

Michell, Jennifer FIN:EX

From: Foster, Doug FIN:EX
Sent: December 12, 2017 4:35 PM
To: Michell, Jennifer FIN:EX
Cc: Flanagan, Paul FIN:EX; Wanamaker, Lori FIN:EX
Subject: LNG briefing material
Attachments: LNG - 2017 - DF3 - clean.doc

Jenn, the attached has been ok'd to be sent to the MO for tomorrow's briefing with the Minister at 11:30AM.

Paul/Lori, I amended the Finance Evaluation of Instruments section so it coincides with the table earlier, and addresses each element.

d.

Ministry of Finance

BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

**Ministry
Contact:** Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Prepared as information in preparation of meetings amongst the Ministers of Finance, Energy, Mines and Petroleum Resources and the Premier on December 13 – 14, 2017.

DATE PREPARED:**TITLE: LNG Project Competitiveness****ISSUE: MEMPR Request for Provincial Measures to Address LNG Competitiveness****BACKGROUND:**

Over the past 18 months, a number of major LNG projects have either been cancelled or put on hold. However, more recently LNG Canada (Shell and its partners) and Kitimat LNG (Chevron and its partners) have indicated a continued interest in moving their projects forward. In particular, LNG Canada intends to reach a final investment decision (FID) on its pending project in July 2018. (See Appendix 1 for terms/definitions in this note).

The Ministry of Energy, Mines and Petroleum Resources (MEMPR) has been working closely with its consultant and LNG Canada on the economics of their project with a focus on competitiveness. s.12; s.13; s.17

s.12; s.13; s.17

s.12; s.13; s.17

Analysis of the Analysis

Ministry of Finance staff have reviewed the analysis done by LNG Canada and MEMPR as follows:

s.12; s.13; s.17

Most analysts are projecting a growing demand for natural gas in Asia driven by economic growth and countries wanting to produce electricity with natural gas rather than coal. As such, investors are becoming more interested in selling into the Asia market. It is estimated that current projected demand will exceed supply by 2024; that the demand/supply gap will increase to about 100 million tonnes LNG per year by 2029; and that this will continue to increase beyond that date.

Indications are that competitive pressures with US gas production will likely keep the cost of BC gas low. LNG Canada has looked at nine price assumptions; low, medium and high prices for both the cost of natural gas in BC and the price of LNG in Asia, and modelled the project's rate of return in the following table.

s.12; s.13; s.17

Page 007 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 008 of 372

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 009 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 010 of 372

Withheld pursuant to/removed as

s.12; s.13; s.14; s.17

Page 011 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

APPENDIX 1 – LNG TERMS

LNG

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane C₂H₆) that has been converted to liquid form for ease and safety of storage or transport. It takes up about 1/600th the volume of natural gas in the gaseous state (at standard conditions for temperature and pressure). It is odorless, colorless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water, and heavy hydrocarbons. The natural gas is then condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162 °C (-260 °F).

In a typical LNG process the gas is first extracted and transported to a processing plant where it is purified by removing any condensates such as water, oil, mud, as well as other gases such as CO₂ and H₂S. The LNG processing plant will consist of one or more *trains* where each train can process a certain amount of natural gas. Each train will have an annual output capacity of about 6 million tonnes annually. A large LNG facility will consist of two trains, such as the one proposed by LNG Canada. LNG is stored in storage tanks and can be loaded and shipped.

BC LNG Project

LNG proposed projects for Northwest of BC consist of the following three pieces:

Source of Natural Gas: A steady long term source of natural gas is required. Some proposed projects will own their own wells in BC and/or Alberta while others might contract with third parties for the gas.

Pipeline to the Coast: There are no existing pipelines to the Northwest of BC. The cost of a pipeline is in the neighborhood of \$7 billion.

LNG Facility: A 12 million tonne per year capacity plant would cost approximately \$14 billion in total and take four to five years to complete. The plant consists of the liquefaction machinery, storage facility and a jetty for loading the LNG to ships.

Final Investment Decision (FID)

LNG projects considering an investment will reach a point of making a final investment decision. This process can be different for each project. For the major projects a final investment decision is a declaration of proceeding to construct a facility with no turning back.

Greenfield versus Brownfield

Greenfield refers to a site for an industrial project that is built from the ground up. Brownfield refers to an existing industrial site that can accommodate a project at a lower cost because it will have existing infrastructure and hence has a lower construction cost.

Units of measurement

Giga-joule: usual measurement of units of natural gas purchased for residential use. One giga-joule is 1,055 Btu's.

Tonnes of LNG: The usual measure of LNG processing plants' annual capacity to produce the product is in millions of tonnes. One million tonnes of LNG is equivalent to 48 billion cubic feet of natural gas.

British thermal unit (Btu): A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

MMBtu: one million btu's. This is an important measure in any analysis of the LNG industry because it is used as the unit of measure for looking at costs and revenue from an LNG project. For example, the sales price in Asia of natural gas might be \$12.00 per MMBtu, and cost of LNG delivered to Asia is \$10.00 per MMBtu. A two train LNG facility with annual capacity of 12 million tonnes of LNG will produce 600 million MMBtu's.

Present Value

Present value is a tool used in the analysis of LNG projects because the investment lasts decades (e.g. over 40 years) and revenue and costs are not necessarily constant.

Present value is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential. Time value can be described with the simplified phrase, "A dollar today is worth more than a dollar tomorrow".

In calculated present value of an income stream the key assumption is the discount rate. For investors considering a particular investment, the discount rate should at least include inflation plus some rate of return that is at least as robust as alternative investments. For governments the appropriate discount rate applied to a revenue stream can be quite different than that of the investor. For example, government might have a very high discount rate if the objective is to realize revenue early.

Government Levies Applicable to LNG

The major government levies applicable to LNG are income taxes, consumption taxes and royalties.

Consumption taxes

Provincial Sales Tax: Consistent throughout several years of discussions with the industry they have asked that their proposed facility be exempt from PST. s.12; s.13; s.17

Carbon Tax: LNG facilities need a significant power source for the liquefaction machinery. LNG projects are planning on producing most of the electricity with gas powered electrical generators. As such carbon tax is a significant operating cost.

Royalties: Most of the natural gas will be sourced from western Canada wells and royalties will be paid to the province where the gas is from.

Income Taxes: Both federal and provincial corporate income tax applies to income from the LNG facility. Apart from seeking accelerated depreciation for their project, the industry has few concerns about corporate income tax.

s.12; s.13; s.17

For both corporate income tax and the LNG Income Tax an important concept is that of **transfer pricing**. Transfer pricing refers to the rules and methods for pricing transactions between enterprises under common ownership or control. Because of the potential for cross-border controlled transactions to distort taxable income, tax authorities in many countries can adjust intragroup transfer prices that differ from what would have been charged by unrelated enterprises dealing at arm's length. Many countries including Canada adopt the OECD methodologies for transfer pricing.

s.12; s.13; s.17

Finance evaluation: There is variability in shipping costs and further verification will be needed to confirm what the actual shipping costs are for LNG Canada, as well as the true competitive gap overall.

Michell, Jennifer FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 12, 2017 9:54 AM
To: Michell, Jennifer FIN:EX
Subject: FW: Updated Deck
Attachments: LNG - 2017 - DF2 - clean.doc

Here is the LNG note.

From: Foster, Doug FIN:EX
Sent: Tuesday, December 12, 2017 7:44 AM
To: Flanagan, Paul FIN:EX
Subject: RE: Updated Deck

I've made some further changes in the red-line and clean attachments.
Would like your thoughts so we can get to Lori.
d.

From: Foster, Doug FIN:EX
Sent: Monday, December 11, 2017 9:35 PM
To: Flanagan, Paul FIN:EX
Subject: FW: Updated Deck

I attached the latest consolidated deck (merging MEMPR and Finance from Carl).
I also attach Elise's earlier risk sharing deck on returns and price sensitivities.
I also attach a draft of the note.

I've made a bunch of changes, as you can see.
the one piece I struggle with is the analysis on page 5, where you show the project rate of returns, s.13; s.17
s.13; s.17

I think with the added tables we answer Lori's questions on incremental revenues to parties and sources.

Thoughts?

d.

From: Andre Powell [<mailto:apowell@deetken.com>]
Sent: Monday, December 11, 2017 8:18 PM

To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX

Cc: Carl Black; Elise Lepine

Subject: Updated Deck

Hi Doug and Paul,

Attached is an updated deck. We noticed a couple of small changes were needed on pg 23 related to units. Please see attached.

Best Regards,

André

The Deetken Group
Management Consulting
Asset Management



André Powell
Managing Partner
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
apowell@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (778) 999-1924

Visit The Deetken Group online at www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Michell, Jennifer FIN:EX

From: Foster, Doug FIN:EX
Sent: December 12, 2017 11:28 AM
To: Michell, Jennifer FIN:EX
Cc: Flanagan, Paul FIN:EX
Subject: RE: Updated Deck
Attachments: LNG - 2017 - DF2 - clean.doc

could you delete the last note and replace with this on please?

paul, I spotted a couple of errors and fixed.

more notably, I have added more to the Risk/Implications section at the end to capture a larger scope of issues that I think remain.

d.

From: Michell, Jennifer FIN:EX
Sent: Tuesday, December 12, 2017 10:56 AM
To: Foster, Doug FIN:EX
Subject: FW: Updated Deck

Jennifer Michell
Director, Executive Operations & Strategic Initiatives
Office of the Deputy Minister | Ministry of Finance

From: Flanagan, Paul FIN:EX
Sent: Tuesday, December 12, 2017 9:54 AM
To: Michell, Jennifer FIN:EX
Subject: FW: Updated Deck

Here is the LNG note.

From: Foster, Doug FIN:EX
Sent: Tuesday, December 12, 2017 7:44 AM
To: Flanagan, Paul FIN:EX
Subject: RE: Updated Deck

I've made some further changes in the red-line and clean attachments.

Would like your thoughts so we can get to lori.

d.

From: Foster, Doug FIN:EX
Sent: Monday, December 11, 2017 9:35 PM
To: Flanagan, Paul FIN:EX
Subject: FW: Updated Deck

I attached the latest consolidated deck (merging MEMPR and Finance from Carl).

I also attach Elise's earlier risk sharing deck on returns and price sensitivities.

I also attach a draft of the note.

I've made a bunch of changes, as you can see.
the one piece I struggle with is the analysis on page 5, where you show the project rate of returns,s.13; s.17
s.13; s.17

I think with the added tables we answer Lori's questions on incremental revenues to parties and sources.

Thoughts?

d.

From: Andre Powell [<mailto:apowell@deetken.com>]
Sent: Monday, December 11, 2017 8:18 PM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Cc: Carl Black; Elise Lepine
Subject: Updated Deck

Hi Doug and Paul,

Attached is an updated deck. We noticed a couple of small changes were needed on pg 23 related to units. Please see attached.

Best Regards,

André

The Deetken Group
Management Consulting
Asset Management



André Powell
Managing Partner
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
apowell@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (778) 999-1924

Visit The Deetken Group online at www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Ministry
Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE:

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Liquefied natural gas projects.

DATE PREPARED:**TITLE: LNG Projects****ISSUE: BC Competitiveness****BACKGROUND:**

In the past year and a half, major LNG projects have either been cancelled or put on hold. More recently, LNG Canada (Shell and its partners) and Kitimat LNG (Chevron and its partners) have indicated a continued interest in moving their projects forward. In particular, LNG Canada is expected to reach a final investment decision in July 2018.

The Ministry of Energy Mines has been working closely with LNG Canada on the economics of their project with a focus on competitiveness. s.12; s.13; s.17
s.12; s.13; s.17

s.12; s.13; s.17

Analysis of the Analysis

Ministry of Finance staff have reviewed the analysis done by LNG Canada and can make the following comments.

s.12; s.13; s.17

Most analysts are projecting a growing demand for natural gas in Asia driven by economic growth and countries wanting to produce electricity with natural gas rather than coal. As such, investors are interested in selling into the Asia market. Current projected demand will exceed supply by 2024 and the gap will increase to about 100 million tonnes LNG per year by 2029 and continue to increase beyond that date.

