

Fred James

Chief Regulatory Officer

Phone: 604-623-4046

Fax: 604-623-4407

bchydroregulatorygroup@bchydro.com

July 25, 2019

Mr. Patrick Wruck
Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

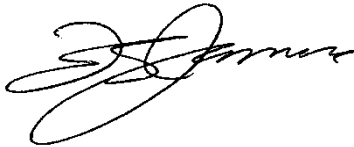
Dear Mr. Wruck:

RE: Project No. 1598932
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Mandatory Reliability Standards (MRS) TPL-001-4 Assessment Report
Semi-Annual Report No. 2 – January 1, 2019 to June 30, 2019 (Report)

BC Hydro writes to submit its Report in compliance with Directive 4 of BCUC Order No. R-27-18A.

For further information, please contact Geoff Higgins at 604-623-4121 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,



Fred James
Chief Regulatory Officer

st/ma

Enclosure (1)

**Mandatory Reliability Standards (MRS)
TPL-001-4 Assessment Report**

Semi-Annual Progress Report No. 2

January 1, 2019 to June 30, 2019

TPL-001-4 Requirement	BC Hydro Stakeholder Comments Organizational Activities and Reliability/Suitability Impact as reported in TPL-001-4 Assessment Report	BC Hydro Cost Estimated as reported in TPL-001-4 Assessment Report		BC Hydro Cost Incurred to Date		BC Hydro Updated Cost Estimates		Cost Variances		Variance Description	
		One Time (\$)	Ongoing (\$)	One Time (\$)	Ongoing (\$)	One Time (\$)	Ongoing (\$)	One Time (\$)	Ongoing (\$)	Notes on One-Time Variances	Notes on Ongoing Variances
TPL-001-4 R1	<p>T&D: Modelling is an ongoing activity with minimal changes to existing process if any. Equipment spares availability need to be dove tailed with power flow base cases and contingency lists. The short circuit study equipment models are to be included in existing TPL assessment planning models. There are no adverse reliability impacts or technical / administrative suitability issues.</p> <p>Estimated Breakdown of Costs: One-Time - \$10,000 (assuming 100 man hours). Ongoing (Annual) - \$0</p>	\$10,000	\$0	\$10,000	\$0	\$10,000	\$0	\$0	\$0		
TPL-001-4 R2	<p>T&D: The study methodology needs to be re written to take in to account the new requirements: a) Sensitivity studies b) equipment spares availability related analysis c) short circuit studies and analysis of results d) options of alternatives to reinforcements detailed in the standard.</p> <p>Estimated Breakdown of Costs: One-Time Costs - Two weeks worth of time for about eight transmission planners = \$56,000.</p> <p>Ongoing (Annual) Costs - About one more week in increase of studies required for about eight transmission planners (280 man hours) = \$28,000. This incremental increase in TPL assessment activity is due to aforementioned additional TPL-001-4 requirements.</p>	\$56,000	\$28,000	\$4,000	\$0	\$56,000	\$28,000	\$0	\$0		
TPL-001-4 R3	T&D: No incremental actions expected.	\$0	\$0	Not applicable	Not applicable	Not applicable	Not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
TPL-001-4 R4	<p>T&D: If the TPL assessments identify there is a need to shed nonconsequential load , then the use of NCLL will need to be reviewed through an open and transparent stakeholder process.</p> <p>Estimated Breakdown of Costs: One-Time Costs - The use of NCLL is estimated to be on approximately four occasions in lieu of transmission reinforcements. Each stakeholder process required is estimated to cost about \$100,000. The total cost of a stakeholder process for all four events is estimated to be about \$400,000.</p> <p>Ongoing (Annual) - Not known at this time; will come out of future planning studies.</p>	\$400,000	Unknown at this time	\$800	\$0	\$400,000	Unknown at this time	\$0	\$0		
TPL-001-4 R5	T&D: No incremental actions expected.	\$0	\$0	Not applicable	Not applicable	Not applicable	Not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
TPL-001-4 R6	T&D: No incremental actions expected.	\$0	\$0	Not applicable	Not applicable	Not applicable	Not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
TPL-001-4 R7	Unable to assess based on undefined Planning Coordinator/Planning Authority footprints and entities responsible. The Commission Reasons for Decision for Order No. R-41-13 (page 20), indicated that a separate process would be established to consider this matter as it pertains to BC.	To be Determined	To be Determined	To be Determined	To be Determined	To be Determined	To be Determined	Not Applicable	Not Applicable		
TPL-001-4 R8	T&D: No incremental actions expected.	\$0	\$0	Not applicable	Not applicable	Not applicable	Not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable