

EMPR FOI EMPR:EX

From: Nikolejsin, Dave EMPR:EX
Sent: August 27, 2018 11:15 AM
To: Meggs, Geoff PREM:EX
Cc: Susannah Pierce
Subject: RE: Direct BC LNG investment

Geoff, the \$40B is not a precise number and the breakdown is fluid. In fact LNGC now expects the numbers to be even larger over time. That said, the answer to your question from LNGC is:

Of a total CAD40bln spend, we estimate CAD24bln of that to be spent in BC. (60%) This number covers (a portion) of upstream development, the liquefaction plant and the pipeline.

-----Original Message-----

From: Meggs, Geoff PREM:EX
Sent: August 23, 2018 8:54 AM
To: Nikolejsin, Dave EMPR:EX <Dave.Nikolejsin@gov.bc.ca>
Cc: Susannah Pierce <Susannah.Pierce@lngcanada.ca>
Subject: Direct BC LNG investment

Dave, the Green Party is again asking for a breakdown of how much of a \$40 billion project would be spent in B.C., knowing that modules and tankers, for example, will be sourced overseas. Do you have that handy?

Geoff

Sent from my iPhone

From: Robinson, Kirsten
To: Peterson, Ken; Len Boggio; Bob Gallagher; MacLaren, Les EMPR:EX; John Nunn; John Ritchie; "joseph.ehasz@aecom.com"; Wanamaker, Lori FIN:EX; "Lorne Sivertson"; dpodmore@concertproperties.com; "Ken Peterson"
Cc: O'Riley, Christopher; McKenzie, Ken; Clarke, Gareth; "Michael.Kennedy@ca.ey.com"
Subject: BC HYDRO: Follow up from Lorne Sivertson re Report by Canadian Energy Research Institute
Date: October 5, 2018 3:46:36 PM
Attachments: LNG CANADA[1].docx

Forwarding report from Lorne Sivertson:

Begin forwarded message:

From: Lorne Sivertson <lorne.sivertson@shaw.ca>
Date: October 5, 2018 at 8:57:22 AM PDT
To: "Amy.McCallion@bchydro.com" <Amy.McCallion@bchydro.com>
Subject: FW: CERi LNG Report

Amy

At the PAB meeting on Thursday I was requested to send a recent report I have on Canadian LNG projects. This report by the Canadian Energy Research Institute can be accessed as shown below. The PAB is principally interested in the economic impacts of the now announced LNG Canada Project, which can be found on page 25, page 41, page 85 and page 86/87. I have also attached a shorter paper I prepared on the LNG Canada Project which has some additional information.

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Smart about power in all we do.

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LNG CANADA PROJECT

1. Background

In 2015 the BC government said there were 23 LNG projects planned for BC. The average size of these plans was about 7 million tonnes/year of LNG. While no final decisions had been made most proponents were likely to have chosen the Direct-Drive technology, where natural gas combustion provides the energy for cooling and compression rather than E-Drive technology, that uses electricity for processing.

The Province had set out a number of LNG development policy positions. They included:

- A reduced power rate for ancillary plant needs of \$83.02/MWh, which was agreed to in a BC Hydro/LNG Canada contract (the BC Hydro large industrial rate in 2014 was \$54.34/MWh);
- A CO₂ benchmark of 0.16 tonnes per tonne of LNG;
- Acceptance of Direct-Drive technology rather than less polluting E-Drive because of the electricity supply issue and longer proven technology; and
- A reduced carbon tax rate of \$25/tonne if the 0.16 benchmark cannot be met;

In 2018 a number of the plants that were proposed for development have been delayed or cancelled, because of poor markets and regulatory delays in BC. However, recently the LNG market has improved significantly. Royal Dutch Shell in a February,

2018 report says that the market in 2017 reached 293 million tonnes, 30% higher than expected. Shell says there could be a world demand for 600 million tonnes per year by 2035. Shell sees a possible LNG shortage by the mid-2020s.

LNG Canada, owned by Shell, PetroChina, Korea Gas and Mitsubishi, earlier delayed an investment decision because of poor markets. They have spent millions on their Kitimat site preparation. Recently said they will make a final investment decision in late 2018. On April 28, 2018 LNG Canada announced that they had selected Fluor Corp and JGC Corp for the engineering, procurement and construction (EPC) for the Project.

2. New Policy Position

The New Democratic Party on March 22, 2018 set out several incentives to encourage LNG Canada to proceed with the proposed \$40 billion investment for Kitimat These include:

- Exemption from PST on construction costs;
- Rebate on carbon taxes from the scheduled \$20/tonne until 2021, if the company can prove it has the lowest GHG emissions of any world LNG plant; and
- The BC Hydro large industrial power rate for ancillary energy needs (about \$57/MWh) to encourage the use of electricity rather than natural gas for those purposes. (note BC Hydro has only included power for the small Fortis BC Tilbury Island LNG plant in its 2016 Integrated Resource Plan, only

included the ancillary power needs for LNG Canada and electricity for both the compression and ancillary needs for the Woodfibre LNG Squamish Project, for a total of 2,662 GWh/year)

3. LNG Canada Project

The Project would start in Stage 1 with two 6 million tonnes/year trains with two more to be added in Stage 2. The National Energy Board approved the export of up to 24 million tonnes/year for 25 years in 2013. It received a Project Approval Certificate in 2015. A load out port to accommodate LNG carriers of up to 265,000 cubic metres would be built. LNG Canada would build a 700 km pipeline to transport natural gas to the Kitimat plant site. The company says the Project would create 7,500 construction jobs and about 600 permanent jobs.

4. Opposition

Mr. Weaver of the BC Green Party and many others are opposed to the Project, mainly because of environmental impacts, (8 mega-tonnes of GHGs according to Weaver), who also says most of the construction jobs will be created in Asia, and the only jobs BC will get will be plant assembly jobs.

LNG Canada challenge the Greens arguments, saying if the Project proceeds, to be decided in late 2018, the jobs will be real and that their facilities will be the least polluting LNG plants operation in the world. Their plants, LNG Canada says, will have 50% lower GHG emissions than other plants.

Premier John Horgan has said “ All LNG projects should guarantee a fair return for BC’s natural resources, guarantee jobs and training opportunities for British Columbians, respect and partner with First Nations, and meet the province’s climate commitments.”

5. Dealing With The Opposition

Below are approaches to this opposition.

i) LNG POWER OPTIONS

There are 3 stages in the production of LNG: 1) natural gas pre-treatment; 2) natural gas cooling to – 162 C with compression; 3) storage of LNG for shipment. Cooling and compression of natural gas can use one of three current technologies. Direct-Drive, the most common technology, uses natural gas burned in turbines to create mechanical energy for cooling and compression. It has an efficiency rating of about 30%. A variation of this gas-based technology is Aero-Derivative technology that uses open cycle gas turbines (OCGT). The efficiency rating is about 45%. A third technology is Electric-Drive (E-Drive) where the compressors use electricity for gas processing and can use the very efficient combined cycle gas turbines (CCGT). E-Drive can have gas turbine efficiency of 60% and electric motor efficiency of 95%.

A 5 million tonne/year Direct- Drive plant will require 110 MW of electricity for ancillary power needs, likely supplied by a centralized power plant. An E-Drive plant of the same size will need about 450 MW of power from a power plant.

So if LNG Canada go ahead with 12 million tonnes in phase 1, and chose D-Drive that would require about 265 MW of electrical generation capacity for ancillary needs.

If they selected E- Drive that would require about 1,080 MW of electrical generating capacity, or roughly 100% of the \$10 billion Site C Project power generation. One tonne of LNG requires about one megawatt hour of electricity, using E-Drive. The cost of electricity from Site C, or any new wind or hydropower source is about \$110/MWh, substantially higher than the BC Hydro industrial rate of about \$55/MWh. At the \$110/MWh cost that would mean about \$110 per tonne of LNG., or 20% of the landed value of LNG in Asia, currently at US\$10.50/MMbtu (there are 53 MMBtu/tonne LNG).

Thus it is clear from this and previous statements from LNG Canada that they would use Direct-Drive, with only power for ancillary needs sourced from BC Hydro at the industrial rate. Aero-Derivate technology may be a choice, however.

The Direct Drive plant will emit from 0.3 to 0.5 tonnes of CO₂ per tonne of LNG, which for a 6,250,000 plant would mean 1,160,000 tonnes per year of CO₂. The E Drive plant of the same size would have emissions will be about 0.17 per LNG tonne, for a total of 800,000 tonnes of CO₂, a significant advantage. However this advantage could not be captured given the power use requirements for the BC Hydro system set out above.

With very low natural gas prices E-Drive can be at an additional major competitive cost disadvantage.

However, if the LNG E-Drive plant could use power generated from a modern combined cycle gas turbine (CCGT) plant with natural gas at the now \$1.50 MMBtu in BC, the cost of electricity would be about \$50.00 per megawatt hour. That could make E-Drive plants more competitive, representing just 9% of the LNG landed cost in Asia. There would still be GHGs, but substantially less than Direct-Drive.