Indications are that competitive pressures with US gas production will likely keep the cost of BC gas low. LNG Canada has looked at nine price assumptions; low, medium and high prices for both the cost of natural gas in BC and the price of LNG in Asia and modelled the project's rate of return in the following table.

s.12; s.13; s.17

Page 024 of 372

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 025 of 372 to/à Page 026 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

APPENDIX – LNG TERMS

LNG

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane C₂H₆) that has been converted to liquid form for ease and safety of storage or transport. It takes up about 1/600th the volume of natural gas in the gaseous state (at standard conditions for temperature and pressure). It is odorless, colorless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water, and heavy hydrocarbons. The natural gas is then condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162 °C (-260 °F).

In a typical LNG process the gas is first extracted and transported to a processing plant where it is purified by removing any condensates such as water, oil, mud, as well as other gases such as CO₂ and H₂S. The LNG processing plant will consist of one or more *trains* where each train can process a certain amount of natural gas. Each train will have an annual output capacity of about 6 million tonnes annually. A large LNG facility will consist of two trains, such as the one proposed by LNG Canada. LNG is stored in storage tanks and can be loaded and shipped.

BC LNG Project

LNG proposed projects for Northwest of BC consist of the following three pieces:

Source of Natural Gas: A steady long term source of natural gas is required. Some proposed projects will own their own wells in BC and/or Alberta while others might contract with third parties for the gas.

Pipeline to the Coast: There are no existing pipelines to the Northwest of BC. The cost of a pipeline is in the neighbourhood of \$7 billion.

LNG Facility: A 12 million tonne per year capacity plant would cost approximately \$14 billion in total and take four to five years to complete. The plant consists of the liquefaction machinery, storage facility and a jetty for loading the LNG to ships.

Final Investment Decision (FID)

LNG projects considering an investment will reach a point of making a final investment decision. This process can be different for each project. For the major projects a final investment decision is a declaration of proceeding to construct a facility with no turning back.

Greenfield versus Brownfield

Greenfield refers to a site for an industrial project that is built from the ground up.

Brownfield refers to an existing industrial site that can accommodate a project at a lower cost because it will have existing infrastructure and hence has a lower construction cost.

Units of measurement

Giga-joule: usual measurement of units of natural gas purchased for residential use. One giga-joule is 1,055 Btu's.

Tonnes of LNG: The usual measure of LNG processing plants' annual capacity to produce the product is in millions of tonnes. One million tonnes of LNG is equivalent to 48 billion cubic feet of natural gas.

British thermal unit (Btu): A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

MMBtu: one million btu's. This is an important measure in any analysis of the LNG industry because it is used as the unit of measure for looking at costs and revenue from an LNG project. For example, the sales price in Asia of natural gas might be \$12.00 per MMBtu, and cost of LNG delivered to Asia is \$10.00 per MMBtu. A two train LNG facility with annual capacity of 12 million tonnes of LNG will produce 600 million MMBtu's.

Present Value

Present value is a tool used in the analysis of LNG projects because the investment lasts decades (e.g. over 40 years) and revenue and costs are not necessarily constant.

Present value is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential. Time value can be described with the simplified phrase, "A dollar today is worth more than a dollar tomorrow".

In calculating present value of an income stream the key assumption is the discount rate. For investors considering a particular investment, the discount rate should at least include inflation plus some rate of return that is at least as robust as alternative investments. For governments the appropriate discount rate applied to a revenue stream can be quite different than that of the investor. For example, government might have a very high discount rate if the objective is to realize revenue early.

Government Levies Applicable to LNG

The major government levies applicable to LNG are income taxes, consumption taxes and royalties.

Consumption taxes

Provincial Sales Tax: Consistent throughout several years of discussions with the industry they have asked that their proposed facility be exempt from PST. s.12; s.13; s.12; s.13; s.17

Carbon Tax: LNG facilities need a significant power source for the liquefaction machinery. LNG projects are planning on producing most of the electricity with gas powered electrical generators. As such carbon tax is a significant operating cost.

Royalties: Most of the natural gas will be sourced from western Canada wells and royalties will be paid to the province where the gas is from.

Income Taxes: Both federal and provincial corporate income tax applies to income from the LNG facility. Apart from seeking accelerated depreciation for their project, the industry has few concerns about corporate income tax.

s.12; s.13; s.17

For both corporate income tax and the LNG Income Tax an important concept is that of **transfer pricing**. Transfer pricing refers to the rules and methods for pricing transactions between enterprises under common ownership or control. Because of the potential for cross-border controlled transactions to distort taxable income, tax authorities in many countries can adjust intragroup transfer prices that differ from what would have been charged by unrelated enterprises dealing at arm's length. Many countries including Canada adopt the OECD methodologies for transfer pricing.

Page 030 of 372 to/à Page 031 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Greenfield versus Brownfield

Greenfield refers to a site for an industrial project that is built from the ground up. Brownfield refers to an existing industrial site that can accommodate a project at a lower cost because it will have existing infrastructure and hence has a lower construction cost.

Units of measurement

Giga-joule: usual measurement of units of natural gas purchased for residential use. One giga-joule is 1,055 Btu's.

Tonnes of LNG: The usual measure of LNG processing plants' annual capacity to produce the product is in millions of tonnes. One million tonnes of LNG is equivalent to 48 billion cubic feet of natural gas.

British thermal unit (Btu): A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

MMBtu: one million btu's. This is an important measure in any analysis of the LNG industry because it is used as the unit of measure for looking at costs and revenue from an LNG project. For example, the sales price in Asia of natural gas might be \$12.00 per MMBtu, and cost of LNG delivered to Asia is \$10.00 per MMBtu. A two train LNG facility with annual capacity of 12 million tonnes of LNG will produce 600 million MMBtu's.

Present Value

Present value is a tool used in the analysis of LNG projects because the investment lasts decades (e.g. over 40 years) and revenue and costs are not necessarily constant.

Present value is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential. Time value can be described with the simplified phrase, "A dollar today is worth more than a dollar tomorrow".

In calculating present value of an income stream the key assumption is the discount rate. For investors considering a particular investment, the discount rate should at least include inflation plus some rate of return that is at least as robust as alternative investments. For governments the appropriate discount rate applied to a revenue stream can be quite different than that of the investor. For example, government might have a very high discount rate if the objective is to realize revenue early.

Government Levies Applicable to LNG

The major government levies applicable to LNG are income taxes, consumption taxes and royalties.

Consumption taxes

Provincial Sales Tax: Consistent throughout several years of discussions with the industry they have asked that their proposed facility be exempt from PST. s.12; s.13; s.17
s.12; s.13; s.17

Carbon Tax: LNG facilities need a significant power source for the liquefaction machinery. LNG projects are planning on producing most of the electricity with gas powered electrical generators. As such carbon tax is a significant operating cost.

Royalties: Most of the natural gas will be sourced from western Canada wells and royalties will be paid to the province where the gas is from.

Income Taxes: Both federal and provincial corporate income tax applies to income from the LNG facility. Apart from seeking accelerated depreciation for their project, the industry has few concerns about corporate income tax.

s.12; s.13; s.17

For both corporate income tax and the LNG Income Tax an important concept is that of **transfer pricing**. Transfer pricing refers to the rules and methods for pricing transactions between enterprises under common ownership or control. Because of the potential for cross-border controlled transactions to distort taxable income, tax authorities in many countries can adjust intragroup transfer prices that differ from what would have been charged by unrelated enterprises dealing at arm's length. Many countries including Canada adopt the OECD methodologies for transfer pricing.

s.12; s.13; s.17

Page 034 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Ministry of Finance

BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Prepared as information in preparation of meetings amongst the Ministers of Finance, Energy, Mines and Petroleum Resources and the Premier on December 13 – 14, 2017.

DATE PREPARED:**TITLE: LNG Project Competitiveness****ISSUE: MEMPR Request for Provincial Measures to Address LNG Competitiveness****BACKGROUND:**

Over the past 18 months, a number of major LNG projects have either been cancelled or put on hold. However, more recently LNG Canada (Shell and its partners) and Kitimat LNG (Chevron and its partners) have indicated a continued interest in moving their projects forward. In particular, LNG Canada intends to reach a final investment decision (FID) on its pending project in July 2018. (See Appendix 1 for terms/definitions).

The Ministry of Energy, Mines and Petroleum Resources (MEMPR) has been working closely with its consultant and LNG Canada on the economics of their project with a focus on competitiveness. s.12; s.13; s.17

s.12; s.13; s.17

s.12; s.13; s.17

Analysis of the Analysis

Ministry of Finance staff have reviewed the analysis done by LNG Canada and MEMPR as follows:

s.12; s.13; s.17

Most analysts are projecting a growing demand for natural gas in Asia driven by economic growth and countries wanting to produce electricity with natural gas rather than coal. As such, investors are becoming more interested in selling into the Asia market. It is estimated that current projected demand will exceed supply by 2024; that the demand/supply gap will increase to about 100 million tonnes LNG per year by 2029; and that this will continue to increase beyond that date.

Indications are that competitive pressures with US gas production will likely keep the cost of BC gas low. LNG Canada has looked at nine price assumptions; low, medium and high prices for both the cost of natural gas in BC and the price of LNG in Asia, and modelled the project's rate of return in the following table.

s.12; s.13; s.17

Page 040 of 372 to/à Page 043 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

APPENDIX 1 – LNG TERMS

LNG

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane C₂H₆) that has been converted to liquid form for ease and safety of storage or transport. It takes up about 1/600th the volume of natural gas in the gaseous state (at standard conditions for temperature and pressure). It is odorless, colorless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water, and heavy hydrocarbons. The natural gas is then condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162 °C (-260 °F).

In a typical LNG process the gas is first extracted and transported to a processing plant where it is purified by removing any condensates such as water, oil, mud, as well as other gases such as CO₂ and H₂S. The LNG processing plant will consist of one or more *trains* where each train can process a certain amount of natural gas. Each train will have an annual output capacity of about 6 million tonnes annually. A large LNG facility will consist of two trains, such as the one proposed by LNG Canada. LNG is stored in storage tanks and can be loaded and shipped.

BC LNG Project

LNG proposed projects for Northwest of BC consist of the following three pieces:

Source of Natural Gas: A steady long term source of natural gas is required. Some proposed projects will own their own wells in BC and/or Alberta while others might contract with third parties for the gas.

Pipeline to the Coast: There are no existing pipelines to the Northwest of BC. The cost of a pipeline is in the neighbourhood of \$7 billion.

LNG Facility: A 12 million tonne per year capacity plant would cost approximately \$14 billion in total and take four to five years to complete. The plant consists of the liquefaction machinery, storage facility and a jetty for loading the LNG to ships.

Final Investment Decision (FID)

LNG projects considering an investment will reach a point of making a final investment decision. This process can be different for each project. For the major projects a final investment decision is a declaration of proceeding to construct a facility with no turning back.

Michell, Jennifer FIN:EX

From: Foster, Doug FIN:EX
Sent: December 8, 2017 4:02 PM
To: Michell, Jennifer FIN:EX
Cc: Flanagan, Paul FIN:EX
Subject: LNG deck for lori W
Attachments: 20171208 - Briefing Summary - MinFin.pptx

still a work in progress on some key parts.
paul's note hits on the key pieces from a finance perspective.
d.

From: Carl Black [mailto:cblack@deetken.com]
Sent: Friday, December 8, 2017 3:42 PM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

Here is another turn, incorporating the changes we just discussed. Let us know with any further feedback as we work on slides 16 and 17.

Best,
Carl

2017-12-08 15:11 GMT-08:00 Carl Black <cblack@deetken.com>:
Hi Doug,

The updated deck is attached. You'll note that we continue to work on the requested table to add to Slide 18. We're also still waiting on information from BCH for Slide 33.

Best,
Carl

2017-12-08 13:29 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:
Thx. Looking forward to getting rest so we can prepare material for our deputy. D

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Carl Black
Sent: Friday, December 8, 2017 1:28 PM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

Here is some analysis on the relative returns to proponents and government under different LNG price

scenarios. This will complement the table you had requested which we are currently working on. The updated deck, including this material, that table, and the other changes you requested will follow this afternoon.

Best,
Carl

2017-12-08 12:18 GMT-08:00 Foster, Doug FIN:EX
<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:
thanks. d.

From: Carl Black [<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>]
Sent: Friday, December 8, 2017 11:50 AM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

We're planning to send the requested new analysis by 1:00 pm and are working on the broader deck revisions as well.

Best,
Carl

2017-12-08 11:25 GMT-08:00 Foster, Doug FIN:EX
<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

--

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>
Management Consulting
Asset Management

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>>
[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

Carl Black
Principal
Suite 501-1755 W. Broadway, Vancouver, BC V6J
4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>
cblack@deetken.com<<mailto:cblack@deetken.com>>
Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>

Management Consulting
Asset Management


[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>>

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cid%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

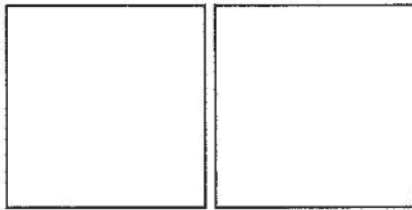
Carl Black
Principal
Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5
cblack@deetken.com<<mailto:cblack@deetken.com>>
Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

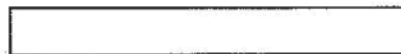

Management Consulting
Asset Management

Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

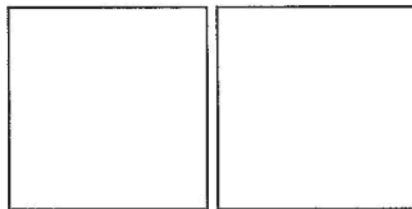


Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.



Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Michell, Jennifer FIN:EX

From: Wanamaker, Lori FIN:EX
Sent: December 11, 2017 11:52 AM
To: Michell, Jennifer FIN:EX
Subject: Fw: Updated materials
Attachments: 20171210 - Briefing Summary - MEMPR.pptx; 2017.12.10 BN Competitiveness Consultation.docx; 20171208 - Briefing Summary - MinFin (1).pptx

Can you put these documents into my SharePoint for the Wednesday meeting with PJH. Thx.

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Nikolejsin, Dave MNGD:EX <Dave.Nikolejsin@gov.bc.ca>
Sent: Sunday, December 10, 2017 9:59 PM
To: Wright, Don J. PREM:EX
Cc: Wanamaker, Lori FIN:EX
Subject: FW: Updated materials

Don, please find attached the final materials for the meetings this week (wed and Thurs) with Premier, MCI and my minister.

s.13

Don – I will leave you to share with Premier and I am assuming Geoff will also want to be part of those meetings?

Lori – I will leave to you to forward this to your Minister. And please let me know if you need anything else from me or want me to assist in any briefings before Wed.

Dave Nikolejsin
Deputy Minister
Energy, Mines and Petroleum Resources

Page 050 of 372 to/à Page 156 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 157 of 372

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 158 of 372 to/à Page 200 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 201 of 372

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 202 of 372 to/à Page 225 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 226 of 372

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 227 of 372 to/à Page 310 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 311 of 372

Withheld pursuant to/removed as

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

Page 312 of 372 to/à Page 363 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 364 of 372

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 365 of 372 to/à Page 372 of 372

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: November 3, 2017 6:35 AM
To: Flanagan, Paul FIN:EX; Hawkshaw, Steve FIN:EX
Subject: LNG
Attachments: PST Relief and Upside Sharing Mechanism; RE: Risk Sharing Analysis

Can you come to this meeting?

d.

-----Original Appointment-----

From: Manahan, Suzanne MNGD:EX
Sent: Tuesday, October 31, 2017 12:06 PM
To: Manahan, Suzanne MNGD:EX; Foster, Doug FIN:EX; 'apowell@deetken.com'; Wray, Jennifer MNGD:EX; Sundher, Shauna MNGD:EX
Subject: Call - Suzanne Manahan/ Jennifer Wray/ Shauna Sundher/ Doug Foster/ Andre Powell
When: Friday, November 3, 2017 2:30 PM-3:30 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Dial-in: 1-877-353-9184 Toll Free / Participant ID: 5015247# / Moderator: Suzanne Manahan

Re: LNG risk-sharing concepts

Andre to meet Doug at his office, then together they will phone Suzanne.

Justesen, Josh T FIN:EX

From: Andre Powell <apowell@deetken.com>
Sent: October 29, 2017 4:58 PM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; XT:Lepine, Elise HLTH:IN
Subject: PST Relief and Upside Sharing Mechanism
Attachments: 20171029 - PST Mechanism.pptx

Hi Doug,

s.12; s.13

This is a draft for discussion.

In addition to this framework, we have a few other concepts that are less fleshed out but that we'd like to discuss with you.

Best Regards,

André



Management Consulting
Asset Management



André Powell
Managing Partner
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
apowell@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (778) 999-1924

Visit The Deetken Group online at www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 003 of 393 to/à Page 004 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 005 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 006 of 393 to/à Page 008 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: October 29, 2017 1:34 PM
To: XT:Lepine, Elise HLTH:IN
Cc: Manahan, Suzanne EMPR:EX; Andre Powell; Flanagan, Paul FIN:EX
Subject: RE: Risk Sharing Analysis
Attachments: 20171029 - financial review - Risk Sharing.pptx

Thanks Elise. Will look at carefully. D.

From: Elise Lepine [mailto:elepine@deetken.com]
Sent: Sunday, October 29, 2017 11:32 AM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne MNGD:EX; Andre Powell
Subject: Risk Sharing Analysis

Hi Doug,

Attached is a small piece of analysis we've put together to address the base case risk sharing profile of the LNG Canada project. The analysis compares proponent after tax cumulative cash flows to combined BC & Federal nominal cumulative revenues over the life of the project.

If you have some time in the next couple of days Andre and I would be happy to walk you through the analysis.

Regards,

--



Management Consulting
Asset Management



Elise Lepine
Senior Associate
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
elepine@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 802-3046

Check out our new website! Same address, different perspective: www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 010 of 393 to/à Page 012 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: XT:Lepine, Elise HLTH:IN
Sent: November 23, 2017 9:15 AM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; Andre Powell; Carl Black
Subject: Working outline of document
Attachments: Outline of Key Questions Addressed in the Decision Document.docx

Hi Doug,

We thought you might like to see our working outline of the document, which is essentially a series of questions. I've highlighted the sections which I believe encompass your interests based on yesterday's discussion.

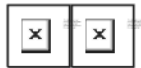
Please let us know if it seems as though anything is missing from your perspective.

Regards,

--



Management Consulting
Asset Management



Elise Lepine
Senior Associate
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
elepine@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 802-3046

Check out our new website! Same address, different perspective: www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 014 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 015 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 016 of 393 to/à Page 017 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: November 24, 2017 7:01 PM
To: Foster, Doug FIN:EX; Manahan, Suzanne EMPR:EX
Cc: Andre Powell; XT:Lepine, Elise HLTH:IN
Subject: Assessing LNG Cost Estimates
Attachments: 20171124 - Assessing LNG Costs in BC.pptx

Hi Doug, Suzanne,

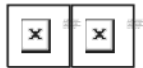
I'm attaching our preliminary assessment of the plausibility of the cost estimates based on assumptions provided during proponent consultations. Please let us know if there is a good time to discuss this next week.

Kind Regards,
Carl

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 019 of 393 to/à Page 020 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 021 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 022 of 393 to/à Page 029 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: XT:Lepine, Elise HLTH:IN
Sent: November 28, 2017 1:27 PM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Cc: Manahan, Suzanne EMPR:EX; Wray, Jennifer AEST:EX; Sundher, Shauna MNGD:EX; Andre Powell; Carl Black
Subject: Policy Instruments
Attachments: 20171128 - Proposed Fiscal Instruments.pptx

Hi all,

Attached are short descriptions of each of the instruments for our discussion today.

Regards,

--



Management Consulting
Asset Management



Elise Lepine
Senior Associate
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
elepine@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 802-3046

Check out our new website! Same address, different perspective: www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 031 of 393 to/à Page 042 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: XT:Lepine, Elise HLTH:IN
Sent: November 29, 2017 7:22 PM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; Andre Powell; Carl Black
Subject: Table
Attachments: 2017.11.30 Summary table for Doug.docx

Hi Doug,

Attached is a first cut at the table we were discussing on the call today, I've included the change in cumulative nominal and PV10 revenues for the province as well as the impact on the cost stack for each policy.

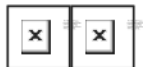
I've also included Targeted impact to LNG and Feasibility column which aim to get at the following:

s.12;s.13

--



Management Consulting
Asset Management



Elise Lepine
Senior Associate
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
elepine@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 802-3046

Check out our new website! Same address, different perspective: www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 044 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 1, 2017 11:51 AM
To: Manahan, Suzanne EMPR:EX; Foster, Doug FIN:EX
Cc: Andre Powell; XT:Lepine, Elise HLTH:IN; Flanagan, Paul FIN:EX; Wray, Jennifer AEST:EX; Sundher, Shauna MNGD:EX
Subject: Revenue & Commitments - Updated Draft
Attachments: 20171201 - R&C.xlsx

Hi Doug, Suzanne,

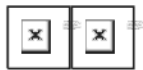
I'm attaching the updated draft of our revenue and commitments analysis. We may like to refer to this periodically during our discussion this afternoon.

Best,
Carl

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 046 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 047 of 393

Withheld pursuant to/removed as

s.17; s.13; s.12

Page 048 of 393 to/à Page 102 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 103 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 104 of 393 to/à Page 106 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Manahan, Suzanne EMPR:EX
Sent: December 1, 2017 2:59 PM
To: Foster, Doug FIN:EX
Subject: FW: Updated Report
Attachments: 2017.11.29 BN Competitiveness Consultation v.7 (2).docx

Most recent version.

From: Sundher, Shauna MNGD:EX
Sent: Friday, December 1, 2017 2:50 PM
To: Manahan, Suzanne MNGD:EX
Subject: Updated Report

Most up to date report. Deetken is combing through today so there will be a more updated version by EOD.

Shauna Sundher

Senior Project and Policy Analyst
LNG Task Force | Ministry of Energy, Mines and Petroleum Resources
Phone: (250) 896-8748 | Fax: (250) 387-6209 | Email: shauna.sundher@gov.bc.ca

Page 108 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 109 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 110 of 393 to/à Page 237 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 238 of 393

Withheld pursuant to/removed as

DUPLICATE

Justesen, Josh T FIN:EX

From: Andre Powell <apowell@deetken.com>
Sent: December 4, 2017 2:28 PM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; Carl Black; XT:Lepine, Elise HLTH:IN
Subject: s.12; s.13; s.17
Attachments: 20171204_s.12; s.13; s.17 v.3.docx

Hi Doug,

Attached is the analysis of the s.12; s.13; s.17 that we discussed on Friday.

If you have time, we'd like to walk you through this.

Thanks,

Andre

Page 240 of 393 to/à Page 247 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 5, 2017 4:00 PM
To: Wanamaker, Lori FIN:EX
Cc: Flanagan, Paul FIN:EX
Subject: FW: Revenue & Commitments - Updated Draft
Attachments: 20171201 - R&C.xlsx; Re: [s.12](#); [s.13](#); [s.17](#)

keeping you in loop.

we have tentative meeting on thrs (paul and me with them and EMPR) and will be preparing material for you and minister.

there 2 meeting scheduled for next week – Dec 13 and 14th with the two ministers and Premier on this LNG matter, particularly LNG Canada and strategy.

d.

From: Foster, Doug FIN:EX
Sent: Friday, December 1, 2017 6:27 PM
To: Flanagan, Paul FIN:EX
Subject: FW: Revenue & Commitments - Updated Draft

this is quite good.

they are going to remodel to cover of making sure that fixed and contingent covered offs in earlier years....and add to later years.

d.

From: Carl Black [<mailto:cblack@deetken.com>]
Sent: Friday, December 1, 2017 11:51 AM
To: Manahan, Suzanne MNGD:EX; Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX; Wray, Jennifer MNGD:EX; Sundher, Shauna MNGD:EX
Subject: Revenue & Commitments - Updated Draft

Hi Doug, Suzanne,

I'm attaching the updated draft of our revenue and commitments analysis. We may like to refer to this periodically during our discussion this afternoon.

Best,
Carl

--


Management Consulting
Asset Management

Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751



Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Justesen, Josh T FIN:EX

From: Andre Powell <apowell@deetken.com>
Sent: December 4, 2017 2:28 PM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; Carl Black; XT:Lepine, Elise HLTH:IN
Subject: s.12; s.13; s.17
Attachments: 20171204s.12;s.13;s.17 v.3.docx

Hi Doug,

Attached is the analysis of the s.12;s.13;s.17 that we discussed on Friday.

If you have time, we'd like to walk you through this.

