefit Agreements has been identified as a key requirement by industry. Canada has not consulted with First Nations about this initiative.

V CONCLUSION:

Canada's next steps on developing and implementing a national transparency and reporting regime for the extractive industry could have important implications for British Columbia companies.

ATTACHMENT: Transparency, CSR and British Columbia's Extractive Industry Associations

DRAFTED BY:

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APPROVED BY:

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Attachment

Transparency, CSR and British Columbia's Extractive Industry Associations

Canadian Association of Petroleum Producers (CAPP)

CAPP does not emphasize a CSR framework. Rather, it focuses the impacts of the industry on the environment and community by focusing on climate change, air and water quality, and sustainable land use.

Mining Association of Canada (MAC) and the Mining Association of British Columbia (MABC)

In 2004, MAC launched Towards Sustainable Mining (TSM), a set of guiding principles and performance elements that govern key activities of companies in all sectors of the mining and mineral-processing industry. In May 2011, MABC became the first provincial association to adopt the MAC's TSM initiative. TSM falls under the corporate social responsibility (CSR) framework. It helps the industry maintain its social license to operate and helps the industry improve its performance by aligning mining activity with the priorities and values of its communities of interest.

Currently the Canadian mining industry has joined with two non-governmental organizations to lobby for mandatory "publish what you pay" rules in Canada. MAC, Prospectors and Developers Association of Canada (PDAC), Revenue Watch International and Publish What You Pay Canada have released proposals for ways to effectively implement transparency provisions for the mining sector, including project-by-project payments to all governments, whether domestic or foreign.

Association of Mineral Exploration of British Columbia (AMEBC)

AMEBC promotes CSR through participation and promotion at PDAC. At PDAC, a CSR Committee has been developing the e3 Plus Principles and Guidelines over the past two years – called *A Framework for Responsible Exploration*. AMEBC also supports the CSR initiatives of the Canadian Institute of Mining (CIM) who in turn supports the Canadian Centre of Excellence in CSR.

AMEBC also supports The Office of the Extractive Sector Corporate Social Responsibility (CSR) Counselor located within the Department of Foreign Affairs and International Trade (DFAIT). The Office of the CSR Counsellor was set up as part of the Government of Canada's corporate social responsibility strategy for the Canadian international mining, oil and gas sectors. The Office's Review Process supports dispute resolution, dialogue and effective problem-solving between a Canadian extractive company and people affected by the extractive project. The Office of the CSR Counsellor provides the option for constructive resolution of disputes between Canadian companies and communities outside of Canada by providing a convening and facilitation role.

MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development and Minister Responsible for Housing

II ISSUE: Update on Enbridge Inc.'s proposed Northern Gateway Pipelines Project for October 13, 2013 meeting in Seoul, Korea with The Honourable Joe Oliver, Minister of Natural Resources, Minister Ken Hughes, Alberta Energy and Minister Martine Qu  llet, Natural Resources, Province of Quebec.

III BACKGROUND:

The estimated \$6 billion Northern Gateway Pipelines Project (NGP) proposes the construction of twin pipelines across Alberta and northern British Columbia (B.C.) to move oil and import condensate between Bruderheim, Alberta and Kitimat, B.C. The proposed NGP also requires the construction of a new marine shipping terminal in Kitimat, to enable tankers to ship oil to Asia and the United States and import condensate.

Currently, the proposed NGP has completed the hearing phase of a federal regulatory process led by the National Energy Board (NEB). The Joint Review Panel (JRP) will be submitting an environmental assessment report to the federal government by December 31, 2013. This report will include the JRP's conclusions, recommendations and certificate conditions as well as any mitigation measures and follow-up that should be considered by the federal government. It is anticipated the federal government will make a decision on the environmental assessment and whether to issue a certificate under the *NEB Act* by June 2014.

The proposed NGP continues to draw strong opposition from First Nations and environmental organizations due to concerns over the possibility of terrestrial and marine oil spills, construction impacts, tanker traffic, and the link to oil sands and related climate change impacts.

IV DISCUSSION:

The government of B.C. has outlined five minimum requirements to support heavy oil pipelines which deal with environment assessment process requirements, marine and terrestrial oil spills, aboriginal rights and a fair fiscal share for B.C. that must be met for the province to consider the construction and operation of heavy oil pipelines.

On May 31, 2013, B.C. submitted its final written argument to the JRP and identified the weaknesses of the NGP application and evidence. In the submission, the Province stated that it cannot support the project as presented to the JRP because the Proponent has been unable to address British Columbians' environmental concerns.

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The Proponent presented little evidence regarding its approach in the event of a spill in a timely and effective manner so as to reduce as much as possible its environmental and other effects. It is not clear from the evidence that the Proponent will in fact be able to respond effectively to spills either from the pipeline itself, or from tankers transporting heavy oil from the proposed terminal.

B.C. will shoulder 100 percent of the risk in the marine environment and a significant proportion of the risk on the land should a spill event occur. The Proponent's proposed economic benefits to B.C., does not reflect the level, degree and nature of the potential risk borne by the province, the environment and taxpayers.

The Proponent has also not met the requirements for First Nation's participation. Governments in Canada have a duty to consult and accommodate First Nations, and B.C. is committed to meeting this test. B.C. has developed a set of tools to help First Nations to partner with industry and participate in economic development. These agreements help to create certainty for development that benefits all British Columbians. B.C. remains committed to this approach.

Enbridge Inc. has recently been increasing its efforts to gain support for the proposed NGP with communities, First Nations, the public and government. It has begun a major media campaign in an effort to gain support from all British Columbians.

V CONCLUSION:

In order to fully address the five requirements the Proponent, B.C., Alberta, and Canada must work collaboratively. Work is already underway within various levels of government with respect to required regulations, world-leading marine and land spill practices, and discussions of benefits and risks.

As announced by Premiers Clark and Redford on July 26, 2013, a British Columbia/ Alberta energy working group will provide the corporate leadership regarding this proposed Project including consideration of B.C.'s five conditions.

APPROVED BY:

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MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Hydraulic Fracturing in British Columbia

III BACKGROUND:

The Honourable Mme. Martine Ouellet, Quebec Minister of Natural Resources, may wish to discuss British Columbia's experience with hydraulic fracturing operations at the meeting on October 13, 2013 in Seoul, Korea.

Technology

Hydraulic fracturing is the stimulation process that allows natural gas production from organic-rich shale, a rock not historically considered an oil or gas reservoir. Shale formations have very small pore spaces and low permeability which makes the flow of gas difficult. Hydraulic fracturing is required to facilitate the movement of gas.

Hydraulic fracturing involves injecting a fluid, primarily composed of water, sand and small amounts of chemical additives (friction reducers and surfactants) at a high enough pressure to fracture or crack the rock. Sand holds the cracks open once the pressure is lowered, allowing the natural gas to migrate to the wellbore and up to the well head at surface.

Specific hydraulic fracturing fluid formulas are often proprietary and vary amongst companies and applications. Chemical additives account for less than one percent of the water composition in slickwater hydraulic fractures.

History in British Columbia

Hydraulic fracturing has been used in British Columbia to stimulate gas production in conventional reservoirs since 1950. As of 2005, with the development of horizontal drilling, hydraulic fracturing has enabled development of the vast unconventional shale gas resources in northeast British Columbia. There are currently about 7300 hydraulically fractured wells in the province.

IV DISCUSSION:

British Columbia has for decades been and continues to be a leader in safe, responsible natural gas development. There has never been a reported incident of groundwater contamination as a result of hydraulic fracturing operations within British Columbia.

Regulatory Framework

Hydraulic fracturing in British Columbia is strictly managed and addressed via rigorous regulation, industry best practices, and ongoing research on water quality and quantity. The *Oil and Gas Activities Act* (OGAA) is an updated regulatory framework, brought into

force in 2010 in response to the growth in the natural gas sector and emergence of unconventional gas exploration. Under OGAA, specific construction and production regulations ensure safe hydraulic fracturing practices. These regulations include requirements for containment procedures and proper disposal of hydraulic fracturing fluids.

Extensive consultations on OGAA began in 2002 through the Oil and Gas Regulatory Improvement Initiative, which involved communities, local governments, First Nations, companies, landowners, environmental organizations and industry associations.

British Columbia was the first province in Canada to regulate the mandatory disclosure of ingredients used in the hydraulic fracturing process. The online registry, found at FracFocus.ca, provides a transparent accounting of each well drilled. FracFocus.ca was built to accommodate future participation by other jurisdictions to enable one national site for disclosure information. Alberta has joined British Columbia in requiring the disclosure of hydraulic fracturing fluids via FracFocus.ca.

Water Use

Hydraulic fracturing in some shale gas development areas uses significantly more water than conventional hydraulic fracturing. Water consumption in a single slickwater well is estimated at approximately 10,000 - 70,000 cubic meters, depending on the number of hydraulic fractures conducted. Water is mainly obtained from surface sources such as rivers and lakes. Water use is approved by the British Columbia Oil and Gas Commission (BC OGC) and there is a legal requirement for industry to report water use data. According to the BC OGC, industry currently uses less than 0.25 per cent of the annual run off from river basins in northeast British Columbia for oil and gas production.

Under British Columbia's *Environmental Management Act*, fluids produced from oil or gas operations cannot be discharged into the environment, (i.e., into rivers/lakes, onto the ground surface, or into aquifers) without authorization. OGAA further regulates waste water wherein produced fluids, including fracture flowback water from natural gas wells can be reused for well completions, or be disposed into deep, underground saline aquifers.

Seismicity

A study by the BC OGC found hydraulic fracturing can induce seismicity by activating pre-existing faults, but in the cases studied, the impact was confined to the reservoir. Further work is underway to more fully understand the observed links between shale gas activity and induced seismicity, including a three-year project with the University of British Columbia.

Affect on Communities

In the Peace region of the province the oil and gas sector contributes extensively to economic development. The spinoff infrastructure from oil and gas activity has created a significant amount of business and jobs for thousands of workers in the area. Activities such as road and facility construction, pipelines, safety and security services,

environmental assessment services and land reclamation have generated a large work force directly related to the oil and gas industry. The industry provides over 12,000 direct jobs in the North Peace region alone.

See Appendix 1 for a table of common myths related to hydraulic fracturing that have been brought to the attention of Government and the corresponding facts in British Columbia.

Industry Initiatives

In September 2011, the Canadian Association of Petroleum Producers (CAPP) announced its "Guiding Principles for Hydraulic Fracturing" for industry to guide water management and improved water and fluids reporting practices for shale gas development. CAPP developed operating practices to support the guiding principles for hydraulic fracturing and is in the process of reviewing their members' adherence to the practices.

