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From: Alani, Aniz
To: Bill Adsit s.22 ; Bennett, Brad; Jack Weisgerber s.22 James P. Hatton
(jhatton@farris.com); Jamie Brown; janine@northerndevelopment.bc.ca; John Knappett; John Ritchie
(jcwritchie@telus.net); s.22 : Valerie Lambert; s.22
MacLaren, Les MEM:EX; Susan Yurkovich
Cc: McDonald, Jessica; Burr, Ruth; Karly McRae; Kelsey Connolly; Lesley Nilsson; Priti Roopra; Tamara Davidson;
Anne Ho; O'Riley, Christopher; McSherry, Diane
Subject: BC Hydro: Ernst & Young/BTY review of Site C
Date: Tuesday, October 11, 2016 2:35:07 PM

Dear Directors and Site C Project Board members:

Included below for your information is a recently issued information bulleting regarding an independent review of Site C's project risk and case management processes by Ernst & Young and BTY Consultancy Group Inc. The report is available at the following direct link:

<https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/accountability-reports/global-reporting-initiative/bchydro-sitec-ey-btw-risk-cost-mgmt-report.pdf>.

Independent review of Site C by Ernst & Young/BTY finds appropriate processes in place to meet project milestones and financial targets

Review concludes project is clearly defined and well planned

VANCOUVER – BC Hydro today released an independent review of the Site C project's risk and cost management processes by Ernst & Young LLP and BTY Consultancy Group Inc. The report stated: "Overall, our review finds that the project is well defined and that the processes for managing risks and costs are largely representative of leading practices. Execution of the major work packages are clearly scoped and supported by both a robust set of project management practices and tools, as well as by a team with deep experience on delivering major projects for BC Hydro."

Ernst & Young and BTY Group were engaged to assess the Site C project's practices for cost and schedule forecasting, including risk management and mitigation, to ensure the appropriate processes are in place to build the project on time and on budget.

The review focused on four key areas:

1. Review of contracts (over \$50 million) awarded to date.
2. Review of risk management plans, processes and risk registers.
3. Review of cost management plans and processes, with an assessment of overall cost controls.
4. Review of key cost drivers and indicators compared to the estimate baseline.

During the months of July and August 2016, Ernst & Young and BTY reviewed over 100 project documents, interviewed senior project personnel and conducted a site visit.

Key excerpts from report

The Ernst & Young/BTY report stated that:

- "Given Site C's early stage in its lifecycle, our review did not find any evidence to suggest that major project milestones and financial targets will not be met. Overall, the Site C project is both clearly defined and well-planned."
- "BC Hydro employs an industry leading approach to project management via the Project & Portfolio Management system, with practices scaled to both the complexity and size of Site C."
- "While project execution risks do exist, those risks are well-understood and managed by the project team."
- "A robust process was followed in order to establish the project budget, and extensive due diligence was conducted."
- "Site C benefits from best-in-class software that BC Hydro has implemented and integrated over the past five years, including SAP, P6 (Primavera), HeavyBid, Unifier, and others."
- "Finally, we were strongly encouraged by the level to which Site C has leveraged the depth of knowledge within the broader BC Hydro organization around key areas such as project, contract, and interface management."

The Ernst & Young/BTY report also provided a list of recommendations for BC Hydro to consider going forward. BC Hydro has reviewed and considered the recommendations in the report and has developed an action plan to address them.

The Ernst & Young and BTY report is available online at sitecproject.com.

* * *

Backgrounder

EY/BTY Recommendations and BC Hydro Actions

EY FINDING / RECOMMENDATION	BC HYDRO ACTION
While the complex nature of these interfaces will put significant pressure on BC Hydro to manage and control as multiple contracts run in parallel, we are encouraged by the depth of experience across the organization in managing complex interfaces. Recommendation 1: An interface manager and team should be considered as part of the overall project organization.	BC Hydro will develop an interface management plan between major contracts and implement an interface register.
Current contract management needs and reporting requirements are placing significant strain on the capacity of the Site C project team. Recommendation 2: As the project progresses, Site C would benefit from an independent review of the capacity and capability of the project team to deliver upon evolving project needs.	As the project progresses, BC Hydro will commission an independent review to ensure sufficient capacity and capability with regards to contract management and reporting requirements.
The project team is aware of the risks on the Main Civil Works package and is supporting the contractor in many aspects. Recommendation 3: The Main Civil Works contractors would	BC Hydro will: Continue implementation of a site verification process including weekly surveying of progress. Develop a plan in collaboration with Unifier Sustainment team to implement