Thanks,

Andre

Page 251 of 393 to/à Page 258 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 259 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 260 of 393 to/à Page 275 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 276 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 277 of 393 to/à Page 332 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 4, 2017 5:23 PM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; XT:Lepine, Elise HLTH:IN; Andre Powell
Subject: Re:s.12;s.13;s.17
Attachments: 20171204 - R&C v.2.xlsx

Hi Doug,

Here is the updated revenue and commitments analysis reflecting the changes we discussed on Friday, particularly the addition of charts for Federal revenues.

Best,
Carl

2017-12-04 14:28 GMT-08:00 Andre Powell <apowell@deetken.com>:

Hi Doug,

Attached is the analysis of the s.12;s.13;s.17 that we discussed on Friday.

If you have time, we'd like to walk you through this.

Thanks,

Andre

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 334 of 393 to/à Page 341 of 393

Withheld pursuant to/removed as

DUPLICATE

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 5, 2017 5:06 PM
To: Foster, Doug FIN:EX
Cc: Manahan, Suzanne EMPR:EX; XT:Lepine, Elise HLTH:IN; Andre Powell
Subject: Re: s.12;s.13;s.17
Attachments: 20171205 - R&C .xlsx

Hi Doug,

Another update up this. We've taken the s.13 This commitment is to
s.13
s.13 Additionally, looking back at my notes, the Ministry of FLNR had informed us that s.13
s.13

Best,
Carl

2017-12-04 17:22 GMT-08:00 Carl Black <cblack@deetken.com>:
Hi Doug,

Here is the updated revenue and commitments analysis reflecting the changes we discussed on Friday, particularly the addition of charts for Federal revenues.

Best,
Carl

2017-12-04 14:28 GMT-08:00 Andre Powell <apowell@deetken.com>:
Hi Doug,


Attached is the analysis of the s.12;s.13;s.17 that we discussed on Friday.

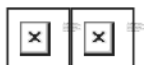
If you have time, we'd like to walk you through this.

Thanks,

Andre

--


Management Consulting
Asset Management



Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com

Office: +1 (604) 731-4424

Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--



Management Consulting
Asset Management



Carl Black

Principal

Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5

cblack@deetken.com

Office: +1 (604) 731-4424

Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 344 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 345 of 393 to/à Page 393 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 001 of 393 to/à Page 032 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 033 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 034 of 393 to/à Page 036 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 6, 2017 4:55 AM
To: Flanagan, Paul FIN:EX
Subject: FW: Competitiveness Report Updated Draft
Attachments: 2017.12.05 BN Competitiveness Consultation vPassword Protected v.3.1.docx

For you comments. D.

From: Andre Powell [mailto:apowell@deetken.com]
Sent: Tuesday, December 5, 2017 11:33 PM
To: Foster, Doug FIN:EX
Subject: Competitiveness Report Updated Draft

Hi Doug,

I wanted to update you on progress since our last call:

1) We have put together options that ensure that ^{s.13;s.17}
s.13;s.17

2) I have connected with LNG Canada and ^{s.13;s.17}
s.13;s.17

I have attached is an updated, nearly final competitiveness report with a short executive summary for your review. The exec summary includes our proposed recommendations.

s.13

Best Regards,

André

The Deetken Group
Management Consulting
Asset Management



André Powell
Managing Partner
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
apowell@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (778) 999-1924

Visit The Deetken Group online at www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 038 of 393 to/à Page 085 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 086 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 087 of 393 to/à Page 100 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 101 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 102 of 393 to/à Page 116 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 7, 2017 12:06 PM
To: Andre Powell
Cc: Flanagan, Paul FIN:EX
Subject: FW: Final Drafts
Attachments: 2017.12.06 BN Competitiveness Consultation v.final draft.docx; 20171206 - Briefing Summary v. final draft.pptx

on the second bullet, I acknowledge its later called out on slide 21 – but it is a principle none the less.
while slide 6 is interesting, what would be more useful is to have it followed by what's the outlook for

s.13
d.

From: Foster, Doug FIN:EX
Sent: Thursday, December 7, 2017 11:15 AM
To: Andre Powell
Cc: Flanagan, Paul FIN:EX
Subject: FW: Final Drafts

thanks.

some questions/comments:

- page 5 of the paper and slide 2: a 5th question has to be asked “how would such options be managed fiscally

s.13
s.13

- slide 6: what to the various policies scenarios mean?
- slide 13: this has to be contrasted with a context slide that shows

s.13

- slide 20: its EMPR making a recommendation – clarify.

s.13

- slide 21: how does the 5th question above get addressed here?
- Before we get to slides 20 and 21, we have to have more on the competitiveness piece, which builds on slide 8.

s.13

s.13

That sets up the point we are making at slide 22, item 2.

- We need a slide that summarizes what costs BC has/is already incurring for the LNG sector

s.13

- Slide 21: the second item, which is critical: providing a fair return to taxpayers for the provincial resource. This is important as we consider the competitiveness issue.

The slide deck needs a simple table that compares returns.

s.13

s.13

- Slide 24: we need to include a slide that shows the revenue consequence to each and is a follow on to slide 20
- Slide 25. there needs to be more of an assessment piece. s.13

s.13

- Paul will have comments on slide 26. But we do have to think about the table above and how BC preserves its fair share with rising prices.

s.13

Please to discuss further.
d

From: Andre Powell [<mailto:apowell@deetken.com>]
Sent: Wednesday, December 6, 2017 9:45 PM
To: Foster, Doug FIN:EX
Subject: Fwd: Final Drafts

Hi Doug,

Next turn on the report is attached.

Thanks,
André

----- Forwarded message -----

From: Elise Lepine <elepine@deetken.com>

Date: Wed, Dec 6, 2017, 20:04

Subject: Final Drafts

To: Nikolejsin, Dave MNGD:EX <Dave.Nikolejsin@gov.bc.ca>

Cc: Piccinino, Ines MNGD:EX <Ines.Piccinino@gov.bc.ca>, Manahan, Suzanne MNGD:EX

<suzanne.manahan@gov.bc.ca>, Turner, Geoff J MNGD:EX <Geoff.Turner@gov.bc.ca>, Wray, Jennifer MNGD:EX <jennifer.wray@gov.bc.ca>, Sundher, Shauna MNGD:EX <shauna.sundher@gov.bc.ca>, <Simon.Coley@gov.bc.ca>, Andre Powell <apowell@deetken.com>, Carl Black <cblack@deetken.com>

Hi all,

Please find attached the final drafts of the decision document (including appendices) and the executive summary briefing note. I've removed the passwords and added 'Confidential Advice to Cabinet' on both documents.

Ines - I believe all of the comments from your email have now been addressed.

Carl will be available for last minute requests tomorrow from 10 am up until the briefing at 1:30 pm.

Regards,

--

The Deetken Group
Management Consulting
Asset Management



Elise Lepine
Senior Associate
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
elepine@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 802-3046

Check out our new website! Same address, different perspective: www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 120 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 121 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 122 of 393 to/à Page 155 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 156 of 393

Withheld pursuant to/removed as

s.17; s.12; s.13

Page 157 of 393 to/à Page 201 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 202 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 203 of 393 to/à Page 311 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: XT:Lepine, Elise HLTH:IN
Sent: December 7, 2017 12:30 PM
To: Foster, Doug FIN:EX
Cc: Flanagan, Paul FIN:EX; Carl Black; Manahan, Suzanne EMPR:EX; Wray, Jennifer AEST:EX
Subject: Update to s.12; s.13; s.17
Attachments: 20171206 s.12;s.13;s.17 .docx

Hi Doug,

Please find attached the s.12; s.13; s.17 you had requested for our review during the call today.

Regards,

--

The Deetken Group

Management Consulting
Asset Management



Elise Lepine
Senior Associate
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
elepine@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 802-3046

Check out our new website! Same address, different perspective: www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 313 of 393 to/à Page 320 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 8, 2017 1:27 PM
To: Foster, Doug FIN:EX
Cc: Andre Powell; XT:Lepine, Elise HLTH:IN; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?
Attachments: 20171207 - Risk & Return Analysis.pptx

Hi Doug,

Here is some analysis on the ^{s.13} This
will complement the table you had requested which we are currently working on. The updated deck, including this
material, that table, and the other changes you requested will follow this afternoon.

Best,
Carl

2017-12-08 12:18 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:

thanks. d.

From: Carl Black [mailto:cblack@deetken.com]
Sent: Friday, December 8, 2017 11:50 AM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,


We're planning to send the requested new analysis by 1:00 pm and are working on the broader deck revisions as well.

Best,

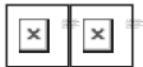
Carl

2017-12-08 11:25 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:

--


Management Consulting
Asset Management

Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com



Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 323 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 324 of 393 to/à Page 341 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 8, 2017 4:02 PM
To: Michell, Jennifer FIN:EX
Cc: Flanagan, Paul FIN:EX
Subject: LNG deck for lori W
Attachments: 20171208 - Briefing Summary - MinFin.pptx

still a work in progress on some key parts.
paul's note hits on the key pieces from a finance perspective.
d.

From: Carl Black [mailto:cblack@deetken.com]
Sent: Friday, December 8, 2017 3:42 PM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

Here is another turn, incorporating the changes we just discussed. Let us know with any further feedback as we work on slides 16 and 17.

Best,
Carl

2017-12-08 15:11 GMT-08:00 Carl Black <cblack@deetken.com>:

Hi Doug,

The updated deck is attached. You'll note that we continue to work on the requested table to add to Slide 18. We're also still waiting on information from BCH for Slide 33.

Best,
Carl

2017-12-08 13:29 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:
Thx. Looking forward to getting rest so we can prepare material for our deputy. D

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Carl Black
Sent: Friday, December 8, 2017 1:28 PM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

Here is some analysis on the ^{s.13}

s.13 This will complement the table you had requested which we are currently working on. The updated deck, including this material, that table, and the other changes you requested will follow this afternoon.

Best,
Carl

2017-12-08 12:18 GMT-08:00 Foster, Doug FIN:EX
<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:
thanks. d.

From: Carl Black [<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>]
Sent: Friday, December 8, 2017 11:50 AM
To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

We're planning to send the requested new analysis by 1:00 pm and are working on the broader deck revisions as well.

Best,
Carl

2017-12-08 11:25 GMT-08:00 Foster, Doug FIN:EX
<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

--

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>
Management Consulting
Asset Management

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>>
[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

Carl Black
Principal
Suite 501-1755 W. Broadway, Vancouver, BC V6J
4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>
cblack@deetken.com<<mailto:cblack@deetken.com>>
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>

Management Consulting
Asset Management

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>>

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

Carl Black

Principal

Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5

cblack@deetken.com<<mailto:cblack@deetken.com>>

Office: +1 (604) 731-4424

Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--


Management Consulting
Asset Management

Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751



Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 8, 2017 4:04 PM
To: Foster, Doug FIN:EX
Subject: LNG - 2017.doc
Attachments: LNG - 2017.doc

Page 347 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

DATE PREPARED:**TITLE: LNG Projects****ISSUE: BC Competitiveness****BACKGROUND:**

In the past year and a half, major LNG projects have either been cancelled or put on hold. More recently, LNG Canada (Shell and its partners) and Kitimat LNG (Chevron and its partners) have indicated a continued interest in moving their projects forward. In particular, LNG Canada is expected to reach a final investment decision in July 2018.

The Ministry of Energy Mines has been working closely with LNG Canada on the economics of their project with a focus on competitiveness. s.12; s.13; s.17

s.12; s.13; s.17

s.12; s.13; s.17

Analysis of the Analysis

Ministry of Finance staff have reviewed the analysis done by LNG Canada and can make the following comments.

s.12; s.13; s.17

s.12; s.13; s.17

Most analysts are projecting a growing demand for natural gas in Asia driven by economic growth and countries wanting to produce electricity with natural gas rather than coal. As such, investors are interested in selling into the Asia market. Current projected demand will exceed supply by 2024 and the gap will increase to about 100 million tonnes LNG per year by 2029 and continue to increase beyond that date.

Indications are that competitive pressures with US gas production will likely keep the cost of BC gas low. LNG Canada has looked at nine price assumptions; low, medium and high prices for both the cost of natural gas in BC and the price of LNG in Asia and modelled the project's rate of return in the following table.

s.12; s.13; s.17

Page 351 of 393 to/à Page 353 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

APPENDIX – LNG TERMS

LNG

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane C₂H₆) that has been converted to liquid form for ease and safety of storage or transport. It takes up about 1/600th the volume of natural gas in the gaseous state (at standard conditions for temperature and pressure). It is odorless, colorless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water, and heavy hydrocarbons. The natural gas is then condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162 °C (-260 °F).

