

MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Tuesday, May 6, 2014 3:17 PM
To: Bernard, Marion M FIN:EX
Subject: Site C Update
Attachments: Site C update1 28April2014.ppt


Hi Marion:

Further to my voice mail, here is a deck that was used to brief Ministers last week. It includes the go-forward dates. Decisions on the EA in the October time frame, and if approved an investment decision by the BC Cabinet in early November.

I spoke with Cheryl Yaremko, BCH's CFO, on Friday. They would be happy to get together on Site C financial impacts and other issues with you and Marie in early June.


Give me a shout if you need more or want to discuss.

Les



**Site C Clean Energy Project
Environmental Assessment
Process Update**


Minister Briefings



Panel Report

- Independent Joint Review Panel – Chair + 2 members
- Public Hearing: December 2013 – January 2014
– 26 sessions in 11 locations in BC and Alberta
- Preparing Panel Report: February – April 2014
- Panel Report expected to be submitted to federal Minister of Environment and Environmental Assessment Office (EAO) Ex. Dir. on May 1


s.12,s.16



Environmental Assessment Office


Permitting Schedule

- BC Hydro is currently submitting permit applications to NRS agencies to meet the construction schedule and some permits will require public advertising
- Delaying permitting applications until after an EA decision would lose one year of construction as clearing must happen first with winter logging
- Permits cannot be issued until after a successful EA decision which is not expected until Sept to Oct. 2014
- Ministries preparing themselves to issue initial permits within 60 days after the EA decision



Key Milestones

- May 1st – Panel expected to submit report to provincial and federal governments
- Joint posting of panel report on EAO and Canadian Environmental Assessment Agency websites shortly after submission (within 1-2 working days)
- Aboriginal consultation on Panel Report, Aboriginal Consultation Report and draft conditions for a provincial Certificate/federal decision statement



Key Milestones

- September 2 – Expected provincial and federal referral date to Ministers
- September 2 to mid-October – Decision window for provincial and federal Ministers
- The deadline for decisions is 174 days (6 months) from submission of the Panel's Report.

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Thursday, May 8, 2014 8:39 AM
To: MacLaren, Les MEM:EX; Nikolejsin, Dave MEM:EX; Marsh, Kyle MEM:EX; Tennant, Laura MEM:EX; Gordon, Matt GCPE:EX; Haslam, David GCPE:EX; Joyce, Tonja GCPE:EX
Subject: Speaking Notes - Final Draft
Attachments: SN_JRPReport_ChrisChanges.docx

Hi All

Here is final draft I am sending up to MBB – incorporates Les’ comments on significant affects, s.13

s.13

s.13

Thanks

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca



SPEAKING POINTS FOR
HON. Bill Bennett
MINISTER OF ENERGY AND MINES
Site C Joint Panel Report

Thursday, May 8, 2014

1:45 p.m.

DRAFT 2

Please check against delivery

Introduction

- Today, the Joint Review Panel report on Site C was released
- This report is part of a three-year environmental assessment process that has included several public comment periods, open houses, two months of public hearings and 29,000 pages of evidence submitted by BC Hydro
- I want to thank the Panel members for their work
- Government will carefully consider the contents and recommendations of this report as it makes a decision on whether Site C receives environmental approval.

Process

- Now that the report has been completed, the BC Environmental Assessment Office and the Federal Environmental Assessment Agency will conduct further First Nations consultation

- Based on the report and this further consultation, they will develop a recommendation for the provincial and federal governments to consider
- This will include the development of conditions for the project to follow, should it be approved, based on BC Hydro's mitigation proposals that have been accepted by the Panel as well as the Panel's recommendations
- The Panel has concluded that the project will have some significant residual environmental and social effects
- We have an obligation to support economic growth but we must balance that with our responsibility to protect the environment
- It is important to recognize that all new electricity generation projects have environmental impacts
- This report is an important part of determining whether the impacts of this project are justified by its benefits

- Government will take the time to carefully consider this report as it makes a decision on the Site C project, including the conditions the project will have to meet, should it receive environmental approval
- Both the province and the federal government will make a decision on environmental approval within six months
- Should the project receive environmental approval, the province must also make a final investment decision

Key Conclusions

- As part of making a final investment decision, I've committed to doing my due diligence to ensure that Site C is the best possible way to meet our future energy needs
- The Panel's report contains some encouraging conclusions:
- On Page 298, the Panel concluded "in the long term, Site C would produce less expensive power than any alternative."

- On Page 305, the Panel concluded that “BC will need new energy and new capacity at some point” and that “Site C would be the least expensive of the alternatives and its cost advantages would increase with the passing decades.”
- On Page 306, the panel makes what I consider to be a very perceptive comment – that a decision on Site C involves “a judgement on the degree to which present consumers should pre-pay the benefits to future generations.”
- This same question faced decision-makers who built the dams on the Peace and the Columbia in the 1960s and 1970s that provide the affordable, reliable and clean electricity that we take for granted today.
- As government makes a final investment decision on Site C, we must weigh our responsibility to make the investments that will ensure our children and grandchildren enjoy the same benefits that previous generations have passed down to us ... with our responsibility to be prudent and limit costs on today’s ratepayers.

Timing

- We know the demand for power is growing – our population is set to increase by 1.1 million people over the next 20 years, our economy is growing, people are using more devices and there are new uses for electricity like shore power and electric vehicles
- We need to build new generation to meet these needs
- But we also have an emerging LNG industry in BC – and any demand from this industry will accelerate the timing on when that new generation is required
- Our initial review of the report indicates that the Panel's calculations with regards to timing do not account for any LNG load even though they conclude that BC Hydro's low LNG forecast is most likely correct
- Based on a low LNG load forecast, BC Hydro expects to have a need for new capacity in 2019 and a need for new energy in 2024

- The low LNG load forecast is quite conservative – for example, if just one large LNG facility decides to use electricity for its ancillary needs - demand would be equal - and in some cases greater than the low forecast
- Or another example – if the Woodfibre LNG project near Squamish goes fully electric, its demand combined with the demand from FortisBC's expansion of its Tilbury LNG plant in Delta, which is already under construction, would be more than twice what is contemplated under the low LNG scenario
- Any demand over and above the low LNG forecast would advance the need for new power even further
- The point here is – it's very difficult to plan your electricity system to the head of a pin – you can never have exactly as much energy as you need, exactly when you need it
- And as the Panel notes, the consequences of insufficient capacity can be severe – brownouts, rolling blackouts and the need to purchase electricity at expensive prices in emergency situations

- We must also remember that Site C is not about providing power in the short term – it would be a long term, 100 year addition to our electricity system

BCUC

- I want to address two of the Panel's recommendations
- First, Recommendation 46, states that the Project costs should be referred to the BCUC for detailed examination
- The Panel made this recommendation because they felt they did not have the time or resources to make a conclusion on the accuracy of the Project cost
- It is important to note that BC Hydro has already had an independent third party, KPMG, review the costs of Site C
- The Panel also noted that the cost estimate has been done to Class 3 standards as set out by the Association for the Advancement of Cost Engineering and includes allowances for inflation and a contingency

- Further, the BCUC will have the opportunity to determine how the costs of Site C are recovered in rates
- Second, Recommendation 48 states that government may wish to consider referring the load forecast and demand side management details to the BCUC
- It is important to note that BC Hydro's load forecasting methodology has already been independently reviewed through a number of BCUC proceedings and the BCUC has accepted BC Hydro's load forecasting methodology
- Further, BC Hydro's current forecast was prepared in 2012 and is currently tracking within a 1% accuracy range to-date
- Lastly, as I have said before, the decision to proceed with Site C is a major public policy decision, most appropriately made by the elected government

Conclusion

- Government will carefully consider this report
- I thank the Panel members for their work
- Happy to take your questions

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Thursday, May 8, 2014 10:32 AM
To: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX; Wieringa, Paul MEM:EX
Subject: FW: MBB Speaking Notes for 1:45 PM
Attachments: SN_JRPReport_MBBFinal.docx

FYI

Chris Sandve

Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

From: Sandve, Chris MEM:EX
Sent: Thursday, May 8, 2014 10:32 AM
To: Mentzelopoulos, Athana GCPE:EX; Gleeson, Kelly T GCPE:EX; Mills, Shane PREM:EX
Cc: Marsh, Kyle MEM:EX; Tennant, Laura MEM:EX; Gordon, Matt GCPE:EX; Haslam, David GCPE:EX; Mitschke, Matt ENV:EX; Strongitharm, Bruce FLNR:EX; Campbell, Carolyn ABR:EX; Bill, Karen F AGRI:EX
Subject: MBB Speaking Notes for 1:45 PM

Final MBB Speaking Notes approved by MBB. Any comments/concerns, please let me know.

Thanks

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca



SPEAKING POINTS FOR
HON. Bill Bennett
MINISTER OF ENERGY AND MINES
Site C Joint Panel Report

Thursday, May 8, 2014

1:45 p.m.

DRAFT 2

Please check against delivery

Introduction

- Today, the Joint Review Panel report on Site C was released
- This report is part of a three-year environmental assessment process that has included several public comment periods, open houses, two months of public hearings and 29,000 pages of evidence submitted by BC Hydro

Process

- Now that the report has been completed, the BC Environmental Assessment Office and the Federal Environmental Assessment Agency will conduct further First Nations consultation and develop a recommendation for the provincial and federal governments to consider
- including the development of conditions for the project to follow, should it be approved, based on BC Hydro's mitigation proposals that have been accepted by the Panel as well as the Panel's recommendations

- The Panel has concluded that the project will have some significant residual environmental and social effects
- It is important to recognize that all new electricity generation projects have environmental impacts
- This report is an important part of determining whether the impacts of this project are justified by its benefits
- Government will take the time to carefully consider this report as it makes a decision on the Site C project, including the conditions the project will have to meet, should it receive environmental approval
- Both the province and the federal government will make a decision on environmental approval within six months
- Should the project receive environmental approval, the province must also make a final investment decision

Key Conclusions

- As part of making a final investment decision, I've committed to doing my due diligence to ensure that Site C is the best possible way to meet our future energy needs
- The Panel's report contains some encouraging conclusions:
- On Page 298, the Panel concluded "in the long term, Site C would produce less expensive power than any alternative."
- On Page 305, the Panel concluded that "BC will need new energy and new capacity at some point" and that "Site C would be the least expensive of the alternatives and its cost advantages would increase with the passing decades."
- As government makes a final investment decision on Site C, we must weigh our responsibility to make the investments that will ensure our children and grandchildren enjoy the same benefits that previous generations have passed down to us ... with our responsibility to be prudent and limit costs on today's ratepayers.

Timing

- We know the demand for power is growing – our population is set to increase by 1.1 million people over the next 20 years, our economy is growing, people are using more devices and there are new uses for electricity like shore power and electric vehicles
- We need to build new generation to meet these needs
- We also have an emerging LNG industry in BC – and any demand from this industry will accelerate the timing on when that new generation is required
- Our initial review of the report indicates that the Panel's calculations with regards to timing do not account for any LNG load even though they conclude that BC Hydro's low LNG forecast is most likely correct
- Based on that low LNG load forecast, BC Hydro expects to have a need for new capacity in 2019 and a need for new energy in 2024

- The low LNG load forecast is quite conservative – for example, if just one large LNG facility decides to use electricity for its ancillary needs - demand would be equal - and in some cases greater than the low forecast
- Or another example – if the Woodfibre LNG project near Squamish goes fully electric, its demand combined with the demand from FortisBC's expansion of its Tilbury LNG plant in Delta, which is already under construction, would be more than twice what is contemplated under the low LNG scenario
- Any demand over and above the low LNG forecast would advance the need for new power even further
- The point here is – it's very difficult to plan your electricity system to the head of a pin – you can never have exactly as much energy as you need, exactly when you need it
- As the Panel noted on Page 305, "the timing of need is necessarily uncertain."

- And as the Panel notes on Page 286, the consequences of insufficient capacity can be severe – brownouts, rolling blackouts and the need to purchase electricity at expensive prices in emergency situations
- We must also remember that Site C is not about providing power in the short term – it would be a long term, 100 year addition to our electricity system

BCUC

- I want to address two of the Panel's recommendations
- First, Recommendation 46, states that the Project costs should be referred to the BCUC for detailed examination
- The Panel made this recommendation because they felt they did not have the time or resources to make a conclusion on the accuracy of the Project cost

- It is important to note that there is 35 years of analysis behind this project and BC Hydro has already had an independent third party, KPMG, review the costs of Site C
- The Panel also noted that the cost estimate has been done to Class 3 standards as set out by the Association for the Advancement of Cost Engineering and includes allowances for inflation and a contingency
- Further, the BCUC will have the opportunity to determine how the costs of Site C are recovered in rates
- Second, Recommendation 48 states that government may wish to consider referring the load forecast and demand side management details to the BCUC
- It is important to note that BC Hydro's load forecasting methodology has already been independently reviewed through a number of BCUC proceedings and the BCUC has accepted BC Hydro's load forecasting methodology
- Further, BC Hydro's current forecast was prepared in 2012 and is currently tracking within a 1% accuracy range to-date

- The Panel also noted on Page 284, that “BC Hydro’s forecasting methods did not differ substantially from best practices among utilities across North America and further states that “BC Hydro has been forthright about some of the factors and judgements that can affect forecasts.”
- Lastly, as I have said before, the decision to proceed with Site C is a major public policy decision, most appropriately made by the elected government

Conclusion

- Government will carefully consider this report
- I thank the Panel members for their work
- Happy to take your questions

Key Facts

- *“A few decades hence, when inflation has worked its eroding way on cost, Site C could appear as a wonderful gift from the ancestors of that future society, just as BC consumers today thank the dam-builders of the 1960s.”*
(Panel’s Reflections - Page 307)
- *“Site C after an initial burst of expenditure would lock in low rates for many decades and would produce fewer greenhouse gas emissions per unit of energy than any source save nuclear.”* (Panel’s Reflections - Page 308)
- BC Hydro is already planning to meet 78% of future demand through conservation (DSM) and a review of DSM savings across 23 utilities throughout North America shows BC Hydro’s savings are the sixth highest in terms of % of sales.
- While rate increases may encourage customers to conserve more, it is important to recognize that BC’s electricity rates remain among the lowest in North America.
- The Panel concludes that “the Proponent has not fully demonstrated the need for the Project on the timetable set forth.” – NOT SO IF LNG LOAD MATERIALIZES

Begin forwarded message:

From: "Today's News Online GCPE:EX" <tno@gov.bc.ca>
Date: May 8, 2014 at 4:42:34 PM PDT
Subject: CKNW: Austin - Site C dam review

CKNW (Vancouver)
CKNW World Today
08-May-2014 15:47

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TNO...

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MacLaren, Les MEM:EX

From: Nikolejsin, Dave MEM:EX
Sent: Tuesday, June 10, 2014 12:36 PM
To: Sandve, Chris MEM:EX; Gordon, Matt GCPE:EX; Bennett, Bill MEM:EX; Tennant, Laura MEM:EX
Cc: MacLaren, Les MEM:EX
Subject: Fwd: Joint Review Panel - Heads-up

FYI

Dave Nikolejsin
Deputy Minister
Energy and Mines

Begin forwarded message:

From: "Murphy, Brian EAO:EX" <Brian.Murphy@gov.bc.ca>
Date: 10 June, 2014 12:33:27 PM PDT
To: "Caul, Doug D EAO:EX" <Doug.Caul@gov.bc.ca>, "Nikolejsin, Dave MEM:EX" <Dave.Nikolejsin@gov.bc.ca>
Cc: "Carr, Michelle EAO:EX" <Michelle.Carr@gov.bc.ca>, "MacLaren, Les MEM:EX" <Les.MacLaren@gov.bc.ca>, "Reay, Gary W FLNR:EX" <Gary.Reay@gov.bc.ca>, "Leake, Greg EAO:EX" <Greg.Leake@gov.bc.ca>
Subject: Joint Review Panel - Heads-up

Doug/Dave:

s.13

Brian

MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Tuesday, June 10, 2014 3:44 PM
To: Sandve, Chris MEM:EX
Cc: Nikolejsin, Dave MEM:EX; Gordon, Matt GCPE:EX; Bennett, Bill MEM:EX; Tennant, Laura MEM:EX; Wieringa, Paul MEM:EX
Subject: Re: Joint Review Panel - Heads-up

s.13

Les

On Jun 10, 2014, at 2:59 PM, "Sandve, Chris MEM:EX" <Chris.Sandve@gov.bc.ca> wrote:

s.13

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

From: Nikolejsin, Dave MEM:EX

Sent: Tuesday, June 10, 2014 12:36 PM

To: Sandve, Chris MEM:EX; Gordon, Matt GCPE:EX; Bennett, Bill MEM:EX; Tennant, Laura MEM:EX

Cc: MacLaren, Les MEM:EX

Subject: Fwd: Joint Review Panel - Heads-up

FYI

Dave Nikolejsin

Deputy Minister

Energy and Mines

Begin forwarded message:

From: "Murphy, Brian EAO:EX" <Brian.Murphy@gov.bc.ca>

Date: 10 June, 2014 12:33:27 PM PDT

To: "Caul, Doug D EAO:EX" <Doug.Caul@gov.bc.ca>, "Nikolejsin, Dave MEM:EX" <Dave.Nikolejsin@gov.bc.ca>

Cc: "Carr, Michelle EAO:EX" <Michelle.Carr@gov.bc.ca>, "MacLaren, Les MEM:EX" <Les.MacLaren@gov.bc.ca>, "Reay, Gary W FLNR:EX" <Gary.Reay@gov.bc.ca>, "Leake, Greg EAO:EX" <Greg.Leake@gov.bc.ca>

Subject: Joint Review Panel - Heads-up

Doug/Dave:

s.13

Brian

2014–2023
Key Highlights

Construction and Maintenance Looking Forward British Columbia

Copyright

¹ This group includes on-site workers – 75 percent of the full construction workforce. Statistical reliability is limited by small populations in some provinces, and in British Columbia, one of the 33 trades and occupations is suppressed.



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² Liquefied natural gas

³ In-mobility refers to the arrival of workers from outside the local construction industry.



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* See "Inter-provincial Employees in Canada" by Christine Laporte and Yuqian Lu, Analytical Studies Branch, Social analysis Division, Statistics Canada, 2013, 11-626, No. 29





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Timely construction forecast data is available online at **www.constructionforecasts.ca**. Create customized reports on a broad range of selected categories within sector, trade or province covering up to 10 years.

For more information, contact:

BuildForce Canada
Phone: 613-569-5552
info@buildforce.ca

February 2014

Funded by the Government of Canada



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MacLaren, Les MEM:EX

From: Frankie Nash <Frankie.Nash@cleanenergybc.org>
Sent: Tuesday, June 17, 2014 7:30 AM
To: Nikolejsin, Dave MEM:EX
Cc: Sandve, Chris MEM:EX; MacLaren, Les MEM:EX
Subject: materials for today's briefing
Attachments: Site C Cost Effectiveness Evaluation - Draft presentation for Minister - June 13 update.pdf; CEBC slides June 17th.pdf; CEBC Briefing Note July 17 2014 v1 PK.docx

Hi Dave,

Please find attached the materials for today's briefing with CEBC, LEI, and Minister Bennett.

Let me know if you have any questions or concerns.

Frankie Nash
Manager, Clean Energy Development and Operations



354-409 Granville Street | Vancouver, BC V6C 1T2, Canada
Office: 604.568.4778 | Toll Free: 1.855.568.4778 | Cell: 778.847.8401 | Fax: 604.568.4724
frankie.nash@cleanenergybc.org

www.cleanenergybc.org

Page 042 to/à Page 061

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s.13;s.17

British Columbia's Clean Energy Legacy

June 17, 2014






All in a days work...

Minister's Mandate Letter

- **"Continue to develop the Site C dam project and support it through the environmental assessment review process."**
- **"Minimize rate increases to consumers and industry at BC Hydro while continuing to replace and build hydro electric and transmission infrastructure."**
- **"Work with the Clean Energy sector to ensure that there remain significant opportunities for renewable energy companies to provide power to British Columbia."**

Over the next 90 minutes we will clearly demonstrate...

- 
- That a diversified Clean Energy portfolio provides a cost effective solution to BC's energy needs
 - That our industry offers diverse and unique benefits province wide
 - That the Clean Energy sector can and should be government's 21st Century Electricity Legacy
 - That we can not only talk the talk, but we can walk the walk: we are ready to go!

Back in the day...

- To put simply, BC's modern Clean Energy industry was born out of government's...
 1. commitment to creating free enterprise energy opportunities, and private sector risk taking
 2. priority to develop and manage natural resources in an environmentally responsible manner.



2014 looks pretty good...

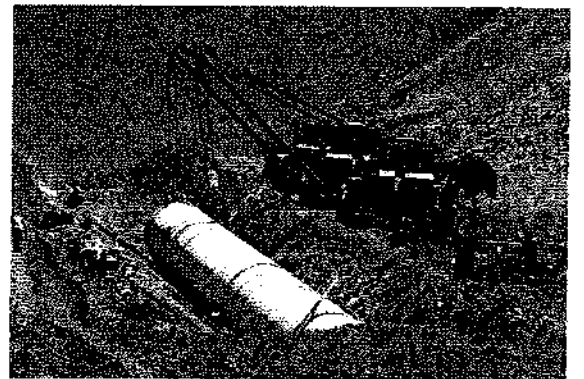
- 82 Clean Energy projects operating across 5 regions in the province
- 21 projects currently being built = \$4 Billion in Capex
 - Total direct construction jobs = 2,850
 - Total income to FNs = \$800 million over life of EPAs
- Distributed economic development for local tax base and Provincial tax benefit
- Average cost of IPP power is \$73/MWh and falling as projects mature.
- We are proud of what we are accomplishing alongside BC Hydro and Government and want to continue to build this lasting legacy infrastructure for BC's future generations.



5

Looking forward...

- Let's put private capital at risk, not ratepayers
- Let's continue to respect our environment and those who rely on it
- Let's enable all corners of the province to participate in this generational opportunity
- Let's enable communities to become self-reliant
- Let's fulfill First Nations aspirations on evolving participation in the sector
- Let's enable current and potential investor interest in the Province
- Let's conserve the jobs and expertise we have built within the sector
- Let's celebrate this free enterprise BC Liberal Government legacy

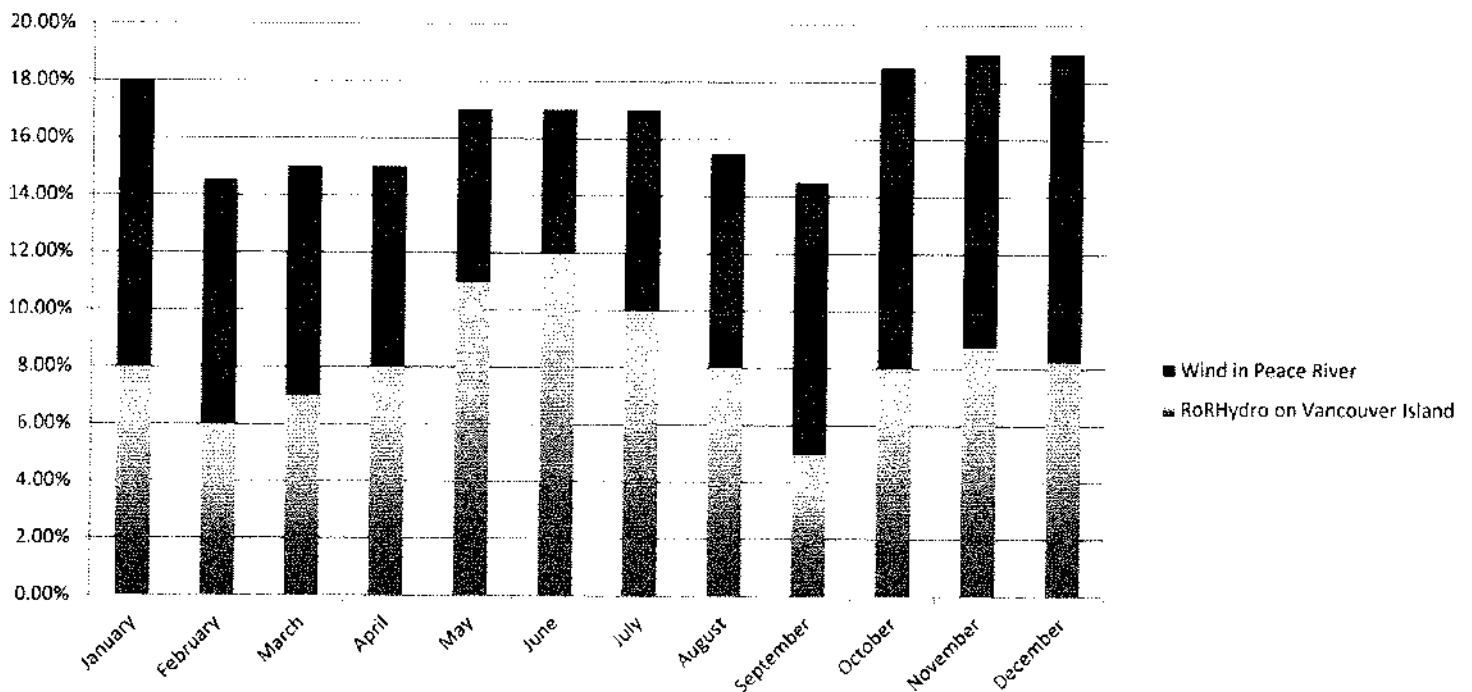


Page 068

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Diversity Creates Capacity: For example Wind from Peace River + Coastal ROR Hydro produces a more stable monthly energy profile.



Source: BC Hydro IRP 8

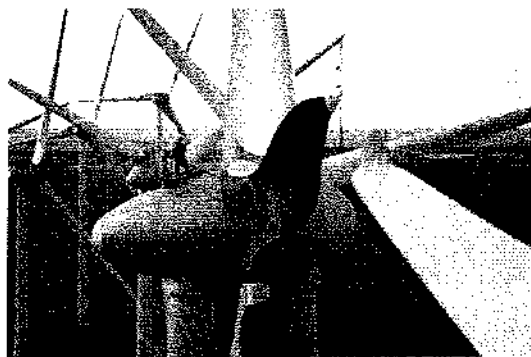
Page 070 to/à Page 071

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s.13;s.17

The real world...

- There are 740 MW of wind projects with an EA certificate and an additional 2,800 MW in the EA process
- There are hundreds of Investigative Licenses for potential hydro and wind projects
- Since 2011, the BC gov't has invested \$5.1m in capacity and equity funding to support clean energy opportunities in 80 Aboriginal communities across BC
- Our sector is mobilized and ready to go!



11

In Conclusion

The Clean Energy portfolio is more than electrons...

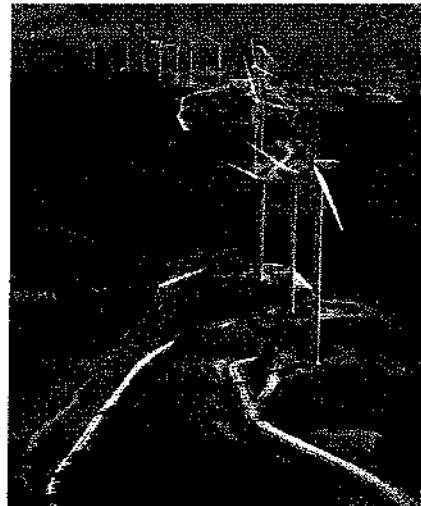
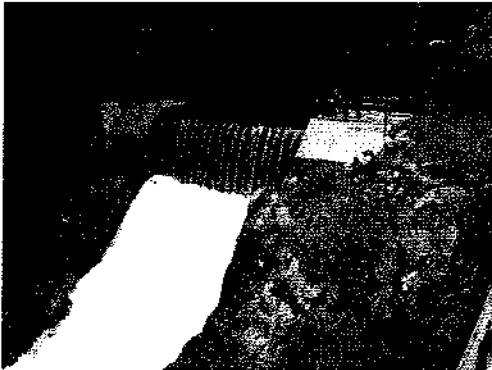
- Distributed rather than “lumpy” investment and input of energy to meet load
- Take capital, schedule, and operating risk
- Technology is only broadening and getting better
- Transformational opportunity for First Nations and communities
- Sustainable build allows for “careers” not just “jobs”
- Lower environmental impact
- Clean Energy portfolio helps you fulfill your mandate letter
- Free enterprise, economic solution



12

Recommendations

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Thank you

Page 076 to/à Page 080

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MacLaren, Les MEM:EX

From: Fitzpatrick, Brigitte MEM:EX
Sent: Tuesday, June 17, 2014 1:25 PM
To: MacLaren, Les MEM:EX
Subject: FW: Material for the meeting with Kiewit tomorrow - June 18th at 8:15am (PVO)
Attachments: Resume - Tones, Ryan 04.2014.pdf; Resume - Glaser, Doug 04.2014.pdf; ECI Target Price Contract Model_Final.pdf

Importance: High

Hi Les, do you want me to try and find someone to print this out for you in Vancouver?

Brigitte

From: Symes, Leslie MEM:EX
Sent: Tuesday, June 17, 2014 10:59 AM
To: Fitzpatrick, Brigitte MEM:EX
Subject: Material for the meeting with Kiewit tomorrow - June 18th at 8:15am (PVO)
Importance: High

Hi, here's some material for the meeting tomorrow in Vancouver with Lorne Valensky. Les is scheduled to staff the Minister.

Leslie Symes
Executive Coordinator
Deputy Minister's Office
Ministry of Energy and Mines
Ministry of Natural Gas Development
and Minister Responsible for Housing
Phone: 250 952-0683

Warning: This email, and any file transmitted with it, is intended only for the use of the individual or organization to whom it is addressed. It may contain information that is privileged or confidential. Any distribution, disclosure, copying, or other use by anyone else is strictly prohibited. If you have received this in error, please telephone or e-mail the sender immediately and delete the message

From: Costa, Sarina MEM:EX
Sent: Tuesday, June 17, 2014 10:45 AM
To: Symes, Leslie MEM:EX
Subject: Material for the meeting with Kiewit tomorrow - June 18th at 8:15am (PVO)

Hi Leslie – attached is some material for the meeting with Lorne Valensky and the reps from Kiewit tomorrow at 8:15am. I understand Les is attending in-person.

Sarina Costa
Administrative Co-ordinator to the
Honourable Bill Bennett
Minister of Energy and Mines and
Minister Responsible for Core Review
250-387-5226

From: Strategies West [<mailto:strategieswest@shaw.ca>]
Sent: Tuesday, June 17, 2014 10:33 AM
To: Sandve, Chris MEM:EX
Cc: Costa, Sarina MEM:EX
Subject: Fw: ECI Target Price Contract Model / Resumes for D.Glaser, R.Tones

Morning Chris and Sarina, hope you are both well.

For the Minister's pre briefing I have attached the resumes of Ryan Tones and Doug Glaser of Kiewit and a two page brief comparing options for price targeting that is used in many jurisdictions.

Thank you again for scheduling this meeting for tomorrow morning. If you have any questions or concerns my cell is (604) 230-1215.

Lorne

Target Price – Best Value Contracts using Early Contractor Involvement (ECI)

Traditional Bid-Build Contracts VS. ECI / Target Price - Best Value Contracts

Traditional Bid-Build

ECI / Target Price

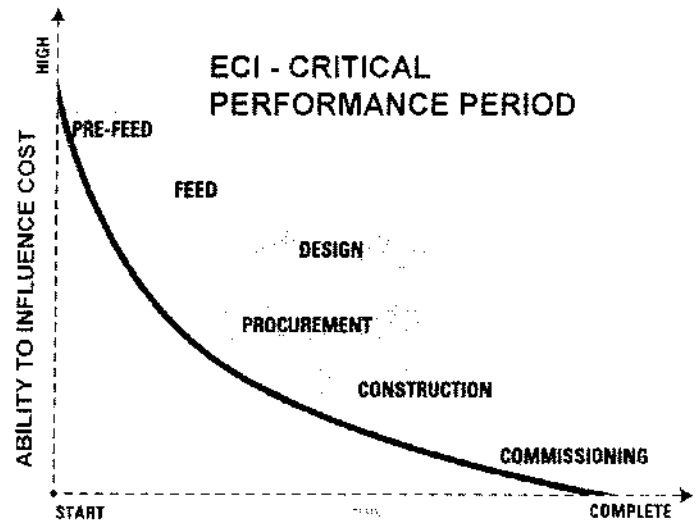
Initial Price	•	•
Preliminary Schedule	•	•
Traditional Contract Model	•	•
Scope of Work Clarity		•
Open, Transparent, and Collaborative Process		•
Risk Understanding / Allocation of the Risk to Best Party		•
Better Change Management Process / Claim Avoidance		•
More Accurate Determination of Final Cost		•
Collaborative Design Process – Optimal Value Engineering		•
Partnership - Alignment of Goals (First Nations, Environment, Local)		•
Pain-Share / Gain-Share – Structured to match the Clients' needs		•
Jointly develop & implement appropriate Labour Strategies		•

Hydro Projects that have successfully used the ECI Model:

- *Tazi Twe Hydroelectric Project, 50MW Generating Station, ~\$550M*
- *Pointe du Bois Spillway Replacement Project, ~\$550M*
- *Keeyask Generating Station, ~\$2,000M*
- *Mayo B Hydro Electric Project, 10MW generating Station, ~\$125M*
- *Lower Mattagami River Project, 271MW generating Station, ~\$2,000M*

General Overview of Early Contractor Involvement (ECI)

- Ability to add the most significant value is in the early stages of the project, which is defined as the ECI Phase
- Client, design engineer and contractor work together to develop the project.
- The process is based on open communication and collaboration
- The ECI process is the first stage of a project's development
- If the ECI process is successful, a 2nd stage is entered into during which a contract is negotiated
- Form of Contract can vary, including Alliance, Target Price, EPC, Unit Price, etc.



- Open, Transparent, Non-adversarial, and Collaborative Partnership
- Best Value for a Project through Value Engineering & Constructability Input
- Mutual Understanding of Logistics and Schedule Constraints
- Focus on making "Best for the Project" Decisions
- Claims Avoidance since Contract Model Promotes Solutions, not Positions
- Fair and Balanced Contract Development
- Jointly Develop & Implement Labour Strategies
- Success in Social License Initiatives (ie. First Nations and Local Communities)

ECI Benefits	SAVINGS	RESEARCH HISTORY	
		COST	
		6 continents	279 organizations
		9 research teams	1,081 projects studied
		21 years	4,000 years' experience
		40 countries	40,000 downloads
		182 team members	\$96 B project value
		2% to 5% of total installed cost	
		\$3 to \$10 payback per \$ spent	
		6% to 25% cost savings	
		6% to 39% schedule reduction	

ECI Return on Investment

An industry study performed by Construction Industry Institute reports that an ECI effort can typically result in the following benefits:

- **Cost Savings between 6% and 25%**
- **Overall Schedule Reduction of 6% to 39%.**

The "cost" of achieving such savings through an ECI effort was identified as being between 2% and 5% of the total installed cost of the project

General Overview of Target Price (or Target Cost) Contracts

- The Target Price is negotiated upfront and the fee or margin is a fixed percentage of cost.
 - This fee percentage is typically less than the equivalent fee which would be added to a Lump Sum Design-Bid-Build Type contract for similar work
 - During the contract term, payments are typically paid on an incurred cost plus fee basis.
 - Incentives are provided to the contractor if the final price is less than the Target Price. Can be in the form of a sharing of the savings accrued below the Target Price
 - If the Target Price is exceeded, the fee may be reduced by an agreed formula.
-
- Gain Share occurs when there are Cost Savings
 - Pain Share occurs when there are Cost Overruns / Contractor's Fee is at Risk
 - Estimating by Open Book Approach / Develops thorough understanding of Assumptions, Costs and Risks
 - Significant Transparency when compared to Lump Sum Design-Bid-Build Type contracts
 - Results in Fair Price for the Project for both Parties
 - Competitive Bench-Marking and Quotations are used for pricing
 - Continue aspects of ECI Collaboration through Construction, such as Value Engineering

Page 086 to/à Page 091

Withheld pursuant to/removed as

s.22

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Monday, July 7, 2014 9:24 AM
To: Bennett, Bill MEM:EX
Cc: Sauder, Kit MEM:EX; Kalaw, Gabby MEM:EX; Gordon, Matt GCPE:EX; MacLaren, Les MEM:EX; Costa, Sarina MEM:EX
Subject: Site C Meetings Update

Hi Minister

Quick update for you on Site C meetings for other Ministers.