As of May 2018 it is not clear which of the compression technologies the front running LNG proponents will select. LNG Canada appears to have selected a combination of Direct-Drive and BC Hydro power for ancillary purposes. Evidently the BC government in the past was working with LNG proponents on this issue. PETRONAS, another LNG proponent, did say that while most world LNG plants use Direct-Drive that they would purchase power for ancillary purposes along with using the Direct-Drive, but if there are other reliable power alternatives, that could change their plans.

If proponents should choose E-Drive, a question would be whether the proponent would build and operate a captive power generating facility or whether an independent power supplier (IPP) serving one or more LNG plants could work.

ii) CCGT Plant

It appears that at this point it would be worthwhile for a preliminary investigation into whether or not there could be an opportunity for an IPP to build and operate an efficient, state of the art, gas-fired power plant (CCGT) to provide electricity to E-Drive LNG plants on the North Coast. The power plant would likely have to be sized at in the range of 500 megawatts. A plant of that size would cost about \$750 million

in addition to the cost of transmission connections. That scale of project would require a major energy industry investor and a contractor expert in the design and construction of similar facilities. The energy firm and contractor could jointly carry out the investigation.

a) CCGT ELECTRICITY COST

Capital Cost

The 800 MW Shepard plant recently built in Alberta cost \$1.63 million/MW. The US engineering firm Black & Veatch in their February 2012 “Cost Report – Cost Performance For Power Generation Technologies” prepared for the National Renewable Energy Laboratory, show the capital cost for 580 MW CCGT at \$1.225 million/MW, + , - 25%. We will use \$1.5 million/MW here.

Heat Rate

Black & Veatch use a heat rate of 6,705 Btu/kwh, which is the efficiency of second -generation plants. G.E. Bridges & Associates in a 1995 study for Columbia Power Corporation used a heat rate of 6,824 for current technology.

O&M Cost

A common estimate is 3% to 4% of capital cost annually. Black & Vetch show a combination of variable and fixed O&M at \$4.50/MWh so, say, \$5.00/MWh.

Fuel Cost

The IEA use a price of \$5.60 to US\$7.60/MMBtu in the 2015 to 2035 period, in US 2009 \$. A.T. Kearney, a US energy consulting firm, has a base-case gas price forecast of US\$6.00 to \$7.00/MMBtu for the long-term. However a more recent World Bank forecasts natural gas not climbing to US\$5/MMbtu in the US until 2030. In BC, as noted above the price is currently just C\$1.50 MMBtu So we will use C\$3.00/MMBtu here.

GHG Taxes

Not all jurisdictions assess carbon taxes but over the long-term many will. BC Hydro in its forecast of electricity prices at Mid C assumes electricity from a CCGT plant will pay a GHG tax. Their 2030 electricity price forecast of \$87/MWh assumes a mid-range GHG tax. Black & Veatch assume a new CCGT plant will produce 117 lb/MMBtu of gas consumption. That works out to a tax of C\$8.50/MWh which is used here.

Plant Output

A 580 MW CCGT plant at 92.5 % availability (1% scheduled outages and 6.5% forced outages from Black & Veatch) will generate 4,700,000 MWh/year. Consumption of natural gas then at the given heat rate would be 31.5 million MMBtu/ MCF (gigajoules) per year.

Cost of Capital (Discount Rate)

Assuming this is a private sector CCGT the appropriate discount rate will be a combination of the required return on equity (ROE) and the long-term cost of borrowing. For this class of investment risk owners probably are looking for an ROE of roughly 17% before taxes. At the current time Moody's Aaa bond yield in the US is just 3.4% but a more normal rate would be at least 6%. If the project life is 30 years and it is financed 70% debt and 30% equity the weighted cost of capital (WAC) is 9.3%. We will use 9.5% here.

Unit Costs

Capital total \$870 million	\$18.83/MWh
O&M	\$5.00/MWh
Fuel @ \$3.00 MMBtu (MCF)	\$20.12/MWh
GHG tax	\$8.50/MWh
Total	<u>\$52.45/MWh</u>

This \$52.45/MWh is roughly equivalent to the current BC Hydro industrial power rate, which has been offered to LNG Canada. What this could mean is that with a IPP facility supplying power from at CCGT plant at the current natural gas price the BC Hydro power would not be required. There would still be some CO2 emissions, but substantially less than with Direct-Drive and BC Hydro power for ancillary purposes.

This concept should be explored with LNG Canada, with power project contractors and IPPs.

iii) JOBS

In its “Site C – Review” submission to the BC Utilities Commission (BCUC) in August, 2017 the Allied Hydro Council of British Columbia described how it, having been formed in 1961, has participated in many major hydropower projects in BC, including all of the Columbia Power Corporation projects in the West Kootenays and the current John Hart project on Vancouver Island. This was done through the Collective Agreement, Columbia Hydro Constructors Ltd. and the Allied Hydro Council of British Columbia. The AHC is comprised of 17 international building and

construction trades unions, represented by the Building Trades Council. Information on the benefits of the CHC/AHC arrangement was set out in more detail in testimony by the AHC consultant and has been described in a recent paper prepared by Sivertson & Associates Consulting Ltd.

The benefits of the AHC include:

- Experienced workers;
- No strike provisions;
- Competitive wage rates;
- Local hires;
- Commitment to delivering project on-budget, on-time; and
- First Nations hiring commitments, apprenticeships, training.

The AHC/CHC Agreement could find its way into other BC government infrastructure projects in the future because of its benefits.

Given the Province's interest in gaining guaranteed jobs and training from the LNG Canada Project consideration should be given to having an AHC/CHC type agreement apply. It need not be an approval requirement but could be a government suggestion the LNG Canada to consider.

Sivertson & Associates Consulting Ltd.

May 1, 2018

From: [Haslam, David GCPE:EX](#)
To: [EMPR Executive Committee](#)
Cc: [GCPE Communications - Energy, Mines & Petroleum Resources](#); [Sanderson, Melissa EMPR:EX](#); [Andrews, Scott EMPR:EX](#)
Subject: Final NR/BG"s and LNG KM/QA
Date: October 2, 2018 11:22:23 AM
Attachments: [KM LNG Canada FIDOct2.docx](#)
[QA LNG Canada FIDOct2.docx](#)
[NR-LNG Canada Final Investment Decision DRAFT Sep29 5-30 GK edits.pdf](#)
[BG LNG FID Background 1 Climate Action Sept 30 2018 530 pm GK edits.pdf](#)
[BG LNG FID Background 3 Sept 30 2018 545 pm GK edits.pdf](#)
[BG LNG Canada FID Background 2 Sept 30 2018 530 pm GK edits2.pdf](#)

All – attached are all the final com products in one email as well as the transcript of PJT and PJH at the media event:

- KM/QA
- NR and three backgrounders

CHAN (Global BC - Vancouver)
Global BC Morning News
02-Oct-2018 08:43

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Key Message

- Our government introduced a new LNG framework which unlocked this investment and the benefits for British Columbians.
- This record investment in our province is a strong vote of confidence in BC and shows that balancing our economic, environmental and reconciliation priorities is possible.
- We are confident our climate plan will accommodate this LNG project – the cleanest large-scale project in the world.
- British Columbians want a future that brings opportunities for them and their kids in the communities they call home.
- We can and will create these opportunities while living up to our responsibilities to guarantee clean air, land and water for the generations who follow.
- We have a different approach – one that ensures we are creating good jobs and a fair return for British Columbians, making full partners of First Nations and living up to our climate commitments.

A Different Approach...

- The old government made huge promises for 100,000 LNG jobs without doing the work to deliver on them.
- **Our government** did the hard work necessary to put in place a new framework for LNG that would unlock investment while ensuring British Columbians will benefit.
- The old government pushed ahead without regard for impacts on the environment and no regard for climate pollution.
- **Our government** is committed to ensuring LNG development fits within BC's climate targets and we are developing a clean growth strategy to put us on the path to a cleaner economy.
- The old government wrote a blank cheque and passed incentives into law before any Final Investment Decision
- **Our government** introduced targeted measures to give equal treatment with other industries – and only in the event of a positive decision.
- The old government took a transactional approach to relationships with First Nations and refused to address any issues unless they signed resource deals.
- **Our government** is ensuring First Nations are meaningful partners in resource development while also pursuing a broader reconciliation mandate that is not tied to trade-offs.

Benefits to BC...

- We're making sure real benefits reach people in the province while protecting our environment and respecting and partnering with First Nations.
- This project will generate \$23 billion in government revenues – bringing new resources for health care, schools, child care and services for the people of BC.
- It will create up to 10,000 jobs for people during construction and 950 permanent jobs in Northern BC once operations are underway.
- The companies have reached agreements with First Nations at the plant site and along the pipeline route to ensure First Nations are meaningful partners and see real benefits.

On Climate...

- We will live up to our climate obligations and reduce emissions to meet our legislated targets.
- We are preparing a strategy to meet our climate goals and support good jobs for the people of our province.
- LNG Canada has committed to using the latest technology to build the world's cleanest LNG project with the lowest emissions of any facility.
- There are opportunities to further reduce emissions through electrification of upstream operations.
- Meeting our climate targets is a challenge that we will all have to rise to and we will have to work together – as government, as industry, as communities, as families – to build a cleaner economy.