In a typical LNG process the gas is first extracted and transported to a processing plant where it is purified by removing any condensates such as water, oil, mud, as well as other gases such as CO₂ and H₂S. The LNG processing plant will consist of one or more *trains* where each train can process a certain amount of natural gas. Each train will have an annual output capacity of about 6 million tonnes annually. A large LNG facility will consist of two trains, such as the one proposed by LNG Canada. LNG is stored in storage tanks and can be loaded and shipped.

BC LNG Project

LNG proposed projects for Northwest of BC consist of the following three pieces:

Source of Natural Gas: A steady long term source of natural gas is required. Some proposed projects will own their own wells in BC and/or Alberta while others might contract with third parties for the gas.

Pipeline to the Coast: There are no existing pipelines to the Northwest of BC. The cost of a pipeline is in the neighbourhood of \$7 billion.

LNG Facility: A 12 million tonne per year capacity plant would cost approximately \$14 billion in total and take four to five years to complete. The plant consists of the liquefaction machinery, storage facility and a jetty for loading the LNG to ships.

Final Investment Decision (FID)

LNG projects considering an investment will reach a point of making a final investment decision. This process can be different for each project. For the major projects a final investment decision is a declaration of proceeding to construct a facility with no turning back.

Greenfield versus Brownfield

Greenfield refers to a site for an industrial project that is built from the ground up. Brownfield refers to an existing industrial site that can accommodate a project at a lower cost because it will have existing infrastructure and hence has a lower construction cost.

Units of measurement

Giga-joule: usual measurement of units of natural gas purchased for residential use. One giga-joule is 1,055 Btu's.

Tonnes of LNG: The usual measure of LNG processing plants' annual capacity to produce the product is in millions of tonnes. One million tonnes of LNG is equivalent to 48 billion cubic feet of natural gas.

British thermal unit (Btu): A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

MMBtu: one million btu's. This is an important measure in any analysis of the LNG industry because it is used as the unit of measure for looking at costs and revenue from an LNG project. For example, the sales price in Asia of natural gas might be \$12.00 per MMBtu, and cost of LNG delivered to Asia is \$10.00 per MMBtu. A two train LNG facility with annual capacity of 12 million tonnes of LNG will produce 600 million MMBtu's.

Present Value

Present value is a tool used in the analysis of LNG projects because the investment lasts decades (e.g. over 40 years) and revenue and costs are not necessarily constant.

Present value is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential. Time value can be described with the simplified phrase, "A dollar today is worth more than a dollar tomorrow".

In calculated present value of an income stream the key assumption is the discount rate. For investors considering a particular investment, the discount rate should at least include inflation plus some rate of return that is at least as robust as alternative investments. For governments the appropriate discount rate applied to a revenue stream can be quite different than that of the investor. For example, government might have a very high discount rate if the objective is to realize revenue early.

Government Levies Applicable to LNG

The major government levies applicable to LNG are income taxes, consumption taxes and royalties.

Consumption taxes

Provincial Sales Tax: Consistent throughout several years of discussions with the industry they have asked that their proposed facility be exempt from PST.^{s.12;}

s.12; s.13; s.17

Carbon Tax: LNG facilities need a significant power source for the liquefaction machinery. LNG projects are planning on producing most of the electricity with gas powered electrical generators. As such carbon tax is a significant operating cost.

Royalties: Most of the natural gas will be sourced from western Canada wells and royalties will be paid to the province where the gas is from.

Income Taxes: Both federal and provincial corporate income tax applies to income from the LNG facility. Apart from seeking accelerated depreciation for their project, the industry has few concerns about corporate income tax.

s.12; s.13; s.17

For both corporate income tax and the LNG Income Tax an important concept is that of **transfer pricing**. Transfer pricing refers to the rules and methods for pricing transactions between enterprises under common ownership or control. Because of the potential for cross-border controlled transactions to distort taxable income, tax authorities in many countries can adjust intragroup transfer prices that differ from what would have been charged by unrelated enterprises dealing at arm's length. Many countries including Canada adopt the OECD methodologies for transfer pricing.

Page 357 of 393 to/à Page 358 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 8, 2017 7:57 PM
To: Foster, Doug FIN:EX
Cc: Andre Powell; XT:Lepine, Elise HLTH:IN; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?
Attachments: 20171208 - Briefing Summary - MinFin.pptx; 20171208 - Briefing Summary - MEMPR.pptx; 2017.12.08 BN Competitiveness Consultation.docx

Hi Doug,

We've updated the deck to include the requested charts on Slides 16 and 17. Please see attached.

In addition to this version, I'm also attaching the deck Dave used to brief his Minister (now updated based on feedback since then).

Lastly, I'm attaching the updated briefing note.

Please let us know with any questions or comments.

Best,
Carl

2017-12-08 16:10 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:

thanks for your hard work with this.

when you get the other pieces just send along and we can review and forward too.

d

From: Carl Black [mailto:cblack@deetken.com]
Sent: Friday, December 8, 2017 3:42 PM

To: Foster, Doug FIN:EX
Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?

Hi Doug,

Here is another turn, incorporating the changes we just discussed. Let us know with any further feedback as we work on slides 16 and 17.

Best,

Carl

2017-12-08 15:11 GMT-08:00 Carl Black <cblack@deetken.com>:

Hi Doug,

The updated deck is attached. You'll note that we continue to work on the requested table to add to Slide 18. We're also still waiting on information from BCH for Slide 33.

Best,
Carl

2017-12-08 13:29 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:

Thx. Looking forward to getting rest so we can prepare material for our deputy. D

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Carl Black

Sent: Friday, December 8, 2017 1:28 PM

To: Foster, Doug FIN:EX

Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX

Subject: Re: are we close with new deck and paper?

Hi Doug,

Here is some analysis on the ^{s.13} This
will complement the table you had requested which we are currently working on. The updated deck, including this material, that table, and the other changes you requested will follow this afternoon.

Best,
Carl

2017-12-08 12:18 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:
thanks. d.

From: Carl Black [<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>]

Sent: Friday, December 8, 2017 11:50 AM

To: Foster, Doug FIN:EX

Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX

Subject: Re: are we close with new deck and paper?

Hi Doug,

We're planning to send the requested new analysis by 1:00 pm and are working on the broader deck revisions as well.

Best,
Carl

2017-12-08 11:25 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

--

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>

Management Consulting
Asset Management

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

Carl Black
Principal
Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>
cblack@deetken.com<<mailto:cblack@deetken.com>>
Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>

Management Consulting
Asset Management

[<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

Carl Black
Principal
Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5
cblack@deetken.com<<mailto:cblack@deetken.com>>
Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--(u000j /3..777)

www.decision.com/decision.htm

Page 364 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 365 of 393 to/à Page 368 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 369 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 370 of 393 to/à Page 393 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 001 of 393 to/à Page 003 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 004 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 005 of 393 to/à Page 039 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 040 of 393

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 041 of 393 to/à Page 066 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 067 of 393

Withheld pursuant to/removed as

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

Page 068 of 393 to/à Page 201 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 202 of 393

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 203 of 393 to/à Page 231 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 9, 2017 3:09 PM
To: Foster, Doug FIN:EX
Cc: Flanagan, Paul FIN:EX; Andre Powell; XT:Lepine, Elise HLTH:IN
Subject: Re: are we close with new deck and paper?
Attachments: 20171209 - Additional Slides - FIN.pptx

Hi Doug,

I'm attaching a set of additional slides based on your conversation with Andre this morning.

s.12; s.13; s.17

Please let us know if you would like to discuss.

Best,
Carl

2017-12-08 20:23 GMT-08:00 Elise Lepine <elepine@deetken.com>:

Hi Paul,

What materials are you referring to? s.12; s.13; s.17

Elise

On Dec 8, 2017 8:20 PM, "Flanagan, Paul FIN:EX" <Paul.Flanagan@gov.bc.ca> wrote:

Iwe are out of time for getting material to our minister and that is not about the slides but rather the table with the info we requested yesterday It's. not a problem as we think we had enough from previous work to close the gaps. It would still be good to get it.

Sent from my iPhone

> On Dec 8, 2017, at 7:59 PM, Carl Black <cblack@deetken.com> wrote:

>

> Hi Doug,

>

> We've updated the deck to include the requested charts on Slides 16 and 17. Please see attached.

>

> In addition to this version, I'm also attaching the deck Dave used to brief his Minister (now updated based on feedback since then).

>

> Lastly, I'm attaching the updated briefing note.

>

> Please let us know with any questions or comments.

>

> Best,

> Carl

>

> 2017-12-08 16:10 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

> thanks for your hard work with this.

> when you get the other pieces just send along and we can review and forward too.

> d

>

> From: Carl Black [<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>]

> Sent: Friday, December 8, 2017 3:42 PM

>

> To: Foster, Doug FIN:EX

> Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX

> Subject: Re: are we close with new deck and paper?

>

> Hi Doug,

>

> Here is another turn, incorporating the changes we just discussed. Let us know with any further feedback as we work on slides 16 and 17.

>

> Best,

> Carl

>

> 2017-12-08 15:11 GMT-08:00 Carl Black <cblack@deetken.com<<mailto:cblack@deetken.com>>>:

> Hi Doug,

>

> The updated deck is attached. You'll note that we continue to work on the requested table to add to Slide 18. We're also still waiting on information from BCH for Slide 33.

>

> Best,

> Carl

>

> 2017-12-08 13:29 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

> Thx. Looking forward to getting rest so we can prepare material for our deputy. D

>

> Sent from my BlackBerry 10 smartphone on the Rogers network.

> From: Carl Black

> Sent: Friday, December 8, 2017 1:28 PM

> To: Foster, Doug FIN:EX

> Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX

> Subject: Re: are we close with new deck and paper?

>

>

> Hi Doug,

>

> Here is some analysis on the relative returns to proponents and government under different LNG price scenarios. This will complement the table you had requested which we are currently working on. The updated deck, including

this material, that table, and the other changes you requested will follow this afternoon.

>

> Best,

> Carl

>

> 2017-12-08 12:18 GMT-08:00 Foster, Doug FIN:EX

<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>><<mailto:Doug.Foster@gov.bc.ca><<mailto:Doug.Foster@gov.bc.ca>>>>:

> thanks. d.

>

> From: Carl Black

[<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>>]

> Sent: Friday, December 8, 2017 11:50 AM

> To: Foster, Doug FIN:EX

> Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX

> Subject: Re: are we close with new deck and paper?

>

> Hi Doug,

>

> We're planning to send the requested new analysis by 1:00 pm and are working on the broader deck revisions as well.

>

> Best,

> Carl

>

> 2017-12-08 11:25 GMT-08:00 Foster, Doug FIN:EX

<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>><<mailto:Doug.Foster@gov.bc.ca><<mailto:Doug.Foster@gov.bc.ca>>>>:

>

>

>

>

> --

>

>

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>](<http://www.deetken.com/>)>

> Management Consulting

> Asset Management

>

> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>](<https://twitter.com/TheDeetkenGroup?lang=en>)> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]

<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cid%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

>

> Carl Black

> Principal

> Suite 501-1755 W. Broadway, Vancouver, BC V6J

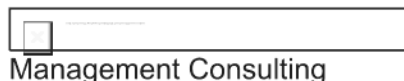
4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>><<https://m>

aps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>
> cblack@deetken.com<<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>>
> Office: +1 (604) 731-4424<tel:%2B1%20%28604%29%20731-4424>
> Cell: +1 (604) 728-3751
>
>
> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>><<http://www.deetken.com/deetkenhorizon>>
> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.
>
>
>
> --
>
>
[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>
> Management Consulting
> Asset Management
>
> [<http://icons.iconarchive.com/icons/icon8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icon8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cid%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>
> Carl Black
> Principal
> Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>
> cblack@deetken.com<<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>>
> Office: +1 (604) 731-4424<tel:%2B1%20%28604%29%20731-4424>
> Cell: +1 (604) 728-3751
>
>
> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>><<http://www.deetken.com/deetkenhorizon>>
> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.
>
>
>
> --
>

>
[http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w]<http://www.deetken.com/>
> Management Consulting
> Asset Management
>
> [http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png]<https://twitter.com/TheDeetkenGroup?lang=en> [http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png]
<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cid%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>
>
> Carl Black
> Principal
> Suite 501–1755 W. Broadway, Vancouver, BC V6J 4S5<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>
> cblack@deetken.com<mailto:cblack@deetken.com>
> Office: +1 (604) 731-4424<tel:%2B1%20%28604%29%20731-4424>
> Cell: +1 (604) 728-3751
>
>
> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<http://www.deetken.com/deetkenhorizon>
> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.
>
>
>
> --
>
>
[http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w]<http://www.deetken.com/>
> Management Consulting
> Asset Management
>
> [http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png]<https://twitter.com/TheDeetkenGroup?lang=en> [http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png]
<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cid%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>
>
> Carl Black
> Principal
> Suite 501–1755 W. Broadway, Vancouver, BC V6J 4S5<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>
> cblack@deetken.com<mailto:cblack@deetken.com>
> Office: +1 (604) 731-4424<tel:%2B1%20%28604%29%20731-4424>
> Cell: +1 (604) 728-3751

>
>
> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>
 > The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.
 >
 >
 >
 > --
 >
 >
 >
[\[http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w\]](http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w)<<http://www.deetken.com/>>
 > Management Consulting
 > Asset Management
 >
 > [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
 <<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>
 > Carl Black
 > Principal
 > Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5
 > cblack@deetken.com<<mailto:cblack@deetken.com>>
 > Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
 > Cell: +1 (604) 728-3751
 >
 >
 > Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>
 > The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.
 >
 >
 >

--



Carl Black
Principal

-- [a000] / 4. - 4/24

www.electro.com/electro.com/

Page 239 of 393 to/à Page 250 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Wanamaker, Lori FIN:EX
Sent: December 10, 2017 7:13 PM
To: Flanagan, Paul FIN:EX; Foster, Doug FIN:EX
Subject: Fw: Updated materials
Attachments: 20171210 - Briefing Summary - MEMPR.pptx; 2017.12.10 BN Competitiveness Consultation.docx;
20171208 - Briefing Summary - MinFin (1).pptx

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Nikolejsin, Dave MNGD:EX
Sent: Sunday, December 10, 2017 9:59 PM
To: Wright, Don J. PREM:EX
Cc: Wanamaker, Lori FIN:EX
Subject: FW: Updated materials

s.12; s.13; s.17

Don – I will leave you to share with Premier and I am assuming Geoff will also want to be part of those meetings?

Lori – I will leave to you to forward this to your Minister. And please let me know if you need anything else from me or want me to assist in any briefings before Wed.

Dave Nikolejsin

Deputy Minister

Energy, Mines and Petroleum Resources

Page 252 of 393 to/à Page 281 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 282 of 393

Withheld pursuant to/removed as

s.17; s.12; s.13

Page 283 of 393 to/à Page 285 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 286 of 393

Withheld pursuant to/removed as

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

Page 287 of 393 to/à Page 393 of 393

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 001 of 390 to/à Page 003 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 004 of 390

Withheld pursuant to/removed as

s.17; s.12; s.13

Page 005 of 390 to/à Page 120 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 11, 2017 10:01 AM
To: Foster, Doug FIN:EX
Cc: Flanagan, Paul FIN:EX
Subject: Re: are we close with new deck and paper?
Attachments: 20171211 - Additional Slides - FIN.pptx

Hi Doug,

In the attached you'll see on Slides 2 and 3 tables that s.12; s.13; s.17
s.12; s.13; s.17 charts are on Slides 8 and 11.

Best,
Carl

2017-12-11 6:01 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca>:

s.12; s.13; s.17

d.

From: Carl Black [mailto:cblack@deetken.com]
Sent: Saturday, December 9, 2017 3:09 PM
To: Foster, Doug FIN:EX
Cc: Flanagan, Paul FIN:EX; Andre Powell; Elise Lepine

Subject: Re: are we close with new deck and paper?

Hi Doug,

I'm attaching a set of additional slides based on your conversation with Andre this morning.

s.12; s.13; s.17

Please let us know if you would like to discuss.

Best,
Carl

2017-12-08 20:23 GMT-08:00 Elise Lepine <elepine@deetken.com>:

Hi Paul,

What materials are you referring to? The table with ^{s.12; s.13; s.17} is included in the MinFin deck.

Elise

On Dec 8, 2017 8:20 PM, "Flanagan, Paul FIN:EX" <Paul.Flanagan@gov.bc.ca> wrote:

Iwe are out of time for getting material to our minister and that is not about the slides but rather the table with the info we requested yesterday It's. not a problem as we think we had enough from previous work to close the gaps. It would still be good to get it.

Sent from my iPhone

> On Dec 8, 2017, at 7:59 PM, Carl Black <cblack@deetken.com> wrote:

>

> Hi Doug,

>

> We've updated the deck to include the requested charts on Slides 16 and 17. Please see attached.

>

> In addition to this version, I'm also attaching the deck Dave used to brief his Minister (now updated based on feedback since then).

>

> Lastly, I'm attaching the updated briefing note.

>

> Please let us know with any questions or comments.

>

> Best,

> Carl

>

> 2017-12-08 16:10 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

> thanks for your hard work with this.

> when you get the other pieces just send along and we can review and forward too.

> d

>

> From: Carl Black [<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>]

> Sent: Friday, December 8, 2017 3:42 PM

>

> To: Foster, Doug FIN:EX

> Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX

> Subject: Re: are we close with new deck and paper?

>

> Hi Doug,

>

> Here is another turn, incorporating the changes we just discussed. Let us know with any further feedback as we work

on slides 16 and 17.

>
> Best,
> Carl
>

> 2017-12-08 15:11 GMT-08:00 Carl Black <cblack@deetken.com<<mailto:cblack@deetken.com>>>:

> Hi Doug,
>
> The updated deck is attached. You'll note that we continue to work on the requested table to add to Slide 18. We're also still waiting on information from BCH for Slide 33.
>
> Best,
> Carl
>

> 2017-12-08 13:29 GMT-08:00 Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>>>:

> Thx. Looking forward to getting rest so we can prepare material for our deputy. D
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: Carl Black
> Sent: Friday, December 8, 2017 1:28 PM
> To: Foster, Doug FIN:EX
> Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
> Subject: Re: are we close with new deck and paper?

>
>
> Hi Doug,
>
>>s.12; s.13; s.17

This will complement the table you had requested which we are currently working on. The updated deck, including this material, that table, and the other changes you requested will follow this afternoon.

>
> Best,
> Carl
>

> 2017-12-08 12:18 GMT-08:00 Foster, Doug FIN:EX
> <Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>><<mailto:Doug.Foster@gov.bc.ca><<mailto:Doug.Foster@gov.bc.ca>>>>:

> thanks. d.
>
> From: Carl Black
> [<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>>]

> Sent: Friday, December 8, 2017 11:50 AM
> To: Foster, Doug FIN:EX
> Cc: Andre Powell; Elise Lepine; Flanagan, Paul FIN:EX
> Subject: Re: are we close with new deck and paper?

>
> Hi Doug,
>
> We're planning to send the requested new analysis by 1:00 pm and are working on the broader deck revisions as well.
>
> Best,
> Carl
>

> 2017-12-08 11:25 GMT-08:00 Foster, Doug FIN:EX
<Doug.Foster@gov.bc.ca<<mailto:Doug.Foster@gov.bc.ca>><<mailto:Doug.Foster@gov.bc.ca><<mailto:Doug.Foster@gov.bc.ca>>>>

>
>
>
>
> --
>
>
[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<http://www.deetken.com/>>
> Management Consulting
> Asset Management
>
> [<http://icons.iconarchive.com/icons/iconarchive.com/windows-8/16/Social-Networks-Twitter-icon.png>]<https://twitter.com/TheDeetkenGroup?lang=en> [<http://icons.iconarchive.com/icons/iconarchive.com/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>
>
> Carl Black
> Principal
>
> Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>><<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>
> cblack@deetken.com<<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com><<mailto:cblack@deetken.com>>>

> Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
> Cell: +1 (604) 728-3751
>
>

> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>><<http://www.deetken.com/deetkenhorizon>>

> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be

unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

>
>
>
> --
>
>
> [<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<http://www.deetken.com/>>
> Management Consulting
> Asset Management
>
> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>
> Carl Black
> Principal

> Suite 501-1755 W. Broadway, Vancouver, BC V6J 4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>

> cblack@deetken.com<<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com>><<mailto:cblack@deetken.com>>>

> Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
> Cell: +1 (604) 728-3751
>
>

> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>><<http://www.deetken.com/deetkenhorizon>>

> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

>
>
>
> --
>
>
> [<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<http://www.deetken.com/>>
> Management Consulting
> Asset Management
>
> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter->

icon.png]<<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
 <<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>
 >
 > Carl Black
 > Principal

> Suite 501–1755 W. Broadway, Vancouver, BC V6J 4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>

> cblack@deetken.com<<mailto:cblack@deetken.com>>
 > Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
 > Cell: +1 (604) 728-3751
 >
 >
 > Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>
 > The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.
 >
 >
 >
 > --
 >
 >
 >
 [<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>
 > Management Consulting
 > Asset Management
 >
 > [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]
 <<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]
 <<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>
 >
 > Carl Black
 > Principal

> Suite 501–1755 W. Broadway, Vancouver, BC V6J 4S5<<https://maps.google.com/?q=1755+W.+Broadway,+Vancouver,+BC+V6J+4S5&entry=gmail&source=g>>

> cblack@deetken.com<<mailto:cblack@deetken.com>>
 > Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>
 > Cell: +1 (604) 728-3751
 >
 >
 > Learn more about Deetken Horizon, our machine intelligence team at

www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

>

>

>

> --

>

>

[<http://static1.squarespace.com/static/55f9c584e4b06eab80ae5c8a/t/571bcb8d1d07c0badf135739/1467149328804/?format=1500w>]<<http://www.deetken.com/>>

> Management Consulting

> Asset Management

>

> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Twitter-icon.png>]<<https://twitter.com/TheDeetkenGroup?lang=en>> [<http://icons.iconarchive.com/icons/icons8/windows-8/16/Social-Networks-Linkedin-icon.png>]

<<https://www.linkedin.com/company/2794484?trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A2794484%2Cidx%3A2-1-2%2CtarId%3A1467756061069%2Ctas%3Adeetk>>

> Carl Black

> Principal

> Suite 501–1755 W. Broadway, Vancouver, BC V6J 4S5

> cblack@deetken.com<<mailto:cblack@deetken.com>>

> Office: +1 (604) 731-4424<<tel:%2B1%20%28604%29%20731-4424>>

> Cell: +1 (604) 728-3751

>

>

> Learn more about Deetken Horizon, our machine intelligence team at
www.deetken.com/deetkenhorizon<<http://www.deetken.com/deetkenhorizon>>

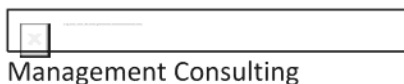
> The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

>

>

>

--



Carl Black
Principal

Asset Management



Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 129 of 390 to/à Page 141 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 11, 2017 6:25 PM
To: Foster, Doug FIN:EX
Cc: Flanagan, Paul FIN:EX; XT:Lepine, Elise HLTH:IN; Andre Powell
Subject: Updated MFIN deck
Attachments: 20171211 - Briefing Summary - MFIN.pptx

Hi Doug,


Here is the updated set of slides, including the analysis discussed today (slides 53 - 58, 75, 77). Please note the following differences from the deck Dave has:

s.12; s.13; s.17

Please let us know with questions.

Best,
Carl

--


Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 143 of 390 to/à Page 220 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 11, 2017 6:38 PM
To: Foster, Doug FIN:EX
Cc: Flanagan, Paul FIN:EX; XT:Lepine, Elise HLTH:IN; Andre Powell
Subject: Re: Updated MFIN deck
Attachments: 20171211 Tax Estimates.pptx

Hi Doug, Paul,

Here is the ^{s.12; s.13; s.17} you requested.

Best,
Carl

2017-12-11 18:24 GMT-08:00 Carl Black <cblack@deetken.com>:

Hi Doug,

Here is the updated set of slides, including the analysis discussed today (slides 53 - 58, 75, 77). Please note the following differences from the deck Dave has:

s.12; s.13; s.17

Please let us know with questions.