benefit from a forward-looking capability and capacity review to help monitor contractor performance against schedule. The implementation of Earned Value Management and Unifier will also support contract management.	required enhancements to Unifier tool, processes and procedures. Implement Earned Value metrics on sub-projects: main civil works, generating station & spillways, transmission, and turbines & generators, as work commences.
<p>We observed strong schedule development and controls processes, including a challenge function, when reporting schedule against planned. The underlying data feeding the schedule and capability and capacity to manage the project will need to be evaluated throughout the lifecycle.</p> <p>Recommendation 4: BC Hydro should commission a comprehensive, independent review of the project schedule at a work package-by-work package level in order to both validate schedule content and to identify any schedule risks.</p>	BC Hydro will commission an independent review of the project schedule at a work package-by-work package level to validate schedule content and to identify any schedule risks.
<p>The capacity of the project team to keep pace with reporting requirements will be challenged going forward.</p> <p>Recommendation 5: Reporting requirements should be assessed and streamlined where possible.</p>	BC Hydro will propose to streamline reporting by changing the frequency of some quarterly reports to semi-annually, where appropriate.
<p>Positively, we observed many areas of insightful, forward-looking reporting including data and information on schedule, cost, interfaces, etc. Some of these areas include weekly construction reports, Progression Meetings, and the Accountability Report, which provide an important 'look ahead' view for risk management. However, this reporting could benefit from further refinement into a concise, easily digestible format.</p> <p>Recommendation 6: Dashboards with key project data should be considered to aid decision-making across the project.</p>	BC Hydro will develop an implementation plan for the appropriate Dashboard tool with key project data.
<p>We have seen good practice with quality management and in assuring the schedule integrity, however what isn't clear is the contractors' capability to manage and report on the works accurately.</p> <p>Recommendation 7: An audit and people, process, and systems review of the contractors should be considered.</p>	BC Hydro will conduct a review of the contractors systems to verify the validity of the information being provided by contractors and will review the organizational structure of major contractors to ensure the optimal team, systems and processes are in place.
<p>We recognize the integration of Unifier into the suite of project tools will support cost management and contract management on the whole, however, gaps still exist related to cash flow projections.</p> <p>Recommendation 8: BC Hydro should continue supplementing P6 with other tools to address limitations as required.</p>	BC Hydro will develop a plan to update P6 schedule set up to enable improved cashflowing and to enable Earned Value.
<p>Project controls should be a key focus for the project management team going forward.</p> <p>Recommendation 9: Continue to refine the project controls processes on the project.</p>	BC Hydro will develop a Project Controls Handbook customized for the Site C project team.
<p>Most cost drivers have been stable or have seen reductions, with the notable exception of currency exchange rates.</p> <p>Recommendation 10: Continue proactive management of cost drivers.</p>	BC Hydro has embedded a monthly review of Estimate at Completion in the Site C Progression process.

Aniz Alani | Corporate Secretary

BC Hydro

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Jessica McDonald
President & Chief Executive Officer
BC Hydro

September 21, 2016

Honourable Bill Bennett
Minister of Energy & Mines
Room 301, Parliament Buildings
431 Menzies Street
Victoria, BC V8V 1X4

Dear Minister Bennett,

Re: Site C Clean Energy Project, Quarterly Progress Report No. 4

I am pleased to enclose the fourth Quarterly Progress Report for the Site C Clean Energy Project, for the reporting period April 1, 2016 to June 30, 2016.

This document is provided in fulfilment of the quarterly project progress reporting requirement, as set out in the Site C (Project) Reporting and Accountability Framework dated June 30, 2015. The Board of Directors of BC Hydro approved the report on September 08, 2016 and authorized me to submit it to the Ministry of Energy & Mines.

The next quarterly progress report will be issued in November 2016.

Sincerely,



Jessica McDonald

Enclosure

cc: Chris O'Riley, Deputy CEO
Diane McSherry, Vice-President & Project Director, Site C

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From: MacLaren, Les MEM:EX
To: Foster, Doug FIN:EX
Cc: McKnight, Elaine L MEM:EX; Mentzelopoulos, Athana FIN:EX
Subject: RE: I'm about a third through the UBC report on Site C
Date: Wednesday, April 19, 2017 3:51:00 PM

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Les

From: Foster, Doug FIN:EX
Sent: Wednesday, April 19, 2017 11:17 AM
To: MacLaren, Les MEM:EX
Cc: McKnight, Elaine L MEM:EX; Mentzelopoulos, Athana FIN:EX
Subject: I'm about a third through the UBC report on Site C

s.13

D.

Sent from my BlackBerry 10 smartphone on the Rogers network.

June 9, 2016

Honourable Bill Bennett
Minister of Energy & Mines
Room 301, Parliament Buildings
431 Menzies Street
Victoria, BC
V8V 1X4

Dear Minister Bennett:

Re: Site C Clean Energy Project, Quarterly Progress Report No. 3

I am pleased to enclose the third Quarterly Progress Report for the Site C Clean Energy Project, for the reporting period from January 1, 2016 to March 31, 2016.

This document is provided in fulfilment of the quarterly project progress reporting requirement, as set out in the Site C (Project) Reporting and Accountability Framework dated June 30, 2015. The Board of Directors of BC Hydro approved the report on June 1, 2016 and authorized me to submit it to the Ministry of Energy & Mines.

The next quarterly progress report will be issued in September 2016.

Sincerely,



Jessica McDonald
Chief Executive Officer

Enclosure

Copy to:

Chris O'Riley, Deputy CEO
Diane McSherry, Vice President and Director Site C Project

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