

## **Main Dam: Report 2 Final - Signed Copy**

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From: Mihlar, Fazil EMLI:EX <Fazil.Mihlar@gov.bc.ca>  
To: Wanamaker, Lori PREM:EX <Lori.Wanamaker@gov.bc.ca>  
Cc: Kristianson, Eric PREM:EX <Eric.Kristianson@gov.bc.ca>, Shortt, Amanda  
PREM:EX <Amanda.Shortt@gov.bc.ca>, Jang, Monica EMLI:EX  
<Monica.Jang@gov.bc.ca>  
Sent: February 15, 2021 2:26:11 PM PST  
Attachments: Report 2 Final - Signed.pdf, ATT00001.txt

Hi Lori: As promised, the report arrived today. It's short; worth a quick read. Fazil

## Fwd: materials for 11:30

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From: Holmwood, Jen PREM:EX <Jen.Holmwood@gov.bc.ca>, Hold - 210514 - Holmwood, Jen PREM:EX <Jen.Holmwood@gov.bc.ca>  
To: Smith, George PREM:EX <George.Smith@gov.bc.ca>  
Sent: February 25, 2021 5:12:47 PM PST  
Attachments: 2021.02.25-Backgrounder Right Bank\_BCH & program review draft.docx, 2021-02-25\_KMQA FIN & EMLI program reviewed draft.docx, 2021-02-25-Backgrounder BC Hydro Rates-BCH & Program reviewed draft.docx, 20210226\_SN\_PJH\_Site C\_v2.docx, Site C Technical Briefing FINAL.pptx, Site C Summary Report - Final February 25 2021.pdf, 2021-02-25-SN\_MBR\_Milburn program reviewed\_draft.docx, 2021-02-25\_News Release Site C 931AM program reviewed draft .docx, 2021-02-25 Backgrounder -Site C Benefits BCH & program review draft.docx, 2021-02-25\_Backgrounder\_Milburn Review BCH & program reviewed draft.docx, 2021-02-25 - Backgrounder Site C Construction Status BCH & program reviewed draft.docx

Jen Holmwood  
Deputy Communications Director, Press Secretary  
Office of the Premier | Government of BC  
250-818-4881

Begin forwarded message:

**From:** "Aaron, Sage PREM:EX" <Sage.Aaron@gov.bc.ca>  
**Date:** February 25, 2021 at 11:26:02 AM PST  
**To:** "Holmwood, Jen PREM:EX" <Jen.Holmwood@gov.bc.ca>, "Smith, George PREM:EX" <George.Smith@gov.bc.ca>, "McKinnon, Michael PREM:EX" <Michael.McKinnon@gov.bc.ca>  
**Subject:** FW: materials for 11:30

I think we can expect some of this to change – not the backgrounders etc but SNs, NR...

Sage (she/her)  
778-678-0832

From: Cuddy, Andrew EMLI:EX <Andrew.Cuddy@gov.bc.ca>  
Sent: February 25, 2021 11:03 AM  
To: Hagglund, Jarrett PREM:EX <Jarrett.Hagglund@gov.bc.ca>; Nash, Amber PREM:EX <Amber.Nash@gov.bc.ca>  
Cc: Aaron, Sage PREM:EX <Sage.Aaron@gov.bc.ca>; Farmer, Leila GCPE:EX <Leila.Farmer@gov.bc.ca>; Howlett, Tim GCPE:EX <Tim.Howlett@gov.bc.ca>  
Subject: materials for 11:30

Andrew Cuddy  
Senior Ministerial Advisor to the Honourable Bruce Ralston  
Minister of Energy, Mines and Low Carbon Innovation

## **EMBARGOED Ministry of Energy, Mines and Low Carbon Innovation - Site C Clean Energy Project tech briefing slides, NR and reports**

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From: Byers, Lindsay GCPE:EX <Lindsay.Byers@gov.bc.ca>, Byers, Lindsay  
PREM:EX <Lindsay.Byers@gov.bc.ca>  
Sent: February 26, 2021 8:39:01 AM PST  
Attachments: Site C Technical Briefing slides.pdf, P. Milburn Special Advisor Site C  
Summary Report.pdf, 2021PREM0014-000342.pdf, Site C Foundation Report  
Compiled.pdf

Good morning,

Attached please find the EMBARGOED Site C Clean Energy Project tech briefing slides from the Ministry of Energy, Mines and Low Carbon Innovation. I am also attaching the EMBARGOED News Release and Site C reports. Please note the times below.

**These materials are under strict embargo until the Premier stands to speak at approximately 11 a.m. Please be responsible - respect the embargo and your colleagues.**

**Special instructions:** Participants are requested to dial in 20 minutes prior to the announcement. Media are asked to have the participant pass code ready when they dial in to save time. Failure to do this may mean a delay in you or others joining the call.