Best,
Carl

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501-1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

--

Page 223 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 224 of 390

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 225 of 390 to/à Page 226 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Andre Powell <apowell@deetken.com>
Sent: December 11, 2017 8:18 PM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Cc: Carl Black; XT:Lepine, Elise HLTH:IN
Subject: Updated Deck
Attachments: 20171211 - Briefing Summary - MFIN v.2.pptx

Hi Doug and Paul,

Attached is an updated deck. We noticed a couple of small changes were needed on pg 23 related to units. Please see attached.

Best Regards,

André



Management Consulting
Asset Management



André Powell
Managing Partner
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
apowell@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (778) 999-1924

Visit The Deetken Group online at www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 228 of 390 to/à Page 301 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 302 of 390

Withheld pursuant to/removed as

s.17; s.12; s.13

Page 303 of 390 to/à Page 305 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 11, 2017 9:35 PM
To: Flanagan, Paul FIN:EX
Subject: FW: Updated Deck
Attachments: 20171211 - Briefing Summary - MFIN v.2.pptx; 20171029 - financial review - Risk Sharing.pptx; LNG - 2017 - DF1.doc

I attached the latest consolidated deck (merging MEMPR and Finance from Carl).
I also attach Elise's earlier risk sharing deck on returns and price sensitivities.
I also attach a draft of the note.

I've made a bunch of changes, as you can see.

s.12; s.13; s.17

Thoughts?

d.

From: Andre Powell [mailto:apowell@deetken.com]
Sent: Monday, December 11, 2017 8:18 PM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Cc: Carl Black; Elise Lepine
Subject: Updated Deck

Hi Doug and Paul,

Attached is an updated deck. We noticed a couple of small changes were needed on pg 23 related to units. Please see attached.

Best Regards,

André

The Deetken Group

Management Consulting
Asset Management



André Powell
Managing Partner
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
apowell@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (778) 999-1924

Visit The Deetken Group online at www.deetken.com

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Page 308 of 390

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 309 of 390 to/à Page 310 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Prepared as information in preparation of meetings amongst the Ministers of Finance, Energy, Mines and Petroleum Resources and the Premier on December 13 – 14, 2017.

DATE PREPARED:**TITLE: LNG Project Competitiveness****ISSUE: MEMPR Request for Provincial Measures to Address LNG Competitiveness****BACKGROUND:**

Over the past 18 months, a number of major LNG projects have either been cancelled or put on hold. However, more recently LNG Canada (Shell and its partners) and Kitimat LNG (Chevron and its partners) have indicated a continued interest in moving their projects forward. In particular, LNG Canada intends to reach a final investment decision (FID) on its pending project in July 2018. (See Appendix 1 for terms/definitions).

The Ministry of Energy, Mines and Petroleum Resources (MEMPR) has been working closely with its consultant and LNG Canada on the economics of their project with a focus on competitiveness. s.12; s.13; s.17

s.12; s.13; s.17

s.12; s.13; s.17

Analysis of the Analysis

Ministry of Finance staff have reviewed the analysis done by LNG Canada and MEMPR as follows:

s.12; s.13; s.17

s.12; s.13; s.17

Most analysts are projecting a growing demand for natural gas in Asia driven by economic growth and countries wanting to produce electricity with natural gas rather than coal. As such, investors are becoming more interested in selling into the Asia market. It is estimated that current projected demand will exceed supply by 2024; that the demand/supply gap will

increase to about 100 million tonnes LNG per year by 2029; and that this will continue to increase beyond that date.

Indications are that competitive pressures with US gas production will likely keep the cost of BC gas low. LNG Canada has looked at nine price assumptions; low, medium and high prices for both the cost of natural gas in BC and the price of LNG in Asia, and modelled the project's rate of return in the following table.

s.12; s.13; s.17

Page 316 of 390 to/à Page 319 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

APPENDIX 1 – LNG TERMS

LNG

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane C₂H₆) that has been converted to liquid form for ease and safety of storage or transport. It takes up about 1/600th the volume of natural gas in the gaseous state (at standard conditions for temperature and pressure). It is odorless, colorless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water, and heavy hydrocarbons. The natural gas is then condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162 °C (-260 °F).

In a typical LNG process the gas is first extracted and transported to a processing plant where it is purified by removing any condensates such as water, oil, mud, as well as other gases such as CO₂ and H₂S. The LNG processing plant will consist of one or more *trains* where each train can process a certain amount of natural gas. Each train will have an annual output capacity of about 6 million tonnes annually. A large LNG facility will consist of two trains, such as the one proposed by LNG Canada. LNG is stored in storage tanks and can be loaded and shipped.

BC LNG Project

LNG proposed projects for Northwest of BC consist of the following three pieces:

Source of Natural Gas: A steady long term source of natural gas is required. Some proposed projects will own their own wells in BC and/or Alberta while others might contract with third parties for the gas.

Pipeline to the Coast: There are no existing pipelines to the Northwest of BC. The cost of a pipeline is in the neighbourhood of \$7 billion.

LNG Facility: A 12 million tonne per year capacity plant would cost approximately \$14 billion in total and take four to five years to complete. The plant consists of the liquefaction machinery, storage facility and a jetty for loading the LNG to ships.

Final Investment Decision (FID)

LNG projects considering an investment will reach a point of making a final investment decision. This process can be different for each project. For the major projects a final investment decision is a declaration of proceeding to construct a facility with no turning back.

Greenfield versus Brownfield

Greenfield refers to a site for an industrial project that is built from the ground up. Brownfield refers to an existing industrial site that can accommodate a project at a lower cost because it will have existing infrastructure and hence has a lower construction cost.

Units of measurement

Giga-joule: usual measurement of units of natural gas purchased for residential use. One giga-joule is 1,055 Btu's.

Tonnes of LNG: The usual measure of LNG processing plants' annual capacity to produce the product is in millions of tonnes. One million tonnes of LNG is equivalent to 48 billion cubic feet of natural gas.

British thermal unit (Btu): A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

MMBtu: one million btu's. This is an important measure in any analysis of the LNG industry because it is used as the unit of measure for looking at costs and revenue from an LNG project. For example, the sales price in Asia of natural gas might be \$12.00 per MMBtu, and cost of LNG delivered to Asia is \$10.00 per MMBtu. A two train LNG facility with annual capacity of 12 million tonnes of LNG will produce 600 million MMBtu's.

Present Value

Present value is a tool used in the analysis of LNG projects because the investment lasts decades (e.g. over 40 years) and revenue and costs are not necessarily constant.

Present value is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential. Time value can be described with the simplified phrase, "A dollar today is worth more than a dollar tomorrow".

In calculating present value of an income stream the key assumption is the discount rate. For investors considering a particular investment, the discount rate should at least include inflation plus some rate of return that is at least as robust as alternative investments. For governments the appropriate discount rate applied to a revenue stream can be quite different than that of the investor. For example, government might have a very high discount rate if the objective is to realize revenue early.

Government Levies Applicable to LNG

The major government levies applicable to LNG are income taxes, consumption taxes and royalties.

Consumption taxes

Provincial Sales Tax: Consistent throughout several years of discussions with the industry they have asked that their proposed facility be exempt from PST. s.12; s.13; s.17

s.12; s.13; s.17

Carbon Tax: LNG facilities need a significant power source for the liquefaction machinery. LNG projects are planning on producing most of the electricity with gas powered electrical generators. As such carbon tax is a significant operating cost.

Royalties: Most of the natural gas will be sourced from western Canada wells and royalties will be paid to the province where the gas is from.

Income Taxes: Both federal and provincial corporate income tax applies to income from the LNG facility. Apart from seeking accelerated depreciation for their project, the industry has few concerns about corporate income tax.

s.12; s.13; s.17

For both corporate income tax and the LNG Income Tax an important concept is that of **transfer pricing**. Transfer pricing refers to the rules and methods for pricing transactions between enterprises under common ownership or control. Because of the potential for cross-border controlled transactions to distort taxable income, tax authorities in many countries can adjust intragroup transfer prices that differ from what would have been charged by unrelated enterprises dealing at arm's length. Many countries including Canada adopt the OECD methodologies for transfer pricing.

s.12; s.13; s.17

s.12; s.13; s.17

Finance evaluation: There is variability in shipping costs and further verification will be needed to confirm what the actual shipping costs are for LNG Canada, as well as the true competitive gap overall.

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 12, 2017 9:44 AM
To: Flanagan, Paul FIN:EX
Subject: Re: LNG - 2017 - DF2 - pf clean.doc

s.12; s.13; s.17

D

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Flanagan, Paul FIN:EX
Sent: Tuesday, December 12, 2017 9:41 AM
To: Foster, Doug FIN:EX
Subject: LNG - 2017 - DF2 - pf clean.doc

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 12, 2017 4:35 PM
To: Michell, Jennifer FIN:EX
Cc: Flanagan, Paul FIN:EX; Wanamaker, Lori FIN:EX
Subject: LNG briefing material
Attachments: LNG - 2017 - DF3 - clean.doc

Jenn, the attached has been ok'd to be sent to the MO for tomorrow's briefing with the Minister at 11:30AM.

Paul/Lori, I amended the Finance Evaluation of Instruments section so it coincides with the table earlier, and addresses each element.

d.

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Prepared as information in preparation of meetings amongst the Ministers of Finance, Energy, Mines and Petroleum Resources and the Premier on December 13 – 14, 2017.

DATE PREPARED:**TITLE: LNG Project Competitiveness****ISSUE: MEMPR Request for Provincial Measures to Address LNG Competitiveness****BACKGROUND:**

Over the past 18 months, a number of major LNG projects have either been cancelled or put on hold. However, more recently LNG Canada (Shell and its partners) and Kitimat LNG (Chevron and its partners) have indicated a continued interest in moving their projects forward. In particular, LNG Canada intends to reach a final investment decision (FID) on its pending project in July 2018. (See Appendix 1 for terms/definitions in this note).

The Ministry of Energy, Mines and Petroleum Resources (MEMPR) has been working closely with its consultant and LNG Canada on the economics of their project with a focus on competitiveness. s.12; s.13; s.17

s.12; s.13; s.17

s.12; s.13; s.17

Analysis of the Analysis

Ministry of Finance staff have reviewed the analysis done by LNG Canada and MEMPR as follows:

s.12; s.13; s.17

Most analysts are projecting a growing demand for natural gas in Asia driven by economic growth and countries wanting to produce electricity with natural gas rather than coal. As such, investors are becoming more interested in selling into the Asia market. It is estimated that current projected demand will exceed supply by 2024; that the demand/supply gap will increase to about 100 million tonnes LNG per year by 2029; and that this will continue to increase beyond that date.

Indications are that competitive pressures with US gas production will likely keep the cost of BC gas low. LNG Canada has looked at nine price assumptions; low, medium and high prices for both the cost of natural gas in BC and the price of LNG in Asia, and modelled the project's rate of return in the following table.

s.12; s.13; s.17

Page 331 of 390 to/à Page 332 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 333 of 390

Withheld pursuant to/removed as

s.13; s.12; s.17

Page 334 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 335 of 390

Withheld pursuant to/removed as

s.13; s.17; s.12

APPENDIX 1 – LNG TERMS

LNG

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane C₂H₆) that has been converted to liquid form for ease and safety of storage or transport. It takes up about 1/600th the volume of natural gas in the gaseous state (at standard conditions for temperature and pressure). It is odorless, colorless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water, and heavy hydrocarbons. The natural gas is then condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162 °C (-260 °F).

In a typical LNG process the gas is first extracted and transported to a processing plant where it is purified by removing any condensates such as water, oil, mud, as well as other gases such as CO₂ and H₂S. The LNG processing plant will consist of one or more *trains* where each train can process a certain amount of natural gas. Each train will have an annual output capacity of about 6 million tonnes annually. A large LNG facility will consist of two trains, such as the one proposed by LNG Canada. LNG is stored in storage tanks and can be loaded and shipped.

BC LNG Project

LNG proposed projects for Northwest of BC consist of the following three pieces:

Source of Natural Gas: A steady long term source of natural gas is required. Some proposed projects will own their own wells in BC and/or Alberta while others might contract with third parties for the gas.

Pipeline to the Coast: There are no existing pipelines to the Northwest of BC. The cost of a pipeline is in the neighborhood of \$7 billion.

LNG Facility: A 12 million tonne per year capacity plant would cost approximately \$14 billion in total and take four to five years to complete. The plant consists of the liquefaction machinery, storage facility and a jetty for loading the LNG to ships.