In an effort to use less freshwater, industry in British Columbia is already increasing the use of other sources, such as saline (unpotable) groundwater from water source wells as well as recycled flowback water. Another example is Shell Canada's use of municipal waste water from Dawson Creek.

The Petroleum Service Association of Canada which includes companies that perform hydraulic fracturing services, in February 2013, announced a new initiative, the Working Energy Commitment which will lead to the formation of a hydraulic fracturing code of conduct. Consultation is taking place in various locations throughout Alberta, British Columbia and Saskatchewan with release of the code anticipated by end of 2013.

APPROVED BY:

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Ines Piccinino, ADM, UDD
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✓

Appendix 1

July 9, 2013

Hydraulic Fracturing Myth-Fact

PREPARED BY: BC Oil and Gas Commission, FOR INFORMATION

ISSUE: List of myths and corresponding facts for hydraulic fracturing

Myth	Fact
Hydraulic fracturing uses more freshwater than B.C.'s water systems can support.	<ul style="list-style-type: none"> Water used for hydraulic fracturing is a very small amount – less than a fraction of a per cent of annual runoff in northeast B.C. river basins. In an effort to use less freshwater, companies are also increasing the use of other sources, such as saline (unpotable) groundwater from water source wells and recycled flowback water. Section 8 water approvals and water use supporting oil and gas activities in B.C. is posted on the BC Oil and Gas Commission's (Commission) website and also available via the Northeast Water Tool.
Hydraulic fracturing contaminates groundwater and drinking water.	<ul style="list-style-type: none"> There have not been any confirmed instances of groundwater contamination as a result of hydraulic fracturing in B.C. The province has strong regulations around groundwater protection, including cementing and casing requirements with a specific intent to protect groundwater In addition, hydraulic fracturing is not permitted above 600 metres unless specified by the Commission under a special review. Hydraulic fracturing occurs at significant depths (1,500 metres to 4,000+ metres below the surface) relative to potable groundwater zones (typically 25-120 metres below the surface in northeast BC).
Hydraulic fracturing can cause large earthquakes.	<ul style="list-style-type: none"> The Commission has undertaken extensive studies on the link between hydraulic fracturing and induced seismicity in the Horn River Basin. Findings have been that hydraulic fracturing has caused small seismic events in the Horn River Basin north of Fort Nelson. This occurred in an area with pre-existing underground faulting, which made it more susceptible to seismicity. The Commission continues to study induced seismicity and hydraulic fracturing, and recent initiatives include: installation of six new seismograph stations in northeast B.C.; increased use of seismic assessments by operators, and enhanced permitting requirements in which operations must be ceased if an event magnitude of 4.0 or greater is detected.
Hydraulic fracturing is	<ul style="list-style-type: none"> It has been used for decades. Technologies though have improved in

not proven to be a safe industrial practice for people or the environment.	recent years that have both increased the potential to capture natural gas from tight formations such as shale, as well increased the safety of the practice.
Unconventional development has huge impacts on the landscape of northeast B.C.	<ul style="list-style-type: none">• Unconventional gas development is more predictable than conventional gas development, and as such reduces the overall footprint. This allows for better planning on surface features like roads, pipelines and facilities.• Use of multi-well pads and hydraulic fracturing also mean that more gas can be captured from a smaller footprint. One unconventional multi-well pad averages about 3.5 hectares and averages 8-16 wells per pad.
Hydraulic fracturing fluid is full of harmful chemicals.	<ul style="list-style-type: none">• Hydraulic fracturing fluid is made up of approximately 99 per cent water and sand and less than 1 per cent other ingredients such as stabilizers and friction reducers.• Hydraulic fracturing fluids do not come in contact with the environment – they are used in a closed loop by which they are pumped down the wellbore and return to the wellhead where they are collected and either stored and re-used or transported to an approved disposal facility.• B.C. was the first province to require the mandatory disclosure of ingredients used in hydraulic fracturing, starting January 2012. These ingredients are searchable on a public database at www.Fracfocus.ca. It also serves as a public resource for information on the process of hydraulic fracturing.
Hydraulic fracturing emits major GHG emissions.	<ul style="list-style-type: none">• Hydraulic fracturing is a small component in the lifecycle of a natural gas well, lasting usually about two weeks, and as such it does not contribute greatly toward total emissions.• Lifecycle GHG emissions from unconventional natural gas wells are similar to those for conventional natural gas wells.• Overall, emissions from natural gas development are on the decline in British Columbia, largely due to flaring initiatives.• A lot of the criticism around shale gas development and GHG emissions stems from a perception regarding venting of natural gas after hydraulic fracturing, (i.e. the direct release of unburned gas to the atmosphere). Venting in this manner is prohibited in B.C. by the Drilling and Production Regulation.

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MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development and Minister Responsible for Housing

II ISSUE: Update on Kinder Morgan Canada's proposed Trans Mountain Pipeline Expansion project for October 13, 2013 meeting in Seoul, Korea with The Honourable Joe Oliver, Minister of Natural Resources, Minister Ken Hughes, Alberta Energy and Minister Martine Quellet, Natural Resources, Province of Quebec.

III BACKGROUND:

Kinder Morgan Canada Inc. (KMC) currently operates the Trans Mountain (TMx) pipeline system with capacity to supply 300,000 barrels per day (bbls/d) from Edmonton to marketing terminals and refineries in Greater Vancouver and the Puget Sound area in Washington. KMC currently handles 5 to 10 vessels per month at its Westridge Terminal in Burnaby for export from Port Metro Vancouver.