The following briefings are scheduled with staff only. I will forward you the briefing materials as soon as I have them from BC Hydro so you can review them in advance of these meetings taking place.

- Minister Letnick – July 9, 2 PM, Vancouver
- Minister Stone – July 11, 9 AM, Victoria
- Minister Oakes, July 22, 4 PM, Vancouver

The following briefings are being setup with both you and the Ministers involved:

- Minister De Jong – tentatively looking at July 14, 9:30 AM, Vancouver
- Minister Rustad – date/time TBD – Sarina is working on this

BC Hydro has also suggested adding an additional two briefings, with you participating:

s.13

Let me know if you are OK with us going ahead and scheduling these two additional meetings.

Thanks

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca



Ref.: 82859

Mr. Stephen Bellringer
Chair
BC Hydro and Power Authority
<contact information removed>

RECEIVED
PROV. AGRICULTURAL
LAND COMMISSION DEC 11 2013

Dear Mr. Bellringer:

Re: Site C and the Agricultural Land Reserve

As you know, the Joint Review Panel has issued a notice of public hearing respecting the Site C Clean Energy Project (Project), with hearings to commence December 9, 2013.

The Province is aware that one of the issues at the hearing will be the effect of the Project on agricultural land, some of which is within the Agricultural Land Reserve. The Province is also aware that BC Hydro has proposed measures to mitigate effects on agricultural resources in the Environmental Impact Statement and expects that these measures will be implemented.

Considering this joint environmental assessment, and its public hearing process under an independent Joint Review Panel, I am writing to inform you that the Government's current view is that this process should not be duplicated respecting these lands by a further process under the *Agricultural Land Commission Act*.

Should the Project receive approval in the environmental assessment process, the Government will take appropriate action to ensure that the requirements of the *Agricultural Land Commission Act* will not apply to any of the lands potentially affected by the Project.

Please feel free to draw this letter to the attention of the Joint Review Panel at the hearing.

Sincerely,

<original signed by>

Bill Bennett
Minister

pc: ✓ Mr. Richard Bullock
Chair
Agriculture Land Commission

Ministry of
Energy and Mines
and Minister Responsible
for Core Review

Office of the
Minister

Mailing Address:
PO Box 9060 Stn Prov Govt
Victoria BC V8W 9E2

Location:
Legislature Building

Site C Clean Energy Project Joint Review Panel

Canadian Environmental Assessment Agency, 160 Elgin Street, 22nd Floor, Ottawa, ON K1A 0H3
British Columbia Environmental Assessment Office, 836 Yates Street, 2nd Floor, Victoria, BC V8W 9V1
SiteCReview@ceaa-acee.gc.ca

January 19, 2014

Brian Underhill and Colin Fry
Executive Directors
<personal information removed>

Sent by e-mail

Subject: Site C Clean Energy Project

Dear Messrs. Underhill and Fry,

I am writing as counsel to the Joint Review Panel conducting the environmental assessment of the Site C Project. During the public hearing, the Panel was provided with a copy of the letter dated December 11, 2013 from The Honourable Bill Bennett, Minister of Energy and Mines, to Mr. Stephen Bellringer, Chair of BC Hydro and Power Authority. The letter advises Mr. Bellringer that

Should the [Site C] Project receive approval in the environmental assessment process, the Government will take appropriate action to ensure that the requirements of the *Agricultural Land Commission Act* will not apply to any of the lands potentially affected by the Project.

Mr. Richard Bullock, Chair of the Agricultural Land Commission, is shown as having received a copy of the letter and a copy is attached for ease of reference.

Under its Terms of Reference, the Panel must include in its assessment of the Project, "an assessment of the environmental, economic, social, health and heritage effects of the Project." The assessment is to consider the significance of the effects, cumulative effects and feasible mitigation measures, and "the capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of the present and those of the future."

The Panel will complete its report and submit it to the federal and provincial governments who will then decide whether to approve the Project.

To assist it in its consideration of the above issues, the Panel would appreciate if the Agricultural Land Commission would provide its written advice as to the process it would

Site C Clean Energy Project Joint Review Panel

Canadian Environmental Assessment Agency, 160 Elgin Street, 22nd Floor, Ottawa, ON K1A 0H3
British Columbia Environmental Assessment Office, 836 Yates Street, 2nd Floor, Victoria, BC V8W 9V1
SiteCReview@ceaa-acee.gc.ca

follow with respect to the effect of the Project on agricultural land, were the Project not excluded from the requirements of the *Agricultural Land Commission Act*.

Please consider the following issues in your reply:

- The topics it expects an applicant to include in the material filed in support of its application,
- The quality and detail of that material,
- The ALC's internal review process, including the competencies available to it in-house and whether it would retain outside experts, and
- The nature of the hearing process, including compelling witnesses to attend and cross-examination.

The Panel would appreciate if the Agricultural Land Commission could provide its advice by January 23th, 2014. Thank you for your consideration of this request.

Sincerely,

<original signed by>

Brian J. Wallace
Counsel to the Joint Review Panel



Agricultural Land Commission

<contact information removed>

January 29, 2014

ALC File #81500-05/Site C

DELIVERED BY E-MAIL

Mr. Brian J. Wallace
Counsel to the Site C Clean Energy Project Joint Review Panel
Canadian Environmental Assessment Agency
BC Environmental Assessment Office

Re: Site C Clean Energy Project Letter

This will acknowledge receipt of your letter dated January 19, 2014 regarding the above. You outline the purpose of your letter as follows:

To assist it in its consideration of the above issues, the Panel would appreciate if the Agricultural Land Commission would provide its written advice as to the process it would follow with respect to the effect of the Project on agricultural land, were the Project not excluded from the requirements of the Agricultural Land Commission Act.

Please consider the following issues in your reply:

- *The topics it expects an applicant to include in the material filed in support of its application,*
- *The quality and detail of that material,*
- *The ALC's internal review process, including the competencies available to it in house and whether it would retain outside experts, and*
- *The nature of the hearing process, including compelling witnesses to attend and cross-examination.*

The ALC finds itself somewhat constrained in responding as some of the particulars of the ALC's process decisions would depend on the details of a particular proposal, including submissions that might be made regarding process issues where a project is a matter of public interest. Having stated this caveat, the ALC is pleased to provide you with the following information regarding applications.

The ALC's mandate and processes are set out in the *Agricultural Land Commission Act (ALCA)*:
http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_02036_01.

The ALC's *Applicant Information Package* summarizes the ALC's application process, information requirements and information the ALC may consider

http://www.alc.gov.bc.ca/How_Do_I/How_Do_I_ALR_Application.htm.

(Please note section titled, *How Does the Commission Make a Decision?* (pages 5 – 6)).

Note that under s. 25(3) of the *ALCA* regarding subdivision and non-farm use applications and s. 30(4) of the *ALCA* regarding exclusion applications, an application to the ALC may not proceed unless (if the land meets the conditions set out in those sections), the application is first authorized by resolution of a local government. Please note as well Parts 7 and 8 of the *Agricultural Land Use, Reserve and Subdivision and Procedure Regulation*, B.C. 171/2002 (as amended) ("the Regulation"), which outline various advertisement and meeting provisions respecting exclusion applications.

The application procedures are set out in the Regulation

http://www.alc.gov.bc.ca/legislation/Reg/ALR_Use-Subd-Proc_Reg.htm.

The topics it expects an applicant to include in the material filed in support of an application, and the quality and detail of that material:

- Detailed property information;
(Land Title Office information regarding Parcel Identifier (PID and legal description))
- Size of parcel(s) under application;
(Obtained from subdivision plans or BC Assessment)
- Current land use of parcel(s) under application;
(Written description and spatial representation – i.e. mapping and satellite imagery such as from Google Maps)
- Current land use of parcel(s) adjacent to the parcel(s) under application;
(Written description and spatial representation – i.e. mapping and satellite imagery such as from Google Maps)
- Proposed land use and details regarding potential direct and indirect impacts either of a temporary or permanent nature;
- Professional Agrologist report indicating extent and quality of land impacted;
(See Below: Professional Reports)
- Land use planning information from local government;
- Positive and negative impacts to agricultural land use on subject parcels and lands adjacent; and
- Proposed impact mitigation measures for larger projects.

(Note: This is done on a case by case basis, an example of which is the ALC's decision regarding its consideration of the South Fraser Perimeter Road (SFPR) – Delta, BC)
http://www.alc.gov.bc.ca/application_status/Docs/38351d1.pdf

Professional Reports

(Note: While the following criteria were developed primarily for resource extraction and fill placement proposals, they also have utility for understanding the agricultural issues associated with applications seeking to exclude land from the ALR, to include land to the ALR, to subdivide or conduct a non-farm use in the ALR.

The ALC requires consistency in the quality and format of technical reports submitted by applicants and their agent(s). The ALC requires a technical report containing the following information for all resource extraction and fill placement proposals.

1. GENERAL REQUIREMENTS

All technical reports submitted in support of applications must meet the following general conditions in order to be considered by the ALC.

- 1.1 Reports are to be prepared by a fully qualified professional capable of preparing resource extraction and fill placement proposals.
- 1.2 The qualified professional must state his/her qualifications and experience in the report and certify that adequate field work was carried out and the report prepared by the signatory author.
- 1.3 A report must contain a statement outlining the objectives of the report, limitations of the report which may be imposed by the intensity of survey, survey scale intensity, resource information used and source, and other limitations which may affect the interpretation of the findings in the report.
- 1.4 The report must be signed by the qualified professional with his/her professional designation attached.
- 1.5 All reports must contain field evidence or qualified citation of others work which adequately support the opinions, findings and conclusions drawn in the report.
- 1.6 Subjective or personal opinion must be clearly distinguished from that supported by field evidence or cited authority.

- 1.7 Submitted reports which, upon review by the ALC's qualified professional, fail to meet these criteria or which may be found to be deficient in other areas will be returned to the applicant for review and re-submission, or rejected outright. The ALC reserves the right to forward questionable reports to the governing professional body of the author for review.

2. LAND REHABILITATION REPORTS FOR EXTRACTION OR FILLING

All technical reports submitted in support of applications involving land rehabilitation must meet the general requirements listed above and contain the following:

- 2.1 A detailed soil survey and agricultural capability analysis of the land(s) under application and any affected or potentially affected neighbouring properties at an appropriate scale.
- 2.2 All existing resource information such as government soil survey and agricultural capability mapping must be included and discussed in the context of the detailed survey described in 2.1.
- 2.3 An inventory and description of existing land use on the land(s) under application and surrounding lands must be included.
- 2.4 An assessment of existing surface and subsurface drainage conditions on the land(s) under application and surrounding lands should be included. In particular, possible drainage improvements apart from the proposed works must be assessed.
- 2.5 A detailed operating and reclamation plan must be prepared and include, but not be limited to, the following elements:
 - a) plans and cross-sections showing existing conditions, interim and final grades drawn at an appropriate scale;
 - b) a topsoil management plan addressing stripping, storage and replacement issues;
 - c) an operating, phasing and rehabilitation plan for the interim non-farm use activity;
 - d) fill certification procedures and site control measures to ensure that only clean soil material is accepted at any site proposed for import of soil from off site;
 - e) detailed drainage plans for the rehabilitated site to ensure optimum surface and subsurface drainage conditions;
 - f) enumeration, consideration and mitigation of any off-site impacts;

- g) schedule of monitoring procedures and reporting;
- h) risk assessment and bonding requirements to ensure adequate reclamation;
- i) final proposed agricultural capability; and
- j) closure procedures and certification of the work.

2.6 A discussion of any agricultural improvement accruing to the land, or any loss of opportunity, which might be attributable to the proposed works described in the report.

3. **REPORTS REGARDING PROPOSED SUBDIVISION OR EXCLUSION APPLICATIONS**

All technical reports submitted in support of these applications must address the following issues where relevant to the requested activity:

- 3.1 A detailed soil survey and agricultural capability assessment at an appropriate scale;
- 3.2 Discussion of current soil survey and agricultural capability assessment in comparison with any existing mapping;
- 3.3 Discussion of soil bound agricultural suitability of the land(s) under application for each agricultural capability unit identified and the overall suitability of the site for agricultural use.
- 3.4 Discussion of non-soil bound agricultural suitability.
- 3.6 An impact analysis considering the effects of the proposed application on the land(s) under application and surrounding lands. Suggest any mitigation measures which might be implemented.

The ALC's internal review process, including the competencies available to it in-house and whether it would retain outside experts.

- As set out in s. 5(1) of the ALCA, appointed Commissioners are selected for their knowledge and expertise relating to agriculture, land use planning, local government and first nation government.
- As set out in s. 8(5) of the ALCA, the chief executive officer may retain consultants considered advisable and may set their remuneration.

The nature of the hearing process, including compelling witnesses to attend and cross-examination

- At its discretion, the ALC can convene public information meetings involving larger scale applications or applications that prompt significant public interest.
- While the ALC has the ability to request any information it believes is relevant to assist in its deliberation of an application, and proceeds on the basis that the applicant bears the practical onus to satisfy the ALC that the application should be granted (which includes responding to questions arising from the application), the ALC has no specific statutory authority to compel witnesses in the application process. If a witness does attend and present evidence (see Regulation, ss. 24 and 25), the Commission has the right to manage its process, including asking any questions commissioners consider appropriate in order to fully inform themselves regarding the matter.

I trust you find this information helpful.

Yours truly,

PROVINCIAL AGRICULTURAL LAND COMMISSION

<original signed by>

Colin Fry, Executive Director

MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Tuesday, July 8, 2014 3:20 PM
To: Sandve, Chris MEM:EX; Nikolejsin, Dave MEM:EX; Bennett, Bill MEM:EX
Cc: Gordon, Matt GCPE:EX; Sauder, Kit MEM:EX
Subject: RE: FYI: Gwen Johansson news conference - July 9
Attachments: BCENV Draft Conditions Site C.PDF

EAO received the attached letter from Hudson's Hope this afternoon seeking an additional 90 days to comment on the draft conditions for EA approval. This may be linked to the news conference tomorrow.

Les

From: MacLaren, Les MEM:EX
Sent: Tuesday, July 8, 2014 11:19 AM
To: Sandve, Chris MEM:EX; Nikolejsin, Dave MEM:EX; Bennett, Bill MEM:EX
Cc: Gordon, Matt GCPE:EX; Sauder, Kit MEM:EX
Subject: RE: FYI: Gwen Johansson news conference - July 9

I asked Brian Murphy at EAO whether there was anything from Hudson Hope's participation in the JRP process that would provide a hint. He notes:

I expect so [my surmising that HH would push for renewables and gas-fired generation] but it appears they never talked alternatives that I can see in their opening and closing submissions to the Panel (attached). They may have seen the push on renewables by Clean Energy BC and the big gas push by other participants and the panel in their report. s.16
over a year now and they may be looking at that as well.

So yes, I guess we will find out tomorrow at 12:30.

Les

From: Sandve, Chris MEM:EX
Sent: Tuesday, July 8, 2014 10:55 AM
To: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX; Bennett, Bill MEM:EX
Cc: Gordon, Matt GCPE:EX; Sauder, Kit MEM:EX
Subject: RE: FYI: Gwen Johansson news conference - July 9

CEBC says it's not their stuff and that they have not worked with Gwen on any review. Other than that, don't have any more details on what review is, where it comes from or what it says ... guess we will find out at 12:30!

Chris Sandve

Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

From: Nikolejsin, Dave MEM:EX
Sent: Tuesday, July 8, 2014 10:03 AM
To: Sandve, Chris MEM:EX; MacLaren, Les MEM:EX; Bennett, Bill MEM:EX



HUDSON'S
HOPE
PLAYGROUND OF THE PEACE

Box 330
9904 Dudley Drive
Hudson's Hope BC V0C 1V0
Telephone 250-783-9901
Fax: 250-783-5741

Mr. Brian Murphy
Executive Project Director
Environmental Assessment Office
PO Box 9426
Stn Prov Govt
Victoria BC V8W 9V1
Tel: 250 387-2402
Fax: 250 356-7477
Brian.Murphy@gov.bc.ca

June 17, 2014

Re: BC ENV Assessment Draft1 Potential Conditions Site C – Response Time Deadline July 11, 2014

Dear Mr. Brian Murphy,

In regard to the response time deadline for the BC Environmental Draft Conditions being July 11, 2014: we the District of Hudson's Hope are the community which will be the most affected by the operation of Site C if it proceeds. We believe that response conditions should apply to both the construction and operational phases of the project since Hudson's Hope is affected by both. Thirty days simply does not allow enough time to assess what is needed to deal with these huge impacts nor allow us to prepare a response in an effective manner: as noted in your email, "...for review and comment...".

We, the District of Hudson's Hope, respectfully request an additional extension deadline of 90 days so we may more appropriately respond to the "Potential Site C Clean Energy Project Conditions Being Contemplated for Inclusion in Either an Environmental Assessment Certificate under British Columbia's Environmental Assessment Act or a Decision Statement under the Canadian Environmental Assessment Act, 2012" document.

Yours truly,

Mayor, Gwen Johansson

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Wednesday, July 9, 2014 8:08 AM
To: Bennett, Bill MEM:EX
Cc: Kalaw, Gabby MEM:EX; Sauder, Kit MEM:EX; Gordon, Matt GCPE:EX; Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX
Subject: Mayor of Hudson Hope interview

- Tremendous impact – lose all of the waterfront properties, 15% to 20% of our land. Roughly 4500 acres. Most attractive properties that we have.
- Mixed feelings in community – we have two dams – have a lot of BC Hydro employees – understand the benefits – it's what pays the bills for many in our communities.
- JRP felt that as far as cost was concerned, they didn't have the information, time or resources so suggested refer to BCUC
- JRP also suggested looking at emerging technologies – once you have a dam, you have it for 100 years and can't look at emerging technologies – i.e. micro-grids, retrofits to existing dams, natural gas co-gen, solar (referenced Kimberley project), geothermal
- Not cheap energy and we don't know over time what the cost will be – JRP did conclude low greenhouse gas emissions though
- We understand the good and the bad because we have 2 dams – what we know for sure is that the impacts are local while the benefits go somewhere else – Hudson Hope has done its bit – we have suffered consequences of Bennett and Peace Canyon and if there are alternatives, we believe we should look closely at them

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

MacLaren, Les MEM:EX

From: Paul Kariya <Paul.Kariya@cleanenergybc.org>
Sent: Thursday, August 28, 2014 8:30 PM
To: MacLaren, Les MEM:EX
Subject: Presentation
Attachments: Site C Cost Effectiveness Evaluation - Minister presentation for BC Hydro.pptx

Thanks Les

As promised

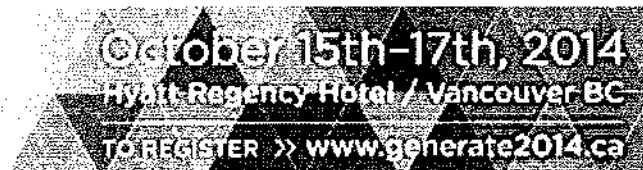
Paul

Paul Kariya
Executive Director



354-409 Granville Street | Vancouver, BC V6C 1T2, Canada
Office: 604.568.4778 | Toll Free: 1.855.568.4778 | Cell: 604.818.1827 | Fax: 604.568.4724
paul.kariya@cleanenergybc.org

www.cleanenergybc.org



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s.13;s.17

Page 117

Withheld pursuant to/removed as

s.22

MacLaren, Les MEM:EX

From: Chace, Julie MEM:EX
Sent: Wednesday, September 3, 2014 2:00 PM
To: Wood, Nancy J MEM:EX
Cc: Symes, Leslie MEM:EX; Wieringa, Paul MEM:EX; MacLaren, Les MEM:EX; Shotton, Ryan GCPE:EX; McNeil, Kevin MEM:EX
Subject: FYI: Site C Presentation
Attachments: Site_C_Caucus 03-09-14v5.pptx

Hi Nancy,

Attached is a revised Caucus deck for Minister Bennett that Les asked me to send to his office via you. Would you mind sending over to Chris?

Thank you very much!

Julie Chace

Director, Transmission and Inter-jurisdiction
Electricity and Alternative Energy Division
Ministry of Energy and Mines

Tel: 250.952.0267

Cell: s.17

From: Nikolejsin, Dave MEM:EX
Sent: Wednesday, September 3, 2014 1:22 PM
To: Chace, Julie MEM:EX
Cc: MacLaren, Les MEM:EX; Wieringa, Paul MEM:EX; Shotton, Ryan GCPE:EX
Subject: Re: FOR YOUR REVIEW: Site C Presentation

Approved

Dave Nikolejsin
Deputy Minister
Energy and Mines

On Sep 3, 2014, at 1:01 PM, "Chace, Julie MEM:EX" <Julie.Chace@gov.bc.ca> wrote:

Hi Dave,

Here is the latest version of Minister Bennett's Caucus presentation on Site C. Once you approve I can send to the MO via Nancy. Please let me know if I can assist with any further edits.

Warm Regards,

Julie Chace

Director, Transmission and Inter-jurisdiction
Electricity and Alternative Energy Division

Ministry of Energy and Mines

Tel: 250.952.0267

Cell: s.17

<Site_C_Caucus 03-09-14v5.pptx>



Ministry of
Energy and Mines



Site C Clean Energy Project: Decision Process

Caucus Presentation

September 10, 2014
(DRAFT 03-9-14 Version 5)

1



Ministry of
Energy and Mines



Agenda

1. History
2. Project Need
3. Alternatives Analysis
4. Next Steps
5. Conclusion

2



Ministry of
Energy and Mines



Site C History

- Site C has been reviewed many times in the last 35 years:
 - **1980:** Application for an Energy Project Certificate - referred to BCUC in 1981
 - **1983:** BCUC concluded Site C was an acceptable project and that impacts could be successfully managed; more work required on need and alternatives.
 - **1989 to 1991:** Site C advanced again; work suspended in 1991 in favour of demand reduction programs and gas-fired generation
 - **2004, 2006 and 2008:** BC Hydro long-term resource plans identified Site C as an attractive, low cost, reliable resource option.
 - **2013:** IRP and Site C Environmental Assessment confirm Site C as an attractive, cost-effective option to meet growing demand.

3



Ministry of
Energy and Mines



Site C History

- BC Hydro's 2013 Integrated Resource Plan (IRP)
 - **Confirms Site C as a cost-effective supply option to meet demand, and recommends building Site C for its earliest in-service date.**
 - IRP also includes offsetting 78% of demand growth with Power Smart and other demand reduction programs, new IPPs under the Standing Offer Program and IPP contract renewals, and BC Hydro expansions/upgrades at Mica and GM Shrum.
 - Clean Energy Strategy to expand Standing Offer Program (for projects under 15 megawatts) allows for some clean power procurement targeted to First Nations partnerships.
 - IRP recommended actions based on project experience, consultant studies and extensive First Nations and stakeholder input, including IPPs.
 - IRP approved by Cabinet November 2013.

4



Ministry of
Energy and Mines



Site C History

- Site C Environmental Assessment (Jan 2013 – Mar 2014)
 - Based on IRP and additional First Nations and stakeholder input.
 - Interested stakeholders included Clean Energy BC, individual IPPs, Canadian Geothermal Association
 - Joint Review Panel agreed that Site C would be the least expensive option over the long term, but questioned the analysis completed to assess needs and alternatives for the project (e.g., demand forecast, geothermal power).
 - Ministry of Energy and Mines has been involved with Clean Energy BC over the past 5 months to look at alternatives and give them an opportunity to establish cost effectiveness of clean energy (wind, run of river, biomass etc.)

5



Ministry of
Energy and Mines



The Need for Electricity has Increased

- BC Hydro's IRP projected 40% demand growth over 20 years (population growth, industrial expansion, more technology)
- May 2014 BC Hydro demand forecast predicts further need due to significant but uncertain industrial growth.
 - Increased oil and gas development in the Peace region.
 - Increased certainty that LNG projects will take power from BC Hydro (e.g., LNG Canada, Woodfibre, FortisBC).
 - Pulp and paper facilities re-opening in the near term.
 - Northwest Transmission accessing new mining opportunities (Red Chris, KSM)
- The IRP contemplated new clean energy procurement if demand exceeds forecasts


6

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s.13,s.17



BRITISH COLUMBIA
Ministry of Energy and Mines



Conclusion

- Site C continues to show rate payer and system benefits:
 - has gone through extensive consultation and review processes; and
 - appears to be the most cost effective resource to meet BC's electricity needs through long-term price and rate certainty, clean supply and a flexible, firm resource.
- The Ministry is undertaking further due diligence to check the different assumptions presented by BC Hydro and Clean Energy BC in order to ensure the Government is able to base the final investment decision on accurate information.
- Commitment to exhaust current avenues of review before making a recommendation to Cabinet.

14

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Monday, September 8, 2014 8:10 AM
To: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX; Sauder, Kit MEM:EX; Haslam, David GCPE:EX; Bennett, Bill MEM:EX
Subject: Bullets for interview with Derrick Penner
Attachments: LEI slides.pptx
Importance: High

Assuming Derrick has all or some of the version attached. Thoughts?

- I've been clear that my commitment as Minister is to ensure that government conducts an in-depth analysis of all options, prior to making a decision on Site C, so that we can be assured we are meeting our future power needs in a way that will keep rates as low as possible and provide ratepayers with the best deal.
- As part of this process, a number of parties, such as the Clean Energy Association and the Canadian Wind Energy Association, are undertaking studies on the costs and risks of Site C and alternatives to Site C.
- My Ministry has been working closely with these associations and with BC Hydro to consider these studies as we develop recommendations for government.
- While the Clean Energy Association and London Economics have not completed their work and while my Ministry is still working with them to conduct an analysis, there are some important observations you should be aware of:
 - s.13,s.17
- s.13,s.17
- s.13,s.17
 - When considering this, it is important to note that while Site C has an overall budget of \$7.9 billion, only \$3.8 billion is related to direct construction costs.
 - The remainder relates to allowances for inflation, interest, indirect costs, sunk costs, First Nations accommodation costs, etc. as well as a contingency of 18% on direct construction costs and 10% on all other costs.

- It is important to note that KPMG has conducted an independent review of the Site C budget.
- BC Hydro has been developing Site C for 35 years and spent \$225 million on engineering work and field investigations.
- As a result, we have a far greater level of information about Site C and its costs than other BC Hydro projects typically have at the final investment decision phase.
- The benefits to Site C are clear.
 - It would be the third dam on the Peace River and would capitalize on the storage capacity of the Williston reservoir – enabling it to generate a third of what’s generated at Bennett with a reservoir just one-twentieth of the size.
 - The power provided by Site C would be both dependable and flexible – there whenever we need it and able to be adjusted to best take advantage of trading opportunities and to better support intermittent resources such as run-of-river and wind.
- It is also important to note the conclusions of the Joint Review Panel with regards to Site C. They said:
 - We will need new energy at some point and that Site C would be the “least expensive” way to get it.
 - “in the long term, Site C would produce less expensive power than any alternative”
 - its “cost advantages would increase with the passing decades”
 - and its value “will only grow over time.”

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: S.17

| E-mail: chris.sandve@gov.bc.ca

Page 129 to/à Page 140

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DUPLICATE

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Tuesday, September 9, 2014 8:55 AM
To: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX; Wieringa, Paul MEM:EX
Subject: FW: Caucus - September 10 at 10:50 am
Attachments: Site C Caucus Final.pptx

FYI

Chris Sandve

Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

From: Sandve, Chris MEM:EX
Sent: Tuesday, September 9, 2014 8:54 AM
To: Pruden, Christie LASS:EX
Cc: Dunn, Greg LASS:EX
Subject: RE: Caucus - September 10 at 10:50 am

Final MBB approved caucus presentation for tomorrow attached

Chris Sandve

Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

From: Pruden, Christie [<mailto:Christie.Pruden@leg.bc.ca>]
Sent: Wednesday, September 3, 2014 4:31 PM
To: Sandve, Chris MEM:EX
Cc: Dunn, Greg LASS:EX
Subject: Caucus - September 10 at 10:50 am

Hi Chris:

I currently have your Minister on the September 10th Caucus agenda for 45 minutes starting at 10:50 am. Please let me know if we can expect a powerpoint or handouts? Thanks.

Christie

Christie Pruden

Director of Operations
BC Government Caucus

East Annex | Parliament Buildings | Victoria | British Columbia | V8V 1X4
Phone: 250-356-6131 | Fax: 250-387-9066 | Email: christie.pruden@leg.bc.ca



Ministry of
Energy and Mines



Site C Clean Energy Project: Decision Process

Government Caucus Presentation

September 10, 2014

1



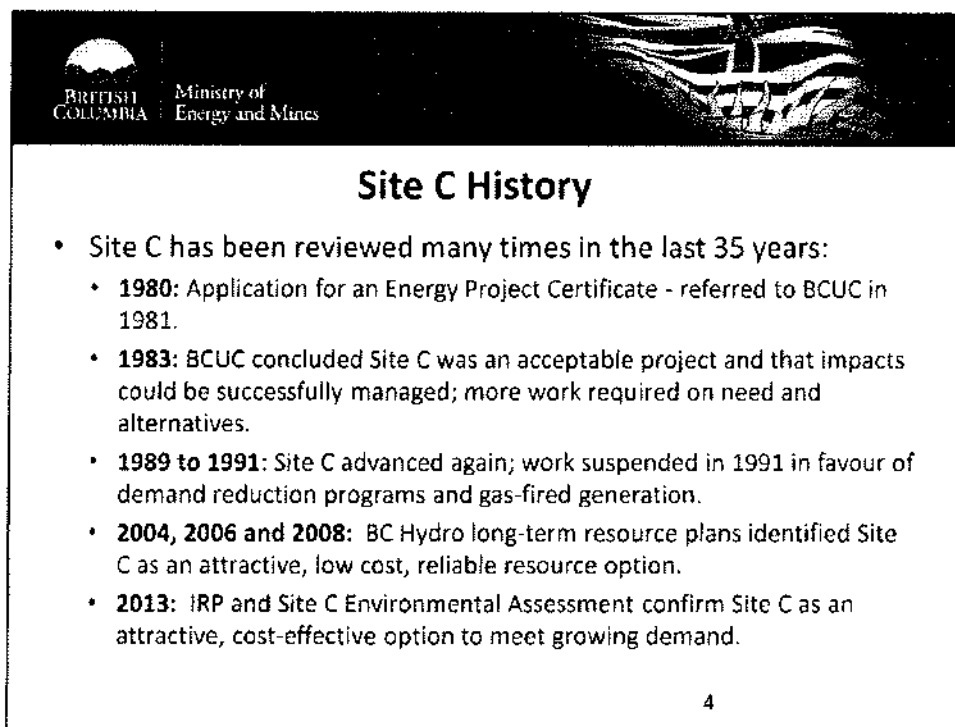
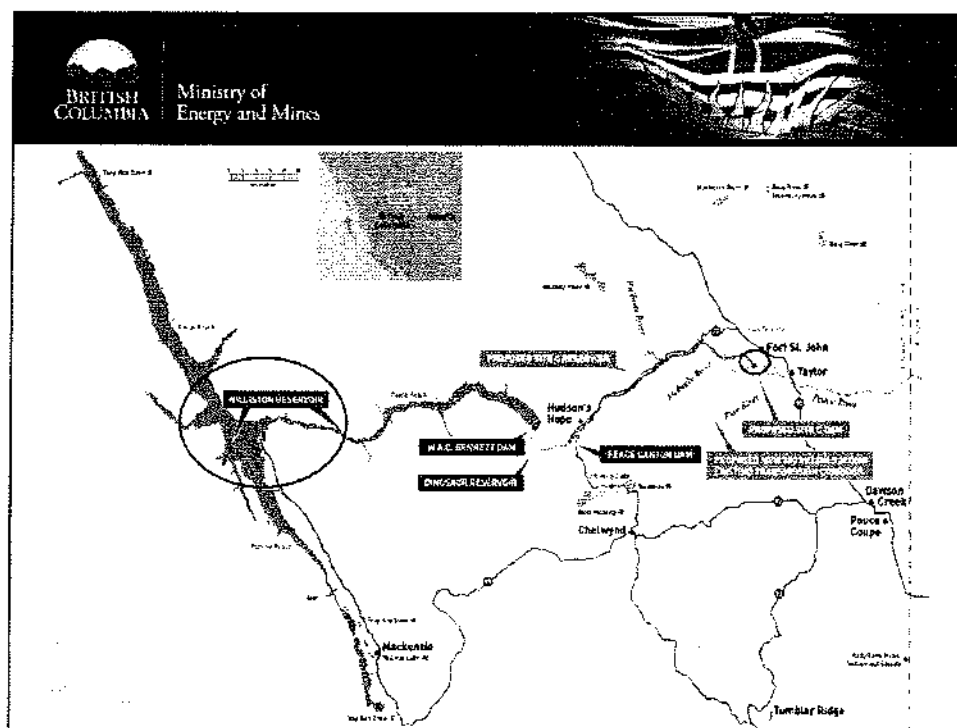
Ministry of
Energy and Mines



Agenda

- Site C History
- The Need for Electricity has Increased
- Clean Energy Association Analysis
- Options to Meet Long-Term Need
- Next Steps
- Conclusion

2





Ministry of
Energy and Mines



Site C History

- BC Hydro's 2013 Integrated Resource Plan (IRP)
 - **Confirms Site C as a cost-effective supply option to meet demand, and recommends building Site C for its earliest in-service date.**
 - IRP also includes offsetting 78% of demand growth with Power Smart and other demand reduction programs, IPP projects currently in development coming online, IPP contract renewals, new IPPs under the Standing Offer Program and BC Hydro expansions/upgrades at Mica and GM Shrum.
 - Clean Energy Strategy to expand Standing Offer Program (for projects under 15 megawatts) allows for some clean power procurement targeted to First Nations partnerships.
 - IRP recommended actions based on project experience, consultant studies and extensive First Nations and stakeholder input, including IPPs.
 - IRP approved by Cabinet, November 2013.

5



Ministry of
Energy and Mines



Site C History

- Site C Environmental Assessment (January 2013 – March 2014)
 - Based on IRP and additional First Nations and stakeholder input.
 - Interested stakeholders included Clean Energy BC, individual IPPs, Canadian Geothermal Association.
 - Joint Review Panel agreed that Site C would be the least expensive option over the long term, but questioned the analysis completed to assess needs and alternatives for the project (e.g. demand forecast, geothermal).
 - Ministry of Energy and Mines has been involved with Clean Energy BC over the past 5 months to look at alternatives and give them every opportunity to establish cost effectiveness of clean energy (wind, run of river, biomass etc.).

6



Ministry of
Energy and Mines



The Need for Electricity has Increased

- BC Hydro's IRP projected 40% demand growth over 20 years (population growth, industrial expansion, more technology).
- May 2014 BC Hydro demand forecast predicts further need due to significant but uncertain industrial growth.
 - Increased oil and gas development in the Peace region.
 - Increased certainty that LNG projects will take power from BC Hydro (e.g., LNG Canada, Woodfibre, FortisBC).
 - Pulp and paper facilities re-opening (Taylor, Mackenzie).
 - Northwest Transmission accessing new mining opportunities (Red Chris, KSM).
- The IRP contemplates a new clean energy procurement if demand exceeds forecasts.
- Current growth forecast is 1% per year after DSM.



Ministry of
Energy and Mines



Energy Vs. Capacity

- **Energy** is the amount of electricity produced or used over a period of time (typically expressed over a year)
- **Dependable Capacity** is the maximum amount of electricity that BC Hydro can supply to meet peak customer demand at **any point in time**

Intermittent

Power that fluctuates or is not available at all times

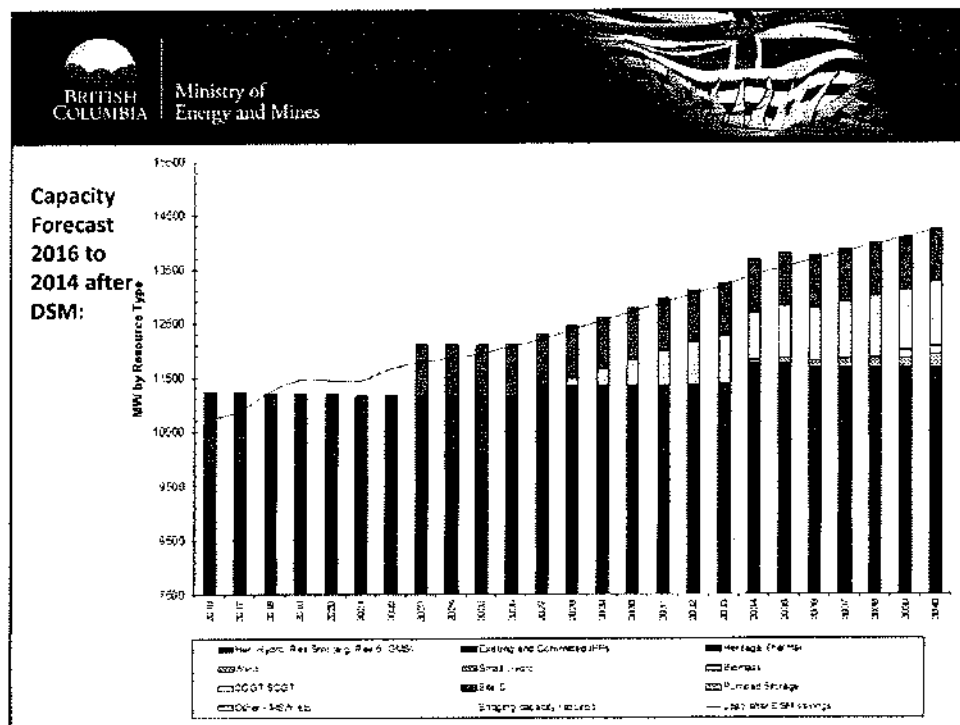
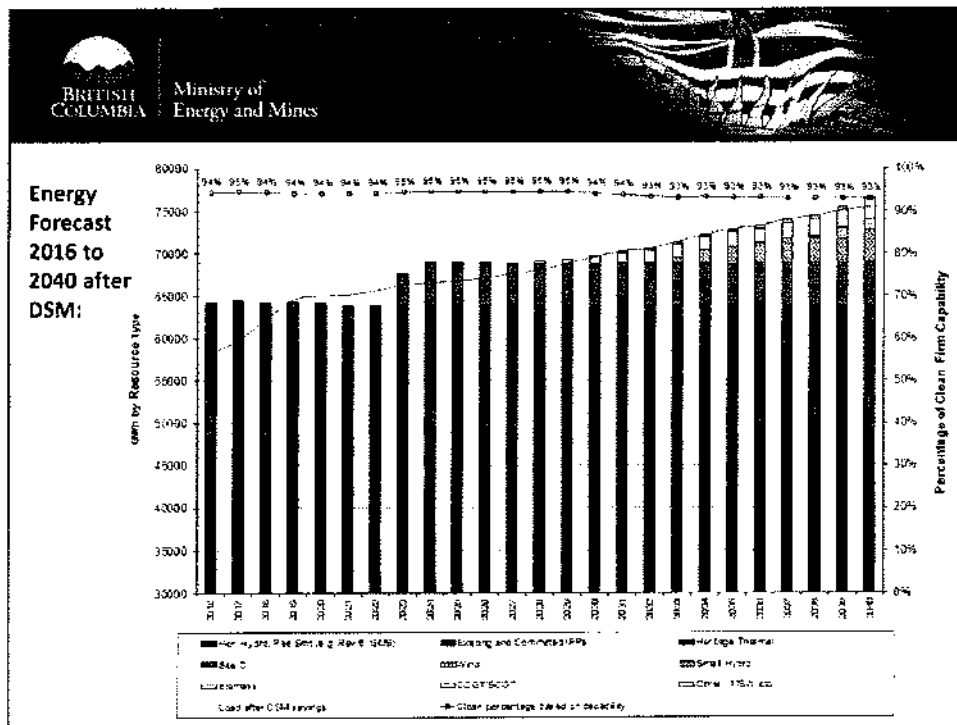
Dependable

Power that can be reliably produced when required

Flexible

Power that can be adjusted to meet conditions and integrate intermittent resources

Resource	Capacity
Run of River	Intermittent
Wind	Intermittent
Bioenergy	Dependable; not flexible
Natural Gas	Dependable; not flexible except for peaker plants
Large Hydro	Dependable and Flexible



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s.13;s.17



Ministry of
Energy and Mines



Conclusion

- Site C continues to show rate payer and system benefits:
 - has gone through extensive consultation and review processes; and
 - appears to be the most cost effective resource to meet BC's electricity needs through long-term price and rate certainty, clean supply and a flexible, firm resource.
- The Ministry is undertaking further due diligence to check the different assumptions presented by BC Hydro and Clean Energy BC in order to ensure the Government is able to base the final investment decision on accurate information.
- Commitment to exhaust all avenues of review and test all assumptions before making a recommendation to Cabinet.

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s.12

Page 155 to/à Page 160

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s.12;s.13;s.17

Page 161

Withheld pursuant to/removed as

s.12

MacLaren, Les MEM:EX

From: Reay, Gary W FLNR:EX
Sent: Friday, October 3, 2014 11:33 AM
To: MacLaren, Les MEM:EX
Cc: Wieringa, Paul MEM:EX; Kriese, Kevin FLNR:EX
Subject: Site C for Ministers mtg - October 6, 2014
Attachments: s.13,s.16

s.12,s.13

I think that's all, let me know if you have any questions.

Gary

From: Blenkin, Sarah FLNR:EX
Sent: Thursday, October 2, 2014 3:28 PM
To: DMO Admin Assistant, FLNR FLNR:EX
Cc: Reay, Gary W FLNR:EX
Subject: 209459 Information note on Site C for Ministers mtg on monday October 6, 2014 (plus 3 attachments)

Good afternoon Signi,

As promised please see attached for Tim's review and approval and then forwarding to Minister Thomson and Bennett's office – Thank you kindly ☺

Sarah Blenkin | Regional Operations North
Executive Assistant to Kevin Kriese, ADM
Ministry of Forests, Lands and Natural Resource Operations
250.952.0596



Enabling the potential of BC's land and natural resources

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s.16;s.13

Page 170 to/à Page 171

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s.16;s.13;s.17

MacLaren, Les MEM:EX

From: Haslam, David GCPE:EX
Sent: Tuesday, October 14, 2014 8:43 AM
To: GCPE Communications - Energy and Mines
Cc: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX; Wieringa, Paul MEM:EX; Chace, Julie MEM:EX
Subject: Final Site C comm materials
Attachments: Info Bulletin_Site C-11Oct14.docx; QA_Site C-12Oct14.doc; Site C update14Oct2014-BJM.ppt; IN_EAO_Site C_Referral1_10Oct2014.doc; QA_MEM_EA Decision on SiteC_Draft 5.docx

Good morning – attached are the final comm materials for the Site C environmental assessment certificate announcement. The IB will go out at 2pm, with a media availability in the press theatre (and dial in option) at 2:30.

Included from EAO are

- IB
- Q/A
- Technical briefing presentation
- IN

MEM

- QA from MEM

Site C project granted environmental assessment approval

VICTORIA – Environment Minister Mary Polak and Forests, Lands and Natural Resource Operations Minister Steve Thomson have issued an environmental assessment certificate to BC Hydro for the Site C Clean Energy project, located 7 km southwest of Fort St. John.

The ministers decided that Site C is in the public interest and that the benefits provided by the project outweigh the risks of significant adverse environmental, social and heritage effects.

The ministers made the decision after considering a cooperative environmental assessment with the federal government that included a joint review panel. The environmental assessment included consultation with and input from Aboriginal groups, government agencies, communities and the public.

The environmental assessment process provided meaningful consultation with Aboriginal groups to understand the potential impacts of Site C on Aboriginal interests and to develop substantive accommodation measures that will avoid, mitigate or offset those potential impacts.

The Province must still decide whether to proceed with the project based on an investment decision. Should the project proceed, the Environmental Assessment Office, consistent with its compliance and enforcement program, will co-ordinate compliance management efforts with other government agencies to ensure that the office is satisfied that certificate conditions are met. In addition, BC Hydro would be required to obtain a variety of provincial permits, through a process coordinated and led by the Ministry of Forests, Lands and Natural Resources Operations.

The ministers issued the certificate with 77 legally-binding conditions that BC Hydro must meet to be in compliance, including:


- Establish a fund of \$20 million to compensate for lost agricultural lands and activities. The funds will be used to support enhancement projects that improve agricultural land, productivity or systems;
- Develop a Wetland Mitigation and Compensation Plan and monitor construction and operation activities that could cause changes in wetland function;
- Develop an Aboriginal Business Participation Strategy to maximize opportunities for Aboriginal businesses;
- Implement on-site health care with physician and nursing services to manage non-urgent issues for the workforce residing in camps;
- Develop protocols for application of construction methods, equipment, material and timing of activities to mitigate adverse effects to wildlife and wildlife habitat;
- Build 50 rental units in Fort St. John, of which 40 will be used for BC Hydro housing and 10 will be available for low-to-moderate income households. Upon completion of the construction phase, the 40 worker housing units will be made available to low-to-moderate income households;
- In collaboration with a Cultural and Heritage Resources Committee that includes Aboriginal groups, develop and implement mitigation measures to manage effects on cultural resources;

- Design the installation and use of a trap-and-haul facility as part of a fish passage management plan;
- Establish three new boat launch/day use sites and provide approximately \$200,000 for a Community Recreation Site Fund; and
- Monitor greenhouse gas emissions from the reservoir for the first ten years of operations as part of a Greenhouse Gases Monitoring and Follow-up Program.


The \$7.9 billion Site C project would be a third dam and hydroelectric generating station on the Peace River in northeast B.C. It would provide 1,100 megawatts of capacity and produce about 5,100 gigawatt hours of electricity each year – enough to power the equivalent of about 450,000 homes per year.

Media contacts:

Communications
Ministry of Environment
250 953-3834



Environmental
Assessment Office




Site C Clean Energy Project Environmental Assessment


Technical Briefing

Oct. 14, 2014

1




Environmental
Assessment Office




Overview

- Site C Project
- Site C Environmental Assessment (EA) Process
 - Pre-Panel Stage
 - Joint Review Panel Stage
 - Post Panel Stage
- Mitigation/Accommodation
 - Project design modifications
 - Mitigation measures
 - Other accommodation
- Permitting
- Summary

2



**Environmental
Assessment Office**




Site C Clean Energy Project

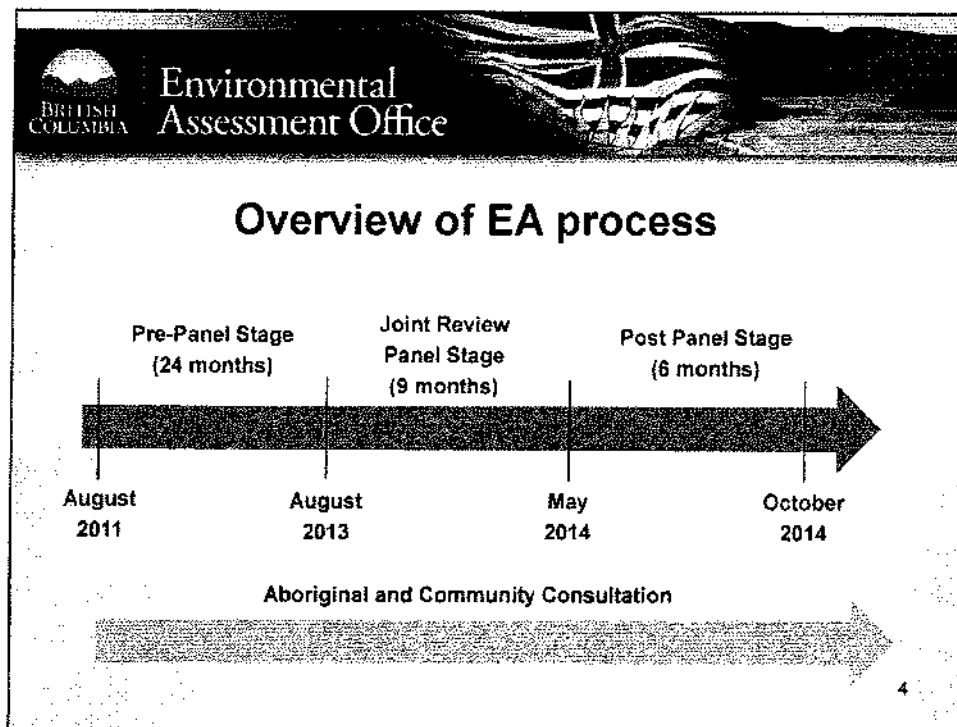
Proposed third dam and generating station on the Peace River in NE BC


COMPONENTS:

- Earthfill dam, approx. 1,050 metres long
- Generating station with six 183 megawatt generating stations
- 83 km long reservoir, two to three times width of current river
- Realignment of up to six segments of Hwy 29
- Shoreline protection at Hudson's Hope
- Two new 500 kV transmission lines
- Access roads in vicinity of the site and temporary access bridge across the Peace River at the dam site
- Two temporary cofferdams across the main channel to allow construction of the dam
- Worker accommodation at the dam site
- Off-site quarries and borrow areas



3






Pre-Panel Stage

- EA conducted under an Agreement between provincial and federal Ministers of Environment that included an independent joint review panel
- Public consultation comment periods on the Agreement, Environmental Impact Statement (EIS) Guidelines and EIS
- Six public open houses each on the EIS Guidelines and the EIS
- Three working group and three technical sub-working group meetings on the EA process, EIS Guidelines and EIS including impacts as well as mitigation and follow-up measures
- Consultation with initially 50 and then later 29 aboriginal groups that could be potentially impacted in BC, Alta and NWT
- Proponent directed by regulators to amend the EIS to ensure it is satisfactory for the Joint Review Panel Stage


5



Joint Review Panel Stage

- Three panel members jointly appointed by the federal and provincial Ministers of Environment
- Panel toured the Project area by road, boat and helicopter
- Panel required three rounds of additional information from the proponent before declaring sufficiency of the amended EIS
- Public hearings held over 26 days in 11 locations in BC and Alberta
- Panel took three months to write 471 page report with 50 recommendations


6



Post Panel Stage

- Aboriginal consultation on the Joint Review Panel Report - May to June 2014
- Aboriginal consultation on the draft federal and provincial conditions - June to July 2014
- BC local government in the northeast reviewed and commented on the draft conditions - June to July 2014
- Aboriginal consultation on the draft Federal/Provincial Consultation and Accommodation Report - May to August 2014
- Project referred to Ministers in early Sept. for separate provincial and federal decisions


7



Ministers' Decision

- Provincial Ministers' have issued an Environmental Assessment Certificate with 77 conditions
- Federal Minister of Environment has issued the Federal Decision Statement with 18 conditions
- Provincial government needs to make an investment decision on Site C.
- If Site C proceeds then EAO will coordinate compliance management efforts with other government agencies

8




Environmental Assessment Office

Mitigation – Project Modifications

- Removed the need for a permanent bridge across the Peace by allowing access across the dam itself
- Used the existing transmission corridor for the two new 500 kV transmission lines instead of constructing a new corridor
- Minimized loss of wildlife habitat on the big island downstream through design of the dam and spillway
- Relocated worker accommodation to north bank to avoid disruption of wetland habitat

9




Environmental Assessment Office

Key Mitigations - Agriculture

- Develop an Agriculture Mitigation Compensation Plan that includes:
 - Fund of \$20 million to compensate for loss agricultural lands and activities
 - Inclusion of suitable land in the Agriculture Land Reserve
 - Funding for mitigation actions for disruptions to agricultural operations
- Develop an Agriculture Monitoring and Follow-up Program for 10 years that includes monitoring for project-induced changes to:
 - Wildlife habitat utilization
 - Humidity within 3 km of the reservoir
 - Groundwater elevation within 2 km of the reservoir
 - Climatic factors to estimate moisture deficits and irrigation water requirements


10



Key Mitigations - Fish and Fish Habitat

- Providing upstream fish passage during construction and operation with trap and haul facilities
- Increase wetted habitat by creating new wetted channels and restoring back channels as part of a Fisheries and Aquatic Habitat Management Plan
- Develop a methylmercury monitoring plan for fish that includes Aboriginal communities, First Nations Health Authority and Northern Health
- Maintain a 15 m machine free zone adjacent to water courses
- Develop a strategy for salvage and relocation of stranded fish
- Develop a Fisheries and Aquatic Habitat Monitoring and Follow-up Program that must include monitoring during operations for a period of 20 years and future mitigation and compensation options after reservoir development.


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Key Mitigations – Vegetation and Ecological Communities

- Develop a Wetland Mitigation and Compensation Plan and monitor construction and operations activities that could cause changes in wetland function
- Establishment of Environmental Protection Zones to avoid direct disturbance to wetland sites
- Creating new wetland habitat areas for migratory birds
- Retaining non-merchantable trees and vegetation in riparian areas with a 15 metre buffer zone.
- Development of an Aboriginal Use Plant Mitigation Plan that identifies opportunities for indigenous plant species for reclamation and up to \$1 million in commercial contracts with indigenous nurseries for provision of plants.

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Environmental Assessment Office

Key Mitigations - Wildlife

- Develop protocols for construction methods, equipment and timing of activities to mitigate adverse effects to wildlife and wildlife habitat as part of a Wildlife Management Plan
- Development of a Wildlife Mitigation and Monitoring Plan that includes compensation options to manage the effects of fish predation on invertebrate and amphibian eggs and larvae and young birds
- A mandatory environmental training program for all workers
- Managing BC Hydro-owned lands to provide ungulate winter range on the north bank
- Development of a Human-Wildlife Conflict Management Plan that includes measures to minimize road mortality and procedures for reporting incidents


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Environmental Assessment Office

Key Mitigations – Community

- Build 50 rental units in Fort St. John (40 will be used for BC Hydro housing and 10 available for low to moderate income households, 40 worker housing units will be available to low to moderate income households upon completion of construction)
- Implement on-site healthcare with physician/nursing services for workforce
- Develop and implement a Local Infrastructure Mitigation Plan to mitigate effects on local water and sewage systems
- Establish three new boat launch/day use sites and provide approximately \$200,000 for a Community Recreation Site Fund
- One-time contribution of \$160,000 to Hudson's Hope to address permanent inundation of land no longer available for development
- Develop and implement a Healthcare Services Plan, Aboriginal Training and Inclusion Plan, Labour Training Plan, Business Participation Plan and a Recreation Program
- Assist school districts 59 and 60 to adjust to increased need resulting from the influx of the Project workforce¹⁴




Environmental Assessment Office

Key Mitigations – Heritage Effects

- Develop and implement mitigation measures to manage effects on cultural resources through development and implementation of a Cultural Resources Mitigation Plan.
- Provide a \$100,000 fund to local accredited facilities to curate and display recovered heritage resources
- Develop and implement a Heritage Resources Management Plan to protect and preserve heritage resources.
- Develop and implement a Heritage Resources Monitoring and Follow-up Program that includes monitoring and mitigation measures, systematic data recovery or emergency salvage operations

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Environmental Assessment Office

Aboriginal Accommodation

- Substantive accommodation offers have been made to Aboriginal groups that the panel found would experience significant adverse effects that cannot all be mitigated:
 - Potential transfer of fee simple interest of provincial Crown land
 - Potential establishment of land protection measures for certain parcels of provincial Crown land
 - Compensation funds for initiatives to address impacts to current uses of lands and resources for traditional purposes
 - Lump sum and annual financial contributions, for the duration of project operations that could be used for various initiatives such as education and training initiatives, community infrastructure projects, youth and elder programs, and cultural continuity programs
 - Direct procurement opportunities
- Negotiations are underway


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Provincial Permitting

- Proponent requires a large number and variety of authorizations from the Province under several statutes
- Examples include: Land, Water, Forest and Range Practices, Wildlife, Heritage Conservation, Mines, Environmental Management, Industrial Roads, Transportation and Public Health Acts
- Ministry of Forests, Lands and Natural Resource Operations is leading and coordinating the permit process
- Permits are being bundled according to project component and timing of activities

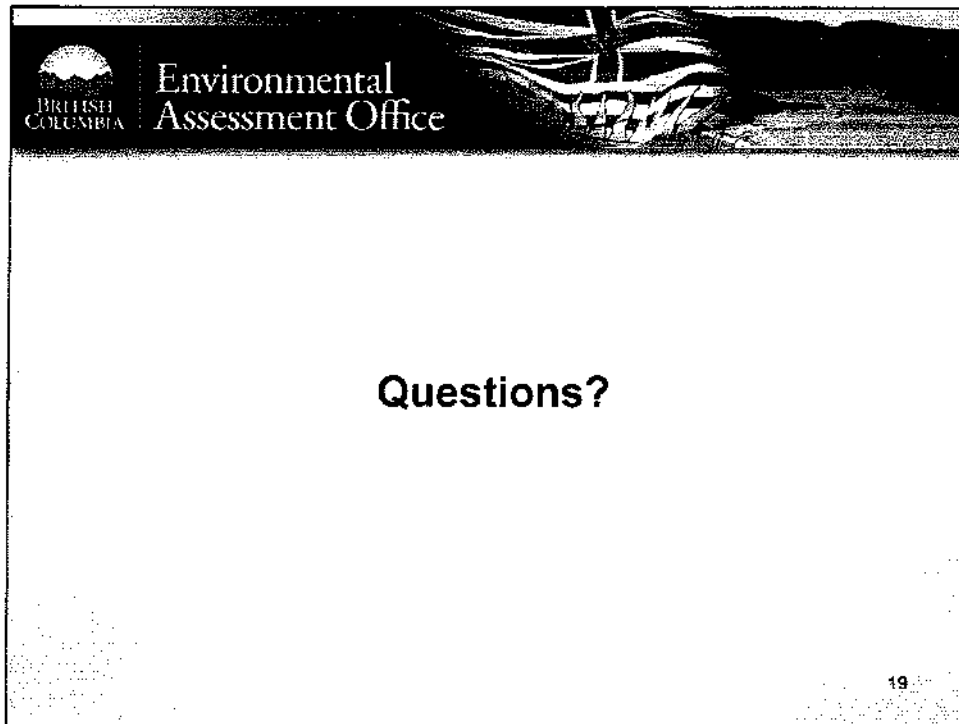
17



Summary

- 39 month EA process that has identified potential adverse environmental, social, economic, heritage and health effects, and project mitigation and compensation measures
- Included an assessment by an independent joint review panel
- Robust public consultation through comment periods and open houses on key documents, and a public hearing of 26 days in BC and Alberta
- EA process provided meaningful consultation with Aboriginal groups to understand potential impacts on Aboriginal interests and to develop substantive accommodation measures to avoid, mitigate or offset potential impacts.

18



Site C Q&As DRAFT 5

EA DECISION

1. Does environmental approval now mean Site C is approved to begin construction?

- No.
- Environmental approvals are significant hurdle for any project, and the environmental approval for Site C is a major milestone.
- The next step is for government to make its final investment decision on Site C.
- We are undertaking an extensive due diligence process on the need, cost and alternatives to Site C to inform a final investment decision.
- It has always been anticipated Cabinet would make this decision following a thorough environmental assessment process.
- Should government decide to proceed with Site C, the project will also require a variety of permits from the Ministry of Forests, Lands and Natural Resource Operations before construction can begin.

2. When will Cabinet decide on Site C?

- Government continues to undertake a due diligence process in reviewing Site C.
- Government hopes to make a decision by the end of the year.

3. Isn't this provincial decision essentially a rubber-stamp? After all, the province has been pursuing Site C for years.

- There is significant due diligence required to support making an investment decision on Site C.
- Not only has Site C been subject to comprehensive federal provincial environmental reviews, it was also reviewed by an independent Joint Review Panel.
- Further, government continues to undertake a due diligence process to assess need, cost and alternatives to Site C. Government hopes to make a decision by the end of the year.

4. If the Province decides to move forward with Site C, when will construction begin?

- Construction would begin in late 2015. Site preparation activities would begin in early 2015.

BCUC

5. The Mayor of Hudson's Hope, First Nations and others are calling for Site C to be referred to the BC Utilities Commission. Why has the government refused to do this?

- The decision on which option makes the most sense for BC and for ratepayers is a major public policy decision most appropriately made by the elected government.
- There has been comprehensive and substantive review of the Site C project through the environmental assessment process.
- The BCUC has never conducted a cost review of a major new hydroelectric dam in BC. The Mica, Revelstoke, Peace Canyon and Bennett dams were not reviewed by the BCUC.
- With regards to need, the BCUC has already reviewed and accepted BC Hydro's load forecasting methodology.
- With regards to cost, the BCUC does not have the capacity to evaluate project costs and would need to bring in external help, like KPMG. KPMG has already conducted a review of the Site C costs and is currently conducting an updated review.
- With regards to alternatives, Site C or alternatives to Site C such as renewables (wind, run-of-river) or natural gas all have different implications for rates and for the environment.
- If Site C proceeds, the BCUC will have the opportunity to determine how the costs of Site C are recovered in rates.

6. The Joint Review Panel also suggested referring the costs of Site C to the BCUC. Why has the government refused to do this?

- The BCUC does not have the capacity to review the costs of Site C and would need to hire external help – like KPMG – to conduct a review.
- The Site C project cost estimate has already been independently reviewed by KPMG and has been subject to numerous peer reviews.
- KPMG is also conducting an updated review of the Site C costs to inform a final investment decision by government. While the overall budget is \$7.9 billion, only \$3.825 billion is related to direct construction costs.
- The remainder includes inflation, interest, indirect costs, regulatory costs, mitigation, First Nations accommodation and contingencies.
- The Site C budget includes an 18% contingency on direct construction costs – it is important to note that this is greater than the 11% cost overrun that the Clean Energy industry is suggesting should be expected based on recent academic studies. BC Hydro has been developing Site C for 35 years and has spent \$225 million on engineering work and field investigations.
- As a result, there is a far greater level of information about Site C than other BC Hydro projects typically have at this stage of development.

- That being said, government is undertaking additional due diligence to support a decision on whether to proceed to construction. Government expects to make a decision by the end of the year.

NEED FOR ELECTRICITY

7. Critics say Site C isn't needed right now and that if Site C is built now, it will result in surplus power?

- We all know that demand for electricity is growing. Our population is set to increase by as much as one million people over the next 20 years, our economy is growing, people are using more electronic devices, and there are potential new uses for electricity like shore power and electric vehicles.
- We need to build new generation to meet this future need.
- BC Hydro's Integrated Resource Plan indicates a need for new capacity (firm power) in 2019 and for new energy by 2024.
- It is important to note that BC Hydro is planning to meet 78% of new demand over the next 20 years through conservation.
- This is a very ambitious target and should conservation efforts fall short, this would only increase the need for new generation.
- While Site C will result in an initial surplus of energy that will likely be exported at a loss, BC Hydro plans to limit the amount of new power it acquires leading up to Site C coming online, which will limit the amount of excess energy created.
- The costs of any excess energy are already incorporated into the cost projections for Site C and the impact to ratepayers would be spread out over the life of the project.
- Site C would be a 100 year asset and over time, as demand increases, its cost advantages would increase.

8. The Joint Review Panel suggested that BC Hydro could not demonstrate the need for this project. Were they wrong when they said that?

- There's no question about the need for more power. Both BC Hydro and the JRP agreed that BC will need new energy and capacity in the future.
- Both BC Hydro and the Joint Review Panel agree that, without any LNG demand, there will be a need for new power by 2028.
- With expected LNG demand of 3000 GWHs per year, the need for new power moves forward to 2024.
- 3000 GWHs per year is equal to two small LNG facilities going e-drive and 1 large LNG facility taking grid power for its ancillary needs only.
- Any demand over and above this would accelerate the need for new power even further.
- Fortis has already indicated that its Tilbury facility will use e-drive and Woodfibre has made the same commitment for its Squamish facility.
- In addition, BC Hydro's May 2014 forecast update indicated that projected demand could be higher than forecast in the Integrated Resource Plan due to re-opened pulp and paper facilities in Mackenzie and Taylor, increased oil and gas development in the Peace River region and potential new mining projects such as KSM.

9. Are you confident in BC Hydro's ability to accurately forecast demand? Critics have also demanded that BC Hydro's demand side management and load growth projections be reviewed by the BCUC. Will government agree to this?

- BC Hydro's load forecasting and demand side management methodologies have already been independently reviewed through a number of BCUC proceedings. The BCUC has accepted BC Hydro's methodologies.
- An additional third party review of BC Hydro's load forecasting is being undertaken in advance of a final investment decision.
- It is important to note that BC Hydro's demand side management targets -- to meet 78% of new demand over the next 20 years through conservation -- are very ambitious and falling short of these targets would only increase the need for new power.
- It is also important to note that BC Hydro's forecast -- which works out to approximately 1% per year after conservation measures -- is in line with the projections in other jurisdictions and is lower than historical growth.

10. Government and BC Hydro acknowledge that Site C will likely produce surplus power for a number of years after it is built, and that power will have to be sold at a loss. Isn't that fiscally irresponsible?

- It is impossible to plan electricity generation to the head of a pin -- you can never have exactly as much electricity as you need, exactly when you need it.
- BC Hydro has an obligation to meet the electricity needs of its customers. That means having enough generating capacity to meet customers' needs, and not be short of electricity.
- The consequences of not having enough are greater than having too much -- an unreliable and uncertain electricity supply hurts economic growth.
- The current load forecast is conservative; Site C would be online when that demand is required.
- The last major hydroelectric project to open in B.C. was Revelstoke dam in 1985. At that time it was surplus, but over time demand caught up with supply. Are we glad BC Hydro built the Revelstoke Dam today -- absolutely.
- The costs of any excess energy are already incorporated into the cost projections for Site C and the impact to ratepayers would be spread out over the life of the project.
- Site C would be a 100 year asset and over time, as demand increases, its cost advantages would increase.

FIRST NATIONS

11. How much progress has there been in negotiating impact benefit agreements with First Nations?

- BC Hydro has been consulting and engaging with Aboriginal groups about Site C since 2007 and will continue to do so.
- While specific agreements are under negotiation, they could include elements such as lump sum cash payments, payment streams over time, the transfer of certain provincial Crown lands, the implementation of land protection measures or special land management designations, as well as work and contract opportunities.
- I would note that First Nations businesses have expressed interest in contracting opportunities should the project proceed.
- BC Hydro has provided more than \$14 million in capacity funding for Aboriginal groups to participate in consultations, carry out traditional land use studies, and to participate in the environmental assessment process.
- Offers of accommodation have been made to all the First Nations the Joint Review Panel determined would be significantly affected by the project.

12. Treaty 8 Tribal Association have threatened lawsuits. How will the Province deal with this threat of lawsuits?

- I am not going to speculate on any legal actions that may be launched.
- However, BC Hydro continues to consult with First Nations and has made offers of accommodation to all First Nations that the Joint Review Panel determined to be significantly impacted by the project.
- We are sensitive to the concerns of First Nations.
- Our preference, in every case, is to find negotiated solutions and work in partnership with First Nations to see how they can benefit from any economic activity.
- Government has not made a final decision on Site C.

13. First Nations have given the government an ultimatum – Site C or LNG but not both. Which one are you going to choose?

- Government has not made a final decision on Site C.
- Site C has been through an extensive environmental assessment process including 7 years of consultations, 2 months of public hearings, and over 30,000 pages of evidence.
- In providing environmental certification, the Governments have concluded that the impacts of the project are justified by the benefits the project provides.
- The EA decision comes with a set of conditions that BC Hydro is accountable for meeting, should the project proceed.
- We are sensitive to the concerns of First Nations.

- Our preference, in every case, is to find negotiated solutions and work in partnership with First Nations to see how they can benefit from any economic activity.

14. If you ignore First Nations and push ahead with both, won't you risk damaging the relationship?

- Government is committed to fostering strong relationships with First Nations. They are an essential part of B.C.'s resource economy.
- We're doing everything possible to ensure First Nations play a prominent role in resource development moving forward.
- A number of First Nations businesses have expressed strong interest in contracting opportunities associated with Site C, should it proceed to construction.

ENVIRONMENTAL

15. What do you say to people who claim the environmental impact of Site C will be far too great?

- All new electricity-generation projects have environmental impacts and Site C is no different.
- In providing environmental certification, the Governments have concluded that the impacts of the project are justified by the benefits the project provides. The EA decision comes with a set of conditions that BC Hydro is accountable for meeting, should the project proceed.
- Site C would provide a source of clean, renewable and cost-effective electricity in B.C. for more than 100 years.

16. What about impacts to agriculture?

- More than 99 per cent of Class 1 to 5 agricultural land in the Peace Agricultural Regional would not be affected by Site C.
- Overall, agricultural production would be expected to benefit from proposed mitigation measures, including a \$20 million agricultural compensation fund proposed by BC Hydro.
- The Joint Review Panel concluded the permanent loss of agricultural production of the Peace River valley bottomlands is not considered significant.

17. What is the Province doing about lands in the Agricultural Land Reserve that would be impacted by Site C?

- The environmental assessment process, including the Joint Review Panel hearings, included an assessment of the agricultural impacts from Site C.
- A further review by the Agricultural Land Commission would duplicate this process and create additional costs for taxpayers.
- Should government decide to proceed with Site C, we will take appropriate action to address the ALR lands affected by the Project.

INDEPENDENT POWER PRODUCERS

18. Clean Energy BC has done a study claiming that IPPs can provide the same amount of power as Site C at a cost of under \$75 per MWh. What's your reaction to that?

- Government is working closely with the clean energy industry as part of its due diligence process and is providing the industry with every opportunity to make its case and demonstrate that it can be competitive with Site C.
- Our number one concern at the end of the day is the ratepayer. If IPPs can deliver the same power supply at comparable or better costs to ratepayers, then we want to know that so we can make the best decision possible to meet BC's future power needs.
- The London Economics International (LEI) study was commissioned by Clean Energy BC as part of the case that it is making to government.
- The study is based on the cost of recent run of river, wind and biogas projects developed in the United States, adjusted for Canadian conditions.
- It is important to LEI's cost analysis does not include:
 - Adjustments for conditions unique to BC that create higher costs – such as challenging terrain and geography and higher labour rates
 - The premium that developers may charge for taking on the risk of project costs and schedules
 - Any First Nations or accommodation costs
 - Decreased trade revenues that BC Hydro would experience without Site C given wind and run-of-river projects do not have the same flexibility to respond to market conditions
 - System wide transmission upgrades that would be required to handle the increased power
- LEI's study also assumes that the private sector can borrow funds at the same rate as BC Hydro / government, which is not the case.
- While, these factors suggest that the cost of IPP power is likely greater than the \$75 per MWh suggested by LEI, it is also clear that the cost of wind technology has improved significantly in recent years.
- Further due diligence work is required before government can make any conclusions about the cost of IPP power today.
- We are continuing to work with the clean energy sector on due diligence to support a final investment decision by Cabinet.