### **Technical briefing**

Time: 9:30 a.m. (Pacific time)

Media dial in: s.15; s.17

Participant pass code: s.15; s.17

### **Event**

Time: 11 a.m. (Pacific time)

Media dial in: s.15; s.17

Participant pass code: s.15; s.17

Best,

**Lindsay Byers | Director**

Media Relations

Government Communications and Public Engagement

E: [Lindsay.Byers@gov.bc.ca](mailto:Lindsay.Byers@gov.bc.ca)

P: 778.678.5539

## FW: Site C MLA kit

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From: Aaron, Sage PREM:EX <Sage.Aaron@gov.bc.ca>  
To: Holmwood, Jen PREM:EX <Jen.Holmwood@gov.bc.ca>, Smith, George PREM:EX <George.Smith@gov.bc.ca>, McKinnon, Michael PREM:EX <Michael.McKinnon@gov.bc.ca>, Hold - 210514 - Holmwood, Jen PREM:EX  
Sent: February 26, 2021 11:17:49 AM PST  
Attachments: 2021.02.26 KMQA - Site C - FINAL.docx  
Sage (she/her)  
778-678-0832

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**From:** Aaron, Sage PREM:EX  
**Sent:** February 26, 2021 11:15 AM  
**To:** LP PREM Directors <PREMDIR@Victoria1.gov.bc.ca>; LP Senior Ministerial Advisors <SRMINADV@Victoria1.gov.bc.ca>; LP Ministerial Advisors <LPMAs@Victoria1.gov.bc.ca>  
**Subject:** Site C MLA kit  
**Sage Aaron, Communications Director** (she/her)  
Office of the Premier | Government of BC  
501 Belleville St, Victoria, BC V8V 2L8 | 778-678-0832



# Site C Technical Briefing

March 5, 2021



## Future of Site C

- Cabinet has made the decision to continue with Site C
- Independent experts have confirmed Site C is safe
- Peter Milburn has advised process improvements are needed to enhance Project oversight and risk and commercial management
- Current Project cost estimate is now \$16 billion, with a one-year delay to the in-service date
- Cost increases are largely the result of COVID-19, geotechnical issues, and other related cost and schedule pressures.



## **Continuing Site C Better for Ratepayers and Taxpayers**

- Stopping Site C now has severe impacts to ratepayers and taxpayers
- Ratepayers and taxpayers are better off completing the Project at this stage, even with higher costs



## External Reviews Considered in Decision-making

### Independent Consultant – Peter Milburn

- Reviewed Project governance and management of risks, construction, contracts and claims handling
- Recommendations will strengthen Project oversight, management and expertise
- Engineering Experts – John France and Dr. Kaare Hoeg
- Examined design of right bank foundation enhancements and earthfill dam
- Concluded that once completed, dam will be safe and reliable
- Will meet guidelines set by the Canadian Dam Association