On April 12, 2013, KMC announced that it will proceed with its proposed plans to expand the existing TMx system to a capacity of 890,000 bbls/d at an estimated capital cost of \$5.4 billion. It is estimated this expansion will increase the number of vessels in Vancouver's Burrard Inlet by about 30 vessels per month.¹

KMC, in its application to the NEB, will be addressing how it will meet British Columbia's (B.C.) requirements to support heavy oil pipelines which deal with environment assessment process requirements, marine and terrestrial oil spills, aboriginal rights, and a fair fiscal share for B.C.

The proposed Trans Mountain Pipeline Expansion Project (TMP) will require a certificate pursuant to Section 52 of the *National Energy Board Act* (NEB Act) to permit construction and operation. The NEB has quasi-judicial powers, with the rights and privileges of a superior court, established by the NEB Act, and its decisions are all enforceable in law. The Provinces' role in the NEB process will be the same as any Intervenor (e.g., the provincial government will need to apply to be an Intervenor).

On May 23, 2013 KMC filed a Project Description with the NEB. On July 29, 2013 the NEB released a List of Issues, which identifies the topics that will be considered during the review process.

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¹ "Project Description for the Proposed Trans Mountain Expansion Project," submitted to the National Energy Board by Trans Mountain Pipeline ULC, May 2013.

KMC plans to file an application with the NEB on December 16, 2013. Once the NEB determines that the application is complete, a 15 month time limit (mandated by legislation) for the assessment of the project potentially begins as of March 2014 with the Hearing Phase commencing late fall 2014. An estimated timeline for the regulatory process, along with approval, is from March 2014 to October 2015.

Of interest, the NEB is scheduled to deliver its recommendations on Enbridge's Northern Gateway Pipelines Project (NGP) by December 31, 2013. The NEB recommendations will be public.

IV DISCUSSION:

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V CONCLUSION:

s.13

APPROVED BY:

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✓

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MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development and Minister Responsible for Housing

II ISSUE: Update on British Columbia/Alberta Working Group for October 13, 2013 meeting in Seoul, Korea with The Honourable Joe Oliver, Minister of Natural Resources, Minister Ken Hughes, Alberta Energy and Minister Martine Qu  llet, Natural Resources, Province of Quebec.

III BACKGROUND:

On July 26, 2013, British Columbia (B.C.) Premier Christy Clark and Alberta (AB) Premier Alison Redford announced the appointment of a B.C./AB Deputy Ministers Working Group (DMWG) led by senior energy officials Steve Carr, Deputy Minister of the B.C. Ministry of Natural Gas Development (MNGD) and Grant Sprague, Deputy Minister of AB Energy.

The DMWG is mandated to develop recommendations related to energy exports and opening new export markets for B.C. and AB. Shared goals include:

1. Opening new markets and expanding export opportunities for oil, gas and other resources.
2. Creating jobs and strengthening the economy of each province and Canada through the development of the oil and gas sector.

A final report is due December 31, 2013 to Premier Clark and Premier Redford. The report is to contain recommendations by both parties and an action plan that may be considered for implementation. An interim update on progress is due October 31, 2013.

IV DISCUSSION:

The DMWG is supported by two key Assistant Deputy Ministers (ADM) Fazil Mihar of the B.C. Oil and Strategic Initiatives Division (MNGD), and Al Sanderson of Strategy Division (AB Energy). Five working teams chaired by senior-level staff have been created: (1) Fiscal and Economic Benefits; (2) Marine and Terrestrial Spillage; (3) First Nations; (4) Responsible Development and Public Engagement; and (5) Transportation.

B.C. and AB have identified members for each working team. B.C.'s teams are being led by ADMs from the Ministries of Finance, Environment, Aboriginal Relations and Reconciliation, Transportation and Infrastructure and Natural Gas Development.

On October 3, 2013 the two key ADMs met in Victoria and agreed to a work plan with timelines.

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On October 7, 2013 the DMWG and ADMs met in Vancouver.

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V CONCLUSION:

B.C. and AB are actively engaged in moving forward to fulfil the Premiers' commitments to develop recommendations by the end of 2013. Five working teams have been created and initial meetings held to develop a work plan with timelines.

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Steve Carr, DM

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MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: NOVA Gas Transmission Ltd. (NGTL) North Montney pipeline project

III BACKGROUND:

NGTL, a wholly owned subsidiary of TransCanada Pipelines Limited (TransCanada), proposes to construct and operate new pipeline facilities in the North Montney area of British Columbia (B.C.) that will form part of the existing NGTL System. The two proposed sections of pipeline will be known collectively as the North Montney Project (Project) and will cost approximately \$1.5 billion. NGTL has submitted its Project Description to the National Energy Board (NEB) and will file its application to NEB by end of this year.

Located in the Peace River Regional District the Project includes approximately 306 kilometers (km) of up to 48 inch pipe and related components, including metering facilities, valve sites, compressor stations, and possible downstream pipeline facilities. The proposed pipeline will connect to the existing Groundbirch Mainline, 35 km southwest of Fort St. John (see attached Map). Planned in-service date for the pipeline is spring/summer of 2017.

NGTL states that the Project will provide gas producers in the North Montney area with access to the Alberta NOVA Inventory Transfer (NIT) market hub and thereby to gas markets across North America. It will also connect to the proposed Prince Rupert Gas Transmission pipeline which will transport natural gas to Pacific NorthWest LNG Ltd.'s proposed liquefied natural gas (LNG) export facility at Lelu Island. The North Montney pipeline will also be able to supply natural gas to the proposed TransCanada Coastal GasLink pipeline as both pipelines will interconnect with the Groundbirch Mainline.

In mid-August TransCanada held open houses for the Project in Fort St. John, Hudson's Hope and Chetwynd as part of an on-going stakeholder engagement program.

IV DISCUSSION:

After reviewing a number of alternative routes and taking into account stakeholder, First Nation and community feedback to-date, NGTL chose the preferred route described in the Project Description. Forestry is the primary land use along the route while agriculture is secondary. The preferred route traverses a length of 1.8 km of the proposed Peace-Boudreau protected area and 8.8 km of the Peace Moberly Tract. Some landowners will be impacted as approximately 15% (27 km) of the Project will traverse private land. To minimize the project's footprint, 155 km will parallel or utilize existing right-of-way.

The Project environmental and socio-economic assessment will consider impacts to soil,

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vegetation, wildlife, historical resources, current land use, traditional land use, and aquatics. An Environmental Protection Plan (EPP) will also be developed to identify specific measures to mitigate effects of the project, during and following construction.

The Project will bring economic benefits to the Province by providing jobs and contracting opportunities during construction. The Project when completed will provide annual tax revenue to municipal and provincial governments.

The proposed pipeline would be an important infrastructure linkage connecting gathering systems to new transmissions pipelines for LNG. NGTL states the purpose of the pipeline is to send gas to Alberta. By connecting to NIT, NGTL will ensure B.C. producers access a very liquid trading hub in addition to opportunity to connect to LNG export development.

s.13

NGTL has yet to submit a toll application to the NEB. By connecting to NIT, NGTL could apply for NEB approval of rolled-in tolls and in this way transfer the cost of the new pipeline across the Alberta system. Other pipeline systems in British Columbia would be opposed to this type of toll model, based on competition concerns.¹ In NGTL's 2012 Komie North Extension pipeline application to connect the Horn River Basin (HRB) to the NIT market, the NEB found the rolled-in toll model to be inappropriate as it would unreasonably subsidize the extension of the NGTL Alberta System.

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NGTL plans to file its Project application in fall 2013 which could include the toll application or it may file it separately from the environmental assessment.

V CONCLUSION:

The Ministry supports the competitive development of additional transmission pipelines to meet northeast B.C. natural gas production transportation demand and LNG development goals.

The Ministry will monitor the Project and engage across government through the Major Oil and Gas Projects team to assess provincial interests and potential Provincial participation in the anticipated early 2014 NEB Hearing for this Project.

REVIEWED BY:

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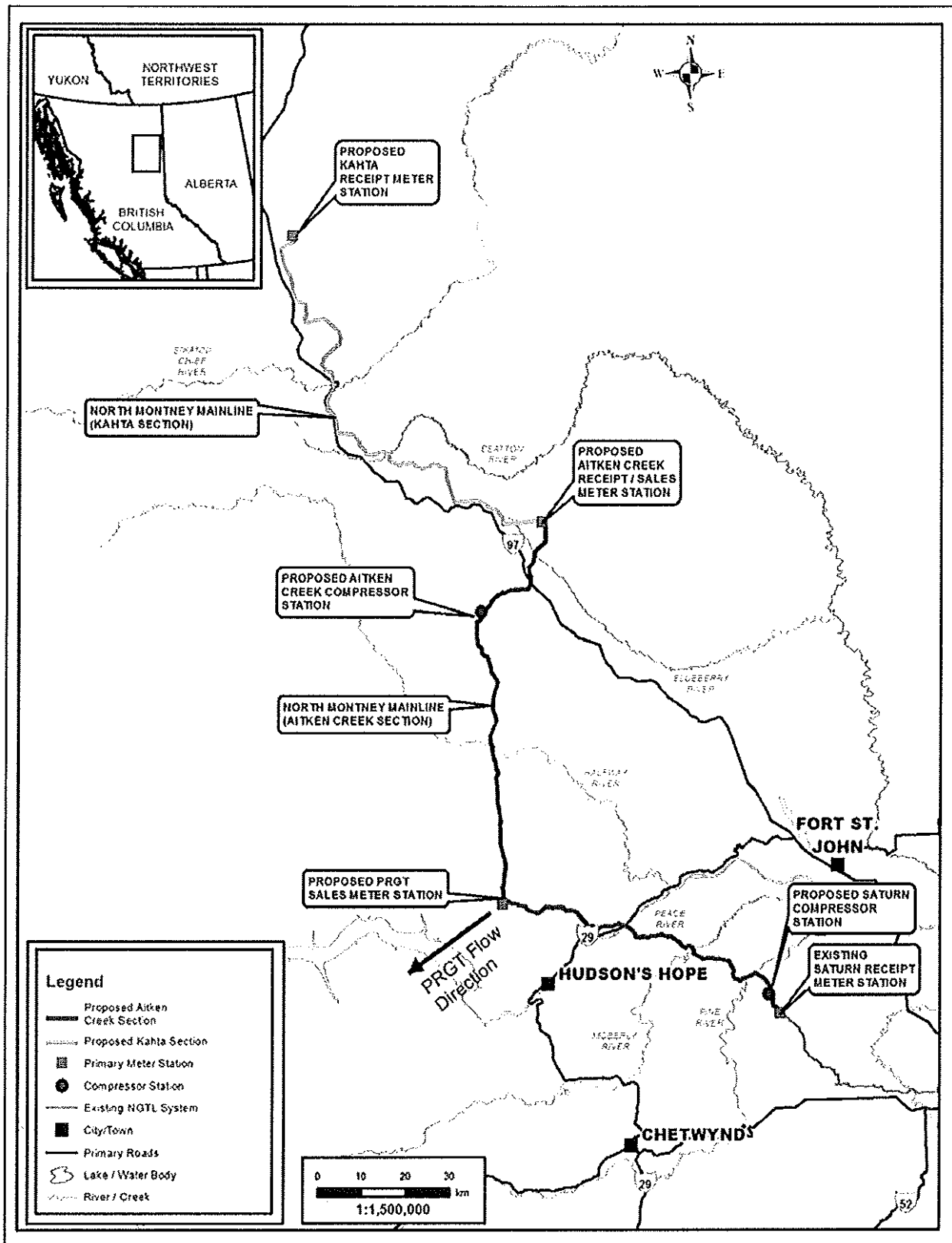
Steve Carr, DM

✓

Attachment: 1

¹ Westcoast Energy Inc., for example, competes directly for gas supply with NGTL and uses a cost of service toll model that requires shippers on new pipelines to pay for the cost of the new pipeline.

Map: Proposed NGTL North Montney Pipeline Project



MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development

II ISSUE: Meeting with Honourable Thomas Marshall, Minister of Natural Resources, Minister Responsible for the Forestry and Agrifoods Agency, and Attorney General of, Newfoundland, to discuss common issues including British Columbia's experience with and response to hydraulic fracturing operations.

III BACKGROUND:

Technology

Hydraulic fracturing is the stimulation process that allows natural gas production from organic-rich shale, a rock not historically considered an oil or gas reservoir. Shale formations have very small pore spaces and low permeability which makes the flow of gas difficult. Hydraulic fracturing is required to increase the permeability of the rock and to facilitate the movement of gas up a wellbore.

Hydraulic fracturing involves injecting a fluid, primarily composed of water, sand and small amounts of chemical additives (friction reducers and surfactants) at a high enough pressure to fracture or crack the rock. Sand holds the cracks open once the pressure is lowered, allowing the natural gas to migrate to the wellbore and up to the well head at surface.

Specific hydraulic fracturing fluid formulas are often proprietary and vary amongst companies and applications. Chemical additives account for less than one percent of the water composition.

History in British Columbia

Hydraulic fracturing has been used in British Columbia to stimulate gas production in conventional reservoirs since 1950. As of 2005, with the development of horizontal drilling, hydraulic fracturing has enabled development of the vast unconventional shale gas resources in northeast British Columbia. There are currently about 7300 hydraulically fractured wells in the province.

IV DISCUSSION:

British Columbia has for decades been and continues to be a leader in safe, responsible natural gas development. There has never been a reported incident of groundwater contamination as a result of hydraulic fracturing operations within British Columbia.

Regulatory Framework

Hydraulic fracturing in British Columbia is strictly managed and addressed via rigorous regulation, industry best practices, and ongoing research on water quality and quantity. The *Oil and Gas Activities Act* (OGAA) is an updated regulatory framework, brought into force in 2010 in response to the growth in the natural gas sector and emergence of unconventional gas exploration. Under OGAA, specific construction and production regulations ensure safe hydraulic fracturing practices. These regulations include requirements for containment procedures and proper disposal of hydraulic fracturing fluids.

Extensive consultations on OGAA began in 2002 through the Oil and Gas Regulatory Improvement Initiative, which involved communities, local governments, First Nations, companies, landowners, environmental organizations and industry associations.

British Columbia was the first province in Canada to regulate the mandatory disclosure of ingredients used in the hydraulic fracturing process. The online registry, found at FracFocus.ca, provides a transparent accounting of each well drilled. FracFocus.ca was built to accommodate future participation by other jurisdictions to enable one national site for disclosure information. Alberta has joined British Columbia in requiring the disclosure of hydraulic fracturing fluids via FracFocus.ca.

Water Use

Hydraulic fracturing in shale gas development uses significantly more water than conventional hydraulic fracturing. Water consumption in a single well is estimated at approximately 10,000 - 70,000 cubic meters, depending on the number of hydraulic fractures conducted. Water is mainly obtained from surface sources such as rivers and lakes and is approved by the British Columbia Oil and Gas Commission (BC OGC). Industry currently uses less than 0.25 per cent of the annual run off from river basins in northeast British Columbia for oil and gas production, and is legally required to report water use data.

Under British Columbia's *Environmental Management Act*, fluids produced from oil or gas operations cannot be discharged into the environment, (i.e., into rivers/lakes, onto the ground surface, or into aquifers) without authorization. OGAA further regulates waste water wherein produced fluids, including fracture flowback water from natural gas wells can be reused for well completions, or be disposed into deep, underground saline aquifers.

Seismicity

A study by the BC OGC found hydraulic fracturing can induce seismicity by activating pre-existing faults, but in the cases studied, the impact was confined to the reservoir. Further work is underway to more fully understand the observed links between shale gas activity and induced seismicity, including a three-year project with the University of British Columbia.