19. Will Site C kill the IPP industry?

- BC Hydro is proposing Site C as part of a diverse range of options to meet a 40% increase in demand over the next 20 years.

- If government decides to proceed with Site C, it would provide 5100 GWHs of annual energy.
- For comparison, even if Site C goes ahead, BC Hydro plans to add another 9,000 GWHs of annual energy from Independent Power Producers over the next 20 years by renewing existing contracts, taking power from projects currently under development and signing new contracts under the Standing Offer Program.
- IPPs provide close to 25% of BC's power supply today – they will continue to play a critical role in BC's electricity system going forward, whether Site C is approved or not.

FINANCIAL

20. Given BC Hydro's high debt load and all the various infrastructure projects going on, isn't it reckless to talk about spending \$8 billion on a hydroelectric project?

- We will need new energy at some point and both BC Hydro's IRP and the Joint Review Panel concluded that Site C would be the least expensive way to get it.
- That being said, Site C would be one of the biggest infrastructure projects in B.C. history.
- The implications of the borrowing requirements for Site C and its impact on government's finances is one aspect of the due diligence being undertaken to support a final investment decision by the government, which will come before the end of 2014.

21. What would borrowing \$7.9 billion for this project do to B.C.'s credit rating?

- The implications of the borrowing requirements for Site C and its impact on government's finances is one aspect of the due diligence being undertaken to support a final investment decision by the government, which will come before the end of 2014.
- While the overall budget is \$7.9 billion, only \$3.825 billion is related to direct construction costs. The remainder includes inflation, interest, indirect costs, regulatory costs, mitigation, First Nations accommodation and contingencies.

22. How much would the province's debt-servicing cost increase if B.C.'s credit rating downgraded to AA due to Site C borrowing costs?

- The implications of the borrowing requirements for Site C and its impact on government's finances is one aspect of the due diligence being undertaken to support a final investment decision by the government, which will come before the end of 2014.

23. Will BC Hydro customers get hit with huge increases to pay for Site C?

- All new generation projects, whether Site C or alternatives such as wind/run-of-river or natural gas, will have the effect of increasing rates.
- The focus of government's final investment decision will be what option is best for ratepayers.
- If approved, Site C's expected in-service date is outside the current 10 Year Rates Plan.
- There would be no effect on today's BC Hydro rates from Site C, as costs of the project would be deferred until the project begins generating electricity, which is projected to be in 2024.

- As with other large projects, such as BC Hydro's purchase of an interest in Teck's Waneta Dam, the rate impacts would be smoothed over a number of years.
- This would ensure that the costs for Site C are paid by the ratepayers who are benefiting from the project. Once the project is in operation, costs will be recovered from BC Hydro ratepayers over many decades.

ALTERNATIVES

24. Why isn't the government looking more seriously at geothermal power?

- The Ministry of Energy and Mines has issued 12 geothermal permits since 2001.
- While eligible, no geothermal projects have been bid into BC Hydro procurement processes to date.
- Under the current structure of BC's electricity market, it is up to private sector to identify and develop geothermal resources.
- IPPs have not advanced any geothermal energy projects because of the high cost and risk associated with exploring for and developing the geothermal resource.
- Given the risk associated with developing this resource, we believe it is better for the private sector to assume this risk, not ratepayers.

25. Jurisdictions such as Alberta are building natural gas plants capable of generating huge amounts of power much more cheaply than B.C.'s hydroelectric generated power. Why not save the taxpayers money and opt for natural gas generation?

- Natural gas generation would be cheaper but would also produce up to 50 times more GHG emissions than Site C.
- Past experience indicates that any large scale natural gas projects in BC would face significant public acceptance and permitting challenges.
- They also have higher operating costs, a shorter project life and are subject to fluctuating natural gas and carbon prices.
- That said, government is continuing to look at natural gas generation and the impact it would have on rates compared to Site C as part of its due diligence process to inform a final investment decision.

26. Government says natural gas fired power plants aren't environmentally friendly, yet rule changes now allow LNG companies to burn natural gas to provide power to compress, cool and transport B.C. natural gas for international markets. Isn't that a double standard?

- We have an opportunity to secure a new industry for BC and we need to be competitive. That's why we're giving LNG companies a choice on how to power their facilities.
- From a global perspective, LNG from BC will displace more carbon intense fuels in export markets, resulting in a net overall benefit.
- We anticipate that some LNG facilities will use natural gas for all of their energy needs, some will use grid power from BC Hydro for part of their requirements, and others will be fully electric.

LOCAL IMPACT

27. How many homes would be impacted by Site C?

- With respect to land requirements for Site C, BC Hydro and the Crown already own 92 per cent of the land required for the project.
- With respect to residences, there are 30 property owners with residences that may be impacted. Not all of these residents would be required to move. Some may be able to stay on another portion of their property.
- In all cases, compensation is provided based on fair market value, plus additional compensation such as legal and moving costs and any business or financial costs related to the property.
- BC Hydro continues to meet directly with property owners who may be impacted.

28. What kind of compensation would these people be offered?

- Compensation is negotiated directly with land owners.
- Compensation is based on fair market value of the lands, plus additional compensation such as property transfer tax and reasonable moving, legal and survey costs that are incurred in acquiring a similar interest or estate in other land, and any business or financial costs related to the property.

29. What kind of compensation is being offered to communities affected by the project?

- BC Hydro has been consulting with communities, local governments, stakeholders and the public since 2007.
- BC Hydro reached a regional legacy benefits agreement with the Peace River Regional District (PRRD) – announced in June 2013 – whereby BC Hydro will provide \$2.4 million annually to the PRRD and its member communities for 70 years once Site C is operational. The payment will be indexed to inflation.
- BC Hydro is also working with communities to reach agreements that will provide lasting benefits for residents in the Peace region. To date, agreements have been reached with the Districts of Taylor and Chetwynd, and discussions continue with Fort St. John and Hudson's Hope.

**Site C Clean Energy Project
Release of Decision
October 14, 2014**

The Environmental Assessment Process

Q 1. Why did the ministers decide to issue an environmental assessment certificate?

The ministers decided that Site C is in the public interest and that the benefits provided by the project outweigh the risks of adverse environmental, social and heritage effects.

The ministers also determined that the environmental assessment process provided meaningful consultation with Aboriginal groups to understand the potential impacts of Site C on Aboriginal interests and to develop substantive accommodation measures that are intended to avoid, mitigate or offset those potential impacts.

The ministers issued the certificate with 77 legally-enforceable conditions that BC Hydro must meet to be in compliance. The certificate conditions were developed following consultation and input from Aboriginal groups, government agencies, communities and the public.

Q 2. Why was an environmental assessment done?

Site C triggered a provincial environmental assessment under BC's *Environmental Assessment Act*. The project also triggered a federal review under the *Canadian Environmental Assessment Act*.

Q 3. Why was there a joint review between the provincial and federal governments?

The provincial and federal environment ministers determined that a single, cooperative environmental assessment, including a joint review panel, would avoid unnecessary duplication and delays that could arise from individual reviews by each government.

Q 4. How were the members of the joint review panel chosen?

The federal and provincial environment ministers set the scope, procedures and methods for the environmental assessment through an agreement that included the establishment of a Joint Review Panel.

The Panel was jointly appointed by Canada and British Columbia and consisted of Harry Swain as Panel Chair, Jocelyne Beaudet as the Federal Member, and James Mattison as the Provincial Member.

Q 5. What documents and information did the joint review panel consider during its deliberations?

The Panel reviewed and discussed:

- the approved Environmental Impact Statement Guidelines;
- the amended Environmental Impact Statement;
- additional information provided by BC Hydro in response to the Panel's Information Requests;
- submissions from interested parties;
- public comments;
- comments from government agencies and non-government experts; and
- comments, assertions of rights and submissions from Aboriginal groups.

Q 6. What public consultation took place on the environmental assessment of this project?

During the two-year Pre-Panel Stage (August 2011-August 2013), the Environmental Assessment Office and the Canadian Environmental Assessment Agency conducted public consultation on the:

- draft Agreement between the federal and provincial environment ministers;
- draft Environmental Impact Statement Guidelines, including 6 open houses in May 2012;
- draft Environmental Impact Statement, including 6 open houses in February 2013;

The six open houses were in Fort St. John, Hudson's Hope, Chetwynd, Peace River, Alberta, Dawson Creek and Prince George. Close to 300 people attended the open houses for the Environmental Impact Statement.

During the joint panel review stage, the panel conducted public consultation that included 26 general, community and topic-specific public hearing sessions in 11 locations in BC and Alberta from December 2013 to January 2014.

Consultation, Impacts and Mitigation

Q 7. Were Aboriginal groups consulted?

Yes. There has been extensive Aboriginal consultation on the Site C project by the Environmental Assessment Office, the Canadian Environmental Assessment Agency and BC Hydro.

Fifty Aboriginal groups were consulted at the start of the environmental assessment process. Ultimately, it was determined by the Environmental Assessment Office and the Canadian Environmental Assessment Agency that 29 Aboriginal groups (Treaty 8 First Nations, non-Treaty 8 First Nations and Métis) in BC, Alberta and the Northwest Territories would be potentially impacted by the project and they have been consulted throughout the three-year environmental assessment.

Q 8. How were the impacts on Aboriginal communities addressed?

To address potential impacts on Aboriginal interests, BC Hydro has proposed various accommodations, including project modifications and mitigation measures.

The provincial government and BC Hydro have offered financial and other benefits to those Treaty 8 First Nations which the Panel found would experience significant adverse effects that cannot all be mitigated. The Province gave BC Hydro a mandate to negotiate Impact and Benefit Agreements. BC Hydro has made offers to all of the impacted BC Treaty 8 First Nations in relation to the following:

- Potential transfer of the fee simple interest in provincial Crown land;
- Potential establishment of land protection measures for certain parcels of provincial Crown land;
- Compensation funds for initiatives to address impacts to current uses of land and resources for traditional purposes for the benefit of all Aboriginal groups affected by the project;
- Lump sum and annual financial contributions, for the duration of project operations, which could be used for various initiatives, such as education and training initiatives, community infrastructure projects, youth and elder programs, and cultural continuity programs; and
- Direct procurement opportunities.

The offers have been made to seven Treaty 8 First Nations. Negotiations are underway with five of the seven.

Impacts to Aboriginal interests have been adequately assessed and mitigation measures have been proposed or compensation offered.

Q 9. How were local communities involved in the environmental assessment?

The Advisory Working Group for the project included 10 local governments from BC and 11 from Alberta.

All 10 BC local governments were provided an opportunity to comment on the draft conditions that would be attached to the environmental assessment certificate. The Environmental Assessment Office received responses from four of the BC local governments

Q 10. What impacts will there be on local governments?

The Joint Review Panel concluded that:

- There will be no significant adverse effects on population, housing, community infrastructure and services, or the labour market.
- There will be opportunities for new and existing jobs and businesses during the construction phase.
- Local government revenues to be received from existing sources, together with payments contemplated in negotiations between the Proponent and local

governments, would generally be sufficient to maintain service quality levels; therefore, no significant adverse effects or cumulative effects are foreseen.

Q 11. Will there be significant adverse effects with Site C?

The joint review panel determined that Site C would likely cause significant adverse effects on five, out of a total of 22, valued components:

- fish and fish habitat
- vegetation and ecological communities
- wildlife resources
- current use of lands and resources for traditional purposes
- heritage resources

The panel also determined that, when combined with past, present and reasonable foreseeable future projects, the project would result in significant cumulative effects on fish, vegetation and ecological communities, wildlife, current use of lands and resources for traditional purposes, and heritage resources.

Q 12. What conditions and design restrictions are attached to the approval of the Project?

The Site C Environmental Assessment Certificate is subject to 77 conditions (many with sub-conditions) that BC Hydro must implement throughout the various phases of the project. Each of the conditions is a legally-binding requirement that BC Hydro must meet to be in compliance with the certificate.

Key conditions include the following:

- Establish an agricultural compensation fund of \$20 million to compensate for lost agricultural lands and activities. The funds will be used to support enhancement projects that improve agricultural land, productivity or systems;
- Develop a Wetland Mitigation and Compensation Plan and monitor construction and operation activities that could cause changes in wetland function;
- Develop an Aboriginal Business Participation Strategy to maximize opportunities for Aboriginal businesses;
- Implement on-site health care with physician and nursing services to manage non-urgent health issues for the workforce residing in the camps;
- Develop protocols for application of construction methods, equipment, material and timing of activities to mitigate adverse effects to wildlife and wildlife habitat;
- Build 50 rental units in the City of Fort St. John, of which 40 will be used for BC Hydro housing and 10 will be available for low-to-moderate income households. Upon completion of the construction phase, the 40 worker housing units will be made available to low-to-moderate income households;
- In collaboration with a Cultural and Heritage Resources Committee that includes Aboriginal groups develop and implement mitigation measures to manage effects on cultural resources;

- Design the installation and use of a trap-and-haul facility as part of a fish passage management plan;
- Establish three new boat launch/day use sites and provide approximately \$200,000 for a Community Recreation Site Fund; and
- Monitor greenhouse gas emissions from the reservoir for the first 10 years of operations as part of a Greenhouse Gases Monitoring and Follow-up Program.

In addition, the federal government has included 18 conditions with their approval, many with numerous sub-conditions.

Q 13. Were there design changes as a result of the project planning and environmental assessment?

Key design changes to minimize and mitigate potential effects include:

- Modified design for the project, allowing access across the dam and, as a result, removing the need for a permanent bridge across the Peace River downstream of the dam. This avoids having increased activity on the south bank of the river in the Area of Critical Community Interest and Peace Moberly Tract where various groups exercise Aboriginal Interests to hunt, trap and fish;
- Using the existing transmission line right-of-way from the G.M. Shrum generation station to Fort St. John and Taylor for the two proposed 500 kV transmission lines from the Site C substation. The two 500 kV lines will be placed along the existing right-of-way and the two existing 138 kV lines will be removed;
- Minimize the loss of wildlife habitat on the big island downstream of the dam through design of the dam, generating station and spillway;
- Relocate worker accommodation to minimize disruption of wetlands;
- Remove the requirement to establish a temporary work force camp on Crown land on the south side of the Peace River at the proposed dam site; and,
- Use existing access corridors, including existing roads for the realignment of Highway 29.

Q 14. Will the project require any provincial permits before it can be constructed?

BC Hydro will require a large number and variety of authorizations from the Province under several acts to facilitate construction and operation of Site C, as well to implement mitigation and compensation measures. These acts include the *Land, Water, Forest, Forest and Range Practices, Wildlife, Heritage Conservation, Mines, Environmental Management, Industrial Roads, Wildlife, Transportation, Transportation of Dangerous Goods and Public Health Acts*, among others.

The Ministry of Forest, Lands and Natural Resource Operations is coordinating and leading the permitting process for the natural resource sector of the provincial government. Over the last year, ministry staff have developed a Permit Optimization Strategy, which has included streamlining the number, submission and review of provincial permits through:

- The use of multi-site permits for multiple project components;
- Permits being "bundled" according to project component and timing of activities within the component; and
- Permits being "batched" according to construction sequence.

The list of potential provincial permits that would be required by BC Hydro for the construction or operation of the Site C project is provided in Volume 1, subsection 8.4 of the Amended Environmental Impact Statement, available on the Environmental Assessment Office' website at:

http://a100.gov.bc.ca/appsdata/epic/documents/p371/d35993/1377112211036_3f6818f00391108d24816e17b74b6b4dc04df98c77657ac56b1e7335f3fe1194.pdf.

Site C Project Information

Q 15. Who is the proponent for this project?

BC Hydro is the proponent.

Q 16. Where is the project located?

The Site C project would be located on the Peace River in the northeast part of the province, approximately 7 km southwest of Fort St. John.

Q 17. What is the Site C project?

The Site C project is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. It would provide 1,100 megawatts of capacity and produce about 5,100 gigawatts-hours of energy. That's enough to power over 450,000 homes.

Q 18. What are the components of the project?

- An earthfill dam, 1,050 metres long and 60 metres high above the riverbed
- A generating station with six 183 megawatt generating units
- An 83 kilometre-long reservoir that would be, on average, two to three times the width of the current river.
- The realignment of up to six segments of Highway 29 over a total distance of up to 30 kilometres.
- Shoreline protection at Hudson's Hope
- Two new 500-kilovolt transmission lines connecting the Site C facilities to the existing Peace Canyon Substation, along an existing right of way.
- Access roads in the vicinity of the site and a temporary access bridge cross the Peace River at the dam site.
- Construction of two temporary cofferdams across the main river channel to allow for construction of the earthfill dam

- Worker accommodation at the dam site, with other workers being housed off-site and in the region.
- Development, use and reclamation of off-site quarries and borrow areas.

Q 19. How much will the project cost?

BC Hydro estimates the capital cost of Site C project to be \$7.9 billion.

Q 20. How many jobs will the project create?

Construction of Site C would create approximately 10,000 person-years of direct employment during the eight-year construction period, and approximately 33,000 person-years of total jobs through all stages of development and construction. Site C would provide 25 permanent direct jobs during operations.

Q 21. How has the outstanding concern about need for the project been addressed?

The Province forecasts that BC's electricity needs will grow by approximately 40% over the next 20 years, driven by a projected population increase of more than one million residents and economic expansion. Demand from the emerging Liquefied Natural Gas sector would further increase demand.

The Joint Review Panel had two overall conclusions on the need for Site C:

1. BC will need new energy and new capacity at some point. Site C would be the least expensive of the alternatives and its cost advantages would increase with the passing decades as inflation makes alternatives more costly.
2. BC Hydro has not fully demonstrated the need for Site C on the timetable set forth.

It should be noted that the Panel's conclusions that available resources provide adequate energy and capacity until at least 2028 is based on a "no LNG load". The Panel provided an errata noting that there were errors in their calculations and, without producing new tables, stated that their conclusions did not change for "low LNG load".

On November 26, 2013, the Province approved the proponent's Integrated Resource Plan (IRP), after two rounds of public consultation and input. The IRP is a 20-year plan that explains how BC Hydro will meet future growth in demand for electricity, with a goal of ensuring a reliable, cost-effective electricity supply for BC. It includes an assessment of diverse resources and a long-term forecast of demand, supply and conservation.

The Ministry of Energy and Mines and BC Hydro have determined that new capacity will be required by 2019 using a "low LNG load" scenario.

Q 22. How are the outstanding concerns about energy alternatives being addressed?

As part of its long-term planning process and for the environmental assessment, BC Hydro compared alternative resource options that would be built instead of Site C (e.g.

wind, run of river hydro, biomass and natural gas). These findings are reported in BC Hydro's Integrated Resource Plan and the amended Environmental Impact Statement. Key findings were that Site C would:

- Provide the best combination of financial, technical, environmental and economic development attributes compared to the alternatives.
- Provide both energy and capacity, compared to many renewable resources that primarily provide energy.
- Result in lower cost than other clean energy options for the equivalent amount of energy and capacity.
- Have among the lowest greenhouse gas emissions, per gigawatt hour, compared to other electricity generation options.
- Contribute more to GDP during construction and provide more construction jobs than alternative resource portfolios.

On Site C and alternatives, the Panel wrote: "Site C would be the least expensive of the alternatives, and its cost advantages would increase with the passing decades as inflation makes alternatives more costly."

The Panel also stated "The Panel concludes that a number of supply alternatives are competitive with Site C on a standard financial analysis, although in the long-term, Site C would produce less expensive power than any alternative."

Not All Panel Recommendations Incorporated into Conditions

Q 23. There are a number of panel recommendations that are directed to the provincial government that have not been included as conditions of the environmental assessment certificate. How is the government addressing those recommendations?

The government will provide information about its plans for addressing those recommendations if and when a final investment decision is made to proceed with the project.

Q 24. Will ministers be directing the conducting of a regional baseline study and environmental assessment as recommended by the joint review panel?

Because this recommendation is directed to the Government of British Columbia, not BC Hydro, and is outside the scope of the Panel's mandate, this recommendation has not been made a condition of the environmental assessment certificate.

However, it is important to note that the Government of British Columbia has approved a cumulative effects assessment framework for the province. Implementation of phase one is starting this year with assessment of a small sub-set of natural resource values across northern BC and in the Thompson Okanagan and Cariboo regions.

Q 25. Why did ministers not forward the project to the BC Utilities Commission for review and approval of items such as costs, load forecast, demand side management, research and development, and revenue requirements, as recommended by the panel?

This recommendation is outside the scope of the panel's mandate and the environmental assessment, and is best addressed by the Government of BC at its discretion.

BC Hydro's cost estimate has been independently reviewed by KPMG.

BC Hydro's load forecasting has been the subject of independent review in a number of BCUC regulatory proceedings and the BCUC has accepted BC Hydro's load forecasting methodology.

On November 26, 2013, the Province approved BC Hydro's Integrated Resource Plan after two rounds of public consultation and input. The IRP is a 20-year plan that explains how BC Hydro will meet future growth in demand for electricity, with the goal of ensuring a reliable, cost effective electricity supply for BC. It includes an assessment of diverse resources, and a long-term forecast of demand, supply and conservation. It also confirmed the corporation's research and development plans.

As well, on November 26, 2013, the Province issued a 10-year rate plan which directed BCUC to set rate increases for the initial two years at 9% and 6%. In 2013, the Industrial Electricity Policy Review Task Force recommended an independent review of the BCUC to evaluate resource needs, review processes and performance. As a result through the Core Review process, an independent Task Force is currently reviewing the BCUC, with the goal of increasing the BCUC's capacity, effectiveness and efficiency so that BC Hydro rates can be set by BCUC starting in the third year of the plan.

Q 26. Why did the provincial ministers' not post a "Reasons for Ministers' Decision" as has been done with other provincial environmental assessment decisions?

The Site C environmental assessment was completed cooperatively with the federal government under a joint agreement that did not require governments to post their reasons for decision. Although the "Reasons for Ministers' Decision" has been done for other provincial environmental assessment decisions, the federal government issues only a Federal Decision Statement similar to an Environmental Assessment Certificate.

The Executive Director of the Environmental Assessment Office provided a response to each of the Panel's recommendations, which has been publicly posted on the office's website, along with other documentation related to the decision to grant an environmental assessment certificate.

Program Area	Associate DM	Comm. Director
Brian Murphy 387-2402	Doug Caul 356-7475	Greg Leake 387-2470

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Withheld pursuant to/removed as

s.12;s.14;s.16

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Monday, June 2, 2014 10:28 AM
To: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX
Cc: Marsh, Kyle MEM:EX; Tennant, Laura MEM:EX; Gordon, Matt GCPE:EX
Subject: Site C
Attachments: 20140602101354.pdf

Hi Dave and Les

When Matt, Laura and I were in Vancouver on Thursday to meet with Jessica, we stopped in to see Susan and Mina, re: Site C.

Attached (sorry some of it didn't scan very well) is a copy of the decision process BN that was included in MBB's Site C briefing binder as well as copies of the agendas for the BC Hydro Board of Directors briefings on Site C on June 18 and July 23.

Susan is looking for direction, re: next briefings for MBB and briefings for other Ministers over the summer. We should discuss with MBB also but wanted to discuss with both of you first.

Susan thinks, and I agree, that it makes sense for MBB to get the same briefings as the Board over the summer. He could get these separately or just attend the Board meetings. The June 18 board meeting conflicts with Cabinet and the July 23 board meeting conflicts with the Columbia River Treaty symposium at PNWER, so it looks like separate briefings are more likely unless we think there is a big advantage to having MBB and the Board briefed together.

In addition to the topics outlined on the attached board agendas, I think MBB would benefit from a briefing focused on timing and factors that can influence timing – i.e. First Nations, Labour, cost implications, etc. It also probably makes sense to brief MBB on the various pieces of Site C that touch on other Ministers prior to BC Hydro and the Ministry conducting those briefings over the summer.

Let me know if this makes sense to you and I'll check in with MBB and then start to look at dates.

Thanks

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: s.17

E-mail: chris.sandve@gov.bc.ca

BRIEFING NOTE

3.0 DECISION PROCESS

Summary

The Site C project has undergone a multi-stage process, with a decision from government at the end of each stage. Prior to proceeding to construction, the project requires a number of additional decisions, including: federal and provincial government decisions on environmental certification; an investment decision from the BC Hydro Board; a provincial government investment decision on Site C; and the necessary provincial and federal permits and authorizations for construction. BC Hydro is seeking guidance from the Minister on a process, schedule and information requirements for the investment decision on Site C.

3.1 Issue

- This briefing note outlines the upcoming decisions required for the Site C project by the BC Hydro Board and the Shareholder, and seeks input from the Minister on Shareholder briefings, information requirements, process and schedule for these decisions.

3.2 Multi-Stage Evaluation Process for Site C

- BC Hydro adopted a multi-stage approach for the planning and evaluation of the Site C project – outlined in the chart below – with a provincial decision at each stage.

Multi-Stage Evaluation and Planning Process for Site C	
Stage 1 (2004-2007)	The review of project feasibility concluded that it would be prudent to continue to investigate Site C as a potential resource option to address the growing electricity gap within the province.
Stage 2 (2007-2009)	Stage 2 included comprehensive consultations with Aboriginal groups, the public and stakeholders, as well as advancing environmental studies, field studies, engineering design and technical work.
Stage 3 (2010-Present)	Stage 3 includes an independent environmental assessment process by federal and provincial regulatory agencies.
Stage 4	Should the project receive environmental certification, Stage 4 would require a decision by the BC Hydro Board of Directors and the Province to proceed to full project construction.
Stage 5	The final stage would include an approximate seven-year construction period, with one additional year for final project commissioning, site reclamation, and demobilization.

3.3 Provincial Decisions and Policy Guidance for Site C

- In the 2007 *BC Energy Plan*, the provincial government directed BC Hydro to start consultations on the project. This direction initiated the second stage of planning and evaluation called Stage 2: Consultation and Technical Review.
 - The specific wording the 2007 BC Energy Plan was as follows:

"BC Hydro and the Province will enter into initial discussions with First Nations, the Province of Alberta and communities to discuss Site C to ensure that communications regarding the potential project and the processes being followed are well known."
 - In a subsequent meeting with then-Minister Neufeld, the Northwest Territories was added as a jurisdiction with which to consult.
- In fall 2009, following comprehensive consultations and advancing technical work, BC Hydro submitted the *Stage 2 Report: Consultation and Technical Review* to the Province, supplemented by a number of briefings to Ministers as well as the Cabinet Committee on Climate Action and Clean Energy.

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- In addition to making decisions to advance the project as part of the multi-stage evaluation, the Province has also provided specific direction relating to the planning and review of Site C, including:

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Decision Process and Timing

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- o In 2010, the *Clean Energy Act* exempted the Site C project from requiring a Certificate of Public Convenience and Necessity (CPCN).
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- o In February 2012, the Province provided BC Hydro with a mandate to negotiate agreements with First Nations and Peace region communities.
- o In December 2013, the B.C. government exempted the Site C project from requiring an Agricultural Land Commission process regarding ALR lands in Site C project area. It was determined that this would be a duplication of process and that the federal-provincial environmental assessment process was sufficient.

3.4 Upcoming Decisions on Site C

- With the Site C project nearing completion of the environmental assessment process — the Joint Review Panel Report is expected in late April — there are three key decisions required for the project to proceed to construction:
 - o A federal-provincial government decision is required for environmental certification, expected to be made by late October 2014.
 - o An investment decision is required by the BC Hydro Board of Directors, which is expected to be made in late summer or early fall 2014.
 - o An investment decision by the Province is required for Site C to proceed to construction.
- In addition, there are also decisions required by the provincial and federal governments regarding required permits and authorizations for Site C construction.

Upcoming Decisions		
Decision/Requirement	Decision Authority	Process and Timing
1. British Columbia Environmental Assessment Certificate (EAC)	Minister of Environment; B.C. Minister of Forests, Lands and Natural Resource Operations	<ul style="list-style-type: none"> • October 2014: Decision on certification anticipated
2. Federal Decision Statement	Federal Minister of Environment and Governor-in-Council	<ul style="list-style-type: none"> • October 2014: Decision anticipated
3. Investment Decision	BC Hydro Board of Directors	<ul style="list-style-type: none"> • Summer 2014: Briefings • Late summer/fall 2014 (TBD): Decision
4. Investment Decision	Minister of Energy and Mines/Provincial Cabinet	<ul style="list-style-type: none"> • TBD: Briefings • TBD: Decision

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Decision Process and Timing

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5. Provincial Permits	Ministry of Forests, Land and Natural Resource Operations	<ul style="list-style-type: none"> April 2014: Permit applications to be submitted (first batch)
6. Federal Authorizations	Fisheries and Oceans Canada Transport Canada	<ul style="list-style-type: none"> TBD: To be issued post-certification (phased)

3.5 Provincial Investment Decision

- To maintain project schedule, and to ensure adequate time for briefings, BC Hydro is preparing to initiate project briefings with the Province, including briefings prior to an expected release of the Joint Review Panel report in late April / early May.

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- With respect to other Cabinet Ministers and provincial decision-makers, some potential issues of interest are outlined in the table below.

Ministry / Provincial Decision-Makers	Key Issues
Ministry of Aboriginal Affairs and Reconciliation	Status of First Nations Consultations and outstanding issues, if any
Ministry of Agriculture	Agricultural assessment of the project/ALC process
Ministry of Finance	Project cost estimate and ratepayer impact
Ministry of Community, Sport and Cultural Development	Community agreements with affected communities in the Peace Region
Ministry of Transportation and Infrastructure	Highway 29 Realignment agreement between BC Hydro and MoTI
Natural Resources Committee of Deputy Ministers	Overview of key issues / investment decision
Premier's Office	Overview of key issues / investment decision
Government Caucus	Project Overview

April 9, 2014

Decision Process and Timing

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3.6 Next Steps

- BC Hydro Board is seeking input from the Minister on these proposed briefings, information requirements, process and schedule for these decisions.

INVESTMENT DECISION WORKSHOP #1: SITE C PROJECT COST & RISK REGISTER

June 18, 2014, 10:00 am – 12:00 pm
(Date and time to be confirmed by Corporate Secretary)

Purpose: In preparation for an investment decision on Site C, the purpose of this workshop is to provide the BC Hydro Project Board and Board members with a detailed briefing on projects costs, timing and risk.

Invitees:

- BC Hydro Board Members
- EVP and CEO
- Site C Integrated Project Team / BC Hydro Staff / External Advisors / KPMG

DRAFT AGENDA

1. Overview of Project Components
 - a) Project Schedule / Critical Milestones
2. Project Cost Update
 - a) Background: 2010 cost estimate, governance & decisions
 - b) Summary of changes from 2010 to 2014
 - I. Project scope changes
 - II. Market-driven changes
 - c) Direct Project Costs
 - I. Review by procurement package
 - II. Value engineering
 - d) Indirect Costs
 - e) Due Diligence / Peer Review
 - f) Project Cost Management
 - g) Ratepayer Impact as Compared to Alternatives
3. Risk Management Update
 - a) Background: 2010 Project Risk Register
 - b) Updated Project Risk Register
 - I. Key Technical, Project and Permitting Risks
 - c) Mitigation and Management
 - d) Financial Considerations

July 21
INVESTMENT DECISION WORKSHOP #2:

Week of July 21, 2014 8:00 am – 1:00 pm
(Date to be confirmed by Corporate Secretary)

Purpose: To provide a comprehensive project update to the BC Hydro Board and to address questions and issues required for an investment decision for Site C.

Invitees:

- BC Hydro Board Members
- EVP and CEO
- Site C Integrated Project Team / BC Hydro staff / External Advisors

DRAFT AGENDA

1. Project Need & Alternatives
 - Policy context
 - Load-resource balance
 - Identified alternatives
2. Summary of Project Cost and Risk Workshop *✓*
3. Environmental Assessment
 - Review of EA process
 - Permitting and authorizations
 - Expected conditions of an EA certificate
4. Aboriginal Consultation
 - Overview of consultation to date
 - Impact benefit agreements
 - Aboriginal procurement and skills training initiatives
 - Outstanding issues, if any
5. Public and Stakeholder Consultation
 - Overview of public and stakeholder consultation to date
 - Local government and community agreements
 - Outstanding issues, if any
6. Project Delivery Plan
 - Project schedule / key milestones
 - Properties
 - Procurement
 - Labour *✗*
 - Governance

*Some decision
in the review.
and
from the
lower
edition.*

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Tuesday, June 10, 2014 8:21 AM
To: Bennett, Bill MEM:EX
Cc: MacLaren, Les MEM:EX; Nikolejsin, Dave MEM:EX; Marsh, Kyle MEM:EX; Tennant, Laura MEM:EX; Wieringa, Paul MEM:EX
Subject: Site C Early Works Clearing RFP
Attachments: IN - Site C Early Works Clearing - 9 June 2014.docx

Hi Minister

Last time you discussed Site C RFQs and RFPs with BC Hydro, you asked if they had planned any additional RFQs or RFPs planned beyond the two that have already been released (RFQ for Worker Accommodation and Main Civil Works). BCH mentioned that they would have a few small, local RFPs going out over the summer.

Attached is an IN on a RFP for Early Works Clearing that BC Hydro would like to post within the next few days. Please let me know if you have any concerns or need any further information.

Thanks

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: S.17 | E-mail: chris.sandve@gov.bc.ca

BC Hydro Issue Note

Site C Early Works Clearing RFP

BC Hydro is preparing to issue a Request for Proposals on BC Bid for Site C Early Works Clearing in early June 2014. The contract would not be awarded until later this year, after project approvals are anticipated. It is common practice to commence procurements concurrent with an environmental assessment process to efficiently manage project schedule and costs. No construction would begin until the appropriate approvals and decisions are in place.

ADVICE AND RECOMMENDED RESPONSE – PROCUREMENT

- BC Hydro is initiating a procurement process for the Early Works Clearing for the Site C project by issuing a Request for Proposals (RFP).
 - Starting procurements concurrent with an environmental assessment process is common practice for major capital projects in B.C. This is consistent with BC Hydro's procurement approach for Site C, as set out in the project's January 2013 Business Case Summary and the Environmental Impact Statement, filed with federal and provincial environmental regulators in January 2013.
 - The contract will not be awarded until late 2014, after decisions on the project are anticipated.
 - Site C construction will not take place unless the project receives environmental certification, regulatory permits and authorizations, and approvals to proceed.
 - BC Hydro has conducted market soundings with local, regional and Aboriginal contractors to understand market capacity, and we believe there are opportunities for regional and Aboriginal companies in this procurement. However, this RFP would be open to all prospective respondents.
- Clearing and site preparation are the first activities undertaken for construction projects. The objective of this procurement is to have a contractor in place to clear and prepare the site, should the project receive approvals to proceed to construction this fall.
 - The majority of clearing activities are anticipated to take place through the winter months, to reduce ground disturbance and effects to fish and wildlife.
 - The contractor will also be responsible for processing, sorting, loading and hauling merchantable wood to the appropriate marketplace or destination.

BACKGROUND

- Construction of Site C would require the removal of vegetation from parts of the project area, including the reservoir, construction access roads, construction sites, and other project areas.
 - In total, 1.4 million m³ of merchantable fibre would be harvested from the reservoir and construction areas during the clearing process. This represents less than half of the current annual consumption by the forest industry in the Peace region.

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- In addition, 1.2 million m³ of non-merchantable fibre would be removed from these areas.
- The Site C Early Works Clearing contractor will be expected to clear the south bank dam site, and construct roads and trails as necessary to access the wood. The contractor will clear an area consisting of approximately 670 hectares of land with an estimated 77,000 m³ of merchantable volume. The contractor will be responsible for the following activities:
 - Tree and merchantable timber removal (falling, skidding/yarding, processing, sorting, loading, hauling to marketplace or assigned destinations);
 - Waste wood collection and deposition as directed;
 - Existing access road and landing upgrades and maintenance; and
 - New access road and/or trail construction and associated landing construction.

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- In addition, in accordance with BC Hydro's Aboriginal procurement policy, the Site C project may also negotiate direct award contracts for clearing with Aboriginal groups in 2014, where appropriate.
- Since clearing will be undertaken in phases, additional clearing contracts are expected in subsequent years.
- Proposals for the Site C Early Works Clearing RFP are due by the end of July and the contract is expected to be awarded in late 2014, after project approvals are anticipated.

PROCUREMENT COMMUNICATIONS AND MARKETING

- Proposed notification of this RFP includes:
 - RFP will be posted to BC Bid
 - A Procurement Update about this business opportunity will be posted to www.sitecproject.com, and emailed to logging and clearing contractors who have signed up to the Site C Business Directory.
 - The Procurement Update will also be emailed to other regional business directories and business associations (Chambers of Commerce, etc.).

MacLaren, Les MEM:EX

From: Wieringa, Paul MEM:EX
Sent: Monday, June 16, 2014 7:38 AM
To: MacLaren, Les MEM:EX; Chace, Julie MEM:EX; Trumpy, Chris MEM:EX
Subject: Fwd: Site C Briefing June 17 2014.pdf
Attachments: Site C Briefing June 17 2014.pdf; ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: "Sandve, Chris MEM:EX" <Chris.Sandve@gov.bc.ca>
Date: June 14, 2014 at 9:03:00 PM PDT
To: "Wieringa, Paul MEM:EX" <Paul.Wieringa@gov.bc.ca>, "Haslam, David GCPE:EX" <David.Haslam@gov.bc.ca>
Subject: Site C Briefing June 17 2014.pdf

This is for MBB's briefing on Tuesday at BC Hydro

SITE C PROJECT UPDATE

June 17, 2014, 4:30pm – 6:30pm
BC Hydro: Four Bentall Centre, 1055 Dunsmuir Street
6th floor, Room #1

Ministry of Energy & Mines

Hon. Bill Bennett, Minister
Dave Nikolejsin, Deputy Minister
Les MacLaren, Assistant Deputy Minister
Chris Sandve, Chief of Staff
Paul Wieringa, Executive Director
Matt Gordon, Director of Communications

BC Hydro

Charles Reid, CEO, BC Hydro
Susan Yurkovich, EVP, Site C, BC Hydro
Trevor Proverbs, Director, First Nations
Peter Feldberg, Fasken Martineau
Maria Pavao, Manager, Labour Strategy
Thomas Assimes, Chief Financial Officer
Michael Savidant, Commercial Manager
Mina Laudan, Director, Public Affairs

AGENDA

1. First Nations
2. Labour
3. Project Timing Considerations
4. Government Briefings / Decision Schedule

BRIEFING NOTE

SITE C – BC HYDRO ABORIGINAL CONSULTATION

Summary

This briefing note sets out:

- The Aboriginal consultation undertaken by BC Hydro with respect to the Site C Clean Energy Project (the Project).
- The issues identified by Aboriginal groups consulted.
- Conclusions reached in the Environmental Impact Statement (EIS) and the Joint Review Panel (JRP) report
- Future consultations to be undertaken by BC Hydro.

Background

The Project is proposed to be constructed in an area covered by Treaty No. 8. Signed in 1899, Treaty 8 covers approximately 840,000 square kilometers of northeastern British Columbia, northern Alberta, northwestern Saskatchewan and the southwest portion of the Northwest Territories. First Nations with Treaty 8 rights are entitled to exercise their rights “throughout the tract surrendered”. Although all Treaty 8 communities could claim a right to hunt, fish, and trap in the vicinity of the Project, this does not mean that a duty to consult is owed to all Treaty 8 First Nations, nor does it mean that all Treaty 8 First Nations are to be treated alike for the purposes of consultation and potential accommodation. Nevertheless, BC Hydro initially took an expansive approach to Aboriginal engagement based on the nature and scope of Treaty 8 rights.

BC Hydro began consultation with Aboriginal groups in late 2007, well before any decision to advance the Project to an environmental assessment. BC Hydro initially extended invitations to 41 Aboriginal groups, primarily T8 First Nations located in the Peace River watershed. By spring of 2010, the list of Aboriginal groups invited by BC Hydro to engage had expanded to 60, and included T8 First Nations in Saskatchewan and other non-T8 Aboriginal groups located closer to the Project, but away from the Peace River.

BC Hydro is responsible for the planning, construction and operation of the Project and, as an agent of the provincial Crown, has a shared obligation to consult with Aboriginal groups with respect to the Project. In addition, the EAO and the Canadian Environmental Assessment Agency (the Agency) have a role in coordinating and conducting consultation for the purposes of the environmental assessment being conducted under the *BC Environmental Assessment Act* and the *Canadian Environmental Assessment Act 2012*. In the exercise of their roles, EAO and the Agency have delegated certain procedural aspects of consultation to BC Hydro.

Approach to Consultation

The consultation undertaken by BC Hydro beginning in 2007 to present day is extensive and ongoing.

In order to fulfill its duty to consult as provincial Crown agent and to meet the requirements to consult as proponent, BC Hydro adopted a tailored approach to consultation guided by the potential impacts of the Project on a particular Aboriginal group's treaty and Aboriginal rights and the degree of interest expressed.

BC Hydro carried out extensive and structured consultation with seven Treaty 8 First Nations that are in close proximity to the Project, and whose members may experience direct effects from the Project. These Treaty 8 First Nations include: Blueberry River First Nations, McLeod Lake Indian Band, Saulteau First Nations, Doig River First Nation, Halfway River First Nation, Prophet River First Nation, and West Moberly First Nations.

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BC Hydro also consulted with other Treaty 8 First Nations located downstream of the Project. This latter group included Aboriginal groups located in Alberta and the Northwest Territories, in proximity to the Peace River watershed, and along the Slave River. Consultations with Aboriginal groups located away from the immediate Project activity zone focussed on potential downstream changes resulting from the Project.

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Prior to entering the environmental assessment process, BC Hydro reached out to Aboriginal groups to determine their concerns and interests. In 2008, BC Hydro invited the Project Area First Nations to participate in the Technical Advisory Committee (TAC) process, along with provincial, federal, and municipal government agencies. The objectives of the TACs included identifying data requirements for baseline studies and receiving input on the scope of baseline studies on, among other things, wildlife, fish and vegetation. This process resulted in the integration of traditional knowledge shared by community members and elders of the Blueberry River First Nations into the baseline studies on wildlife.

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Methods for Information Sharing

BC Hydro directly engaged with Aboriginal groups through meetings with community members, First Nation Councils, and their advisors. BC Hydro technical experts and consultants also worked directly with their counterparts or staff retained by Aboriginal groups to review technical reports, as part of Working Groups or technical sub-committees.

BC Hydro used several approaches to distribute information on the Project, including information provided at the Project website (www.sitecproject.com) and a secured file transfer website in 2012. This latter website was set up to ensure distribution of key documents to all Aboriginal groups including access to otherwise confidential information, such as up to date mapping.

Key Topics Offered for Consultation

BC Hydro provided Aboriginal groups with information required to better understand the Project and endeavoured to convey such information in a form that was accessible and understandable to a non-technical audience. BC Hydro facilitated meetings where subject matter experts reviewed specific Project components, preliminary assessments on potential effects and mitigation strategies. Topics offered for discussion included:

- Construction of the Site C dam
- Wildlife and vegetation
- Fish and aquatics
- Alternative dam site locations (alternative means of project delivery)
- Alternatives to the Project (BC Hydro Integrated Resource Planning process)
- Worker accommodation
- Transmission line construction
- Off-Site construction materials
- Reservoir road access
- Highway 29 realignment options
- Reservoir impact lines
- Hudson's Hope shoreline protection
- Reservoir clearing
- Archaeology and heritage program

- Agriculture
- Reservoir recreation
- Socio-economic effects
- Downstream changes

In each case, subject matter experts engaged directly with Aboriginal representatives respecting issues and concerns pertinent to each topic. BC Hydro requested that the Aboriginal groups provide input regarding the materials presented either verbally or through written follow-up. In instances where BC Hydro received feedback from Aboriginal groups, BC Hydro considered the input and responded in writing regarding how the input was considered and/or incorporated into the Project and BC Hydro's assessment.

Issues of concerns

Key issues of concern identified by Aboriginal groups consulted include:

- potential effects of the Project on fish and fish habitat
- effects on wildlife resources, particularly moose
- effects on plants gathered for cultural or medicinal purposes
- loss of or changes to cultural and spiritual places
- cumulative changes to the Peace River region as a result of development
- alternatives to the Project
- downstream changes to the hydrology and ice regime of the Peace River, particularly in the Peace Athabasca Delta
- potential effects on human health including country foods
- regional socio-economic conditions
- historical grievances related to existing hydroelectric projects on the Peace River

A detailed list of concerns raised, together with BC Hydro's proposed mitigation addressing those concerns, is provided in the Environmental Impact Statement (EIS) Volume 1 Appendix H. In addition, the appendices in Volume 5 of the EIS contain approximately 3500 pages of information including, for each of the 29 Aboriginal groups, a Community Summary, BC Hydro's Consultation Summary, Aboriginal Land and Resource Use Summary, Aboriginal Summary and, where appropriate, a Traditional Land Use Report.

Project Effects Assessment

In 2013, BC Hydro was directed by the Executive Director of the Environmental Assessment Office (EAO) of British Columbia and the federal Minister of Environment to focus its

consultation efforts on 29 Aboriginal groups set out in the Environmental Impact Statement Guidelines (see Appendix C).

In the EIS, BC Hydro concluded that the current use of lands and resources for fishing and hunting and trapping by T8TA, Sauteau, Blueberry River, McLeod Lake, Duncans, Horse Lake, Dene Tha and Metis harvesters would be adversely affected by the Project, but the effect would not be significant. In addition, there would also be a residual adverse effect on other cultural and traditional uses of land for Blueberry River, Sauteau, T8TA, McLeod Lake, Duncan's, Horse Lake and Metis harvesters due to the permanent loss of use and access to certain culturally important places and valued landscapes. For Blueberry, Sauteau and T8TA, the effect would be significant at special high value places on the Peace River (Bear Flat, Farrell Creek, Attachie), as well for McLeod Lake at Attachie.

In its Report, the JRP agreed with BC Hydro that the loss of particular places along the Peace River would be a significant adverse effect for the particular Aboriginal groups named by BC Hydro in close proximity to the area. The JRP also found, in large part because of the value of the Peace River to particular First Nations, there would be a significant adverse effect on fishing opportunities and practices for T8TA members, Sauteau & Blueberry, on hunting opportunities for T8TA members and Sauteau, and on other traditional uses of the land for T8TA members, Sauteau and Blueberry.

The difference between the JRP and BC Hydro findings is due to the fact that the JRP applied a different (lower) threshold for determining significance and hence concluded that the Project will have more significant effects on the current use of lands and resources than that found by BC Hydro.

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Page 231 to/à Page 239

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BRIEFING NOTE

LABOUR STRATEGY UPDATE

Summary

- This briefing note is intended to provide an update to the April 9, 2014 Briefing Note 4.9 - Labour, regarding the Managed Open Site labour strategy for Site C.
- Since April 2014, BC Hydro has conducted several additional market sounding sessions with a variety of organizations, representative of employers, trade unions and the contractor community to seek feedback on the proposed labour approach.
- This note provides an update on these discussions. BC Hydro is now seeking input from the Minister of Energy and Mines prior to communicating with industry and labour stakeholders the confirmed labour approach that will be implemented for the Site C project.

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Page 241 to/à Page 252

Withheld pursuant to/removed as

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References

- Workforce Needs for BC LNG Projects ("5 LNG Project Scenario"), Ministry of Jobs, Tourism and Skills Training and Responsible for Labour, Updated March 5, 2014.
- BC Major Projects Inventory, December 2013
- Construction and Maintenance Looking Forward British Columbia 2014-2023 Key Highlights BuildForce Canada Report, February 2014.
- Canada Starts Here: The BC Jobs Plan, September 2013.
- The Premier's Liquefied Natural Gas Working Group: Final Report, March 31, 2014.
- BC's skills for Jobs Blueprint: Re-engineering education and training, April 2014.

Appendix 1

Major BC industrial and civil projects currently underway that are scheduled to be completed between 2015 (anticipated Site C construction start) and 2021 (end of anticipated Site C peak) as per the BC Major Project Inventory, December 2013

Project	Anticipated Completion Date	Industry	Location
John Hart Replacement	2019	Industrial	Campbell River
Kemano Tunnel Project	2014	Industrial	Kitimat
Waneta Hydroelectric Expansion Project	2014/2015	Industrial	Revelstoke
Mt Milligan Mine Construction	2014	Civil and Industrial	Mackenzie
Rio Tinto Alcan Modernization Project	2014/2015	Industrial	Kitimat
Ridley Terminals Expansion	2014/2015	Industrial	Prince Rupert
Prince Rupert Port Expansion	2014/2015	Industrial	Prince Rupert
Red Chris Copper/Gold Project Construction	2014/2015	Civil and Industrial	North West BC
Forrest Kerr Hydro Electric Project	2014/2015	Civil and Industrial	North West BC
East Toba Montrose/Upper Toba Valley Hydro Electric	2015	Civil and Industrial	Sunshine Coast
Northwest Transmission Line	Spring 2014	Industrial	Terrace
Huckleberry Copper/Silver Molly Mine Upgrade	2021	Industrial	Houston
North Montney Project	2014	Industrial	Wonowon (Fort St John)

BRIEFING NOTE

PROJECT TIMING

Summary

There is a need for energy and capacity on or before Site C's earliest in-service date under all LNG load scenarios. While resources such as Revelstoke 6 and GMS Units 1-5 provide capacity, they do not provide energy. New resources are required for both energy and capacity on or before F2024 and Site C is the least-cost alternative to meet this need.

Delays in the start of construction would require modifications to construction sequencing and would result in additional costs and a one year delay to the project's in-service date. An extended delay would add further costs and increase risk, and would require BC Hydro to meet the demand for energy resources with higher-cost alternatives.

Need for Energy and Capacity

- BC Hydro evaluates the need for new energy and capacity resources (the "gap") through its long-term planning process. Please refer to the Briefing Note on Project Need and Alternatives (from the April 9, 2014 Briefing Binder) for details.
- The need for new resources is determined by comparing forecasts of future customer demand against the existing and committed resources available to BC Hydro. In evaluating the need for Site C, BC Hydro incorporated the impacts of pursuing our DSM target and renewed contracts with existing IPPs where cost effective.
- In the IRP BC Hydro demonstrated the cost-effectiveness of Site C versus alternative future plans in a no LNG scenario.
- The year in which new capacity and energy resources are required under a range of potential LNG scenarios is shown in Table 1 below.

Table 1 – Timing of Need for Energy and Capacity

LNG Load Scenario	Capacity Need	Energy Need
No LNG	F2019	F2027
Low LNG (800 GWh/yr)	F2019	F2024
Expected LNG (3,000 GWh/yr)	F2019	F2022
High LNG (6,600 GWh/yr)	F2019	F2021

- As shown in Table 1, there is a need for capacity in F2019 irrespective of the LNG scenario.
- In the IRP's Expected LNG scenario (3,000 GWh) that was developed in consultation with the Energy and LNG Ministries, a need for energy emerges in F2022. That date would be advanced under the High LNG scenario and deferred to F2024 under the Low LNG scenario. Additional energy resources are required on or before Site C's earliest ISD under all LNG scenarios.
- It is important to note that the government-negotiated LNG rate assumed that Site C energy would come on line on its current schedule. If Site C does not proceed on its current schedule, maintaining the LNG rate would require either increasing ratepayer subsidies or building alternative supply resources.

Sequencing of Revelstoke 6 and GMS Units 1-5

A question has been asked about advancing the timing of Revelstoke 6 and GMS Units 1-5.

- Revelstoke 6 (Rev 6) and GMS Units 1-5 (GMS) are capacity only resource additions on existing dams and provide essentially no energy benefit. As a result, while Rev 6 and GMS can meet the capacity need, they cannot meet the energy need.
- If BC Hydro met the capacity need in F2019 with Rev 6 and/or GMS, there would still be a need for energy in F2022 in the expected LNG scenario.
- Based on the approved IRP, if Site C was not available in F2024, the alternative energy supply would be expected to come from clean IPP projects. As demonstrated in the IRP, the Clean Generation portfolio is higher cost when compared to Site C across all LNG scenarios (including No LNG).
- In summary, while Revelstoke 6 and GMS 1-5 could provide additional capacity, Site C is a more cost-effective way to address both capacity and energy needs and it will allow the supply of Expected LNG without being subsidized by other customer groups.

Construction Timing

2015 Works: Critical Path

A timeline for work undertaken in 2014 and 2015 is provided in Attachment 1.

- The critical path for the first 3 months of construction consists of dam site clearing activities.
 - Clearing must be complete by the start of the bird nesting window on April 1st for work to begin on cleared areas in summer months.
 - Otherwise, activity must wait until the bird nesting window is complete on August 1st, pushing work on cleared areas later in the project schedule

- Clearing in the first several months can be prioritized for those areas that are required for work during the summer. As a result, a delay of less than 30 days to the start of clearing may be able to be managed without major change to the project schedule.
- Any delay in the start of clearing by more than 30 days would effectively push the site clearing into the latter half of 2015. See below for further discussion.

Risks to Construction Start Date

- BCH is undertaking work to ensure the Site C team is prepared for a January 2015 construction start. Key tasks include:
 - Submitting permit applications to begin the permitting process for the first year of construction.
 - Undertaking design work and preparing contract specifications for use in procurement activities, concurrent with the regulatory process.
 - Undertaking procurement on contract packages required for work in the first year of construction, concurrent with the regulatory process. (Note that there is no award of contracts under these procurement processes planned until November 2014, following the date at which Site C anticipates approval and no work will begin on construction activities until BCH received the required permits to undertake the work.)
- While BC Hydro is actively managing the above tasks and targeting a January 1st, 2015 construction start, there are several events out of BC Hydro's control that could contribute to a material delay in the start of constructions, including:
 - Delay to Provincial and/or Federal environmental approvals
 - Delay to final investment decision
 - Delay to issuing initial provincial permits for construction start
 - Authorizations and/or permits establish pre-construction mitigation requirements that cannot be complete by the Construction Start Date.
 - Judicial challenge and/or injunction delays

Consequences of a Delay to Construction Start Date

- A delay of approximately 3 months to issuing permits would require changes to the sequencing of construction activities and would push the project in-service date out by one year; from F2024 to F2025 for all units.
- A 3 month delay would result in the following year 1 activities:
 - Clearing work would begin in August 2015 after the end of the bird nesting window
 - Construction work in areas without required clearing (e.g. the river access road) would begin upon issuance of permits. This would allow BC Hydro and its contractors to establish a presence on the site.

- This would likely push the project in-service date out by 1 year, from F2024 to F2025 for all units and result in increased costs of approximately \$175 million. These costs consist of:
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Extended Delays to Project Start

- A delay beyond a 12-month period would require a major revision to the project execution plan and construction schedule, and would push the project ISD more than a year later.
- A longer delay would result in additional costs due to ongoing carrying costs for the additional time period.
- An extended delay could also result in the lost value of the time and cost invested to date in regulatory, procurement, and project management and require additional costs for repeated work:
 - It may require updating of key environmental and/or socio-economic studies should Site C commence at a later date. This would require incurring costs to repeat work that was already undertaken for the environmental assessment.
 - It would require a major change to the procurement process for major contracts. This would further erode market confidence and reduce potential competitive tension for future procurement processes.
 - It has the potential to result in the loss of key staff on the Project, with time and cost requirements to establish a new team.

s.13,s.14,s.16,s.17

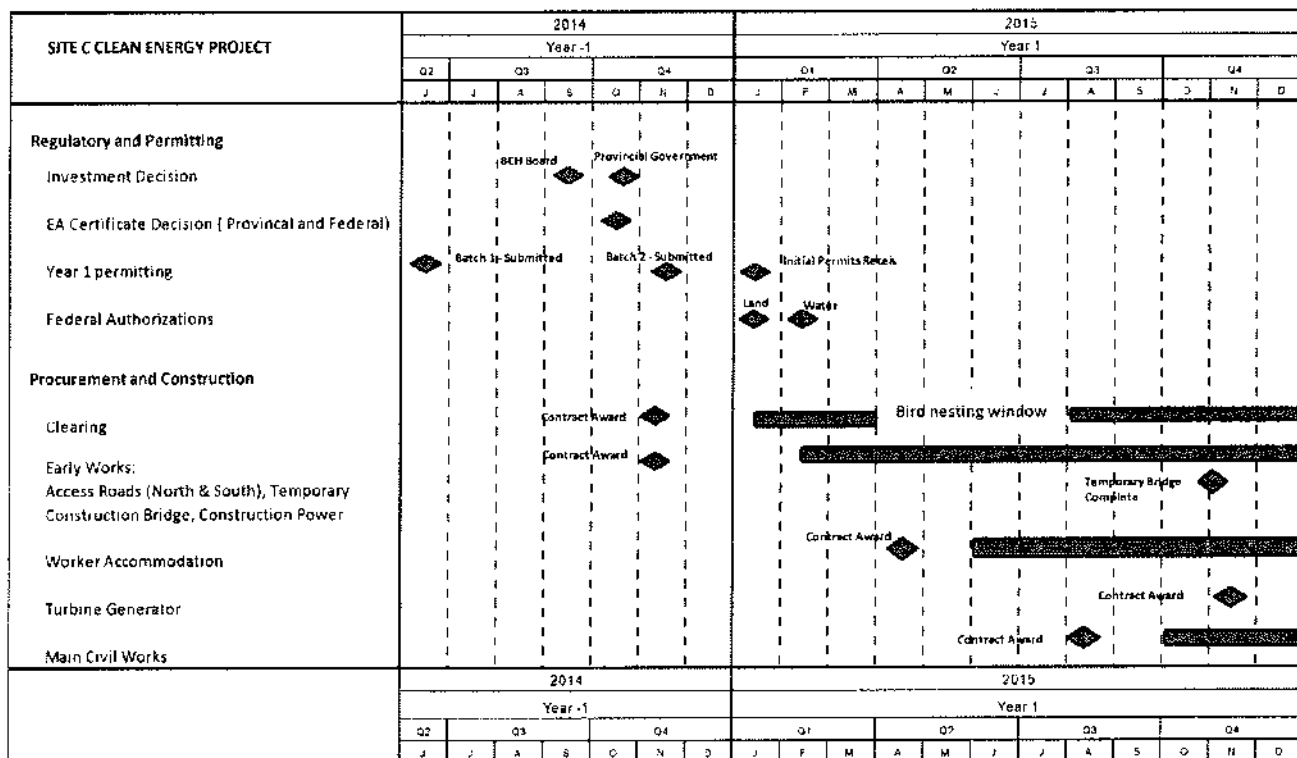
- Under the low, expected, and high LNG scenarios additional energy resources are required in F2024 or earlier. A delay to the Site C ISD would require replacing the project's energy with higher-cost alternative energy resources, which would result in higher costs for BC Hydro ratepayers.

Summary

- Site C is the lowest cost resource option available to BC Hydro and will provide benefits to ratepayers for more than 100 years.
- A short delay to the issue of permits for Site C (i.e. 3-6 months) would require a change to construction sequencing, which would result in increased costs.
- A delay of greater than 12 months would require a major rework of the construction and procurement schedule. Such an extended delay would have large cost implications and could require repeating procurement and/or regulatory work. Such a delay would also require the acquisition of higher-cost alternative resources to meet the energy and capacity need.

BRIEFING NOTE

Attachment 1 – 2014/2015 Schedule & Key Milestones



June 17, 2014

6

Project Timing

CONFIDENTIAL – PREPARED TO PROVIDE ADVICE AND RECOMMENDATIONS TO MINISTER AND CABINET

BRIEFING NOTE

GOVERNMENT BRIEFINGS / DECISION SCHEDULE

Summary

The Site C project has undergone a multi-stage process, with a decision from government at the end of each stage. Prior to proceeding to construction, the project requires a number of additional decisions, including: federal and provincial government decisions on environmental certification; an investment decision from the BC Hydro Board; a provincial government investment decision on Site C; and the necessary provincial and federal permits and authorizations for construction. BC Hydro is seeking guidance from the Minister on a process, schedule and information requirements for the investment decision on Site C.

Issue

This briefing note outlines the upcoming decisions required for the Site C project by the BC Hydro Board and the Shareholder, and seeks input from the Minister on Shareholder briefings, information requirements, process and schedule for these decisions.

Included in this briefing note are the following sections:

- a) Background: Multi-Stage Evaluation Process for Site C
- b) Background: Provincial Decisions and Policy Guidance for Site C
- c) Decision Schedule
- d) Government Briefing Plan

a) Background: Multi-Stage Evaluation Process for Site C

BC Hydro adopted a multi-stage approach for the planning and evaluation of the Site C project – outlined in the chart below – with a provincial decision at each stage.

Multi-Stage Evaluation and Planning Process for Site C	
Stage 1 (2004-2007)	The review of project feasibility concluded that it would be prudent to continue to investigate Site C as a potential resource option to address the growing electricity gap within the province.
Stage 2 (2007-2009)	Stage 2 included comprehensive consultations with Aboriginal groups, the public and stakeholders, as well as advancing environmental studies, field studies, engineering design and technical work.
Stage 3 (2010-Present)	Stage 3 includes an independent environmental assessment process by federal and provincial regulatory agencies.
Stage 4	Should the project receive environmental certification, Stage 4 would require a decision by the BC Hydro Board of Directors and the Province to proceed to full project construction.
Stage 5	The final stage would include an approximate seven-year construction period, with one additional year for final project commissioning, site reclamation, and demobilization.

b) Background: Provincial Decisions and Policy Guidance for Site C

- In the 2007 *BC Energy Plan*, the provincial government directed BC Hydro to start consultations on the project. This direction initiated the second stage of planning and evaluation called Stage 2: Consultation and Technical Review.
 - The specific wording the 2007 BC Energy Plan was as follows:

"BC Hydro and the Province will enter into initial discussions with First Nations, the Province of Alberta and communities to discuss Site C to ensure that communications regarding the potential project and the processes being followed are well known."
 - In a subsequent meeting with then-Minister Neufeld, the Northwest Territories was added as a jurisdiction with which to consult.
- In fall 2009, following comprehensive consultations and advancing technical work, BC Hydro submitted the *Stage 2 Report: Consultation and Technical Review* to the Province,

Page 263

Withheld pursuant to/removed as

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c) Decision Schedule

- With the Site C project nearing completion of the environmental assessment process, there are three key decisions required for the project to proceed to construction:
 - A federal-provincial government decision is required for environmental certification, expected to be made by late October 2014.
 - An investment decision is required by the BC Hydro Board of Directors, which is expected to be made in late summer or early fall 2014.
 - An investment decision by the Province is required for Site C to proceed to construction.
- In addition, there are also decisions required by the provincial and federal governments regarding required permits and authorizations for Site C construction.

Upcoming Decisions		
Decision/Requirement	Decision Authority	Process and Timing
British Columbia Environmental Assessment Certificate (EAC)	Minister of Environment; B.C. Minister of Forests, Lands and Natural Resource Operations	October 2014: Decision on certification anticipated
Federal Decision Statement	Federal Minister of Environment and Governor in Council	October 2014: Decision anticipated
Investment Decision	BC Hydro Board of Directors	Summer 2014: Briefings September 2014: Decision
Investment Decision	Minister of Energy and Mines/Provincial Cabinet	Briefings in progress TBD: Decision
Provincial Permits	Ministry of Forests, Land and Natural Resource Operations	December 2014
Federal Authorizations	Fisheries and Oceans Canada Transport Canada	Spring 2015

d) Government Briefing Plan

To maintain project schedule, and to ensure adequate time for briefings, BC Hydro is proposing to work with MEM to conduct project briefings with relevant Ministries and Ministers, prior to an investment decision.

The briefings could take place between June, July and August 2014. Key Ministries and issues are identified below.

Ministry / Provincial Decision-Makers	Key Issues
Ministry of Aboriginal Affairs and Reconciliation	Status of First Nations Consultations and outstanding issues, if any
Ministry of Agriculture	Agricultural assessment of the project/ALC process
Ministry of Finance	Project cost estimate and ratepayer impact
Ministry of Community, Sport and Cultural Development	Community agreements with affected communities in the Peace Region
Ministry of Transportation and Infrastructure	Highway 29 Realignment agreement between BC Hydro and MoTI
Natural Resources Committee of Deputy Ministers	Overview of key issues / investment decision
Premier's Office	Overview of key issues / investment decision
Government Caucus	Project Overview

MacLaren, Les MEM:EX

From: Laudan, Mina <mina.laudan@bchydro.com>
Sent: Tuesday, July 8, 2014 12:29 PM
To: MacLaren, Les MEM:EX
Subject: Permitting Briefing Note - April 9, 2014
Attachments: 4.1 Permits and Authorizations.final.docx

Les, Here is the permitting briefing note that was provided to the Minister for the April 9th briefing.

Mina Laudan

Director, Public Affairs, Community Consultation & Properties

Site C Clean Energy Project

Tel: 604 695-5279

Web: www.sitecproject.com

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BRIEFING NOTE

4.1 PERMITS AND AUTHORIZATIONS

Summary

In addition to environmental certification, BC Hydro must also obtain permits and authorizations to proceed with Site C construction. BC Hydro will be filing its first series of permit applications for construction activities in April 2014. However, permits and authorizations related to the project will not be issued until a decision has been made on environmental certification, which is anticipated to occur in October 2014. BC Hydro further understands that the Environmental Assessment Certificate (EAC) may include conditions that will need to be addressed in permitting.

4.1.1 Issue

- The following briefing note provides an overview of the provincial and federal permits and authorizations required for the Site C Clean Energy Project. The briefing note describes the streamlined process by which permit applications will be made, and provides an estimated timeline for the permitting process.

4.1.2 Background

- BC Hydro has been engaged with the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) Major Projects Office to streamline and optimize the submission, review and issuance of provincial authorizations required for Site C. These authorizations come under the Forest, Land, Water, Wildlife, Mines, Public Health, Safety Standards, Environmental Management, and Heritage Conservation Acts. A "Lean" 3B Permitting Approach will be used for the project, whereby:
 - "Blanket" permits will be submitted for multiple project components where possible;
 - Permits will be "bundled" according to project component and timing of activities within the major components; and
 - Permit applications will be "batched" according to the construction sequence.
- The MFLNRO Major Projects Office is leading this permitting process and has provided regular updates to the Natural Resource Sector Board and has been nominated for a Premier's Award for Organizational Excellence for the Project's Permit Optimization Strategy.
- Federal authorizations will be required under the Fisheries Act, Navigable Waters Protection Act, Explosives Act, Radio Communication Act, Canada Transportation Act, and Railway Safety Act. BC Hydro is engaging with federal government authorities to come to agreement on the federal authorizations required for construction and operation of Site C, and to obtain authorization as required.

4.1.3 Key Facts

- The permit applications will be batched according to the construction sequence, which is described below.

Batch 1 Permit Applications

- Batch 1 permit applications will be submitted in April 2014, and will be required by BC Hydro to facilitate project site preparation, timber removal and early works.
- Activities identified in Batch 1 permit applications would be implemented shortly after issuance of the EAC. Batch 1 is intended to cover work planned to March 31, 2016 where sufficient information is available to allow for permit applications. Batch 1 permit applications that require advanced design by contractors will be submitted as procurement proceeds.
 - Batch 1 permit applications will include component (bundle) packages for the dam site, North Bank Road Upgrade, Project Access Road, and Quarry sites (Del Rio, Portage Mountain, West Pine, Wuthrich, and 85th Avenue). Multi-site permits will include several under the Water Act (in-stream works notifications and short-term use of water) and Wildlife Act (removal of eagles' nests, beaver dens, others and capture, salvage and relocation of animals and fish).

Batch 2 Permit Applications

- Batch 2 applications will be submitted in late 2014 or early 2015, following receipt of the EAC, and will cover work to March 31, 2017 and beyond where possible.
- Batch 2 applications will include permits required for reservoir clearing and preparation (Moberly to Wilder Creek and Wilder Creek to Cache Creek) and works at Portage Mountain.

Batch 3 Permit Applications

- Batch 3 permit applications will be submitted in late 2015 or 2016 and will cover the remaining work for the project construction stage.
- Batch 3 applications will include permits required for reservoir clearing and preparation (Cache Creek to Halfway River, Halfway River to Hudson's Hope), and activities for Hudson's Hope Shoreline Protection, West End Highway Re-alignment (Lync, Dry, and Farrell Creeks), Reservoir Slope and Stability Impact Lines, Cache Creek Highway Re-alignment, and Halfway river Highway Re-alignment.
- BC Hydro may make additional applications over the course of this period for investigative works, or for mitigation activities, that have not yet been identified. BC Hydro will also make periodic applications for permit term extensions or modifications.
- BC Hydro will communicate with the public and government agencies as required under permits, authorizations, and regulatory requirements issued for project construction and operations.

- The Province will consult with affected First Nations and Aboriginal groups on provincial permits applications related to the project.

4.1.4 Next Steps

- BC Hydro will submit the Batch 1 permit applications in April 2014 and the remaining Batches as outlined above. BC Hydro will also continue to engage with federal government authorities to come to agreement on the federal authorizations required for construction and operation of the Site C project.

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Tuesday, July 8, 2014 1:56 PM
To: Bennett, Bill MEM:EX
Cc: MacLaren, Les MEM:EX; Nikolejsin, Dave MEM:EX
Subject: FW: Site C Briefing Materials for Meeting with the Minister of Agriculture
Attachments: Info Sheet - About Site C - June 2014.pdf; BN - Site C and Agriculture FINAL.7.7.2014.pdf

Hi Minister

See attached materials that BC Hydro will be using for tomorrow's briefing with Minister Letnick on agricultural impacts of Site C. I will attend the briefing and Les or someone from his division will be there as well.

Thanks

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

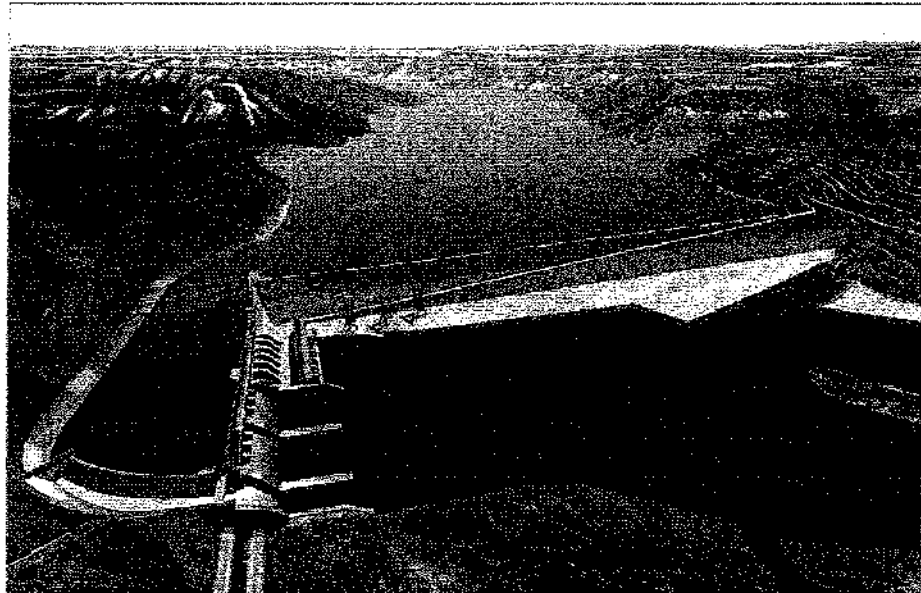
Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: 751-1717 | E-mail: chris.sandve@gov.bc.ca

INFORMATION SHEET ABOUT SITE C

The Site C Clean Energy Project (Site C) would be a third dam and hydroelectric generating station on the Peace River in northeast B.C. It would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year — enough energy to power the equivalent of about 450,000 homes per year in B.C.

As the third project on the Peace River, Site C would gain significant efficiencies by taking advantage of water already stored in the Williston Reservoir. This means that Site C would generate approximately 35 per cent of the energy produced at the W.A.C. Bennett Dam with five per cent of the reservoir area.



The Site C reservoir would be one of the most stable in the BC Hydro system with relatively little fluctuation in water levels during typical operations.

The Site C project requires environmental certification, regulatory permits and authorizations, and other approvals before it can proceed to construction. In addition, the Crown has a duty to consult and, where appropriate, accommodate Aboriginal groups.

Once built, Site C would be a source of clean, renewable and cost-effective electricity for more than 100 years.

Meeting Future Electricity Needs

B.C.'s electricity needs are forecast to increase by approximately 40 per cent over the next 20 years as the economy expands and the population grows by more than a million people. The electricity needs of Liquefied Natural Gas (LNG) facilities would further increase demand. As extensive as BC Hydro's electricity supply is, it will not be enough to meet future electricity demand.

Low Greenhouse Gas Emissions

Site C would produce among the lowest greenhouse gas emissions (GHGs), per gigawatt hour, when compared to other forms of electricity generation. The project would produce significantly less GHGs per gigawatt hour than fossil fuel sources such as natural gas, diesel or coal. Emissions from Site C would fall within the ranges expected for wind, geothermal and solar energy sources.

SITE C CLEAN ENERGY PROJECT

-2-

Cost-Effective Electricity

Site C would be cost-effective because, after its upfront capital cost of \$7.9 billion, it would have low operating costs and a long life of more than 100 years. Site C would produce electricity at a cost of \$83 per megawatt hour at the point of interconnection (based on a real discount rate of 5 per cent), making Site C among the most cost-effective options to help meet B.C.'s future electricity needs.

Economic Development

Site C is estimated to create approximately 10,000 person-years of direct employment during construction, and approximately 33,000 person-years of total employment through all stages of development and construction. Construction would also provide significant opportunities for businesses of all sizes.

Integrating Renewable Energy

Site C would help integrate intermittent renewables by quickly increasing or decreasing generation to match the availability of resources such as wind and run-of-river hydro. For example, Site C generation could be increased when intermittent resources are not available (e.g., when the wind is not blowing), and could be decreased when intermittent resources are available.

REPORT OF THE JOINT REVIEW PANEL

On May 1, 2014, the Joint Review Panel submitted its report on Site C to the federal and provincial governments, as part of the independent environmental assessment process.

On cost-effectiveness, the Panel wrote (page 305): *"The Panel concludes that B.C. will need new energy and new capacity at some point. Site C would be the least expensive of the alternatives, and its cost advantages would increase with the passing decades as inflation makes alternatives more costly."*

On rates and GHGs, the Panel wrote (page 308): *"Site C, after an initial burst of expenditure, would lock in low rates for many decades, and would produce fewer greenhouse gas emissions per unit of energy than any source save nuclear."*

On economic development, the Panel stated (page 201): *"The Panel concludes that there would be excellent opportunities for new and existing jobs and businesses during the construction phase."*

For integrating renewables, the Panel commented (page 300): *"However, B.C. has two great advantages when it comes to integrating renewables: First, a storage dominated hydraulic system is excellent for integration, functioning as it does like a huge battery that can follow the load on any basis from hourly to annually."*

As a long-term asset for B.C., the Panel wrote (page 307): *"A few decades hence, when inflation has worked its eroding way on cost, Site C could appear as a wonderful gift from the ancestors of that future society, just as B.C. consumers today thank the dam-builders of the 1960s."*

BRIEFING NOTE

SITE C AND AGRICULTURE

Summary

The Site C project would affect agricultural land, primarily through the creation of the reservoir, and dam construction, Highway 29 realignment and other project components. An agricultural assessment was conducted as part of the environmental assessment process, and an Agricultural Compensation Fund, and compensation to individual farm operations, is proposed by way of mitigation and compensation for project effects. In May 2014, the report of the Joint Review Panel concluded that the permanent loss of the agricultural production of the Peace River valley bottomlands is not, by itself and in the context of BC or western Canadian agricultural production, significant.

There will also be a requirement to exclude the affected lands from the ALR to permit the project to proceed to construction in 2015.

Background

- As part of the cooperative federal-provincial environmental assessment process for Site C, BC Hydro conducted an agricultural assessment to characterize the potential effects of the project on agriculture.
- A field program was undertaken during 2011 and 2012 to develop the baseline. Methods were discussed with staff from the Ministry of Agriculture and the Agricultural Land Commission as the work progressed. Interviews were held with potentially affected farmers and ranchers.
- Effects on agriculture were assessed in relation to four key aspects:
 - Loss of agricultural land
 - Changes to individual farm operations
 - Changes to agricultural economy
 - Changes to regional food production and consumption (food self-reliance)

Key Findings

- The findings of the agricultural assessment are included in the Site C Environmental Impact Statement, which has been the subject of an independent environmental assessment process, including a Joint Review Panel process with public hearings.
- More than 99 per cent of Class 1 to 5 agricultural lands (land capable of crop production) in the Peace Agricultural Region would not be affected by Site C.
 - While there would be a permanent loss of approximately 3,800 hectares of Class 1 to 5 lands, approximately 2.7 million hectares of Class 1 to 5 lands would remain available in the Peace Agricultural Region.

- In the Peace River valley, more than 16,000 hectares (or more than 80 per cent) of Class 1 to 5 land would remain available for agricultural use.
- An estimated 541 ha of currently cultivated land would be affected by the Project. An estimated 14 farms would permanently lose some cultivated land, and compensation would be provided for these individual farm operators and owners. Individual farm mitigation plans will also be implemented to avoid or reduce impacts on agricultural land and operations to support the continued farm operations of the majority of farms near the project.
- Overall agricultural production in the region would be expected to benefit from the proposed Agricultural Compensation Fund. The Joint Review Panel noted that the proposed \$20 million agricultural compensation fund is generous in comparison to current or likely future annual value of crops from lands affected by the reservoir.
- No residual effect to the ability of the region to be food self-reliant in commodities that can be produced in the region as land remaining outside the Project activity zone would be more than adequate to meet local demand.

Agricultural Land Reserve

- An estimated 2,727 ha of Agricultural Land Reserve (ALR) land would be permanently taken up by the Project, primarily by the reservoir and Highway 29. An estimated 514 ha of ALR land would be used temporarily during Project construction, primarily in the dam site construction area.
- A means of excluding these lands from the ALR, or temporarily allowing non-farm use of ALR lands for the Project, will be required. This exclusion is required to permit the project to proceed to construction in early 2015.
- While there are provisions under the ALC Act to 'exclude' or approve 'non-farm use' of ALR lands, including for transportation and utility uses (i.e., linear infrastructure), inundation from hydroelectric development does not fall under these provisions.
- Options considered for addressing ALR lands include:
 - Agricultural Land Commission (ALC) exclusion or approval of non-farm use
 - Cabinet exclusion under s.40 of the ALC Act
 - An order by Cabinet under s.7 of the Environment and Land Use Act
 - Legislative amendment of ALC Act
- In December 2013, the Minister of Energy and Mines provided a letter to the Chair of the ALC providing clarification from the Province of its intentions, should the project receive environmental certification, regarding ALR land potentially affected by Site C (see letter attached).
- As stated in the letter, the direction from the Province is to avoid duplication of the review process and allows "the government [to] take appropriate action to ensure that the requirements of the *Agricultural Land Commission Act* will not apply to any of the lands potentially affected by the Project" should it proceed.
- This approach is consistent with the 1983 BCUC recommendation regarding ALC lands affected by Site C, in that additional hearings on the question of agricultural use would not

be warranted, and that Cabinet should undertake measures to exclude the affected land from the reserve, if and when a certificate is issued for Site C.

Joint Review Panel Conclusion on Agriculture

- With respect to agriculture, the JRP came to the following conclusion:

"The Panel concludes that the permanent loss of the agricultural production of the Peace River valley bottomlands included in the local assessment area of the Project is not, by itself and in the context of B.C. or western Canadian agricultural production, significant. The Panel further concludes that this loss would be highly significant to the farmers who would bear the loss, and that financial compensation would not make up for the loss of a highly valued place and way of life." (Page 150):

- With regard to BC Hydro's proposed \$20 million agricultural compensation fund, the Panel stated the following:

"The current annual value of crops from the portion of the valley that would be inundated is but \$220,000. While this may be due in part to the continuing threat of expropriation, the more important reasons are labour costs and the availability of cheap produce from elsewhere. Only if the future holds a radical end to current cheap food prices and a breakdown in interregional and international trade would higher figures become credible. The proposed \$20 million agricultural investment fund, to be spent on improvements outside the inundation zone, is generous by comparison." (Page 149)

Next Steps

- The Minister of Energy and Mines has stated that it is the intention Province to avoid duplication of the review process and allows "the government [to] take appropriate action to ensure that the requirements of the *Agricultural Land Commission Act* will not apply to any of the lands potentially affected by the Project" should it proceed.

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Attachments

- Letter from the Minister of Energy and Mines to the Chair of the BC Hydro Board of Directors (December 2013)
- Letter from the Counsel for the Joint Review Panel to the Provincial Agricultural Land Commission (January 19, 2014)
- Response from the Provincial Agricultural Land Commission to the letter from counsel for the Joint Review Panel (January 29, 2014)

Cc: Gordon, Matt GCPE:EX; Sauder, Kit MEM:EX
Subject: RE: FYI: Gwen Johansson news conference - July 9

s.13

From: Sandve, Chris MEM:EX
Sent: Tuesday, July 8, 2014 9:25 AM
To: Nikolejsin, Dave MEM:EX; MacLaren, Les MEM:EX; Bennett, Bill MEM:EX
Cc: Gordon, Matt GCPE:EX; Sauder, Kit MEM:EX
Subject: FW: FYI: Gwen Johansson news conference - July 9

FYI

Chris Sandve
Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: 5.17 | E-mail: chris.sandve@gov.bc.ca

From: Fitzsimmons, Craig [<mailto:Craig.Fitzsimmons@bchydro.com>]
Sent: Tuesday, July 8, 2014 9:23 AM
To: Sandve, Chris MEM:EX; Gordon, Matt GCPE:EX; Haslam, David GCPE:EX
Cc: Laudan, Mina; Elliott, Caroline; Vanagas, Steve
Subject: Fw: FYI: Gwen Johansson news conference - July 9

FYI
Sent from my Blackberry

From: Fitzsimmons, Craig
Sent: Tuesday, July 08, 2014 09:13 AM
To: Vanagas, Steve; Heer, Simi
Subject: FW: FYI: Gwen Johansson news conference - July 9

FYI

Media Advisory - Site C Review Findings to be Released by Mayor Gwen Johansson



HUDSON'S
HOPE
PLAYGROUND OF THE PEACE

District of Hudson's Hope logo (CNW Group/District of Hudson's Hope)

District of Hudson's Hope logo (CNW Group/District of Hudson's Hope) *Pin it*

VANCOUVER, July 8, 2014 /CNW/ - Members of the media and the public are invited to attend a news conference where Gwen Johansson, Mayor of the District of Hudson's Hope, will release the findings of a report that reviews the \$7.9 billion Site C dam project, explores alternatives to Site C and highlights the financial impact of the project on BC taxpayers.

Additional information, including report summary and backgrounder will be issued via CNW Newswire on Wednesday, July 9 at 12:30pm (PST).

Event: Site C Report - Public announcement and news conference

Date: Wednesday, July 9th, 2014
Time: 12:30pm - 1:00 pm
Location: Courtyard of BC Hydro Corporate Offices, 333 Dunsmuir, Vancouver BC

Craig Fitzsimmons
Manager, Communications and
Issues Management - Site C

BC Hydro
400, Floor Benton Centre
1055 Dunsmuir Street
PO Box 49280
Vancouver, B.C. V7X 1M5

Office: 604 683 7000
Fax: 604 595 5280
Email: craig.fitzsimmons@bchydro.com

bchydro.com

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MacLaren, Les MEM:EX

From: Laudan, Mina <mina.laudan@bchydro.com>
Sent: Wednesday, July 9, 2014 1:25 PM
To: MacLaren, Les MEM:EX
Subject: Site_C_Update_Agriculture_2014.(D5).7.9.2014.ppt
Attachments: Site_C_Update_Agriculture_2014.(D5).7.9.2014.ppt

Hi Les,

Here is a copy of the Presentation for the 2pm meeting today with the Minister of Agriculture. From our team, Susan and Siobhan Jackson will be there in person.

Thanks,
Mina

Mina Laudan
Director, Public Affairs, Community Consultation & Properties
Site C Clean Energy Project
Tel: 604 695-5279
Web: www.sitecproject.com

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CLEAN
ENERGY PROJECT

SITE C CLEAN ENERGY PROJECT

Presentation to the Minister of Agriculture

July 9, 2014

BC Hydro

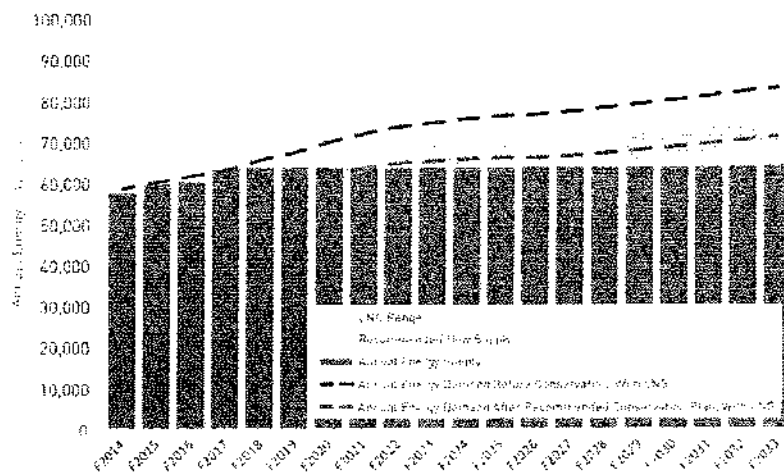
Projections are integrated. Projections are not a forecast. Data is subject to change.

BC Hydro is not responsible for the accuracy of the data.



CLEAN
ENERGY PROJECT

DEMAND TO INCREASE 40% IN 20 YEARS



Projections are integrated. Projections are not a forecast. Data is subject to change.

2

WE NEED BOTH ENERGY AND CAPACITY

Resource	Capacity
Run-of-River	Intermittent
Wind	Intermittent
Bioenergy	Dependable; not flexible
Large Hydro	Dependable; flexible
Natural Gas	Dependable; not flexible except for peaker plants

- Intermittent = Power that fluctuates or is not available at all times
- Dependable = Power that can be reliably produced when required
- Flexible = Power that can be adjusted to meet conditions, can help integrate intermittent resources

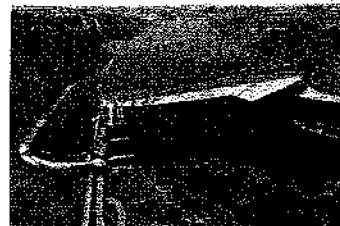
BC Hydro

Prepared and published at the request of Ministers and Cabinet

FOR CLIMATE ACTION

MEETING LONG-TERM ELECTRICITY DEMAND

- Conservation is first and best choice
78% of future demand growth to be met through demand-side management
- Re-investing in Existing Assets
Upgrades to aging infrastructure
Expansion of existing facilities
- Buying from IPPs
20% of current system and growing (\$50+ billion in total contractual commitments)
- New Capacity Resource
Site C Clean Energy Project

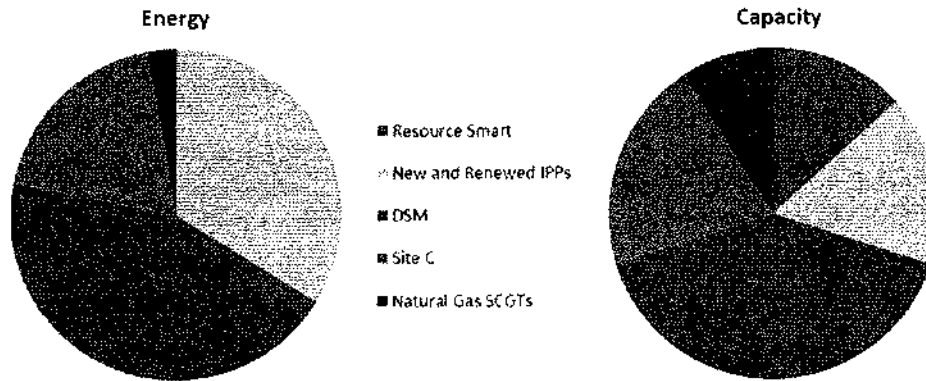


BC Hydro

Prepared and published at the request of Ministers and Cabinet

FOR CLIMATE ACTION

NEW RESOURCES PLANNED BY 2033

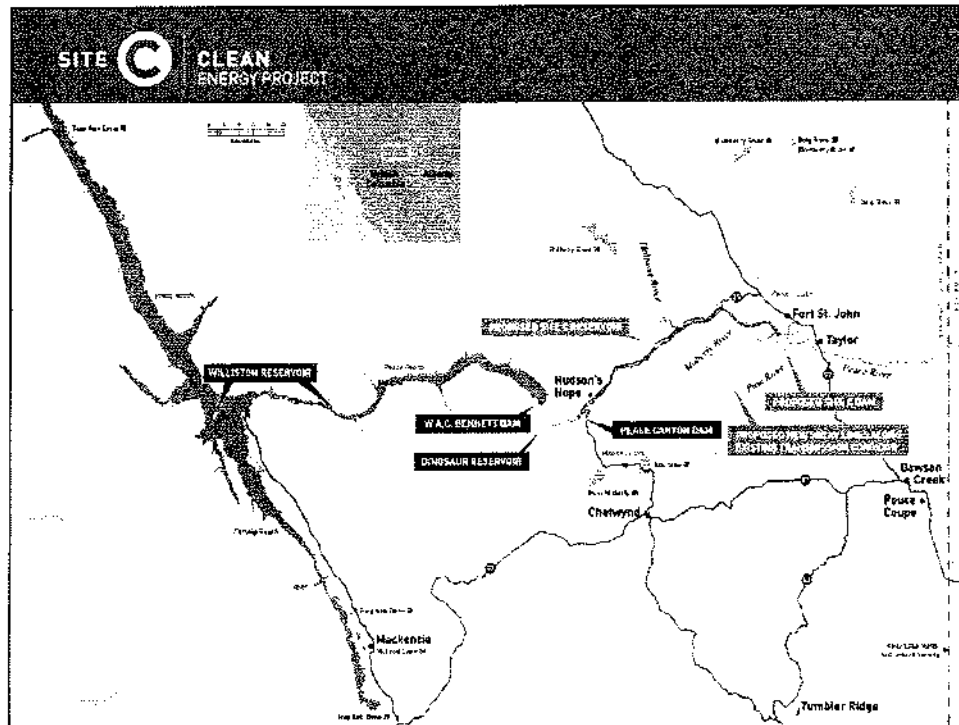


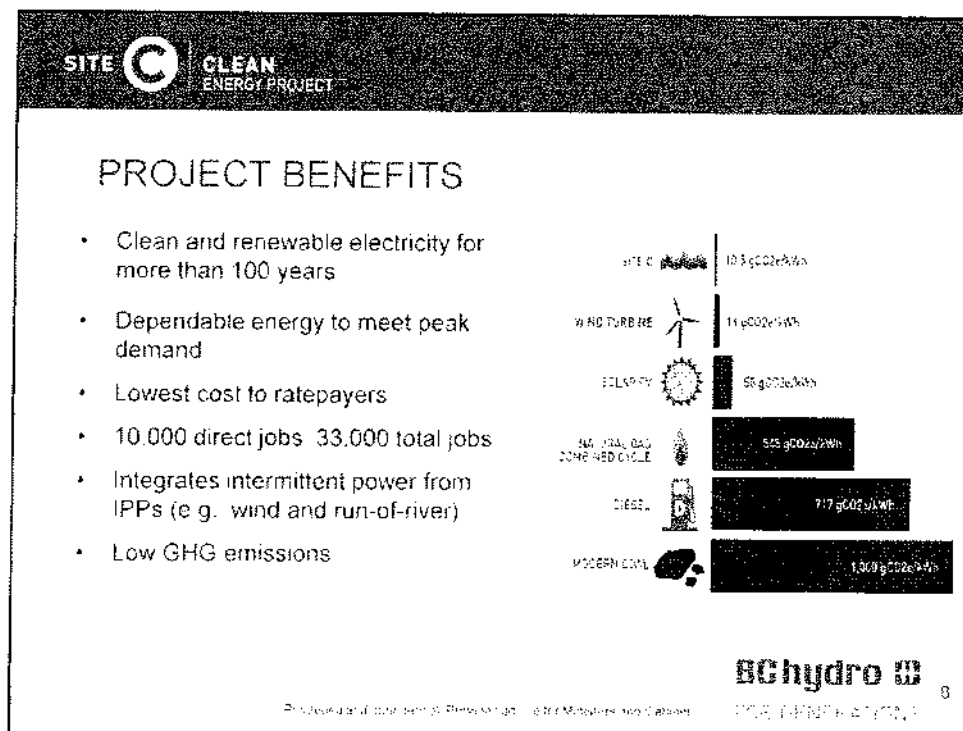
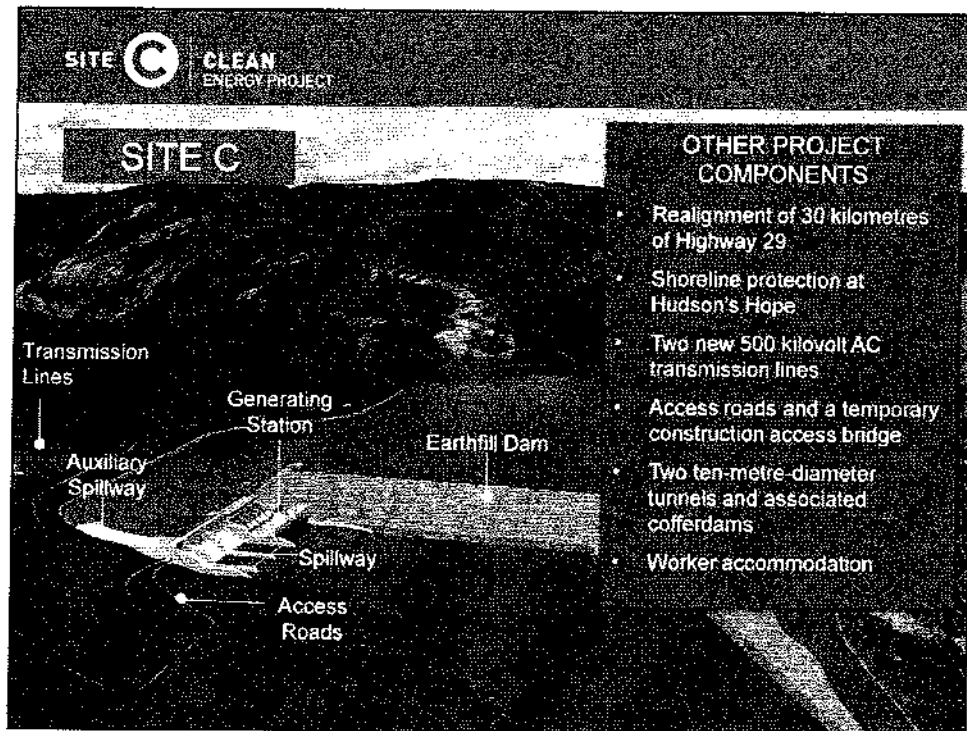
Source: Integrated Resource Plan, November 2013

Prepared by: Integrated Resource Planning, Ministry of Energy and Climate Change

BC Hydro

5





s.13,s.17

SITE

C

CLEAN
ENERGY PROJECT

KEY PROVINCIAL DIRECTIONS

- 2007 BC Energy Plan directs BC Hydro to initiate consultations with First Nations and communities on Site C
- December 2009 – Provincial Cabinet decision to advance Site C to Environmental and Regulatory Review stage
- April 2010 – Province announces decision to advance Site C, subject to regulatory approvals, and ensuring that the Crown's constitutional duties to First Nations are met
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- February 2012 – Province approved mandate for First Nations and community benefits agreements
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BC Hydro

FOR GENERATIONS

Proceeding and confidential. For use only by Ministers and Cabinet

BY THE NUMBERS

ENVIRONMENTAL ASSESSMENT

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- 14,000+ entries in First Nations consultation log
- 500+ consultation meetings with the public and stakeholders, property owners, and local governments
- Multiple years of field studies for fish, wildlife, socio-economic, environment
- 15,000+ pages in the Site C Environmental Impact Statement
- 7,094 information requests responded to
- Two-month public hearing process (December 2013 to January 2014)
- 29,572 pages of evidence filed

BC Hydro

Prepared and published by BC Hydro for the Minister of Environment

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JOINT REVIEW PANEL REPORT

- JRP accepted BC Hydro's mitigation measures and made 50 recommendations (37 directed to BC Hydro)
- The report confirmed that the benefits for the Site C project are clear:
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 - Economic benefits: Site C would provide opportunities for jobs and small businesses of all kinds, including those accruing to Aboriginal people.
 - Legacy project: The panel noted that the project would provide multi-generational benefits
- CEAA and BCEAO currently consulting with Aboriginal groups on JRP Report findings and draft conditions

BC Hydro

Prepared and published by BC Hydro for the Minister of Environment

100-100-100-100-100-100

SITE 
CLEAN
ENERGY PROJECT

COMMUNITY AGREEMENTS

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- Community Agreements reached with districts of Chetwynd and Taylor
- Term sheet agreed to with City of Fort St. John
- Discussions underway with District of Hudson's Hope





**DISTRICT OF
CHETWYND**





FORT ST JOHN
The Energy City



Proceedings are confidential. Please do not disseminate this information.


14
LOCAL NEGOTIATIONS



CLEAN
ENERGY PROJECT

SIGNIFICANT PUBLIC SUPPORT FOR SITE C

- June 2014 poll found that 79% either support building Site C (49%), or can support it under certain circumstances (30%), while 18% are opposed
- Province-wide awareness is at 62%, up from 41% in 2013
- There is a high level of support for Site C provided certain conditions are met, including:
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BC Hydro 

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Prepared and issued for the Province of British Columbia by the Ministry of Energy and Climate Change

DATE: November 2014



CLEAN
ENERGY PROJECT

NEXT STEPS

Area	Activities
Decisions	<ul style="list-style-type: none">• Federal Decision Statement, October 2014• BC Environmental Assessment Certificate, October 2014• Provincial investment decision, Fall 2014• Provincial permits, December 2014• Federal authorizations, Spring 2015
First Nations	<ul style="list-style-type: none">• Continue consultation and conclude agreements
Procurements Underway	<ul style="list-style-type: none">• Worker Accommodation: RFQ complete, RFP to shortlist July 2014• Main Civil Works: RFQ issued April 2014; evaluation underway• Dam Site Clearing: RFP issued June 2014• Other Early Works: Anticipated in summer 2014
Construction	<ul style="list-style-type: none">• Construction anticipated to begin in 2015• 7-year construction; 1-year commissioning and demobilization• All units in service 2023

Subject to environmental factors, other regulatory permits and authorizations, and approvals in progress

SITE C AND AGRICULTURE

SCOPE OF AGRICULTURAL ASSESSMENT

Effects on agricultural were assessed in relation to four key aspects:

1. Loss of agricultural land
2. Changes to individual farm operations
3. Changes to agricultural economy
4. Changes to regional food production and consumption (food self-reliance)



FINDING FOR LOSS OF AGRICULTURAL LAND

- 99.9% of Class 1 to 5 lands in the Peace Agricultural Region not affected by Site C.
- Permanent loss of ~3,800 ha of land rated for agricultural crop production
 - 540 ha currently cultivated for canola, grain, forage, improved pasture

Area	Class 1	Class 2	Class 3	Subtotal Class 1-3	Class 4	Class 5	Subtotal Class 1-5	Class 6 & 7	Total
Affected Land*	0	2,801	832	3,433	290	103	3,816	2,553	6,469
% of Valley	0%	27.2%	13.5%	20.6%	14.4%	7.0%	19.0%	7.8%	11.7%
% of Region	0%	2.1%	0.2%	0.7%	0.1%	0.0%	0.1%	0.1%	0.1%
% of BC	0%	1.1%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%

Reprinted and modified from: Process and/or for Mitigation and Offset

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MITIGATION FOR AGRICULTURAL LAND

- **Mitigation:** Proposed mitigation measures include.
 - Agricultural compensation fund to support regional agricultural projects
 - Proposed fund value based on net present value of foregone economic activity (approximately \$20 million)
 - Administration / governance to be developed through consultation with Ministry of Agriculture, ALC, agricultural organizations
 - Propose stakeholder consultation early in construction period
 - Relocation of suitable quality soil in selected locations
 - Potential inclusion of land in ALR (BC Hydro owned or Crown land)
- Compensation would be provided for individual farm operators whose lands are required for the project



JOINT REVIEW PANEL REPORT

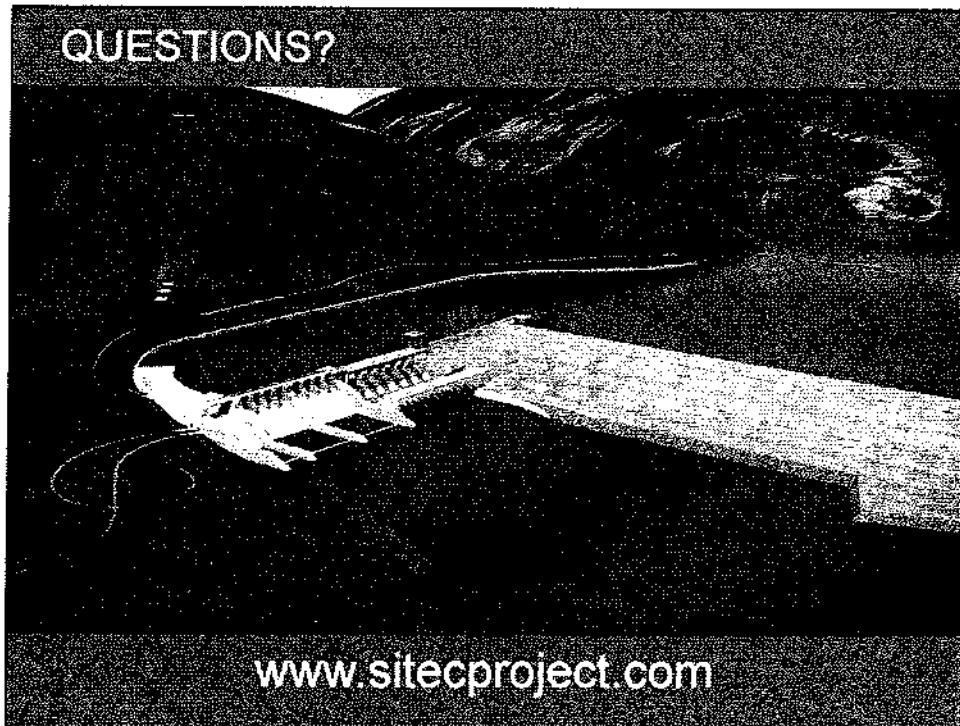
On May 1, 2014, the Joint Review Panel addressed agriculture as follows.

- Conclusion on significance: *"The Panel concludes that the permanent loss of the agricultural production of the Peace River valley bottomlands included in the local assessment area of the Project is not, by itself and in the context of B.C. or western Canadian agricultural production, significant."* (page 150)
- Conclusion on proposed mitigation: *"The current annual value of crops from the portion of the valley that would be inundated is but \$220,000... The proposed \$20 million agricultural investment fund, to be spent on improvements outside the inundation zone, is generous by comparison."* (page 149)

ALR LAND AND SITE C

- Approximately 2,775 hectares of land would need to be removed from the ALR due to the project
 - Inundation, associated erosion, some dam site components, realignment of approximately 30 km of highway, permanent access roads
- ALR land is also temporarily affected by:
 - Dam site components
 - Access roads, excavation and spoil sites, quarries, and other construction related activity
 - Transmission lines and related construction and maintenance activities
- Exclusion of this land from the ALR is required before construction can commence

s.13,s.17



MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Wednesday, July 9, 2014 8:55 PM
To: MacLaren, Les MEM:EX; Bennett, Bill MEM:EX; Sauder, Kit MEM:EX; Nikolejsin, Dave MEM:EX
Subject: FW: Site C Briefing Materials for Meeting with the Minister of Transportation
Attachments: BN - Site C and MOTI.pdf; Info Sheet - About Site C - June 2014.pdf

Here are the materials for Friday's Site C meeting with Minister Stone.

Chris

Chris Sandve

Chief of Staff to the Hon. Bill Bennett

Minister of Energy and Mines and Minister Responsible for Core Review

Office: 250-356-9944 | Cell: S.17 | E-mail: chris.sandve@gov.bc.ca

BRIEFING NOTE

Site C and Ministry of Transportation & Infrastructure

Summary

Should the Site C Clean Energy Project (Site C) proceed to construction, six segments of Highway 29 (approximately 30 km) between Fort St. John and Hudson's Hope would require realignment due to the creation of a reservoir. BC Hydro and MOTI have worked together since 2007 to share information, participate in consultations and the environmental assessment process, and address impacts on MOTI assets. In November 2013, BC Hydro and MOTI confirmed an Implementation Agreement whereby MOTI would provide project management, design oversight, and construction management services through Site C project construction.

Background

- Since 2007, BC Hydro and MOTI have collaborated in the planning and design of upgrades and realignments of roads and highways in the Project area, including the realignment of six segments of Highway 29 (approximately 30 km), along with upgrades to Project access roads and other Project works.
- BC Hydro and MOTI entered into a Cooperation Agreement in April, 2011, to facilitate MOTI involvement in the development of design criteria for MOTI assets and to allow BC Hydro to complete material source investigations in specific MOTI pits and quarries.
- MOTI staff have participated with BC Hydro in Site C public consultations, environmental assessment open houses and public hearing, and meetings with local governments as required with respect to MOTI infrastructure.