Economic Benefits

1. What does LNG Canada's investment decision mean for British Columbia?

Today's decision by LNG Canada to invest in British Columbia marks a historic moment for the people of this province as the economic benefits of this project will extend for generations.

The LNG Canada project means thousands of good-paying jobs during construction and tens of billions of dollars in economic benefits the people of this province. LNG Canada has indicated that its proposal will include a direct investment of \$40 billion (CDN).

This project is moving forward because our government did the hard work to engage with industry and bring in a new LNG framework to unlock investment while ensuring British Columbians benefit.

2. Why is your government supportive of LNG development, but not supportive of the Trans-Mountain Pipeline project?

Our government has always supported LNG development, provided it meets the four conditions we set out.

With respect to the Trans-Mountain Pipeline project, we have been very clear that our concerns are based on protecting B.C.'s environment and economy from the risks of a bitumen spill, and inadequate consultation with First Nations.

Many British Columbians have been saying that this project would create serious risks to our coast and the Court has validated those concerns.

The Court found that the review process failed to consider the risks of marine tanker traffic and that consultation with First Nations was inadequate.

These are very serious issues for the Federal Government to address.

3. What's your response to those critics who say this project is only moving forward because it is subsidized by government?

This project is moving forward because, unlike the previous Liberal government, our government listened to industry and removed the competitive barriers standing in the way of investment, while ensuring we got the best deal for the people of British Columbia. It's this government's actions that got this project over the finish line – full stop.

LNG Canada Final Investment Decision Q&A Oct 2, 2018

Our new LNG framework provides a good return to British Columbia for its natural gas resource and a fair return to investors.

British Columbians will benefit from thousands of jobs and from tens of billions of dollars in government revenues to support schools and hospitals and other services for people.

4. Why did you call the reduction of LNG Income Tax from 7% to 3.5% a sellout, when you are proposing to eliminate it entirely?

The existing LNG Income Tax is not an efficient or effective means for generating returns to British Columbia. And its poor design has been identified as a serious detriment to investment in British Columbia.

In fact the tax was structured in such a way that the proponent would not have paid any LNG Income Tax until after it had recovered its capital costs – which could be decades.

The LNG Income Tax was confusing to industry and was not transparent to taxpayers. Indeed, the tax was dropped from 7% to 3.5% with little explanation.

Our government intends to do things differently. We will introduce legislation to repeal this tax and instead utilize a number of other tax and royalty measures to ensure that British Columbians receive a fair return.

Under our framework LNG Canada will contribute tens of billions in taxes and royalties over the life of the project.

5. Why are you planning to exempt LNG Canada from the PST?

Other investors such as those investing in manufacturing and processing receive an exemption from PST on costs of building their facilities.

Under our new framework, PST exemption will apply to LNG facilities. However, proponents will have to enter into an agreement with government, whereby the proponent (in this case LNG Canada) would pay annual Operating Performance Payments over a 20-year period.

Total payments will be equivalent to the amount otherwise paid as PST during the 7 year construction period. This agreement benefits both LNG Canada and the Province.

6. Why did you eliminate a tax (LNG IT) and leave the company with a tax credit on the income tax (Natural Gas Tax Credit)?

LNG Canada Final Investment Decision Q&A Oct 2, 2018

The existing LNG Income Tax is not an efficient or effective means for generating returns to British Columbia. And its poor design has been identified by other governments and industry in Asia as a serious detriment to investment in British Columbia.

The LNG Income Tax was confusing to industry and was not transparent to taxpayers. Indeed, the tax was dropped from 7% to 3.5% with little explanation.

Our government intends to do things differently. We will introduce legislation to repeal this tax and instead utilize a number of existing tax and royalty measures to ensure that British Columbians receive a fair return. Under our framework LNG Canada will contribute tens of billions in taxes and royalties to the BC economy over the life of the project.

The Natural Gas Tax Credit has been retained as part of a suite of measures aimed at improving BC's competitiveness and as a tool to use BC natural gas in the liquefaction.

7. Are you giving LNG Canada a \$5 billion subsidy?

Not at all.

This project would not have gone ahead were it not for the BC government's new LNG framework which puts the sector on a level footing with other industries.

In the absence of these measures, revenues would be \$0 as there would be no project.

As a result of the framework and the positive investment decision, BC will receive approximately \$23 billion in revenues.

Climate/Environment

8. Critics have said that natural gas is just as bad for climate change and the environment as conventional petroleum products, so why is British Columbia moving forward with LNG development?

We have been clear that any LNG development in BC must fit within BC's climate goals. That is not negotiable. Under the new LNG Framework, all projects should:

- Guarantee a fair return for B.C.'s natural resources.
- Guarantee jobs and training opportunities for British Columbians.
- Respect and make partners of First Nations.
- Protect B.C.'s air, land and water, including living up to the Province's climate commitments.

No premier or government can dismiss this kind of critical economic opportunity for the people of British Columbia.

**LNG Canada Final Investment Decision
Q&A Oct 2, 2018**

Our approach will ensure we are creating good jobs while maintaining our commitment to meet our legislated climate targets.

9. How will LNG Canada's plant impact British Columbia's GHG targets?

Analysis by the Ministry of the Environment and Climate Change Strategy found that the project could increase emissions by up to 3.45 Megatonnes – including associated upstream emissions.

The analysis also showed that this could be reduced further with the adoption of aggressive upstream measures like electrification.

Meeting our climate targets will not be easy – with or without further natural gas development – but we are committed to developing a climate strategy to meet those goals.

We believe we can accommodate emissions associated with the project while meeting our targets.

10. The Pembina Institute says the project's emissions will be 8.6 megatonnes, including the upstream. How can the Ministry's projections be less than half of Pembina's? What accounts for the difference?

The Pembina analysis assumes both Phase 1 and Phase 2 of the project, effectively doubling the emissions. They have also made incorrect assumptions about sourcing of feedstock.

Today's announcement is to proceed with Phase 1 and this is what forms the basis of the government's analysis of benefits to British Columbians and project emissions.

There are also opportunities for further electrification of upstream natural gas operations which could further reduce the associated emissions.

11. Why are you giving LNG Canada a break on the Carbon Tax?

LNG Canada will have access to the same Clean Growth Incentive Program available to companies in other sectors.

Under the Clean Growth Incentive Program, announced in Budget 2018, companies who meet best-in-class global benchmarks for greenhouse gas emissions will be eligible for a rebate of a portion of the Carbon tax paid.

**LNG Canada Final Investment Decision
Q&A Oct 2, 2018**

We are a small, export-oriented economy and we will do our part to fight climate change. Ensuring that our export-oriented sectors green their operations while remaining competitive with jurisdictions where there is no carbon pricing helps to avoid carbon leakage.

12. Given the significant impact LNG Canada's plant will have on B.C.'s ability to hit its GHG targets, will you put a moratorium on further LNG development, including Phase 2 of LNG Canada, in this province?

Emissions from any new source, industrial or otherwise, must fit within B.C.'s legislated GHG emissions targets. It would be up to the proponent of any potential new LNG operations to show how projected emissions would fit into B.C.'s targets.

13. Some have argued that British Columbia LNG production will help reduce global GHGs as countries that currently rely on coal-fired power plants will switch to LNG powered. Do you have firm commitments from any country that confirm this?

British Columbia is responsible for reducing our own emissions to meet our climate commitments.

That is our focus and what happens overseas doesn't help us get to our own targets.

I know that China, one of the largest markets for LNG, has publicly stated that it is moving forward with switching from coal-fired power generation to natural gas powered plants to address air-quality in cities throughout the country.

But we recognize that doesn't change what we, as a province, must do to meet our own greenhouse gas reduction targets.

14. Some critics have said that they don't believe the LNG Canada facility will be the cleanest. What measures are you putting in place to ensure the LNG Canada plant is built as the cleanest LNG production facility?

The Carbon Tax will increase to \$50/tonne – before any plant comes online. The LNG industry will pay the carbon tax just as any other sector.

LNG Canada has committed to 0.15 tonne of greenhouse gas per tonne of LNG, which will be below the benchmark established as cleanest facility in the world (0.16 BC benchmark. Current cleanest in the world is 0.23).

**LNG Canada Final Investment Decision
Q&A Oct 2, 2018**

Most of the feedstock for LNG Canada is expected to come from the Montney basin where aggressive electrification is already taking place and further opportunities exist.

Methane emissions from upstream oil and gas production will be regulated directly to ensure a 45% reduction in methane by 2025, consistent with the federal approach, further reducing emissions from the sector.

15. Given this government's focus on climate change, critics have said LNG is the wrong move and government should be moving toward alternative energy sources. Why is government moving toward LNG instead of alternative energy sources?

Our government is focused on building opportunities for British Columbians while living up to our responsibilities to guarantee clean air, land and water for the generations who follow.

Our government legislated new climate targets just months ago and we are committed to reducing our emissions to meet these targets.

No premier or government can dismiss this kind of critical economic opportunity for the people of British Columbia.