Affect on Communities

In the Peace region of the province the oil and gas sector contributes extensively to economic development. The spinoff infrastructure from oil and gas activity has created a significant amount of business and jobs for thousands of workers in the area. Activities such as road and facility construction, pipelines, safety and security services, environmental assessment services, and land reclamation have generated a large work force directly related to the oil and gas industry. The industry provides over 12,000 direct jobs in the North Peace region alone.

See Appendix 1 for a table of common myths related to hydraulic fracturing that have been brought to the attention of Government and the corresponding facts in British Columbia.

Industry Initiatives

In September 2011, the Canadian Association of Petroleum Producers (CAPP) announced its "Guiding Principles for Hydraulic Fracturing" for industry to guide water management and improved water and fluids reporting practices for shale gas development. CAPP developed operating practices to support the guiding principles for hydraulic fracturing and is in the process of reviewing their members' adherence to the practices.

In an effort to use less freshwater, industry in British Columbia is already increasing the use of other sources, such as saline (unpotable) groundwater from water source wells as well as recycled flowback water. Another example is Shell Canada's use of municipal waste water from Dawson Creek.

The Petroleum Service Association of Canada which includes companies that perform hydraulic fracturing services, in February 2013, announced a new initiative, the Working Energy Commitment which will lead to the formation of a hydraulic fracturing code of conduct. Consultation is taking place in various locations throughout Alberta, British Columbia and Saskatchewan with release of the code anticipated by end of 2013.

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Appendix 1

July 9, 2013

Hydraulic Fracturing Myth-Fact

PREPARED BY: BC Oil and Gas Commission, FOR INFORMATION

ISSUE: List of myths and corresponding facts for hydraulic fracturing

Myth	Fact
Hydraulic fracturing uses more freshwater than B.C.'s water systems can support.	<ul style="list-style-type: none">• Water used for hydraulic fracturing is a very small amount – less than a fraction of a per cent of annual runoff in northeast B.C. river basins.• In an effort to use less freshwater, companies are also increasing the use of other sources, such as saline (unpotable) groundwater from water source wells and recycled flowback water.• Section 8 water approvals and water use supporting oil and gas activities in B.C. is posted on the BC Oil and Gas Commission's (Commission) website and also available via the Northeast Water Tool.
Hydraulic fracturing contaminates groundwater and drinking water.	<ul style="list-style-type: none">• There have not been any confirmed instances of groundwater contamination as a result of hydraulic fracturing in B.C.• The province has strong regulations around groundwater protection, including cementing and casing requirements with a specific intent to protect groundwater• In addition, hydraulic fracturing is not permitted above 600 metres unless specified by the Commission under a special review.• Hydraulic fracturing occurs at significant depths (1,500 metres to 4,000+ metres below the surface) relative to potable groundwater zones (typically 25-120 metres below the surface in northeast BC).
Hydraulic fracturing can cause large	<ul style="list-style-type: none">• The Commission has undertaken extensive

earthquakes.	<p>studies on the link between hydraulic fracturing and induced seismicity in the Horn River Basin.</p> <ul style="list-style-type: none"> • Findings have been that hydraulic fracturing has caused small seismic events in the Horn River Basin north of Fort Nelson. • This occurred in an area with pre-existing underground faulting, which made it more susceptible to seismicity. • The Commission continues to study induced seismicity and hydraulic fracturing, and recent initiatives include: installation of six new seismograph stations in northeast B.C.; increased use of seismic assessments by operators, and enhanced permitting requirements in which operations must be ceased if an event magnitude of 4.0 or greater is detected.
Hydraulic fracturing is not proven to be a safe industrial practice for people or the environment.	<ul style="list-style-type: none"> • It has been used for decades. Technologies though have improved in recent years that have both increased the potential to capture natural gas from tight formations such as shale, as well increased the safety of the practice.
Unconventional development has huge impacts on the landscape of northeast B.C.	<ul style="list-style-type: none"> • Unconventional gas development is more predictable than conventional gas development, and as such reduces the overall footprint. This allows for better planning on surface features like roads, pipelines and facilities. • Use of multi-well pads and hydraulic fracturing also mean that more gas can be captured from a smaller footprint. One unconventional multi-well pad averages about 3.5 hectares and averages 8-16 wells per pad.
Hydraulic fracturing fluid is full of harmful chemicals.	<ul style="list-style-type: none"> • Hydraulic fracturing fluid is made up of approximately 99 per cent water and sand and less than 1 per cent other ingredients such as stabilizers and friction reducers. • Hydraulic fracturing fluids do not come in contact with the environment – they are used in a closed loop by which they are

	<p>pumped down the wellbore and return to the wellhead where they are collected and either stored and re-used or transported to an approved disposal facility.</p> <ul style="list-style-type: none">• B.C. was the first province to require the mandatory disclosure of ingredients used in hydraulic fracturing, starting January 2012. These ingredients are searchable on a public database at www.Fracfocus.ca. It also serves as a public resource for information on the process of hydraulic fracturing.
Hydraulic fracturing emits major GHG emissions.	<ul style="list-style-type: none">• Hydraulic fracturing is a small component in the lifecycle of a natural gas well, lasting usually about two weeks, and as such it does not contribute greatly toward total emissions.• Lifecycle GHG emissions from unconventional natural gas wells are similar to those for conventional natural gas wells.• Overall, emissions from natural gas development are on the decline in British Columbia, largely due to flaring initiatives.• A lot of the criticism around shale gas development and GHG emissions stems from a perception regarding venting of natural gas after hydraulic fracturing, (i.e. the direct release of unburned gas to the atmosphere). Venting in this manner is prohibited in B.C. by the Drilling and Production Regulation.