Implementation Agreement

- In November 2013, BC Hydro and MOTI confirmed an Implementation Agreement whereby MOTI would provide project management, design oversight, and construction management services for the Highway 29 realignments and some other portions of works affecting MOTI infrastructure.
- The Implementation Agreement between MOTI and the Project is effective through to construction completion and includes provisions relating to:
 - Identifying impacts to MOTI infrastructure and mitigation measures
 - Establishing a joint project board and project delivery teams
 - Defining payment process for the cost of works associated with Site C impacts
 - Defining responsibilities of both MOTI and BC Hydro
- BC Hydro will be responsible for all permits, consultation and property acquisition, and for all costs incurred by MOTI in connection with the Implementation Agreement. BC Hydro will be

responsible for the management and upgrade of various MOTI Peace District roads to access the dam site.

- All roads and bridges will to be designed and constructed to MOTI standards and design criteria.
- MOTI will be responsible for project management, design oversight, and construction management services as follows:

Highway 29 realignment

- Realignment of six segments of Highway 29 (approximately 30 km)
- Replace 5 structures with new bridges
- Deactivate sections of the highway and bridges that will be realigned
- Use existing MOTI pits and quarries for construction and develop additional pits and quarries outside of the reservoir impacts as required

Access Roads

- Old Fort Road – upgrade width, strength and alignment
- 240 Road – upgrade width and strength
- 269 Road – upgrade south end, width and strength
- 271 Road – Wuthrich quarry access, improve shoulder width
- Jackfish Lake Road – potential material supply route. If used, upgrade strength for 31 km of road and potentially the width for up to 11 km.

Hudson's Hope

- Canyon Drive Brake Check – install brake check
- Hudson's Hope Shoreline Protection – 2,650 m long berm to protect the shoreline
- D A Thompson Road – upgrade to provide access for construction of shoreline protection

Pits and Quarries (to allow BC Hydro usage of construction materials)

- Wuthrich Quarry – source of temporary rip-rap
- West Pine Quarry – source of permanent rip-rap
- Portage Mountain – source of highway rip-rap
- Del Rio Pit – source of gravel
- Peace View Pit – source of gravel

Other Works

- District of Taylor:
 - Signalization at intersection of Highway 97 and Pine Avenue
 - Highway illumination on Highway 97 in Taylor
 - CMS message boards and webcams on Hwy 97 within Taylor
 - Additional RV sites at Peace Island Park

Temporary Construction Access Bridge

- BC Hydro is planning to construct a temporary construction access bridge in Year 1 of construction that will be designed to accommodate both construction-related traffic and workers to and from both banks.
- Over the years, there has been some interest from the City of Fort St. John and the District of Chetwynd about converting this temporary construction bridge into a permanent crossing. The District of Hudson's Hope, the City of Dawson Creek and some Aboriginal groups have expressed concerns about a new permanent crossing.
- BC Hydro's plans are for a temporary construction bridge only. There is no public access to this bridge, and it will be decommissioned at the end of the construction period.

Next Steps

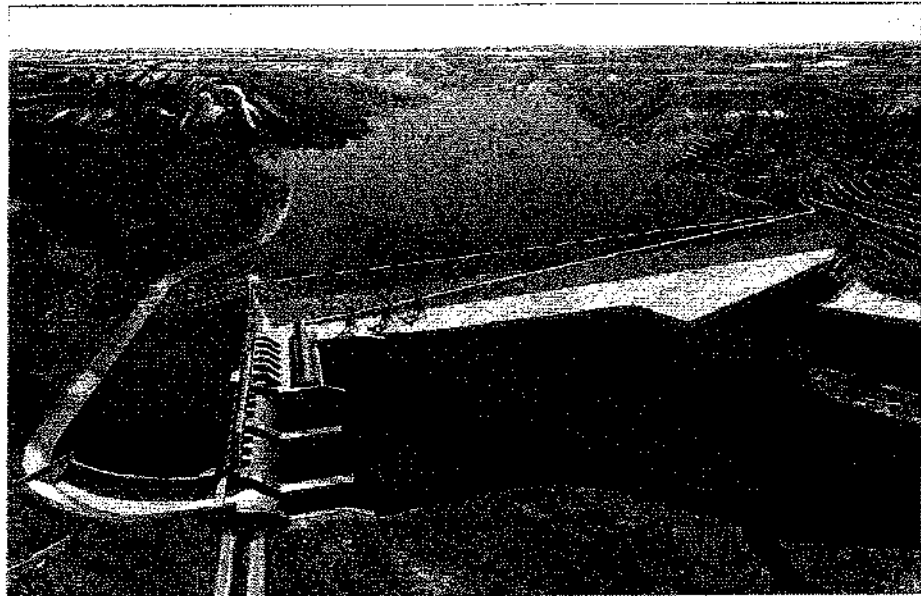
- MOTI is expecting to initiate procurement for north bank road upgrades and improvements in September 2014. Contract award is subject to environmental certification, other regulatory permits and authorizations, and approvals to proceed.
- Federal and provincial environmental decisions for Site C are expected by October 2014.
- A provincial investment decision on Site C is expected in Fall 2014.
- BC Hydro has applied for provincial permits, which are anticipated for December 2014. Federal authorizations are anticipated for Spring 2015.
- BC Hydro and MOTI will continue liaison committee meetings to finalize procurement and construction management scope.

INFORMATION SHEET ABOUT SITE C

The Site C Clean Energy Project (Site C) would be a third dam and hydroelectric generating station on the Peace River in northeast B.C. It would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year — enough energy to power the equivalent of about 450,000 homes per year in B.C.

As the third project on the Peace River, Site C would gain significant efficiencies by taking advantage of water already stored in the Williston Reservoir. This means that Site C would generate approximately 35 per cent of the energy produced at the W.A.C. Bennett Dam with five per cent of the reservoir area.

The Site C reservoir would be one of the most stable in the BC Hydro system with relatively little fluctuation in water levels during typical operations.



The Site C project requires environmental certification, regulatory permits and authorizations, and other approvals before it can proceed to construction. In addition, the Crown has a duty to consult and, where appropriate, accommodate Aboriginal groups.

Once built, Site C would be a source of clean, renewable and cost-effective electricity for more than 100 years.

Meeting Future Electricity Needs

B.C.'s electricity needs are forecast to increase by approximately 40 per cent over the next 20 years as the economy expands and the population grows by more than a million people. The electricity needs of Liquefied Natural Gas (LNG) facilities would further increase demand. As extensive as BC Hydro's electricity supply is, it will not be enough to meet future electricity demand.

Low Greenhouse Gas Emissions

Site C would produce among the lowest greenhouse gas emissions (GHGs), per gigawatt hour, when compared to other forms of electricity generation. The project would produce significantly less GHGs per gigawatt hour than fossil fuel sources such as natural gas, diesel or coal. Emissions from Site C would fall within the ranges expected for wind, geothermal and solar energy sources.

SITE C CLEAN ENERGY PROJECT

-2-

Cost-Effective Electricity

Site C would be cost-effective because, after its upfront capital cost of \$7.9 billion, it would have low operating costs and a long life of more than 100 years. Site C would produce electricity at a cost of \$83 per megawatt hour at the point of interconnection (based on a real discount rate of 5 per cent), making Site C among the most cost-effective options to help meet B.C.'s future electricity needs.

Economic Development

Site C is estimated to create approximately 10,000 person-years of direct employment during construction, and approximately 33,000 person-years of total employment through all stages of development and construction. Construction would also provide significant opportunities for businesses of all sizes.

Integrating Renewable Energy

Site C would help integrate intermittent renewables by quickly increasing or decreasing generation to match the availability of resources such as wind and run-of-river hydro. For example, Site C generation could be increased when intermittent resources are not available (e.g., when the wind is not blowing), and could be decreased when intermittent resources are available.

REPORT OF THE JOINT REVIEW PANEL

On May 1, 2014, the Joint Review Panel submitted its report on Site C to the federal and provincial governments, as part of the independent environmental assessment process.

On cost-effectiveness, the Panel wrote (page 305): *"The Panel concludes that B.C. will need new energy and new capacity at some point. Site C would be the least expensive of the alternatives, and its cost advantages would increase with the passing decades as inflation makes alternatives more costly."*

On rates and GHGs, the Panel wrote (page 308): *"Site C, after an initial burst of expenditure, would lock in low rates for many decades, and would produce fewer greenhouse gas emissions per unit of energy than any source save nuclear."*

On economic development, the Panel stated (page 201): *"The Panel concludes that there would be excellent opportunities for new and existing jobs and businesses during the construction phase."*

For integrating renewables, the Panel commented (page 300): *"However, B.C. has two great advantages when it comes to integrating renewables. First, a storage dominated hydraulic system is excellent for integration, functioning as it does like a huge battery that can follow the load on any basis from hourly to annually."*

As a long-term asset for B.C., the Panel wrote (page 307): *"A few decades hence, when inflation has worked its eroding way on cost, Site C could appear as a wonderful gift from the ancestors of that future society, just as B.C. consumers today thank the dam-builders of the 1960s."*

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Thursday, July 10, 2014 3:20 PM
To: Costa, Sarina MEM:EX; MacLaren, Les MEM:EX
Subject: FW: MOTI PPT
Attachments: MOTI presentation_final.ppt

For tomorrow's briefing with Minister Stone

Chris Sandve
Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s.17 | E-mail: chris.sandve@gov.bc.ca

SITE C CLEAN ENERGY PROJECT

Presentation to the Minister of Transportation

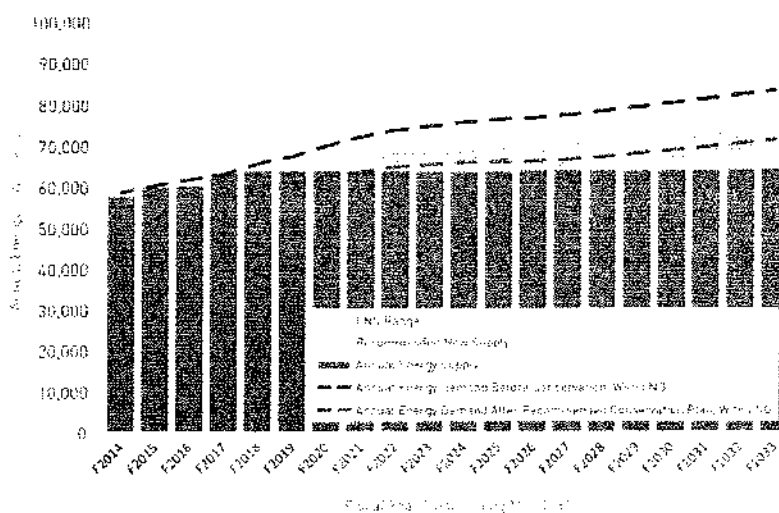
July 31 2014

901 154
 902 506
 903 721
 904 403

KEY WORDS: aging; cognition; memory; personality

Printed by Litho-Press, Inc. Printed in the United States of America

DEMAND TO INCREASE 40% IN 20 YEARS



Disseminated and Confidential: Provides priority to Ministers and Cabinet

WE NEED BOTH ENERGY AND CAPACITY

Resource	Capacity
Run-of-River	Intermittent
Wind	Intermittent
Bioenergy	Dependable; not flexible
Large Hydro	Dependable; flexible
Natural Gas	Dependable; not flexible except for peaker plants

- Intermittent = Power that fluctuates or is not available at all times
- Dependable = Power that can be reliably produced when required
- Flexible = Power that can be adjusted to meet conditions; can help integrate intermittent resources

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Prepared for the BC Hydro Board, 2014. Includes updates to 2013 report.

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MEETING LONG-TERM ELECTRICITY DEMAND

- Conservation is first and best choice
78% of future demand growth to be met through demand-side management
- Re-investing in Existing Assets
Upgrades to aging infrastructure
Expansion of existing facilities
- Buying from IPPs
20% of current system and growing (\$50+ billion in total contractual commitments)
- New Capacity Resource
Site C Clean Energy Project

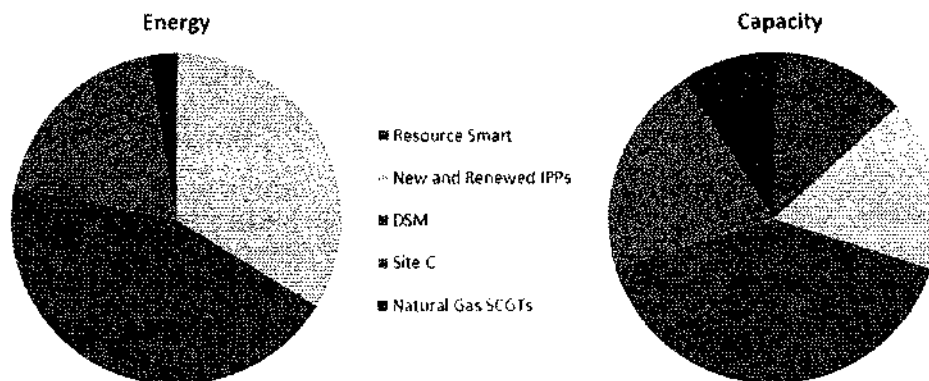


BC Hydro

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NEW RESOURCES PLANNED BY 2033

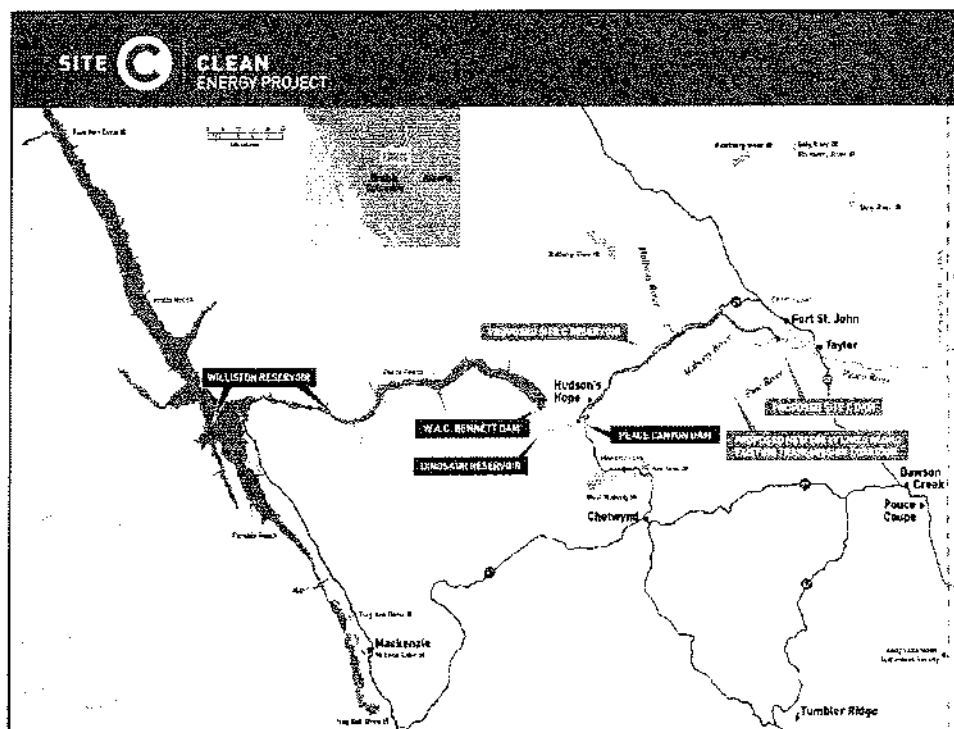


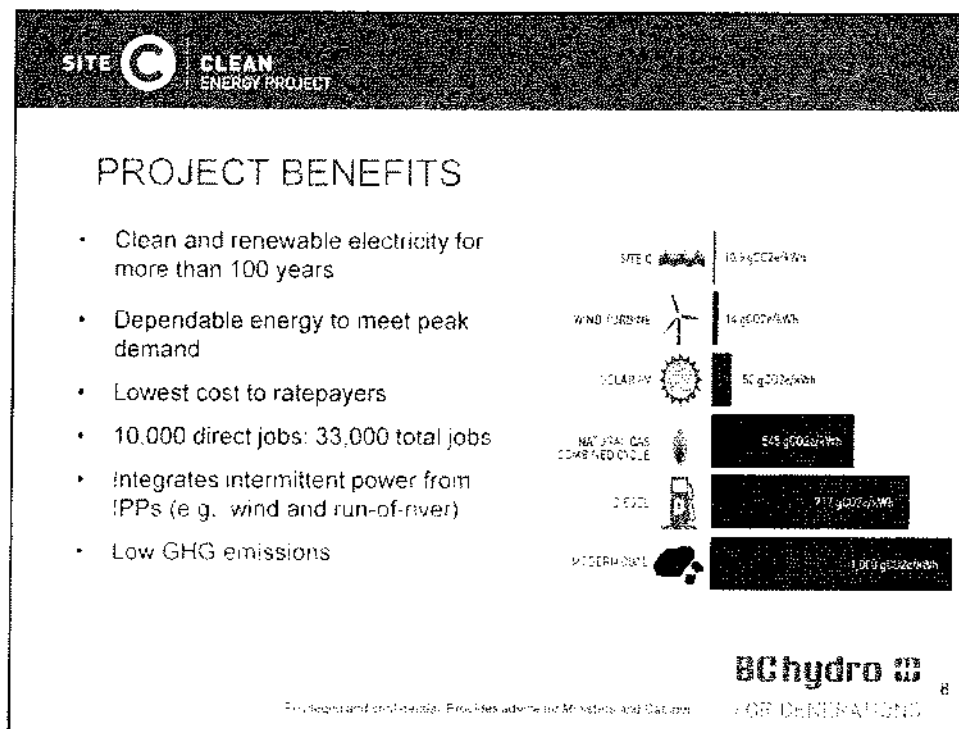
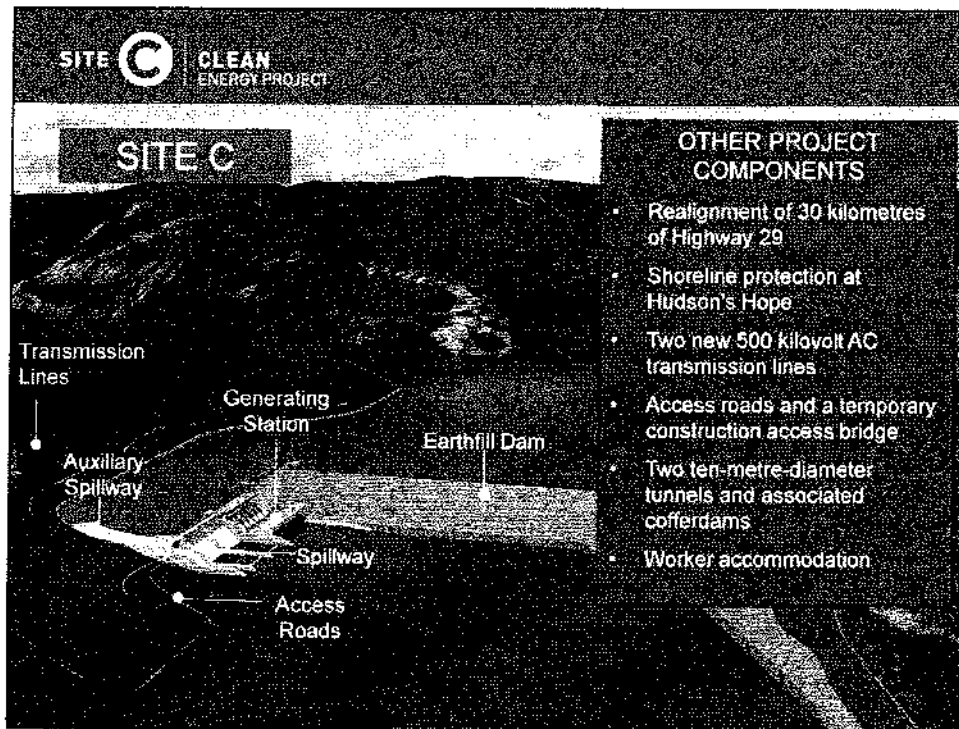
Source: Integrated Resource Plan, November 2013

Printed and published by P. J. van der Stoep, Printer and Publisher

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PROJECT COST ESTIMATE

- Bottom-up project cost estimate of \$7.9B (2010)
 - Direct construction costs
 - Indirect costs: regulatory, project development, construction management, mitigation, community and First Nations benefits agreements, insurance mitigation and compensation
 - Contingency
 - Inflation and Interest During Construction
- Due Diligence
 - Integrated Engineering Team (SNC / Klohn-Crippen)
 - KPMG peer review
 - Partnerships BC
 - Pacific Laicon
 - Industry / market pricing
- Ongoing project cost management

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FOR CLIMATE ACTION

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BC Hydro

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BC Hydro

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For a complete list of environmental assessment and public hearing information, visit www.bchydro.com/sitec

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BC Hydro

12


Published in cooperation with the Joint Review Panel

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SITE 
CLEAN ENERGY PROJECT


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**DISTRICT OF
CHETWYND**





FORT ST JOHN
The Emerald City



BC Hydro

Peace River Regional District, District of Chetwynd, District of Taylor and District of Hudson's Hope



CLEAN
ENERGY PROJECT

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BC Hydro

15

Provided our hydroelectric projects are built in a responsible and sustainable way

FOR CLEAN ENERGY

s.13,s.17

Site C & MOTI

WORKING WITH MOTI

2007	BC Hydro began working with MOTI to prepare materials for public consultation with contractors, stakeholders and the public on project realignment of segments of Highway 25
2011	Entered into Cooperation Agreement with MOTI BC Hydro / MOTI Partnering sessions for Hwy 25 and construction access roads Began definition design – developed realignment options for Hwy 25, access road upgrades
2012	Formalized cooperation agreement with MOTI to support project definition Continued field investigations, finalized definition design MOTI representative participated in Site C public consultations for realignment of Highway 25 BC Hydro / MOTI developed procurement approach for Highway 25 and other works Governance approach approved by MOTI and BC Hydro
2013	Began implementation design for access roads Continued field investigations Finalized BC Hydro / MOTI Implementation Agreement
2014	BC Hydro and MOTI continue to plan design management of Hwy 25 Completed 100% design for the north bank roads Procurement (north bank roads) MOTI to tender in September 2014 (TBC)

IMPLEMENTATION AGREEMENT

- MOTI to provide project management, design oversight and construction management services
- BC Hydro responsible for all permits, consultation and property acquisition and costs

Highway 29

- Coquille Creek/Bear Flats – 3.5 km
- Highway River – 4.0 km
- Farrell Creek East Realignment – 6.0 km
- Farrell Creek – 2.0 km
- Dry Creek – 1.5 km
- Lynx Creek – 5.0 km

Aggregate Sources

- Wamsutter
- Out Rock
- West Pine

North / South Bank Access


- Old Fort Road – Hwy 57 to Howe Pt Entrance – 3.0 km
- 240 Road between Old Fort Road & 255 Road – 1.5 km
- 255 Road – 240 Road to Dam Site Entrance – 2.9 km
- 271 Road – Hwy 57 to Wutichich Pt – 3.0 km
- Jackson Lake Road Improvements – 47 km

Hudson's Hope

- Hudson's Hope Berm / Canyon Drive / Brake Check

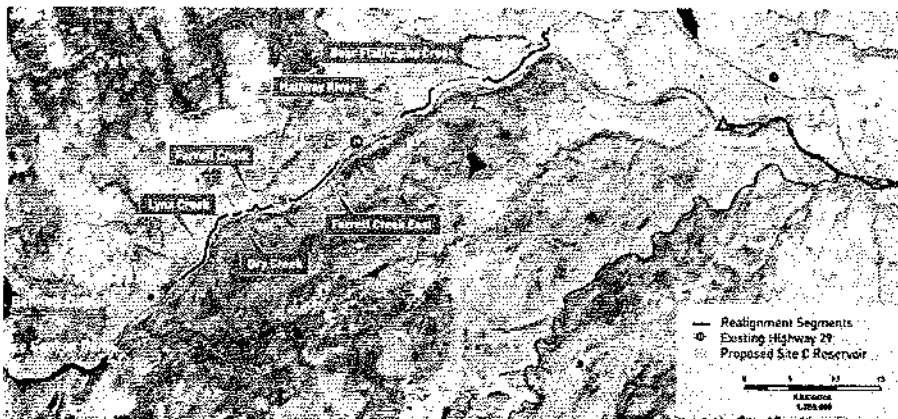
Other Works

- At Taylor (as part of BCH's accommodation agreement)

BC Hydro 

FOR GENERATIONS 19

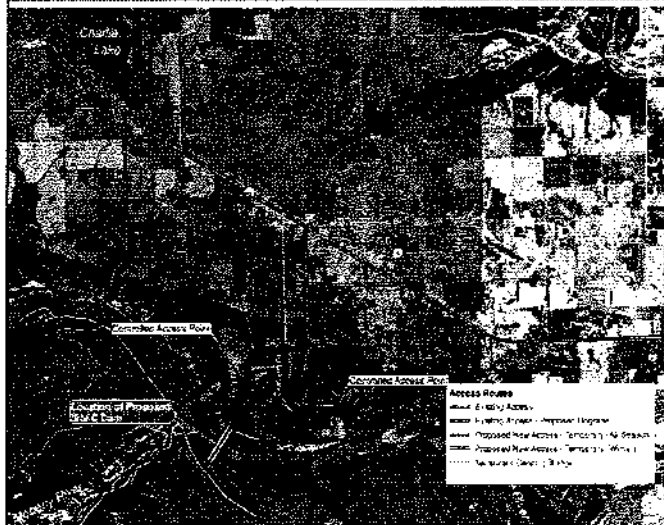
HIGHWAY 29 OVERVIEW



BC Hydro 

FOR GENERATIONS 20

- Wuthrich Quarry
- West Pine Quarry
- Del Rio Pit



SCOPE

- Old Fort Rd - Hwy 97 to 240 Rd - add paved shoulders south of 240 Rd to Howe Pit - realign road to upgrade curve
- 240 Rd - widen and pave
- 269 Rd - widen and pave
- 271 Rd - Hwy 97 to Wuthrich Pit - add paved shoulders

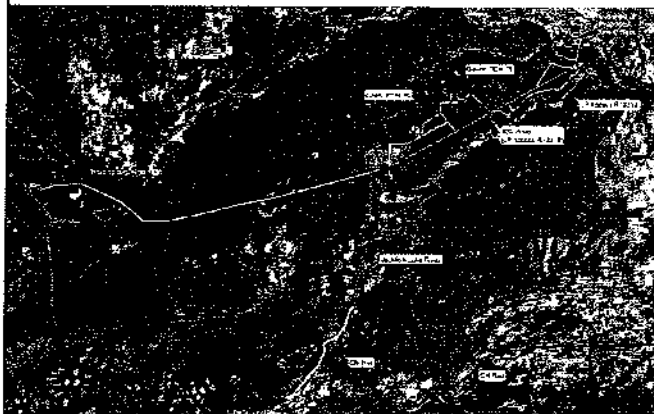
CURRENT STATUS

- Design complete
- Work to be tendered September 2014



CLEAN
ENERGY PROJECT

JACKFISH LAKE ROAD



SCOPE

- Km 0 to 16: widen to accommodate 1.5m paved shoulders within MOTI ReW
- Km 16 to 47: base strengthening to accommodate 100% loading year round, localized widening and hard surfacing

STATUS

- Km 0 to 16: Definition Design complete
- Km 0 to 16: field work to support preliminary design complete

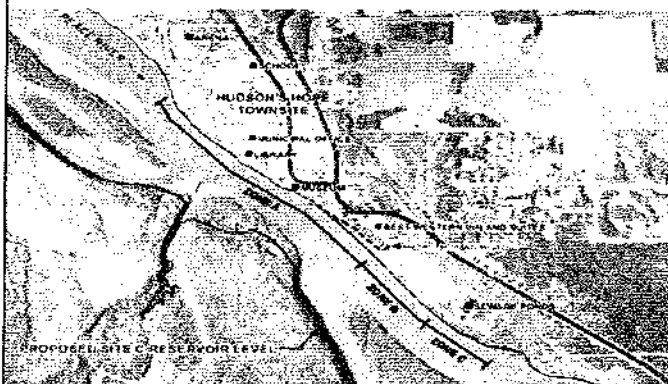
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23



CLEAN
ENERGY PROJECT

HUDSON'S HOPE BERM




SCOPE

- Construct 10m high berm to protect existing slope from effects of reservoir
- Reconstruct DA Thomas Road (main access for construction)
- MOTI to provide construction management

STATUS

- Definition Design complete

BChydro 
FOR GENERATIONS

24

- Peace Island Park: additional long term RV sites
- Pavement condition surveys, already conducted at regular intervals by MOTI, would be enhanced by more frequent surveys for roads being used by Project traffic.
- District of Taylor:
 - Dynamic message signs
 - Web Cam (DriveBC)
 - Highway illumination

- MOTI to initiate procurement for north bank road upgrades and improvements in September 2014 (timing TBC)
 - Contract award is subject to environmental certification, other regulatory permits and authorizations, and approvals to proceed
- BC Hydro and MOTI will continue liaison committee meetings to finalize procurement and construction management scope

s.13,s.17

MacLaren, Les MEM:EX

From: Laudan, Mina <mina.laudan@bchydro.com>
Sent: Monday, July 14, 2014 10:34 AM
To: MacLaren, Les MEM:EX; steve.munro@gov.bc.ca
Cc: Sandve, Chris MEM:EX; Yurkovich, Susan
Subject: Presentation for Site C Briefing at 11am today
Attachments: Site C_Update_Aboriginal Rustad briefing July 17.ppt

Please find attached a PowerPoint presentation for the Site C Briefing today at 11am. Print copies are being provided for those attending in person.

Thank you,
Mina

Mina Laudan
Director, Public Affairs, Community Consultation & Properties
Site C Clean Energy Project
Tel: 604 695-5279
Web: www.sitecproject.com

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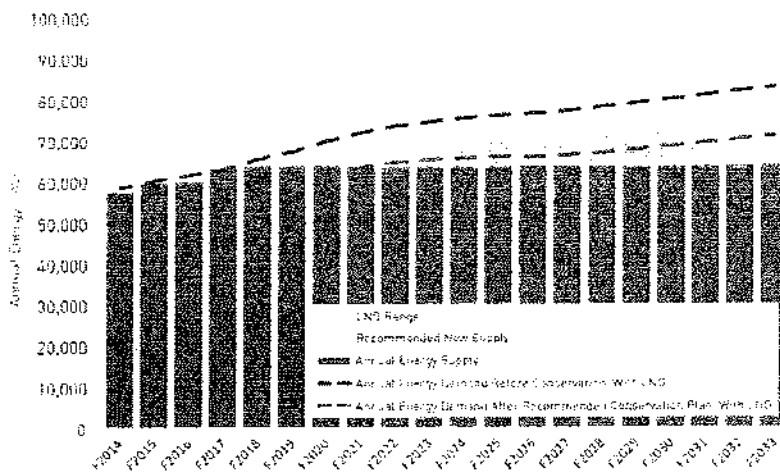
SITE C CLEAN ENERGY PROJECT

Presentation to the Minister of Aboriginal Relations and Reconciliation

July 14, 2014

BC Hydro
POWERING BC

DEMAND TO INCREASE 40% IN 20 YEARS



Prepared and Considered: Proposed Energy for Minister's and Cabinet



CLEAN
ENERGY PROJECT

WE NEED BOTH ENERGY AND CAPACITY

Resource	Capacity
Run-of-River	Intermittent
Wind	Intermittent
Bioenergy	Dependable; not flexible
Large Hydro	Dependable; flexible
Natural Gas	Dependable; not flexible except for peaker plants

- Intermittent = Power that fluctuates or is not available at all times
Dependable = Power that can be reliably produced when required
Flexible = Power that can be adjusted to meet conditions; can help integrate intermittent resources

BChydro 

3

Reviewed and reimagined. Provided as a service to Ministers and Cabinet.

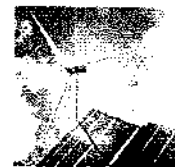
FOR GENERATIONS



CLEAN
ENERGY PROJECT

MEETING LONG-TERM ELECTRICITY DEMAND

- Conservation is first and best choice
78% of future demand growth to be met through demand-side management
- Re-investing in Existing Assets
Upgrades to aging infrastructure
Expansion of existing facilities
- Buying from IPPs
20% of current system and growing (\$50+ billion in total contractual commitments)
- New Capacity Resource
Site C Clean Energy Project



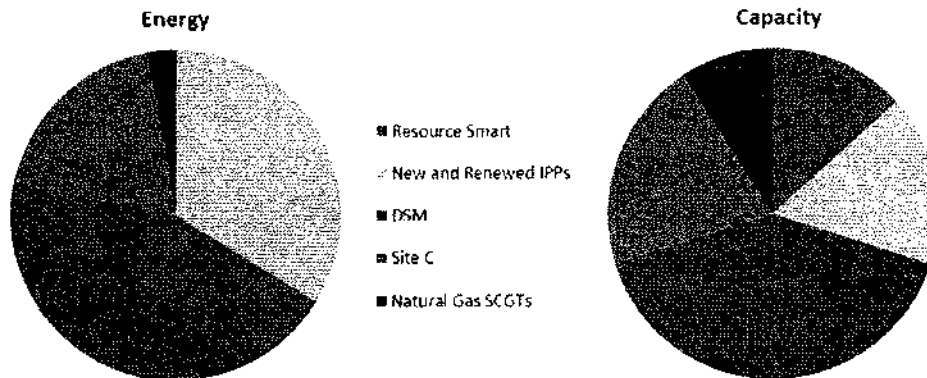
BChydro 

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Reviewed and reimagined. Provided as a service to Ministers and Cabinet.