Our approach will ensure we are creating good jobs while maintaining our commitment to climate targets, and our path to reconciliation with Indigenous peoples.

16. A number of groups and individuals have raised concerns about industry's use of hydraulic fracturing and some jurisdictions have placed a moratorium on the practice. Why is British Columbia still allowing this practice?

Natural gas has been a part of our province's economy for decades. Hydraulic fracturing, if properly regulated, is safe.

The growth and diversification of BC's natural gas sector creates good jobs and strengthens economic prospects for people across the province. In northeast BC, activities linked to exploration and production support local businesses and create opportunities for First Nations communities.

We launched a scientific review of hydraulic fracturing in March to ensure that we have the best possible standards in place to protect our land, air and water.

Since the Panel was announced in March, the Panel members have been meeting with scientific experts on water quantity and water quality, induced seismicity and also fugitive emissions.

**LNG Canada Final Investment Decision
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To date they have held 40 separate Panel Sessions and met with over 60 experts from academia, industry, First Nations, environmental NGOs, the regulator and government.

The Scientific Panel's report to government is expected by the end of the year.

17. The recent report, Revitalizing the Agricultural Land Reserve and the Agricultural Land Commission states that the impacts of oil and gas extraction on agricultural land and farm business in Northeast B.C. have reached a breaking point. How can this government continue to promote development and growth of LNG when this industry is having such a damaging impact on B.C.'s agriculture sector?

British Columbians are passionate about the Agricultural Land Reserve and about protecting farming as a livelihood for future generations.

Oil and gas activities and farming have coexisted for many years and our government is committed to ensuring this continues to be true going forward.

The Oil and Gas Commission and the Agricultural Land Commission have a constructive working relationship and work closely together to balance the two sectors' needs.

Oil and gas activities are considered temporary, non-farm uses in the ALR. Land must be reclaimed to its pre-development agricultural condition when no longer required for an oil or gas activity.

The Commission was recently granted additional authority under Bill 15 to enhance reclamation activities so land formerly used for oil and gas activity may be returned to agricultural production sooner.

18. What is the extent of the impact of oil and gas activities on agricultural land and farm business in Northeast B.C.?

Somewhat less than 2 per cent of the ALR in the Northeast is occupied by oil and gas activities. Before proceeding, these activities are subject to review against the criteria established by the Agricultural Land Commission in the delegation agreement they negotiated with the Oil and Gas Commission.

Oil and gas activity impacts about 312 hectares of Crown land and 888 hectares of private land in the northeast, for a total of approximately 1,200 hectares. Approximately 73 per cent of B.C.'s raw gas production (and approximately 20 per cent of Canada's gas production) currently comes from the Montney Basin. Marketable gas in the ALR portion of the Montney is worth an estimated \$138.8 billion, with marketable oil at \$122.7 billion.

First Nations

19. Does LNG Canada have free prior and informed consent from affected First Nations in order to move this project forward?

The proponent has shown that they understand the importance of consultation and meaningful partnership with First Nations.

The proposed LNG facility will be located in the territory of the Haisla Nation, who have indicated their strong support for LNG Canada's project.

LNG Canada also has agreements in place with a number of other First Nations.

In addition, Coastal Gaslink has signed community and project agreements with all 20 of the elected First Nations along its pipeline route.

We expect them to continue to advance the project in a manner that ensures benefits for First Nations and recognizes indigenous rights.

20. What about the Unist'ot'en protest camp blocking the Coastal Gas pipeline?

I acknowledge that this is a challenging situation and have made clear to the company that they must work to resolve it with respect.

We will assist in re-engagement efforts but ultimately it is the responsibility of the company to find a resolution.

For our part, our government recognizes the need to build a new relationship with the Wet'suwet'en Nation and hereditary leaders. This work isn't connected to any one project.

21. What are the economic benefits for First Nations if this project moves forward and which First Nations bands will benefit?

LNG Canada and Coastal Gaslink have signed benefit agreements with First Nations all along the project route.

LNG Canada has been working with a number of Haisla businesses and has already invested hundreds of thousands of dollars into various workforce development initiatives specifically for First Nations communities.

**LNG Canada Final Investment Decision
Q&A Oct 2, 2018**

Overall, through the life of the project, LNG Canada will provide billions of dollars to First Nations in capacity building, training and education, contracting and employment and community payments.

Additionally, today's final investment decision will activate \$620 million in contract work Coastal GasLink awarded to northern B.C. Indigenous businesses. The company also anticipates another \$400 million in additional contract and employment opportunities for Indigenous and local B.C. communities during pipeline construction.

22. Has the province reached benefit agreements with all nations affected by the LNG Canada facility and Coastal Gaslink (CGL) pipeline?

So far, the Province has reached LNG pipeline benefits agreements with 17 of the 20 First Nations along the proposed CGL pipeline route and one LNG benefits agreement associated with LNG Canada.

23. What is the value of the benefit agreements the province has reached with nations?

Under agreements related to the proposed CGL pipeline, Nations have received over \$6 million to date, with additional short-term benefits of almost \$50 million to be shared over subsequent project milestones and \$10 million per year once the CGL pipeline is in service.

From the LNG Canada facility agreement, \$600,000 has been provided already, with a remaining \$13 million cash benefits and over 1,200 hectares of Provincial Crown lands to be shared over subsequent project milestones.

The Province has also negotiated ongoing yearly benefits over the life of the project.

These agreements ensure First Nations share in the prosperity of LNG developments in their territory.

24. What nations has the Province reached LNG benefit agreements with?

The Province has signed pipeline benefits agreements with 17 Nations, 15 of which have been brought into effect so far.

(Doig River, Halfway River, McLeod Lake, Saulteau, West Moberly, Lheidli T'enneh, Yekooche, Nee Tahi Buhn, Witset (Morisetown), Skin Tyee, Wet'suwet'en First Nation, Burns Lake, Saikuz, Stellat'en, Kitselas)

If pressed... Two of the First Nations have not brought the agreements into effect yet.

25. Is the Province negotiating agreements with the remaining nations?

Yes, we have negotiations underway with several First Nations.

**LNG Canada Final Investment Decision
Q&A Oct 2, 2018**

We will provide updates on any developments on that front as appropriate.

Other Questions

26. The Green Party has said it doesn't support the new LNG framework and will oppose legislation. What is the path forward?

We have long been clear that any LNG development in BC must fit within BC's climate goals.

Our government is working on a clean growth strategy that will reduce climate pollution and support good jobs for the people of our province.

I want to acknowledge Dr. Weaver's life's work on climate change and I'm pleased he has been willing to help our government as we develop a strategy for a cleaner economy.

I know that he has expressed skepticism but to his credit, he is determined to work with us to see if these concerns can be resolved.

BC has already demonstrated that you can take meaningful action to reduce emissions while growing the economy.

As government, it's our responsibility to make decisions in the best interest of British Columbians.

I want to ensure that everyone in this province has the opportunity to share in our economic prosperity – while we protect our environment for future generations.

27. What about the claim that the decision to approve Site C was about subsidizing LNG?

Not at all.

Our decision to continue with Site C was based on protecting British Columbians from having to pay \$4 billion with nothing to show for it – it was not based on any assumptions about LNG.

Under the new framework, LNG Canada will be subject to the same hydro rates as any other industrial customer in BC.

28. Some Government MLAs (Donaldson, Rice, Austin) signed a petition against LNG development at Lelu Island. How do you reconcile that with support for today's announcement?

LNG Canada Final Investment Decision Q&A Oct 2, 2018

Our party has long been clear that we support the development of LNG in BC so long as it lives up to four conditions to ensure British Columbians benefit.

With regard to the Pacific Northwest project, there were some specific concerns regarding siting of infrastructure in an area of sensitive fish habitat. The company actually responded to the concerns expressed by First Nations and others and decided to move the siting.

Under our new approach, we are confident that LNG Canada will create significant jobs and benefits for British Columbians while making partners of First Nations and respecting our climate commitments.

29. How is your approach different from the old government?

The old government signed a blank cheque for companies and passed legislation to tie the hands of future governments before any Final Investment Decision had been made.

Our government developed targeted measures to give equal treatment with other industries that were contingent on a positive investment decision.

The old government pushed ahead without regard for impacts on the environment and no regard for climate pollution.

Our government is committed to ensuring LNG development fits within BC's climate targets and we are working on a clean growth strategy to put us on the path to a cleaner economy.

The old government took a transactional approach to relationships with First Nations and refused to address any of their concerns unless they signed resource deals.

Our government is ensuring First Nations are meaningful partners in resource development while also pursuing a broader reconciliation mandate that is not tied to trade offs.

30. The Opposition is saying that they should get the credit for LNG Canada's decision as their government built LNG prospects. Are they right?

The old government made big promises on LNG but failed to do the work necessary to get it done.

We took a hard look at the issues facing the industry and introduced a new LNG framework that put the sector on the same footing as other industries.

This framework was critical to realizing the positive investment decision by LNG Canada and will ensure British Columbians receive significant benefits.

**LNG Canada Final Investment Decision
Q&A Oct 2, 2018**

Simply put, this historic investment in British Columbia would not have been possible under the old government's approach to LNG.

31. How does LNG Canada's project compare to Pacific Northwest LNG?

Under our government's new approach, LNG development must live up to the 4 conditions to ensure British Columbians benefit from good jobs and a fair return on our resources, that First Nations are made full partners, and that we can meet our climate commitments.

LNG Canada has committed to state-of the art facility with the lowest emissions in the world – at 0.15 tonnes of GHG per tonne of LNG. In contrast, Pacific Northwest LNG forecast considerably higher emissions at 0.23 per tonne.

With respect to employment, the projects are similar size but PNW LNG proposed to employ temporary foreign workers for up to 70% of its workforce while 95% of LNG Canada's workforce will be Canadians.

PNW LNG faced considerable opposition from affected First Nations whom the previous government dismissed as a "ragtag group". In contrast, LNG Canada and project partners have made significant effort to secure support from First Nations and have signed benefit agreements with First Nations along the project route.

NEWS RELEASE

Oct. 2, 2018

For Immediate Release

Office of the Premier
Ministry of Energy, Mines and Petroleum Resources

B.C.'s new LNG Framework to deliver record investment, world's cleanest LNG facility

VANCOUVER – Today's \$40-billion investment by LNG Canada shows B.C.'s future can balance economic opportunity and job creation with forward-looking environmental action that meets the Province's climate action goals, said Premier John Horgan.

"British Columbians want a future that brings opportunities for them and their kids in the communities they call home, while living up to our responsibilities to guarantee clean air, land and water for the generations that follow," Premier Horgan said.

"Ours is a province of unlimited potential, and the responsibility of this generation of British Columbians is to make decisions that embrace and preserve that potential. Today's decision by LNG Canada to invest in northern B.C. demonstrates that balancing our economic, environmental and reconciliation priorities is possible. It's a balance that will benefit the people of B.C. as we build a cleaner economy."

This project will see construction of a natural gas pipeline from northeast B.C. to Kitimat where a new terminal will process and ship LNG to Asian markets, generating \$24 billion of direct investment in B.C.

This record investment was enabled by the B.C. government's new LNG Framework, released in March 2018. In line with the government's approach to LNG, projects should:

- **Guarantee a fair return for B.C.'s natural resources:** This project is expected to generate about \$23 billion in public revenue over 40 years – new funds available to invest in health care, schools, child care and other key public services.
- **Guarantee jobs and training opportunities for British Columbians:** This project will create up to 10,000 jobs during construction and up to 950 permanent jobs once operations are underway.
- **Respect and make partners of First Nations:** Project partners have reached agreements with elected First Nations at the project site and along the pipeline route.
- **Protect B.C.'s air, land and water, including living up to the Province's climate commitments:** LNG's Canada project, as announced today – the world's cleanest in terms of greenhouse gas emissions – will be accommodated within the government's legislated emissions reduction targets.

"Our priority is protecting B.C.'s unique environment for future generations," Premier Horgan said. "With the extraordinary steps LNG Canada is taking to build a state-of-the-art LNG processing plant and partner with First Nations, this project can be made real as we meet our climate protection goals and recognize Indigenous rights."

The Province has committed that large natural gas development projects may proceed only if First Nations are consulted and treated as partners in projects within their territories.

Karen Ogen-Toews, First Nations LNG Alliance CEO, stated: “This is great news for the B.C. economy, for Canada, and for First Nations in B.C. Responsible LNG development means real benefits to Indigenous peoples and communities, long-term careers and reliable revenue to help First Nations close the economic gap between their members and other Canadians. LNG Canada has been a leader in dealing with First Nations. Our congratulations and thanks to their partners.”

“This is an unprecedented level of investment in British Columbia and we welcome the economic opportunities this project will provide for people and communities throughout the province,” said Michelle Mungall, Minister of Energy, Mines and Petroleum Resources. “We look forward to expanding the principles of our LNG Framework as we continue to work with other industries in creating more opportunities for British Columbians, while making resource operations cleaner and more efficient.”

Three backgrounders follow.

Contact:
Sage Aaron
Communications Director
Office of the Premier
778 678-0832

Media Relations
Ministry of Energy, Mines and Petroleum Resources
250 886-5400

Oct. 2, 2018

BACKGROUND 1

Meeting B.C.'s climate goals and building a strong, innovative economy

Government is committed to taking the steps necessary to achieve B.C.'s climate goals. Meeting these climate targets requires a concerted effort across all sectors to make the transition to a low-carbon economy.

B.C. has committed to meet legislative targets of 40% below 2007 levels by 2030, 60% by 2040 and 80% by 2050. These targets were detailed in legislation passed in May 2018. Specific targets for each of the industrial, transportation and building sectors also will be established.

The Government of British Columbia will launch its strategy to integrate the Province's goals for climate action, clean energy and sustainable economic growth later in 2018. In developing the strategy, feedback was solicited this past summer on the first set of priority areas: transportation, buildings and a clean growth program for industry.

Increasing the price on carbon

On April 1, 2018, the carbon tax increased by \$5 a tonne and will continue to increase by this amount annually, until 2022. Increasing the carbon tax meets the requirements set out by the federal government's pan-Canadian climate framework. Rebates will go to a majority of British Columbians.

A portion of the carbon tax revenue, paid by large industry, will fund a rebate program to provide incentives for the use of the greenest technology available in the industrial sector, including the natural gas sector, to reduce emissions and encourage jobs and economic growth. Some of the revenue will also go into a technology fund, to help spur new, clean technologies in all sectors, to make sure they fit within B.C.'s climate plan.

Developing climate solutions for clean growth

The B.C. government has appointed a Climate Solutions and Clean Growth Advisory Council to provide strategic advice to government on areas of focus for climate action that go hand in hand with economic growth. Government also is consulting with the public, researchers, industry associations, labour organizations, Indigenous groups and others on how to achieve the Province's environmental objectives efficiently and effectively, while growing B.C.'s clean economy and helping British Columbians come out ahead.

LNG within a renewed climate strategy

LNG Canada has committed to making its Kitimat facility the world's cleanest in terms of greenhouse gas (GHG) emissions intensity.

According to modelling by the government's Climate Action Secretariat, the LNG Canada project, as announced today, could add up to 3.45 megatonnes of carbon emissions. This impact could be reduced through implementation of various measures.

All sectors, including LNG, will need to reduce their overall emissions to allow B.C. to achieve its carbon pollution reduction targets. The provincial government's long-term strategy will include measures to encourage clean, industrial growth in British Columbia, including:

- A portion of the carbon tax revenue, paid by large industry, will fund a new clean-growth incentive program to encourage the use of the greenest technology available, including in the natural gas sector, to reduce emissions and encourage jobs and economic growth. Some of the revenue will also go into a technology fund, to help spur new investment in all sectors, to make sure they fit within B.C.'s climate plan.
- Investing in electrification of upstream oil and gas production to allow extraction and processing to be powered by electricity, instead of burning fossil fuels.
- Working with industry to reduce fugitive emissions to match the federal government's target of a 45% reduction by 2025.
- Initiated a scientific review of hydraulic fracturing aimed at ensuring that industry in B.C. operates according to the highest-possible standards.

Contact:

Media Relations
Ministry of Environment and Climate Change
Strategy
250 953-3834

Oct. 2, 2018

BACKGROUND 3

Making sure that natural gas development benefits the people of B.C.

An essential part of LNG Canada's final investment decision was the B.C. government's March 2018 fiscal framework. The framework aims to put natural gas development on a level playing field with other industries in B.C. and to support good jobs and revenues for the Province, and to ensure British Columbians benefit from natural gas development.

Direct benefits of the LNG Canada final investment decision include:

- \$24 billion of direct private-sector investments in British Columbia
- Up to 10,000 jobs for people during construction and 950 permanent jobs in Northern B.C., once operations are underway
- Some \$23 billion in new government revenues over the life of the project – new resources for health care, schools, child care and services for the people of B.C.
- Significant funding for First Nation capacity building, training and education, contracting and employment, and community contributions

The framework follows a review of competitiveness issues facing the LNG sector and a detailed financial analysis of the LNG Canada proposal. Government developed measures to help ensure British Columbians receive a good return for natural gas resources, while unlocking new investment in the sector.

In light of LNG Canada's positive final investment decision, the government intends to put these measures in place and they will be available to other major projects of similar scale.

1. New operating performance payments

Under current legislation, proponents constructing significant manufacturing facilities would receive a PST exemption on input costs, whereas those proposing to construct LNG facilities would not.

Under the new framework, the B.C. government intends to exempt LNG Canada from the provincial sales tax (PST) on most elements of the construction of its initial facility. Separately, LNG Canada will also be entering into an agreement with the Province whereby LNG Canada will pay annual operating performance payments over 20 years, which are tied to the production and export of LNG and continuation of government's measures. The total amount of the agreement is equivalent to what LNG Canada would have otherwise paid in PST during the initial facility construction period.

This framework will be available to all proponents constructing significant projects in the province.

2. Clean growth incentive program

The provincial government recognizes that energy-intensive trade-exposed industries, including the natural gas sector, face unfair competition when competing globally with jurisdictions that do not impose a price on carbon.

The government intends that LNG projects will be eligible to participate in the new clean growth incentive program, announced by the provincial government in Budget 2018. A benchmark for world-leading clean LNG production will be established as part of this program, replacing existing requirements under the current Greenhouse Gas Industrial Reporting and Control Act.

3. Industrial electricity rates

The government intends that LNG projects will receive electricity at the general industrial rate charged by BC Hydro. This is the same rate paid by other large industrial users in British Columbia.

4. Removal of LNG income tax

The existing LNG income tax is not an efficient and effective tool for generating returns to British Columbia. It is cumbersome to administer and has led to uncertainties hampering investment. Government intends to introduce legislation to repeal this tax and instead government will use a number of other tax and royalty measures under its new fiscal framework, to help ensure that British Columbia gets a fair return for its natural gas resource. It is the government's intention that the natural-gas income-tax credit will be retained to encourage the use of B.C.'s natural gas at LNG facilities.

New approach to LNG

As part of establishing a new fiscal framework, the provincial government will take steps to improve the transparency and consistency with which it assesses industrial development opportunities. To that end, government intends to introduce legislation to repeal the Project Development Agreement Act, passed by the previous government.

Contact:

Media Relations
Ministry of Energy, Mines and Petroleum Resources
250 886-5400

Oct. 2, 2018

BACKGROUND 2

Requirement to respect and partner with First Nations

The Province has committed that large natural gas development projects, like the one proposed by LNG Canada and Coastal GasLink, can proceed only if proponents consult with First Nations and establish partnerships on projects within their territories.

- The LNG Canada facility in Kitimat will be located in the territory of the Haisla Nation, and is the First Nation most directly affected by the proposed facility. The Haisla Nation is very supportive of LNG Canada and is among several First Nations that support the project.
- LNG Canada has negotiated agreements with several First Nations impacted by its proposed tidewater operations and its provincial permits are not opposed by any First Nations.
- Over the life of the project, LNG Canada will provide billions of dollars to First Nations in capacity building, training and education, contracting and employment and community payments.
- Coastal GasLink, the company established by TransCanada Corporation to supply the new gas pipeline to the proposed LNG facility, has negotiated agreements with the elected councils of all 20 First Nations on the pipeline route from wellhead to tidewater:
 - Stelat'en First Nation, Saik'uz First Nation, Cheslatta Carrier Nation, McLeod Lake Indian Band, Saulteau First Nations, Kitselas First Nation, West Moberly First Nations, Lheidli T'enneh First Nation, Nadleh Whut'en Indian Band, Burns Lake Indian Band, Blueberry River First Nations, Halfway River First Nation, Doig River First Nation, Wet'suwet'en First Nation, Yekooche First Nation, Nee Tahi Buhn Indian Band, Skin Tyee First Nation, Witset First Nation, Nak'azdli Whut'en, Haisla Nation.
- Prior to today's final investment decision, Coastal Gaslink had already conditionally awarded \$620 million in contract work to northern B.C. Indigenous businesses.
- The Province is ensuring that First Nations will benefit from LNG opportunities by pursuing agreements that encourage financial growth, enhance environmental stewardship opportunities and offer skills training so First Nations members can access employment opportunities. Benefits are shared with First Nations at various stages of the project's life cycles under pipeline and facilities agreements with the Province, as well as ongoing benefits while they are in operation.

Contact:

Sarah Plank
Media Relations
Ministry of Indigenous Relations and Reconciliation
250 208-9621

From: [Schmidt, Cathy A EMPR:EX](#)
To: [MacLaren, Les EMPR:EX](#)
Cc: [De Champlain, Rhonda EMPR:EX](#)
Subject: FW: BN for Decision -s.12; s.13; s.14
Date: July 4, 2018 11:54:52 AM
Attachments: s.12; s.13; s.14

Les,

I have made the edits to the BN and memo you requested (package attached). Final version submitted for final approval.

Cathy Schmidt

Executive Coordinator

Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

PO Box 9314 Stn Prov Govt

4th Floor, 1810 Blanshard Street

Victoria, BC V8W 9N1

250-952-0673

Energizing BC - clean, sustainable and productive

From: De Champlain, Rhonda EMPR:EX

Sent: Wednesday, July 4, 2018 11:46 AM

To: Schmidt, Cathy A EMPR:EX

Subject: RE: BN for Decision -s.12; s.13; s.14

Cathy,

I am having difficulty opening and printing the two PDFs.

Can you please print them for me and bring them upstairs.

Also, I need confirmation that the versions sent to me by e-mail are ADM approved so that I can give this assurance to the Deputy.

Thank you.

Rhonda

From: Schmidt, Cathy A EMPR:EX

Sent: Wednesday, July 4, 2018 11:31 AM

To: Cochrane, Marlene EMPR:EX; De Champlain, Rhonda EMPR:EX

Subject: BN for Decision -s.12; s.13; s.14

Importance: High

Attached package submitted for DM approval. Subject to approval, this package is submitted for the Minister's binder and next week's Roundtable.

Once approved, I can resubmit as one PDF. Please let me know if you require anything further.

Cathy Schmidt

Executive Coordinator

Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

PO Box 9314 Stn Prov Govt

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Victoria, BC V8W 9N1

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Energizing BC - clean, sustainable and productive

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Withheld pursuant to/removed as

s.12 ; s.13

Page 049 of 154 to/à Page 057 of 154

Withheld pursuant to/removed as

s.12 ; s.13 ; s.14

From: [Piccinino, Ines EMPR:EX](#)
To: [Nikolejsin, Dave EMPR:EX](#); [Coley, Simon J EMPR:EX](#); [Haslam, David GCPE:EX](#); [Turner, Geoff J EMPR:EX](#); [Beaupre, Darren GCPE:EX](#); [MacLaren, Les EMPR:EX](#)
Subject: Fw: Final Investment Decision
Date: October 2, 2018 6:43:28 AM
Attachments: [image001.gif](#)

Assuming everybody has seen it, but just in case. Cheers indeed!!

<https://www.lngcanada.ca/>

Ines

From: Susannah.Pierce@lngcanada.ca <Susannah.Pierce@lngcanada.ca>
Sent: October-01-18 23:09
To: Susannah.Pierce@lngcanada.ca
Subject: Final Investment Decision

FOR IMMEDIATE RELEASE

LNG Canada Announces a Positive Final Investment Decision

Copyright

Page 059 of 154 to/à Page 060 of 154

Withheld pursuant to/removed as

Copyright

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From: [Nikolejsin, Dave EMPR:EX](#)
To: [De Champlain, Rhonda EMPR:EX](#)
Cc: [MacLaren, Les EMPR:EX](#)
Subject: FW: For Approval Please -s.12; s.13; s.14
Date: July 5, 2018 11:17:35 AM
Attachments: s.12; s.13; s.14

Approved.

From: De Champlain, Rhonda EMPR:EX
Sent: July 5, 2018 10:59 AM
To: Nikolejsin, Dave EMPR:EX <Dave.Nikolejsin@gov.bc.ca>
Cc: De Champlain, Rhonda EMPR:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: For Approval Please s.12; s.13; s.14
s.12; s.13; s.14

I thank you.

Rhonda

(I have attached below Les' response to your previous question for reference).

From: MacLaren, Les EMPR:EX
Sent: Tuesday, July 3, 2018 5:31 PM
To: De Champlain, Rhonda EMPR:EX
Subject: RE: Question from DM s.12; s.13; s.14
Hi Rhonda:
s.12; s.13; s.16; s.17

Les

From: De Champlain, Rhonda EMPR:EX

Sent: Tuesday, July 3, 2018 4:48 PM

To: MacLaren, Les EMPR:EX <Les.MacLaren@gov.bc.ca>

Subject: FW: Question from DM s.12; s.13; s.14

Further to executive, could you please respond to the DM's question below?

Thank you.

Rhonda

From: De Champlain, Rhonda EMPR:EX

Sent: Friday, June 29, 2018 2:43 PM

To: MacLaren, Les EMPR:EX

Cc: De Champlain, Rhonda EMPR:EX; Schmidt. Cathv A EMPR:EX

Subject: Question from DM s.12; s.13; s.14

Hello Les,

s.12; s.13; s.14

Thank you.

Rhonda

From: Craig, Shannon EMPR:EX

Sent: Thursday, June 28, 2018 4:39 PM

To: De Champlain, Rhonda EMPR:EX

Subject: RE: OIC Request s.12; s.13; s.14

Here is some further information, Rhonda:

s.12; s.13; s.14

Thanks,

Shannon

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Withheld pursuant to/removed as

s.12 ; s.13 ; s.14

From: [Nikolejsin, Dave](#) EMPR:EX
To: [Wright, Don J.](#) PREM:EX
Cc: [MacMillan, Elizabeth](#) PREM:EX; [MacLaren, Les](#) EMPR:EX
Subject: FW: For Approval Please s.12; s.13; s.14
Date: July 5, 2018 11:22:10 AM
Attachments: s.12; s.13; s.14

Don, I normally don't involve you in this stuff but you should be aware of this one in case you get questions.
s.12; s.13; s.14

Thanks.

From: De Champlain, Rhonda EMPR:EX
Sent: July 5, 2018 10:59 AM
To: Nikolejsin, Dave EMPR:EX <Dave.Nikolejsin@gov.bc.ca>
Cc: De Champlain, Rhonda EMPR:EX <Rhonda.DeChamplain@gov.bc.ca>
Subject: For Approval Please s.12; s.13; s.14
s.12; s.13; s.14

Rhonda

(I have attached below Les' response to your previous question for reference).

From: MacLaren, Les EMPR:EX
Sent: Tuesday, July 3, 2018 5:31 PM
To: De Champlain, Rhonda EMPR:EX
Subject: RE: Question from DM -s.12; s.13; s.14
Hi Rhonda:
s.12; s.13; s.16; s.17

s.12; s.13; s.16; s.17

Les

From: De Champlain, Rhonda EMPR:EX

Sent: Tuesday, July 3, 2018 4:48 PM

To: MacLaren, Les EMPR:EX <Les.MacLaren@gov.bc.ca>

Subject: FW: Question from DM - s.12; s.13; s.14

Further to executive, could you please respond to the DM's question below?

Thank you.

Rhonda

From: De Champlain, Rhonda EMPR:EX

Sent: Friday, June 29, 2018 2:43 PM

To: MacLaren, Les EMPR:EX

Cc: De Champlain, Rhonda EMPR:EX; Schmidt, Cathy A EMPR:EX

Subject: Question from DM s.12; s.13; s.14

Hello Les,

s.12; s.13; s.14

Thank you.

Rhonda

From: Craig, Shannon EMPR:EX

Sent: Thursday, June 28, 2018 4:39 PM

To: De Champlain, Rhonda ^{EMDD:EV} s.12; s.13; s.14

Subject: RE: OIC Request

Here is some further information, Rhonda:

s.12; s.13; s.14

Thanks,
Shannon

From: [Foster, Doug FIN:EX](#)
To: [MacLaren, Les EMPR:EX](#)
Subject: s.13; s.14
Date: October 1, 2018 6:35:22 AM
Attachments: s.13; s.14

fyi

s.13; s.14

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Withheld pursuant to/removed as

s.13 ; s.14

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s.12 ; s.13 ; s.14

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s.13 ; s.14

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s.13 ; s.14 ; s.17

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s.13 ; s.14

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Withheld pursuant to/removed as

s.13 ; s.14 ; s.17

Page 127 of 154 to/à Page 131 of 154

Withheld pursuant to/removed as

s.13 ; s.14

From: [Coley, Simon J EMPR:EX](#)
To: [Turner, Geoff J EMPR:EX](#)
Cc: [Piccinino, Ines EMPR:EX](#); [MacLaren, Les EMPR:EX](#); [Forman, Ryan EMPR:EX](#)
Subject: LNG Canada & GHGs
Date: September 26, 2018 10:28:06 PM

Geoff,

I want to follow up on the issue of what we are corporately saying is the expecting MT of GHG associated with LNG Canada phase 1 (2 trains). You mentioned below that you were fine with the 3 MT number being used by CAS for their modelling. However, in the email I received from Les' group, they were suggesting 2 MTs. I also note that the LNG Framework "Technical Briefing Deck" by Don Wright which is still on the web has the following numbers for potential GHGs.

I think we should confirm what our corporate/EMPR estimate is for Phase 1 and what's included in that (e.g. any upstream and any new electrification assumptions?) Maybe this issue has landed, but it seems there are still differing numbers floating out there. Can you clarify please?

Case	Upstream GHGs	Facility GHGs	Total GHGs
LNG Canada 2 Trains	2.27 M	1.8M	4.07M
Aggressive upstream electrification (-0.6 M)	1.67 M	1.8M	3.47 M
Lower incremental BC gas supply (-1.86M)	0.41 M	1.8 M	2.21 M
Aggressive upstream electrification and lower incremental BC gas supply (-1.97M)	0.3 M	1.8M	2.1 M

Thanks,

Simon Coley

Acting / Deputy Minister

Ministry of Energy, Mines and Petroleum Resources

Office: 778-698-7176 / Cell: 250-507-6585 / Fax: 250-952-0269

s.14

Page 133 of 154 to/à Page 134 of 154

Withheld pursuant to/removed as

s.13 ; s.14

From: [MacLaren, Les EMPR:EX](#)
To: [Dalal, Suntanu GCPE:EX](#); [Wieringa, Paul EMPR:EX](#)
Subject: RE: For Review: Revised Issues Note for the Minister's Reg...
Date: July 4, 2018 7:04:03 AM
Attachments: s.12; s.13

Some tracked suggestions. Sorry for the delay.

Les

From: Dalal, Suntanu GCPE:EX
Sent: Tuesday, July 3, 2018 1:50 PM
To: MacLaren, Les EMPR:EX <Les.MacLaren@gov.bc.ca>; Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Subject: For Review: Revised Issues Note for the Minister's Reg...

Hi,

Hoping you can review the attached Issues Note for today or tomorrow morning.

Thanks,

Suntanu

From: Dalal, Suntanu GCPE:EX
Sent: Wednesday, June 27, 2018 8:49 AM
To: MacLaren, Les EMPR:EX; Wieringa, Paul EMPR:EX
Cc: Sopinka, Amy EMPR:EX; Rowe, Katherine EMPR:EX; Beaupre, Darren GCPE:EX
Subject: For Review: Revised Issues Note for the Minister's Reg...

Hi,

Attached Issues Note for your review.

It has been reviewed and approved by Amy.

Thanks,

Suntanu

From: Sopinka, Amy EMPR:EX
Sent: Tuesday, June 26, 2018 4:34 PM
To: Dalal, Suntanu GCPE:EX
Cc: Craig, Shannon EMPR:EX; Rowe, Katherine EMPR:EX; Wieringa, Paul EMPR:EX
Subject: FW: For Review: Revised Issues Note for the Minister's Reg

Hi Suntanu,

I've made a couple of tweaks – but with those change, I'm ok with the Issues Note.

A

From: Dalal, Suntanu GCPE:EX
Sent: Tuesday, June 26, 2018 4:03 PM
To: Craig, Shannon EMPR:EX; Sopinka, Amy EMPR:EX
Cc: Beaupre, Darren GCPE:EX
Subject: For Review: Revised Issues Note for the Minister's Reg

Thanks for this Shannon.

Amy, I've made the changes suggested by Shannon. Are you OK with this revised version of the Issues Note?

From: Craig, Shannon EMPR:EX
Sent: Tuesday, June 26, 2018 3:01 PM
To: Dalal, Suntanu GCPE:EX
Cc: Beaupre, Darren GCPE:EX; Sopinka, Amy EMPR:EX
Subject: RE: For Review: Issues Note for the Minister's Reg

Thanks Suntanu, this looks good. A few comments and suggestions in the attached. In terms of our

timing, we are still awaiting the final tagged Minister's regulation, but are hoping to receive it and get it moving up through the approval chain in the next couple of days.

Feel free to contact me if you have any questions,

Shannon

From: Dalal, Suntanu GCPE:EX

Sent: Tuesday, June 26, 2018 8:50 AM

To: Craig, Shannon EMPR:EX

Cc: Beaupre, Darren GCPE:EX; Sopinka, Amy EMPR:EX

Subject: For Review: Issues Note for the Minister's Reg

Hi Shannon,

Here's the draft Issues Note for your thoughts/review.

The messaging reflects what we think the issue is based on the info provided in the Decision Note.

The background section is basically a condensed version of the info in the Decision Note – we'd like to keep the background as brief as possible.

Thanks,

Suntanu Dalal

Public Affairs Officer

Government Communications & Public Engagement

Ministry of Energy, Mines & Petroleum Resources

250-580-0759

From: Beaupre, Darren GCPE:EX

Sent: Tuesday, June 26, 2018 8:33 AM

To: Craig, Shannon EMPR:EX

Cc: Dalal, Suntanu GCPE:EX

Subject: RE: Issues Note for the Minister's Reg

Hi Shannon. Suntanu has been working on an IN for this one and he will connect with you this morning with a draft. Cheers.

From: Craig, Shannon EMPR:EX

Sent: Friday, June 15, 2018 3:30 PM

To: Beaupre, Darren GCPE:EX

Subject: FW: Issues Note for the Minister's Reg

Hi Darren, I am sending this request for assistance along to you in Colin's absence.

s.12; s.13

Please feel free to give me a call with any questions once you have a chance to review the note.

Thanks,



Shannon Craig

Electricity Policy Analyst, Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

Phone: 778-698-7016

From: Sopinka, Amy EMPR:EX

Sent: Tuesday, June 5, 2018 10:31 AM

To: Craig, Shannon EMPR:EX

Cc: Cutler, Scott EMPR:EX

Subject: Issues Note for the Minister's Reg

Good morning Shannon,

s.12; s.13

Thanks!