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MINISTRY OF NATURAL GAS DEVELOPMENT

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Natural Gas Development and Minister Responsible for Housing

II ISSUE: Unconventional Petroleum Potential of the Montney Formation in British Columbia and Alberta Report Release

III BACKGROUND:

In order to better understand its long-term energy supply, the British Columbia (BC) government, in conjunction with National Energy Board of Canada (NEB), has produced assessments of its conventional petroleum resources.

Since the last conventional assessment in 2006, there has been a shift by industry to develop unconventional resources, such as tight gas and shale gas. This development has produced an abundance of natural gas in North America and has focused industry and government on the liquefied natural gas market. This activity has also provided enough information to allow for the quantification of these resources with a degree of accuracy similar to data found within the conventional assessments.

Considering the potential size of the resource and long-term commitments required with respect to liquefied natural gas exports, a better understanding of the province's unconventional petroleum endowment is critical for development.

The first of these unconventional resource assessments, also produced in conjunction with the NEB, centred on the Horn River Basin and was published in 2011.

Subsequently, a collapse in natural gas prices and industry focus on more profitable oil prospects, resulted in almost all unconventional development in BC occurring in the liquids and condensate rich Montney Formation. As such, the province decided in early 2012 to undertake an assessment of the petroleum potential of the Montney Formation.

This evaluation was carried out in conjunction with the NEB, the BC Oil and Gas Commission and the Alberta Energy Regulator, as the formation is located within British Columbia and Alberta. The results of this assessment are complete and will be released during the week of November 4.

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IV DISCUSSION

The results of the Montney Formation Assessment for British Columbia are summarized in the table below:

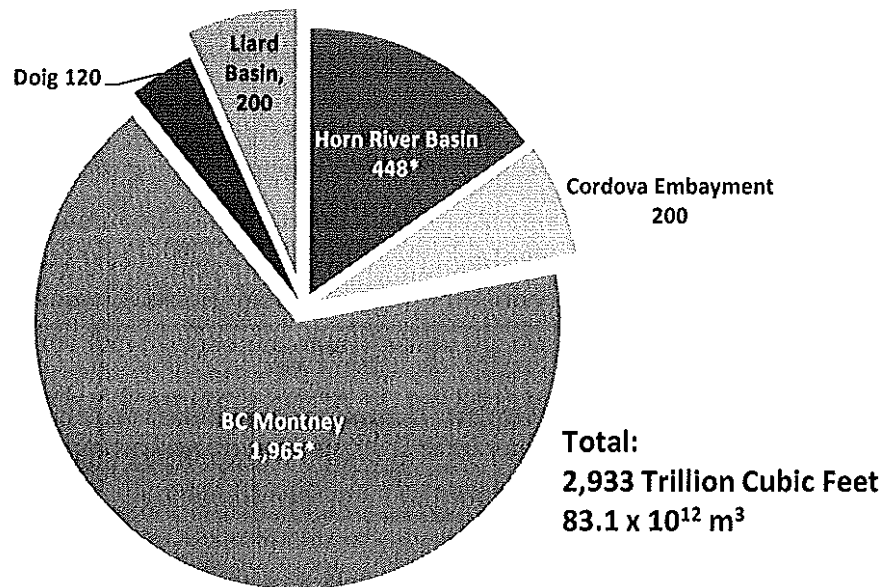
Ultimate potential for Montney unconventional petroleum in British Columbia.

Hydrocarbon Type	In-Place			Marketable		
	Low	Expected	High	Low	Expected	High
Natural Gas – billion m³ (trillion cubic feet)	42,435 (1,498)	55,664 (1,965)	69,630 (2,458)	5,666 (200)	7,677 (271)	10,311 (364)
NGLs – million m³ (million barrels)	11,974 (75,340)	15,310 (96,332)	19,172 (120,633)	1,418 (8,920)	2,010 (12,647)	2,760 (17,366)
Oil – million m³ (million barrels)	211 (1,328)	439 (2,763)	739 (4,652)	1 (8)	5 (29)	11 (70)

The results show that Gas in Place (GIP) in the B.C. Montney formation are expected to be about four times the levels originally thought. Previous preliminary estimates were in the 450 Trillion cubic feet (Tcf) range of GIP while the new report expected GIP is at 1,965 Tcf.

Including the Horn River Basin (2,198 billion m³; 78 Tcf) and conventional resources (1,462 billion m³; 52 Tcf), BC's ultimate potential for **marketable natural** gas is 11,337 billion m³ (400 Tcf). Assessments of other major shale plays, such as the Besa River Formation (Liard Basin), Cordova Embayment (Horn River Formation equivalent) and Doig Formation have yet to be conducted, but a gas-in-place estimate incorporating the new Montney Assessment indicates a total of $83.1 \times 10^{12} \text{ m}^3$ (2,933 Tcf).

Original Gas-In-Place Estimates for Shale and Tight Gas Regions in British Columbia (TCF)



*Calculated Ultimate Potential

Government Communications and Public Engagement staff are coordinating the release of this information with their counterparts at the NEB.

V CONCLUSION

The upcoming release of the assessment of the Montney Formation in British Columbia indicates an expected 1,965 Tcf of natural gas in place and 271 Tcf of marketable gas. This will make the Montney Formation one of the largest gas accumulations in North America.

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Steve Carr, DM, MNGD	✓