Final Investment Decision (FID)

LNG projects considering an investment will reach a point of making a final investment decision. This process can be different for each project. For the major projects a final investment decision is a declaration of proceeding to construct a facility with no turning back.

Greenfield versus Brownfield

Greenfield refers to a site for an industrial project that is built from the ground up. Brownfield refers to an existing industrial site that can accommodate a project at a lower cost because it will have existing infrastructure and hence has a lower construction cost.

Units of measurement

Giga-joule: usual measurement of units of natural gas purchased for residential use. One giga-joule is 1,055 Btu's.

Tonnes of LNG: The usual measure of LNG processing plants' annual capacity to produce the product is in millions of tonnes. One million tonnes of LNG is equivalent to 48 billion cubic feet of natural gas.

British thermal unit (Btu): A traditional unit of heat; it is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

MMBtu: one million btu's. This is an important measure in any analysis of the LNG industry because it is used as the unit of measure for looking at costs and revenue from an LNG project. For example, the sales price in Asia of natural gas might be \$12.00 per MMBtu, and cost of LNG delivered to Asia is \$10.00 per MMBtu. A two train LNG facility with annual capacity of 12 million tonnes of LNG will produce 600 million MMBtu's.

Present Value

Present value is a tool used in the analysis of LNG projects because the investment lasts decades (e.g. over 40 years) and revenue and costs are not necessarily constant.

Present value is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential. Time value can be described with the simplified phrase, "A dollar today is worth more than a dollar tomorrow".

In calculated present value of an income stream the key assumption is the discount rate. For investors considering a particular investment, the discount rate should at least include inflation plus some rate of return that is at least as robust as alternative investments. For governments the appropriate discount rate applied to a revenue stream can be quite different than that of the investor. For example, government might have a very high discount rate if the objective is to realize revenue early.

Government Levies Applicable to LNG

The major government levies applicable to LNG are income taxes, consumption taxes and royalties.

Consumption taxes

Provincial Sales Tax: Consistent throughout several years of discussions with the industry they have asked that their proposed facility be exempt from PST. The response given by
s.12; s.13; s.17

Carbon Tax: LNG facilities need a significant power source for the liquefaction machinery. LNG projects are planning on producing most of the electricity with gas powered electrical generators. As such carbon tax is a significant operating cost.

Royalties: Most of the natural gas will be sourced from western Canada wells and royalties will be paid to the province where the gas is from.

Income Taxes: Both federal and provincial corporate income tax applies to income from the LNG facility. Apart from seeking accelerated depreciation for their project, the industry has few concerns about corporate income tax.

s.12; s.13; s.17

For both corporate income tax and the LNG Income Tax an important concept is that of **transfer pricing**. Transfer pricing refers to the rules and methods for pricing transactions between enterprises under common ownership or control. Because of the potential for cross-border controlled transactions to distort taxable income, tax authorities in many countries can adjust intragroup transfer prices that differ from what would have been charged by unrelated enterprises dealing at arm's length. Many countries including Canada adopt the OECD methodologies for transfer pricing.

s.12; s.13; s.17

s.12; s.13; s.17

Finance evaluation: There is variability in shipping costs and further verification will be needed to confirm what the actual shipping costs are for LNG Canada, as well as the true competitive gap overall.

Justesen, Josh T FIN:EX

From: Carl Black <cblack@deetken.com>
Sent: December 12, 2017 5:25 PM
To: Foster, Doug FIN:EX
Cc: XT:Lepine, Elise HLTH:IN; Andre Powell
Subject: Notes on Slides 53 and 54.

Hi Doug,

s.12; s.13; s.17

Best,
Carl

--



Management Consulting
Asset Management



Carl Black
Principal
Suite 501–1755 W. Broadway,
Vancouver, BC V6J 4S5
cblack@deetken.com
Office: +1 (604) 731-4424
Cell: +1 (604) 728-3751

Learn more about Deetken Horizon, our machine intelligence team at www.deetken.com/deetkenhorizon

The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 15, 2017 2:14 PM
To: Foster, Doug FIN:EX
Subject: s.12; s.13; doc
Attachments: s.17 doc

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS:

Page 344 of 390 to/à Page 348 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Foster, Doug FIN:EX
Sent: December 15, 2017 3:58 PM
To: Wanamaker, Lori FIN:EX
Cc: Flanagan, Paul FIN:EX
Subject: BN on implications - lng measures
Attachments: s.12; s.13; criteria note.doc
~ 17

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Additional information on proposed measures and implications, as well as legal advice on how commitments should/or should not be expressed.

Page 351 of 390 to/à Page 356 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 17, 2017 10:58 AM
To: Foster, Doug FIN:EX; Wanamaker, Lori FIN:EX
Cc: Taylor, Matthew AG:EX
Subject: RE:s.13 Draft 1

s.13

Paul

From: Foster, Doug FIN:EX
Sent: Friday, December 15, 2017 8:55 PM
To: Flanagan, Paul FIN:EX; Wanamaker, Lori FIN:EX
Cc: Taylor, Matthew JAG:EX
Subject: FW:s.13 Draft 1

forgot to forward you the latest I got from Ines.
d

From: Piccinino, Ines MNGD:EX
Sent: Friday, December 15, 2017 4:56 PM
To: Foster, Doug FIN:EX
Cc: Nikolejsin, Dave MNGD:EX
Subject:s.13 Draft 1

Hi, Doug,

s.13 Let me know if you want to discuss please – it will likely evolve considerably before we get to a final document. I'll be in the office all next week.

Hope you have a nice weekend!

Ines

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 17, 2017 11:28 AM
To: Foster, Doug FIN:EX; Wanamaker, Lori FIN:EX
Subject: s.12; s.13; - criteria note - DF1 dec 17.doc
Attachments: s.17 - criteria note - DF1 dec 17.doc

I added the following to show s.12; s.13; s.17

s.12; s.13; s.17

s.22

s.12; s.13; s.17

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017
Updated: December 15, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Additional information on proposed measures and implications, as well as legal advice on how commitments should/or should not be expressed.

Page 361 of 390 to/à Page 368 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 17, 2017 12:18 PM
To: Foster, Doug FIN:EX
Cc: Wanamaker, Lori FIN:EX
Subject: s.12; s.13; - criteria note - DF1 dec 17.doc
- 17

s.12; s.13; s.17

Sent from my iPhone

On Dec 17, 2017, at 11:31 AM, Foster, Doug FIN:EX <Doug.Foster@gov.bc.ca> wrote:

Thanks my friend.
s.12; s.13; s.17

s.22

D.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Flanagan, Paul FIN:EX
Sent: Sunday, December 17, 2017 11:28 AM
To: Foster, Doug FIN:EX; Wanamaker, Lori FIN:EX
Subject: s.12; s.13; - criteria note - DF1 dec 17.doc

s.12; s.13; s.17; s.22

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 18, 2017 8:25 AM
To: Foster, Doug FIN:EX; Wanamaker, Lori FIN:EX; Michell, Jennifer FIN:EX
Subject: s.12; s.13; · criteria note - DF1.doc
Attachments: s.17 · criteria note - DF1.doc

I added a bit on electricity.

Ministry of Finance
BRIEFING DOCUMENT

To: Honourable Carole James
Minister of Finance
And Deputy Premier

Date Requested: December 5, 2017
Date Required: December 11, 2017
Updated: December 15, 2017

Initiated by: Paul Flanagan

Date Prepared:

Ministry
Contact: Paul Flanagan

Phone Number: 778 698-5828
Email: Paul.Flanagan@gov.bc.ca

Doug Foster

Phone Number: 250 387-9022 **Contact:**
Email: Doug.Foster@gov.bc.ca

Cliff #:

TITLE: LNG Project Competitiveness

PURPOSE:
(X) FOR INFORMATION

COMMENTS: Additional information on proposed measures and implications, as well as legal advice on how commitments should/or should not be expressed.

Page 372 of 390 to/à Page 374 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Page 375 of 390

Withheld pursuant to/removed as

s.13; s.17; s.12

Page 376 of 390 to/à Page 379 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Wanamaker, Lori FIN:EX
Sent: December 19, 2017 11:33 AM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Subject: Fw: LNG Competitiveness Implementation s.12; s.13; s.17 pptx
Attachments: LNG Competitiveness Implementation s.12; s.13; s.17 pptx

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Nikolejsin, Dave MNGD:EX
Sent: Tuesday, December 19, 2017 10:25 AM
To: Wright, Don J. PREM:EX
Cc: Wanamaker, Lori FIN:EX
Subject: LNG Competitiveness Implementation s.12; s.13; s.17 pptx

s.12; s.13; s.17

Page 381 of 390 to/à Page 387 of 390

Withheld pursuant to/removed as

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 19, 2017 1:22 PM
To: Foster, Doug FIN:EX; Wanamaker, Lori FIN:EX
Subject: RE: LNG Competitiveness Implementation_s.12; s.13; s.17 pptx

s.12; s.13; s.17

From: Foster, Doug FIN:EX
Sent: Tuesday, December 19, 2017 1:11 PM
To: Wanamaker, Lori FIN:EX; Flanagan, Paul FIN:EX
Subject: RE: LNG Competitiveness Implementation_s.12; s.13; s.17 pptx

s.12; s.13; s.17

d.

From: Wanamaker, Lori FIN:EX
Sent: Tuesday, December 19, 2017 11:33 AM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Subject: Fw: LNG Competitiveness Implementation_s.12; s.13; s.17 pptx

Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Nikolejsin, Dave MNGD:EX <Dave.Nikolejsin@gov.bc.ca>
Sent: Tuesday, December 19, 2017 10:25 AM
To: Wright, Don J. PREM:EX
Cc: Wanamaker, Lori FIN:EX
Subject: LNG Competitiveness Implementation_s.12; s.13; s.17 pptx

s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Flanagan, Paul FIN:EX
Sent: December 19, 2017 10:06 PM
To: Wanamaker, Lori FIN:EX
Cc: Foster, Doug FIN:EX
Subject: Re: LNG Competitiveness Implementation_s.12; s.13; s.17 .pptx

s.12; s.13; s.17

Paul

Sent from my iPhone

On Dec 19, 2017, at 5:01 PM, Wanamaker, Lori FIN:EX <Lori.Wanamaker@gov.bc.ca> wrote:

Paul –s.12; s.13; s.17
Lori

From: Flanagan, Paul FIN:EX
Sent: Tuesday, December 19, 2017 2:19 PM
To: Wanamaker, Lori FIN:EX; Foster, Doug FIN:EX
Subject: RE: LNG Competitiveness Implementation_s.12; s.13; s.17 .pptx
s.12; s.13; s.17

From: Wanamaker, Lori FIN:EX
Sent: Tuesday, December 19, 2017 11:33 AM
To: Foster, Doug FIN:EX; Flanagan, Paul FIN:EX
Subject: Fw: LNG Competitiveness Implementation_s.12; s.13; s.17 .pptx
Sent from my BlackBerry 10 smartphone on the TELUS network.

From: Nikolejsin, Dave MNGD:EX <Dave.Nikolejsin@gov.bc.ca>
Sent: Tuesday, December 19, 2017 10:25 AM
To: Wright, Don J. PREM:EX
Cc: Wanamaker, Lori FIN:EX
Subject: LNG Competitiveness Implementation_s.12; s.13; s.17 .pptx
s.12; s.13; s.17

Justesen, Josh T FIN:EX

From: Wanamaker, Lori FIN:EX
Sent: December 20, 2017 8:19 AM
To: Flanagan, Paul FIN:EX; Foster, Doug FIN:EX
Subject: FW: LNG Competitiveness Implementation_s.12; s.13; s.17 pptx

From: Wanamaker, Lori FIN:EX
Sent: Wednesday, December 20, 2017 8:19 AM
To: Nikolejsin, Dave MNGD:EX; Wright, Don J. PREM:FX
Subject: RE: LNG Competitiveness Implementation_s.12; s.13; s.17 pptx

s.12; s.13; s.17

Lori

From: Nikolejsin, Dave MNGD:EX
Sent: Tuesday, December 19, 2017 10:26 AM
To: Wright, Don J. PREM:EX
Cc: Wanamaker, Lori FIN:EX
Subject: LNG Competitiveness Implementation_s.12; s.13; s.17 .pptx

s.12; s.13; s.17