Amy



Amy Sopinka

Director, Transmission and Interjurisdictional Branch

Ministry of Energy, Mines and Petroleum Resources

Phone: 778-698-7280

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Withheld pursuant to/removed as

s.12 ; s.13

From: [Haslam, David GCPE:EX](#)
To: [Nikolejsin, Dave EMPR:EX](#)
Cc: [Piccinino, Ines EMPR:EX](#); [Plummer, Glen GCPE:EX](#); [Beaupre, Darren GCPE:EX](#); [MacLaren, Les EMPR:EX](#)
Subject: Re: QA LNG Canada FID_Oct 09_FINAL
Date: October 9, 2018 5:48:13 PM

Noted.

Sent from my iPhone

On Oct 9, 2018, at 5:47 PM, Nikolejsin, Dave EMPR:EX <Dave.Nikolejsin@gov.bc.ca> wrote:

s.13; s.17

Dave Nikolejsin
Deputy Minister
Energy, Mines and Petroleum Resources

On Oct 9, 2018, at 5:03 PM, Haslam, David GCPE:EX
<David.Haslam@gov.bc.ca> wrote:

Dave/Ines – Vaughn Palmer speculated on CKNW yesterday that the Kemano completion project may be a source of electricity for LNG Canada's future 2 trains. See clip below. MMM is on NW tomorrow am and I've been asked to produce KM's. Recommend the following:
Is it possible to use electricity from the Kemano Completion Project to power LNG Canada in the future?

s.13; s.17

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Withheld pursuant to/removed as

Copyright

Cc: Howlett, Tim GCPE:EX; Andrews, Scott EMPR:EX

Subject: Re: QA_LNG Canada FID_Oct 09_FINAL

Do you have a line on the Kemano completion project?

Sent from my iPhone

On Oct 9, 2018, at 4:35 PM, Haslam, David GCPE:EX

<David.Haslam@gov.bc.ca> wrote:

Melissa – updated QA on LNG Canada attached. Mostly tense – ie the answer does not start with Today. Vaughn Palmer speculated over the weekend that LNG Canada will have to power the additional 2 trains with electricity from BCH if we're to meet our climate targets. Question 13 addresses this in the attached. In text below. Including Don and Tim. Scott – please ensure this is in her calendar with the NW details:

During the first phase of LNG Canada's project, it will bring two LNG processing trains online. The full proposal is for four trains. Will you require LNG Canada to power trains three and four using electric power?

s.13

<QA_LNG Canada FID_Oct 09_FINAL.docx>

From: [Turner, Geoff J EMPR:EX](#)
To: [MacLaren, Les EMPR:EX](#)
Cc: [Piccinino, Ines EMPR:EX](#)
Subject: RE: Timelines: implementation of LNG Canada package
Date: July 4, 2018 10:03:00 AM

Hi Les,

Here's a brief timeline on the implementation of the individual pieces of the competitiveness package (apart from the electricity piece which I'm guessing you've got a handle on 😊). If you have any questions on this, please let me know.

Thanks

Geoff

s.12; s.13; s.17

- The regulations are expected to be developed in 2019.
- Engagement with stakeholders will take place in the summer of 2018 on program design elements and later in 2018 on the development of sector product benchmarks.

From: Piccinino, Ines EMPR:EX
Sent: Tuesday, July 3, 2018 4:43 PM
To: Turner, Geoff J EMPR:EX
Cc: MacLaren, Les EMPR:EX
Subject: Timelines: implementation of LNG Canada package
Hi, Geoff!

Could you please send Les tomorrow a high level 'competitiveness package implementation' timeline with all the pieces?

s.12; s.13

s.12; s.13

Thanks!!

Ines

From: [MacLaren, Les EMPR:EX](#)
To: [Turner, Geoff J EMPR:EX](#)
Cc: [Piccinino, Ines EMPR:EX](#)
Subject: RE: Timelines: implementation of LNG Canada package
Date: July 4, 2018 11:08:28 AM

Thanks Geoff. s.12; s.13
s.12; s.13

Les

From: Turner, Geoff J EMPR:EX
Sent: Wednesday, July 4, 2018 10:03 AM
To: MacLaren, Les EMPR:EX <Les.MacLaren@gov.bc.ca>
Cc: Piccinino, Ines EMPR:EX <Ines.Piccinino@gov.bc.ca>
Subject: RE: Timelines: implementation of LNG Canada package

Hi Les,

Here's a brief timeline on the implementation of the individual pieces of the competitiveness package (apart from the electricity piece which I'm guessing you've got a handle on ☺). If you have any questions on this, please let me know.

Thanks

Geoff
s.12; s.13; s.17

- The regulations are expected to be developed in 2019.

From: [Anderson, Keith](#)
To: [MacLaren, Les](#) EMPR:EX
Subject: Repeal of Regulations
Date: July 24, 2018 6:07:08 PM

Hi Les,

We're meeting with LNGC this Thursday and with the exemption regulation now completed, I'm expecting **s.12; s.13**

s.12; s.13

Much appreciated.

Keith Anderson | Vice President, Customer Service

BC Hydro

333 Dunsmuir St, 4th floor

Vancouver, BC V6B 5R3

P 604 699-9097

M 604 649-7177

E keith.anderson@bchydro.com

bchydro.com

Smart about power in all we do.

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From: [Nikolejsin, Dave EMPR:EX](#)
To: [Mungall, Michelle EMPR:EX](#); [Sanderson, Melissa EMPR:EX](#)
Cc: [MacLaren, Les EMPR:EX](#); [Piccinino, Ines EMPR:EX](#)
Subject: Today's roundtable
Date: July 4, 2018 12:04:59 PM

Minister, on today's RT Les will be updating you.
s.13

s.12; s.13; s.17

- The regulations are expected to be developed in 2019.
- Engagement with stakeholders will take place in the summer of 2018 on program design elements and later in 2018 on the development of sector product benchmarks.

s.12; s.13

Dave Nikolejsin
Deputy Minister

From: [De Champlain, Rhonda EMPR:EX](#)
To: [MacLaren, Les EMPR:EX](#); [Wieringa, Paul EMPR:EX](#); [Sopinka, Amy EMPR:EX](#); [Craig, Shannon EMPR:EX](#)
Cc: [De Champlain, Rhonda EMPR:EX](#); [Schmidt, Cathy A EMPR:EX](#)
Subject: UCA - Deposited Regulation for your files
Date: July 16, 2018 1:02:48 PM
Attachments: [160_2018.pdf](#)

Hello,

Attached is a copy of Minister's Order M277/2018 (B.C. Reg. 160/2018), made under the Utilities Commission Act.

This is now a public document.

Thank you.

Rhonda De Champlain

Director

Cabinet and Legislative Initiatives

and Executive Operations

Deputy Minister's Office

Ministry of Energy, Mines and

Petroleum Resources

(778) 698-7188

From: [De Champlain, Rhonda EMPR:EX](#)
To: [MacLaren, Les EMPR:EX](#)
Subject: Update - Minister's Order
Date: July 13, 2018 3:52:09 PM

The Minister signed the UCA/LNG Canada Order. I have submitted it for numbering and deposit. This will occur on Monday.

As soon as I have the deposited Order I will provide it to you.

Thank you.

Rhonda De Champlain

Director

Cabinet and Legislative Initiatives

and Executive Operations

Deputy Minister's Office

Ministry of Energy, Mines and

Petroleum Resources

(778) 698-7188

PROVINCE OF BRITISH COLUMBIA
REGULATION OF THE MINISTER OF
ENERGY, MINES AND PETROLEUM RESOURCES

Utilities Commission Act

Ministerial Order No. M 277

I, Michelle Mungall, Minister of Energy, Mines and Petroleum Resources, order that the Transmission Upgrade Exemption Regulation, B.C. Reg. 140/2013, is amended as set out in the attached Schedule.

DEPOSITED

July 16, 2018

B.C. REG. 160/2018

July 13, 2018

Date



Minister of Energy, Mines and Petroleum Resources

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: *Utilities Commission Act*, R.S.B.C. 1996, c. 473, s. 22

Other: M73/2013

R10237710

SCHEDULE

- 1** *Section 1 of the Transmission Upgrade Exemption Regulation, B.C. Reg. 140/2013, is repealed and the following substituted:*

Definitions

- 1** In this regulation:

“Act” means the *Utilities Commission Act*;

“LNG facility” means a facility that liquefies natural gas.

- 2** *Section 2 is amended by renumbering the section as section 2 (1) and by adding the following subsections:*

- (2) Subject to subsection (3), the authority is exempt from Part 3 of the Act in respect of the construction or operation of a plant or system, or an upgrade or extension of either, to provide service for the following:
 - (a) an LNG facility in the vicinity of the District of Kitimat;
 - (b) a facility necessary for the construction of an LNG facility in the vicinity of the District of Kitimat.
- (3) The exemptions under subsection (2) do not apply in respect of a plant, system, upgrade or extension that, on the date the authority decides to construct the plant, system, upgrade or extension, cannot reasonably be expected to come into service before October 1, 2025.
- (4) Subsection (3) does not limit any of the exemptions under subsection (1).