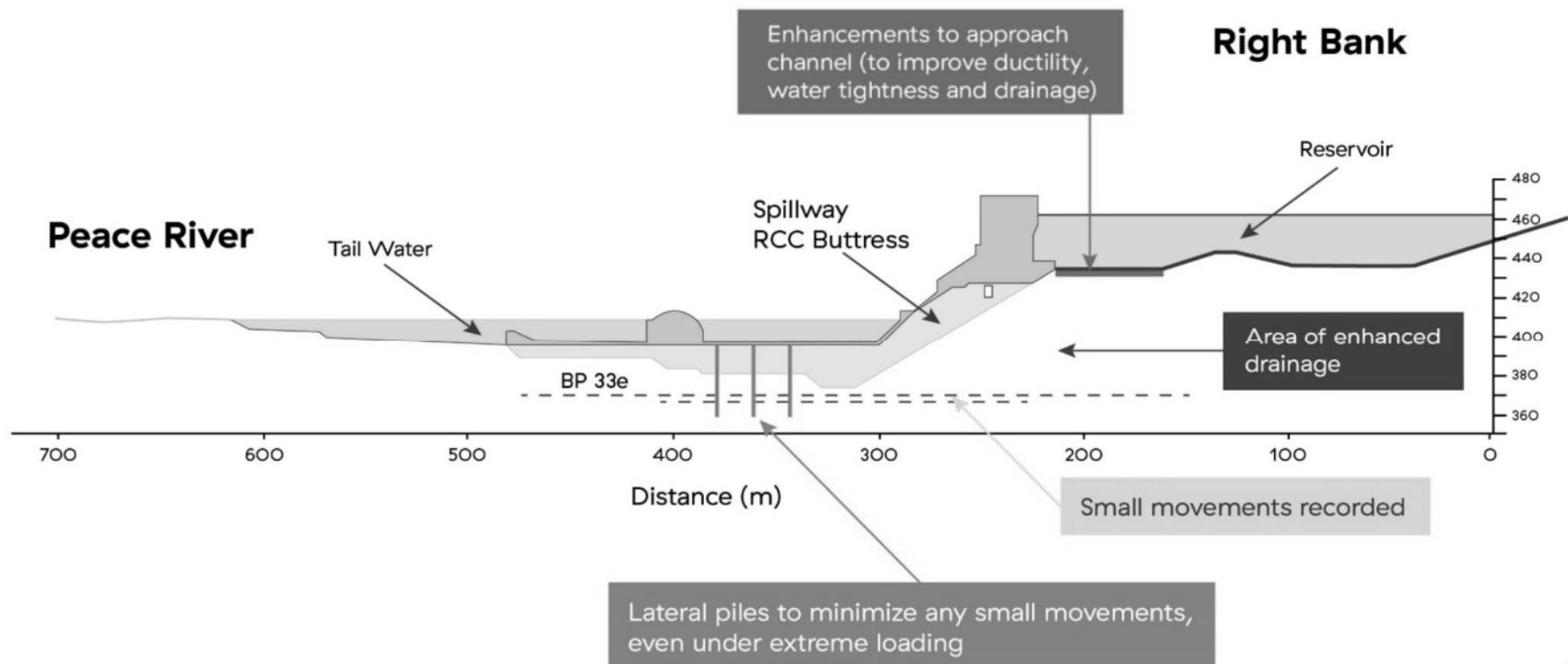


## **Safety and Reliability Confirmed Through Expert Review**

- Solution to foundation issues includes piles to anchor the foundation, approach channel enhancements and additional drainage
- Foundation enhancements follow best engineering practices and have been reviewed by the Technical Advisory Board
- External dam experts provided a second opinion and all reviews concluded that the right bank foundation solution will result in a safe and reliable dam
- Instrumentation and monitoring throughout the life of Site C as a continued precaution will help ensure safety

## Right Bank Foundation Enhancements (RFBE) -Solution

1. Install large piles (concrete-filled pipes) beneath buttress to improve stability and limit possible future movements, even under extreme loading conditions
2. Enhance drainage within the right bank and additional measures for the approach channel to improve water tightness and drainage





## **Additional Review of Earthfill Dam**

- Technical Advisory Board and External Experts also reviewed the design of the main dam
- All reviews concluded that the main dam design is safe
- Enhancements, if required, would be low cost and non-intrusive (adding fill to the surface of the downstream portion of the dam)



## Current Project Cost Estimate and Schedule

- Current Project cost estimate is \$16 billion with a one-year delay in full in-service date
  - Cost increases attributable to COVID-19, unforeseeable geotechnical challenges, and other Project cost and schedule pressures
- Reviews underway
  - Foundation enhancement design optimization
  - New contractor schedules to reflect COVID-19 delay impacts and implementation of foundation enhancements
  - Maintaining a safe work environment, including working with Northern Health Authority
  - Enhanced cost and schedule risk management, including critical timelines



## **Independent Consultant (Peter Milburn) Review**

- Consultant focused on improvements to governance and Project risk, construction and commercial contract management and oversight processes
- Review was not an audit of costs or schedule
- 17 recommendations - all accepted by BC Hydro and government, including a restructured and strengthened Project Assurance Board
- Implementation underway with oversight by EY and Milburn
- Result will be stronger Project and commercial contract oversight and management going forward



## Government Fiscal Impacts of Terminating Site C

- Immediate write down of about \$10 billion (sunk, contract termination, and recognition of site remediation liability costs)
- Hits bottom lines of both BC Hydro and Province
- Further debt implications could follow
  - Risk that rating agencies may remove BC Hydro's status as "self-supporting" with \$25 billion in BC Hydro debt becoming "taxpayer supported"
- BC's credit rating could be downgraded resulting in higher costs for all of the Province's borrowing



## Who Bears Costs – Taxpayers or Ratepayers?

- If Site C terminated, taxpayers or ratepayers pay off the debt
- If BCUC approved ratepayers to pay, BC Hydro rates would increase today (e.g., by 26% for 10 years)
- If taxpayers take on the debt, reduces the Province's ability to fund COVID recovery and needed capital projects



## Rate/Bill Impacts of Continuing Site C at a Higher Project Cost

- The costs of Site C will be recovered through rates over the life of the asset, more than 70 years
- Rate impacts will not occur until the assets go into service
- At the current cost estimate of \$16 billion:
  - By 2028/29 cumulative rates for the average residential ratepayer would be ~3% higher (\$36 per year) higher than the previous forecast based on a \$10.7 billion Project cost
- Forecast rates with this increase are still below the expected rate of inflation for the same period





## Site C Benefits

- Major construction project that employs ~4,500 workers
- Provides employment, training and contracting opportunities for Indigenous Nations
- Low cost electricity keeps rates down, which supports electrification to meet GHG reduction targets
  - New forecasts indicate more electrification required
  - Industrial Electrification Rate
- Surplus sales leverage Site C's clean dispatchable power
- Provides energy and capacity – both of which are needed to safely and reliably meet BC's electricity demands for generations



## Conclusion

- Difficult decision but the right one for ratepayers and taxpayers
- Independent External Experts confirm the project is safe
- Government and BC Hydro are making changes to improve Site C oversight, construction, contract and risk management
- Completing Site C at higher cost is preferable compared to the financial impacts of halting the project and pursuing alternatives