FOR GENERATIONS

NEW RESOURCES PLANNED BY 2033

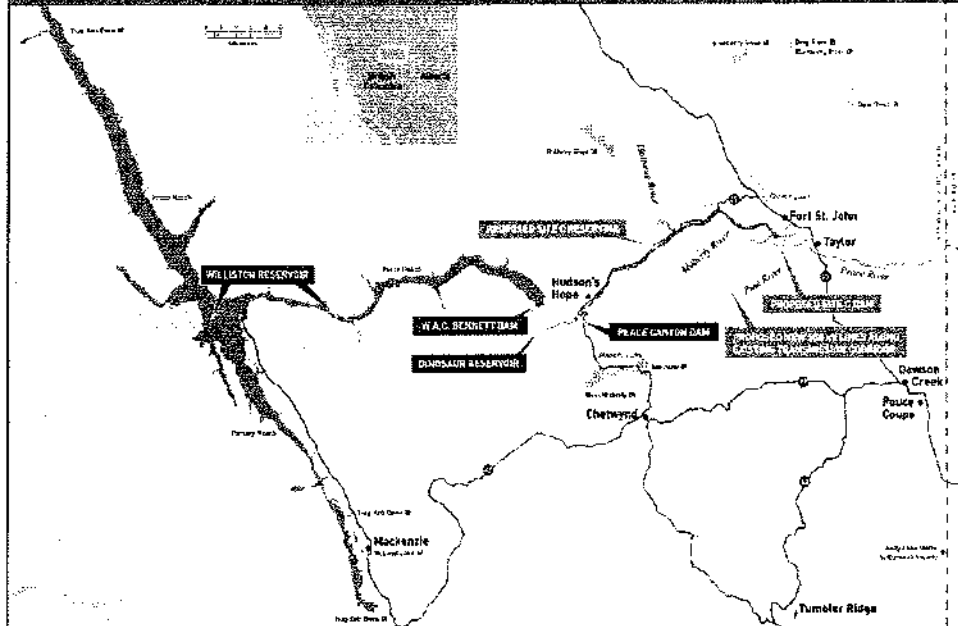


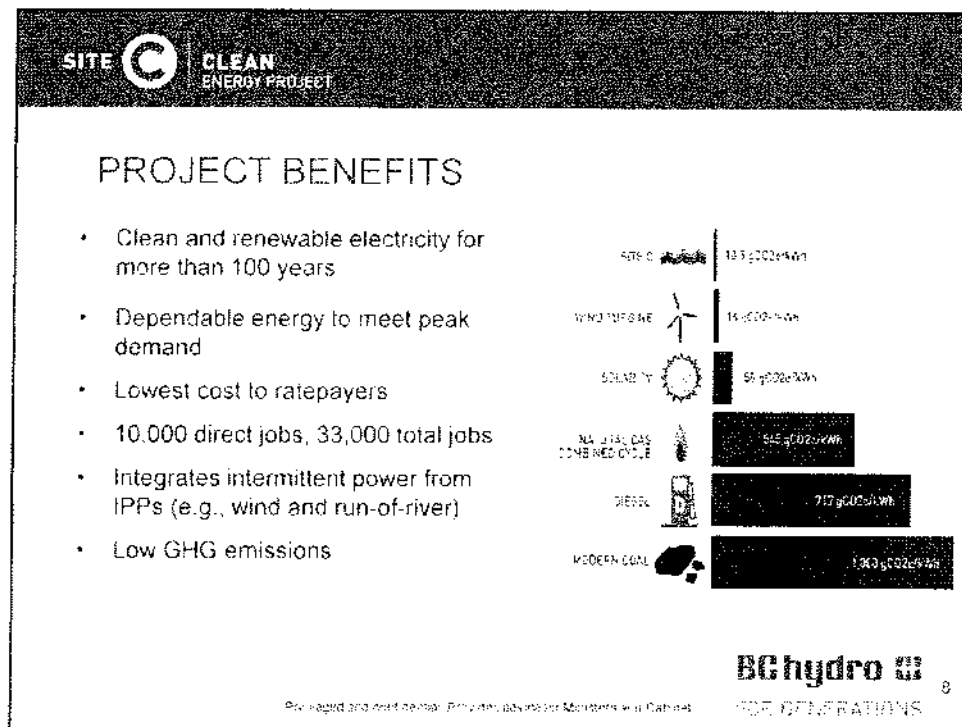
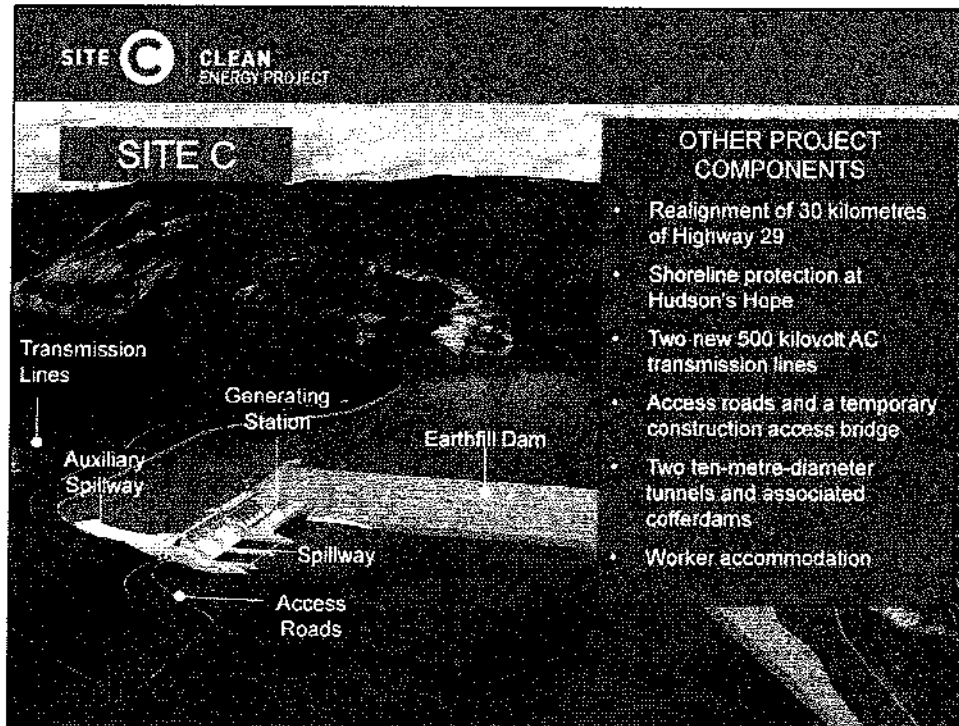
Source: Integrated Resource Plan, November 2013

Hydrogen and hydrogen: Provided in form for Miller's and Exhibit

BC Hydro
FOR GENERATIONS

5





PROJECT COST ESTIMATE

- Bottom-up project cost estimate of \$7.9B (2010)
 - Direct construction costs
 - Indirect costs, regulatory, project development, construction management, mitigation, community and First Nations benefits agreements, insurance, mitigation and compensation
 - Contingency
 - Inflation and Interest During Construction
- Due Diligence
 - Integrated Engineering Team (SNC / Kohn-Crippen)
 - KPMG peer review
 - Partnerships BC
 - Pacific Liaison
 - Industry / market pricing
- Ongoing project cost management

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BC Hydro
FOR DISCUSSION

9

KEY PROVINCIAL DIRECTIONS

- 2007 BC Energy Plan directs BC Hydro to initiate consultations with First Nations and communities on Site C
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BC Hydro
FOR DISCUSSION

10



CLEAN
ENERGY PROJECT

BY THE NUMBERS.

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- Two-month public hearing process (December 2013 to January 2014)
- 29,572 pages of evidence filed

BC Hydro 

11

Privileged and confidential. Provides advice for Mr. Steele and Cabinet

FOR GENERATIONS



CLEAN
ENERGY PROJECT

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 - Legacy project. The panel noted that the project would provide multi-generational benefits
- CEAA and BCEAO currently consulting with Aboriginal groups on JRP Report findings and draft conditions

BC Hydro 

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FOR GENERATIONS

SITE  CLEAN
ENERGY PROJECT

COMMUNITY AGREEMENTS

- Regional Legacy Benefits Agreement with the Peace River Regional District : \$2.4 million for 70 years, indexed to inflation
- Community Agreements reached with districts of Chetwynd and Taylor
- Term sheet agreed to with City of Fort St. John
- Discussions underway with District of Hudson's Hope





DISTRICT OF
CHETWYND





FORT ST. JOHN
The Energetic City



BC Hydro

Peace River Regional District, District of Chetwynd, District of Taylor, City of Fort St. John, BC Hydro



SIGNIFICANT PUBLIC SUPPORT FOR SITE C

- June 2014 poll found that 79% either support building Site C (49%), or can support it under certain circumstances (30%), while 18% are opposed
- Province-wide awareness is at 62%, up from 41% in 2013
- There is a high level of support for Site C provided certain conditions are met, including:
 - 73% would support building Site C provided it goes through an independent environmental review and is approved
 - 76% would support building Site C as long as communities are consulted and their views taken into account, as much as possible
 - 77% would be comfortable with Site C as long as plenty of effort was going into conservation and other forms of clean energy

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ABORIGINAL ENGAGEMENT

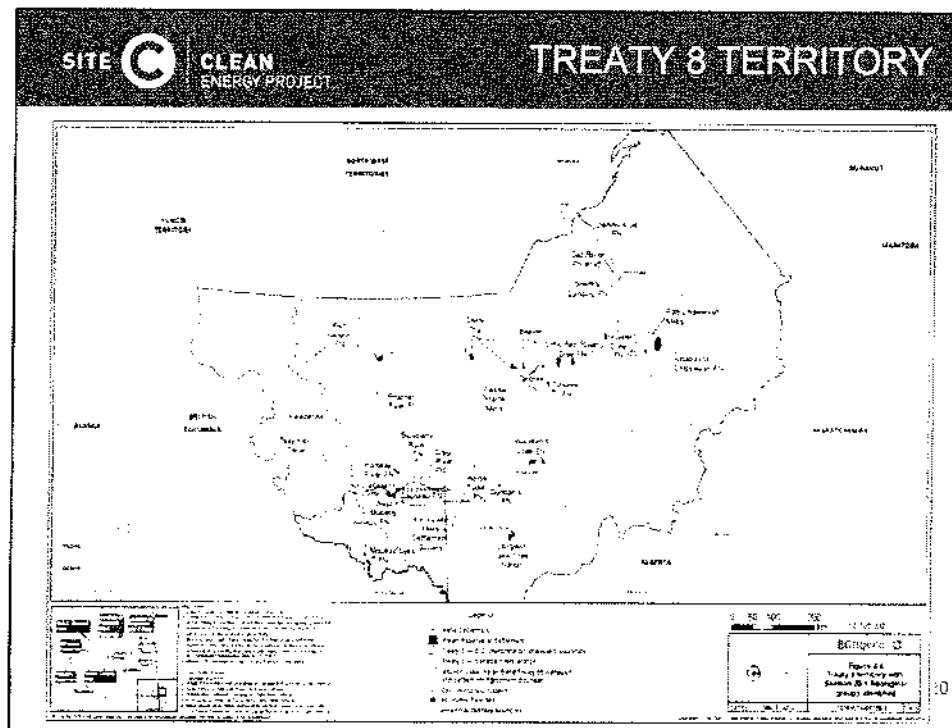
ABORIGINAL CONSULTATION AND SITE C

- Project area covered by Treaty 8 (T8)
- BC Hydro has consulted with 60 Aboriginal groups
- Seven+ years of consultation to date with over 14,000 entries in consultation log
- Significant procurement opportunities under discussion
- BC Hydro, as agent of the provincial Crown, has shared obligation to consult


SITE C CLEAN ENERGY PROJECT GROUPS CONSULTED		
TREATY 8 FIRST NATION SIGNATORIES		
British Columbia	Alberta	Northwest Territories
<ul style="list-style-type: none"> Blueberry River First Nations Fort Nelson First Nation McLeod Lake Indian Band Saulteau First Nations Treaty 8 Tribal Association (T8TA): <ul style="list-style-type: none"> Doig River First Nation Halfway River First Nation Prophet River First Nation West Moberly First Nations NON-TREATY 8 <ul style="list-style-type: none"> Kwadacha First Nation Tsay Keh Dene Band 	<ul style="list-style-type: none"> Athabasca Chipewyan First Nation Beaver First Nation Dene Tha' First Nation Duncan's First Nation Horse Lake First Nation Little Red River Cree Nation Miksew Cree First Nation Smith's Landing First Nation Sturgeon Lake Cree Nation Tali Cree First Nation Woodland Cree First Nation 	<ul style="list-style-type: none"> Dene K'ue First Nation Salt River First Nation
MÉTIS		
British Columbia	Alberta	Northwest Territories
<ul style="list-style-type: none"> Métis Nation British Columbia (as directed by the CEA Agency) Kelly Lake Métis Settlement Society (as directed by the CEA Agency) 	<ul style="list-style-type: none"> Métis Nation of Alberta – Region 8 Paddle Prairie Métis Settlement Society Fort Chipewyan Métis Local 125 	<ul style="list-style-type: none"> Northwest Territory Métis Nation
OTHER		
<ul style="list-style-type: none"> Bigstone Cree Nation Black Lake Chipewyan Prairie First Nation Cleanwater River Dene Dn'p'le First Nation Fond du Lac First Nation Fort McKay First Nation Fort McMurray #468 First Nation Fort Resolution Métis Fort Smith Métis 	<ul style="list-style-type: none"> Fort Vermilion Métis Local Hay River Métis Kapawehno First Nation K'allioteeche First Nation Kee Tsa Kae Now Kelly Lake Cree Nation Lesser Slave Lake Indian Regional Council Loon River Cree Lubicon Lake Lutsel Ke Dene First Nation Métis Nation of Alberta 	<ul style="list-style-type: none"> Métis Nation of Alberta Region 1 North Peace Tribal Council Peace River Métis Local Peace River First Nation Sawridge First Nation Sucker Creek First Nation Swan River First Nation Western Cree Tribal Council Whitefish Lake First Nation Yellowknives Dene First Nation

Prepared and published by the Government of Canada and the Government of Alberta

FOR INFORMATION




SITE



CLEAN
ENERGY PROJECT

ISSUES RAISED BY ABORIGINAL GROUPS

- Fish and fish habitat
- Wildlife resources, particularly moose
- Effects on plants gathered for cultural or medicinal purposes
- Loss of or changes to cultural and spiritual places
- Cumulative changes to the Peace River region as a result of development
- Alternatives to the Project
- Downstream changes to the hydrology and ice regime of the Peace River, particularly in the Peace Athabasca Delta
- Potential effects on human health, including country foods
- Regional socio-economic conditions
- Historical grievances related to existing hydroelectric projects on the Peace River

BC Hydro 

Revised and added to original Presentation by Ministers and Cabinet 22

FOI: 011-83-1006

JOINT REVIEW PANEL REPORT

- Agreed with BC Hydro that the loss of particular places along the Peace River would be a significant adverse effect for some Aboriginal groups
- Found a significant adverse effect on:
 - fishing opportunities and practices for T8TA, SFN and BRFN
 - hunting opportunities for T8TA and SFN
 - other traditional uses of the land for T8TA, SFN and BRFN
- Joint Review Panel used a lower threshold for determining significance than BC Hydro

Page 325 to/à Page 327

Withheld pursuant to/removed as

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CLEAN
ENERGY PROJECT

EXTRA SLIDES

BC Hydro 
FOR GENERATIONS

31

s.13,s.17

MacLaren, Les MEM:EX

From: Wieringa, Paul MEM:EX
Sent: Wednesday, July 23, 2014 12:29 PM
To: MacLaren, Les MEM:EX
Cc: Chace, Julie MEM:EX; Trumpy, Chris MEM:EX; Dias, Oswald MEM:EX; Johnstone, Heather MEM:EX
Subject: FW: Materials - FLNRO
Attachments: BN - Permits_and_Authorizations_23July2014_FINAL.pdf

From: Sandve, Chris MEM:EX
Sent: Wednesday, July 23, 2014 12:25 PM
To: XT:Bennett, B LP:IN; Wieringa, Paul MEM:EX
Cc: Henderson, Kim N PREM:EX
Subject: FW: Materials - FLNRO

Here are BCH's briefing materials for the meeting with Minister Thomson tomorrow on Site C.

Chris Sandve

Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: 1s.17 | E-mail: chris.sandve@gov.bc.ca

BRIEFING NOTE

PERMITS AND AUTHORIZATIONS

Summary

In addition to environmental certification, BC Hydro must also obtain permits and authorizations to proceed with Site C construction. BC Hydro filed its first series of Provincial permit applications for construction activities in April 2014. Permits and authorizations related to the project cannot be issued until a decision has been made on environmental certification, which is anticipated to occur in October 2014.

Issue

- The following briefing note provides an overview of the provincial and federal permits and authorizations required for the Site C Clean Energy Project. The briefing note describes the streamlined process by which permit applications will be made, and provides an estimated timeline for the permitting process.

Background

- The Ministry of Forests, Lands and Natural Resource Operations (FLNRO) is coordinating and leading the permitting process and has provided regular updates to the Natural Resources Sector Board. The required permits and authorizations come under the *Forest, Land, Water, Wildlife, Mines, Public Health, Safety Standards, Environmental Management, and Heritage Conservation Acts*. BC Hydro has been engaged with the FLNRO Major Projects Office to streamline and optimize the submission, review and issuance of provincial permits and authorizations required for Site C whereby:
 - "Multi-Site" permits applications will be submitted for multiple project components, where possible;
 - Permits will be "bundled" according to project component and timing of activities within the major components; and
 - Permit applications will be "batched" according to the construction sequence.
- Provincial permits for construction of Site C **cannot** be issued until a decision has been made on environmental certification. The consultation process with First Nations for provincial permits is complex, varies between groups, and may be subject to processes laid out in agreements negotiated as part of Economic Benefits Agreements.
- Federal authorizations will also be required under the *Fisheries Act, Navigation Protection Act, Explosives Act, Radio Communication Act, Canada Transportation Act, and Railway Safety Act*. BC Hydro continues to engage with federal government authorities to obtain the necessary federal authorizations required for construction and operation of Site C.

Key Facts – Provincial Permits

The permit applications will be batched according to the construction sequence for the project.

Batched Permit Applications

- Batch 1 permit applications were submitted in April 2014, and will be required by BC Hydro to facilitate project site preparation, timber removal and early works.
- Following the issuance of the EAC, Batch 1 permit applications are primarily intended to cover work planned for Year 1 of construction. Permit applications that require advanced design by contractors will be submitted as procurement proceeds.
 - Batch 1 permit applications include activities at the Dam Site, North Bank Road Upgrade, Project Access Road, and Quarry sites (Del Rio, Portage Mountain, West Pine, Wuthrich, and 85th Avenue), including permits for works in and about a stream and removal of eagles' nests and beaver dens and for the collection and salvage of fish.
- Batch 2 applications will be submitted in late 2014 or early 2015, following receipt of the EAC, and will cover work to March 31, 2017 and beyond where possible.
- Batch 3 permit applications will be submitted in late 2015 or 2016 and will cover the remaining work for the project construction stage.
- BC Hydro will continue to communicate with the public and government agencies as required under permits, authorizations, and regulatory requirements issued for project construction and operations.
- The Province will consult with affected First Nations and Aboriginal groups on provincial permits applications related to the Project. This may prove challenging as the Treaty 8 First Nations have indicated that they are not prepared to consult on permits until a decision has been reached on environmental certification.

s.13,s.17

MacLaren, Les MEM:EX

From: Yurkovich, Susan <Susan.Yurkovich@bchydro.com>
Sent: Thursday, August 28, 2014 2:37 PM
To: MacLaren, Les MEM:EX
Subject: Materials requested
Attachments: BN - Site C Cost Estimate FINAL.pdf; Info Sheet - About Site C - June 2014.pdf;
Site_C_Finance_2014 Final.pptx

Here are the materials from the meeting with Minister de Jong.
Let me know if you need anything else.

S

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SITE C CLEAN ENERGY PROJECT

Presentation to the Minister of Finance

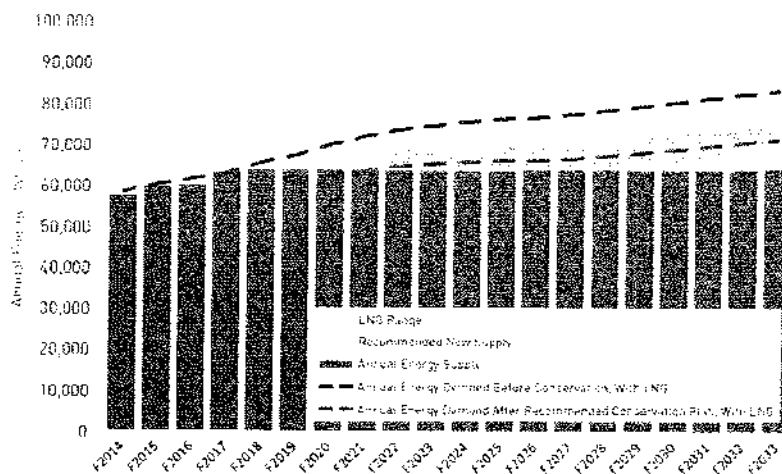
July 24, 2014

BC Hydro

Privileged and confidential. Provides advice for Ministers and Cabinet

FOR CONFIDENTIALITY

DEMAND TO INCREASE 40% IN 20 YEARS



Privileged and confidential. Provides advice for Ministers and Cabinet

WE NEED BOTH ENERGY AND CAPACITY

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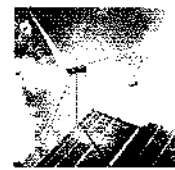
Flexible = Power that can be adjusted to meet conditions; can help integrate intermittent resources

Prepared and modified by: City of Vancouver Members and Council

3

MEETING LONG-TERM ELECTRICITY DEMAND

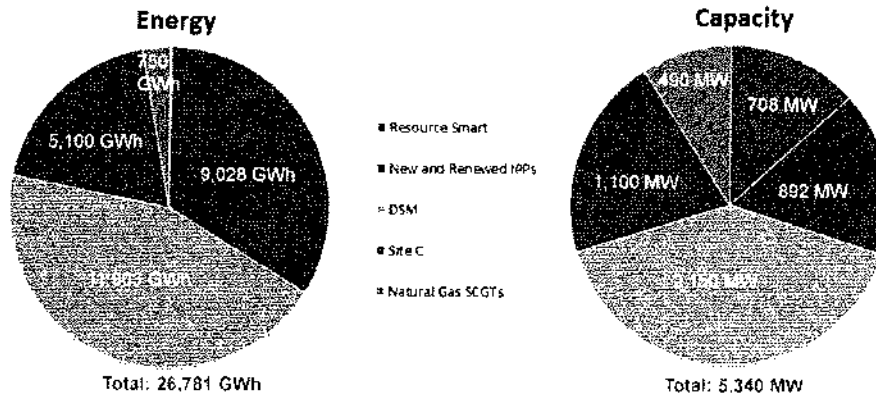
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Site C Clean Energy Project



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4

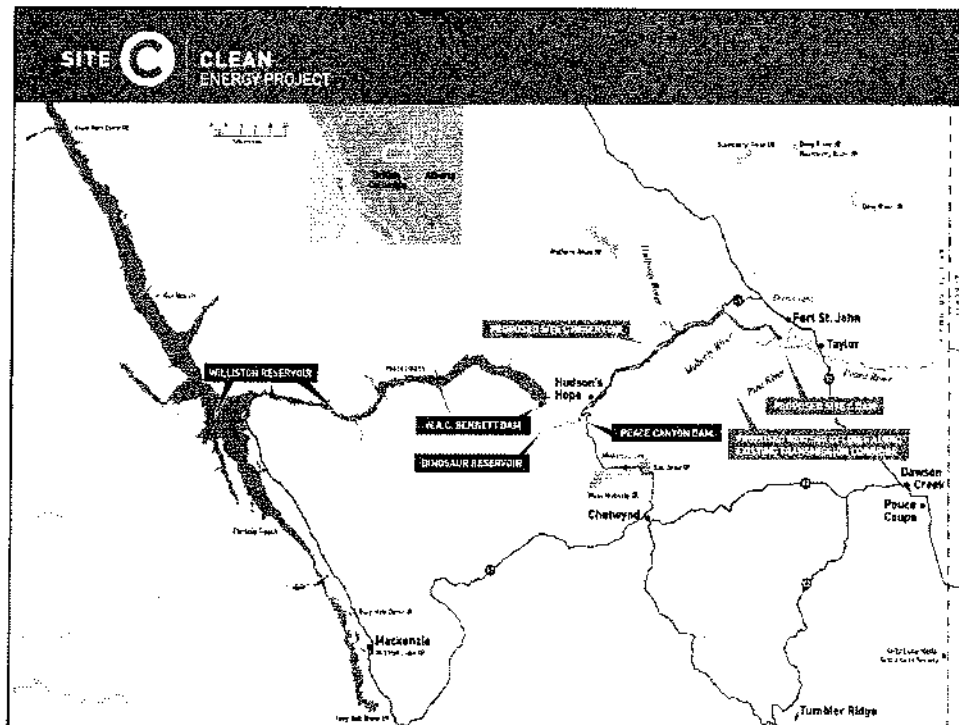
NEW RESOURCES PLANNED BY 2033

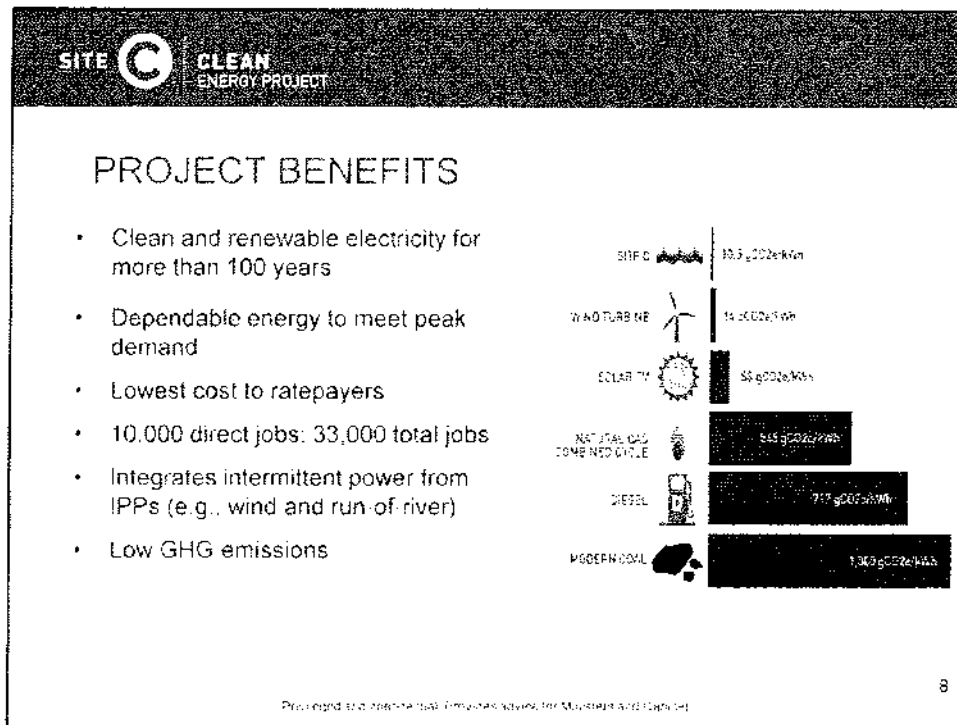
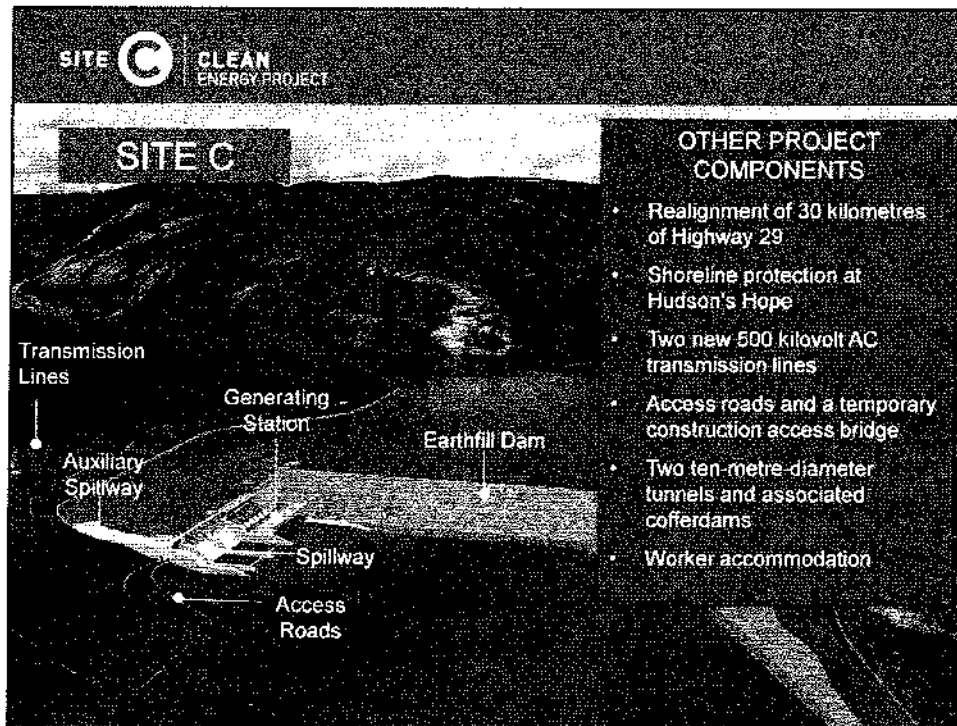


Source: Integrated Resource Plan, November 2013

Privileged and confidential. Provided only to the Ministers and Cabinet

5





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9

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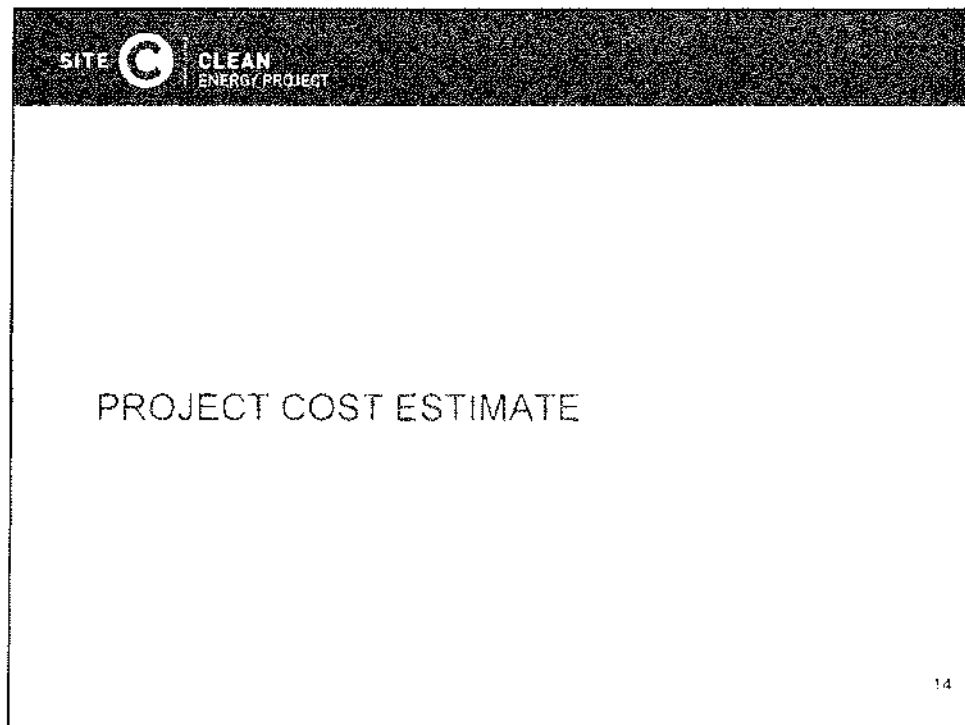
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Privileged and confidential. Proves of record for Ministers and Cabinet

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Page 340

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Page 341 to/à Page 349

Withheld pursuant to/removed as

s.12;s.13;s.17

s.12,s.13,s.17



www.sitecproject.com

Page 351 to/à Page 355

Withheld pursuant to/removed as

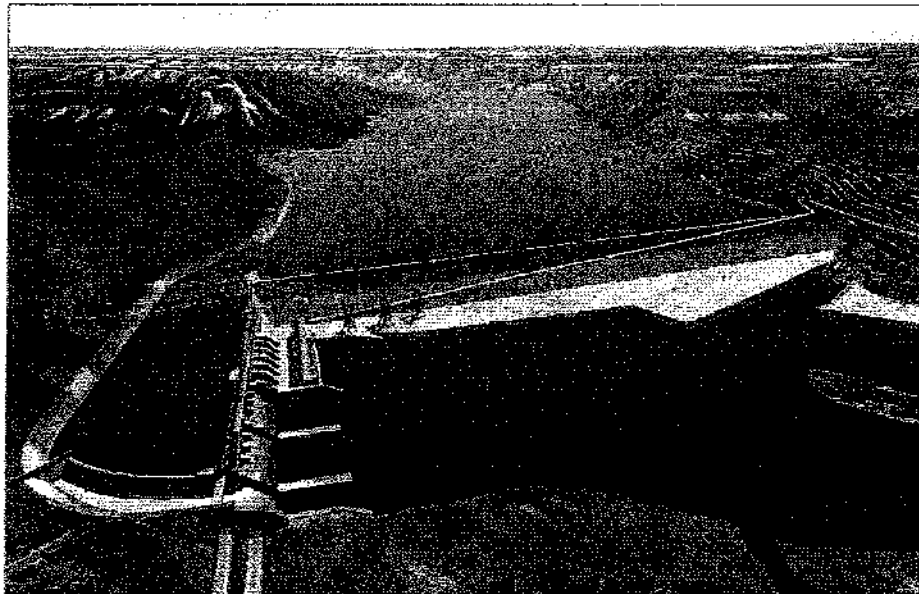
s.12;s.13;s.17

INFORMATION SHEET ABOUT SITE C

The Site C Clean Energy Project (Site C) would be a third dam and hydroelectric generating station on the Peace River in northeast B.C. It would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year — enough energy to power the equivalent of about 450,000 homes per year in B.C.

As the third project on the Peace River, Site C would gain significant efficiencies by taking advantage of water already stored in the Williston Reservoir. This means that Site C would generate approximately 35 per cent of the energy produced at the W.A.C. Bennett Dam with five per cent of the reservoir area.

The Site C reservoir would be one of the most stable in the BC Hydro system with relatively little fluctuation in water levels during typical operations.



The Site C project requires environmental certification, regulatory permits and authorizations, and other approvals before it can proceed to construction. In addition, the Crown has a duty to consult and, where appropriate, accommodate Aboriginal groups.

Once built, Site C would be a source of clean, renewable and cost-effective electricity for more than 100 years.

Meeting Future Electricity Needs

B.C.'s electricity needs are forecast to increase by approximately 40 per cent over the next 20 years as the economy expands and the population grows by more than a million people. The electricity needs of Liquefied Natural Gas (LNG) facilities would further increase demand. As extensive as BC Hydro's electricity supply is, it will not be enough to meet future electricity demand.

Low Greenhouse Gas Emissions

Site C would produce among the lowest greenhouse gas emissions (GHGs), per gigawatt hour, when compared to other forms of electricity generation. The project would produce significantly less GHGs per gigawatt hour than fossil fuel sources such as natural gas, diesel or coal. Emissions from Site C would fall within the ranges expected for wind, geothermal and solar energy sources.

SITE C CLEAN ENERGY PROJECT

-2-

Cost-Effective Electricity

Site C would be cost-effective because, after its upfront capital cost of \$7.9 billion, it would have low operating costs and a long life of more than 100 years. Site C would produce electricity at a cost of \$83 per megawatt hour at the point of interconnection (based on a real discount rate of 5 per cent), making Site C among the most cost-effective options to help meet B.C.'s future electricity needs.

Economic Development

Site C is estimated to create approximately 10,000 person-years of direct employment during construction, and approximately 33,000 person-years of total employment through all stages of development and construction. Construction would also provide significant opportunities for businesses of all sizes.

Integrating Renewable Energy

Site C would help integrate intermittent renewables by quickly increasing or decreasing generation to match the availability of resources such as wind and run-of-river hydro. For example, Site C generation could be increased when intermittent resources are not available (e.g., when the wind is not blowing), and could be decreased when intermittent resources are available.

REPORT OF THE JOINT REVIEW PANEL

On May 1, 2014, the Joint Review Panel submitted its report on Site C to the federal and provincial governments, as part of the independent environmental assessment process.

On cost-effectiveness, the Panel wrote (page 305): *"The Panel concludes that B.C. will need new energy and new capacity at some point. Site C would be the least expensive of the alternatives, and its cost advantages would increase with the passing decades as inflation makes alternatives more costly."*

On rates and GHGs, the Panel wrote (page 308): *"Site C, after an initial burst of expenditure, would lock in low rates for many decades, and would produce fewer greenhouse gas emissions per unit of energy than any source save nuclear."*

On economic development, the Panel stated (page 201): *"The Panel concludes that there would be excellent opportunities for new and existing jobs and businesses during the construction phase."*

For integrating renewables, the Panel commented (page 300): *"However, B.C. has two great advantages when it comes to integrating renewables. First, a storage dominated hydraulic system is excellent for integration, functioning as it does like a huge battery that can follow the load on any basis from hourly to annually."*

As a long-term asset for B.C., the Panel wrote (page 307): *"A few decades hence, when inflation has worked its eroding way on cost, Site C could appear as a wonderful gift from the ancestors of that future society, just as B.C. consumers today thank the dam-builders of the 1960s."*

Page 358 to/à Page 391

Withheld pursuant to/removed as

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