

**Fred James**

Chief Regulatory Officer

Phone: 604-623-4046

Fax: 604-623-4407

bchydroregulatorygroup@bchydro.com

June 6, 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. 1598990
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Fiscal 2020 to Fiscal 20201 Revenue Requirements Application
(Application)**

BC Hydro writes further to our response to BCUC IR 1.121.1.2 to provide an updated page 82 of Appendix J of the Application to include the filing reference information related to the Previous Application.

For further information, please contact Chris Sandve at 604-974-4641 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,

Fred James
Chief Regulatory Officer

cs/rh

Enclosure

Investment Planning ID: 90957	Project Name: Peace to Kelly Lake Capacitors	
Forecast Capital Cost: TBD	Forecast In-Service Date: TBD	Start Date of Construction: ¹ TBD
Development Phase: Identification	Filing Reference: New F2017-F2019 RRA Exhibit B-1, Appendix J, page 54	
Description: The purpose of the project is to reinforce the transmission system between the Peace Region and Kelly Lake substation to ensure transfer capacity is in place for new generation in the Peace Region.		
Key Drivers: <ul style="list-style-type: none"> Reliability. 		
Issues Being Addressed: The Peace Region is a major generation source for BC Hydro, generating enough power to meet about 36 per cent of the total energy demand in the province. BC Hydro's Network Integration Transmission Services (NITS) Base Resource Plan (BRP) Rev 06 released on November 25, 2016 identifies a large amount of hydro generation and other intermittent generation being added by 2024 and through until 2034. The Peace Region to Kelly Lake 500 kV transmission system carries power generated in the Peace Region to load centers in the south of the province. The existing transfer demand on the Peace to Kelly Lake transmission section is near 95 per cent of the transfer capacity of the lines. The addition of Site C and other generation in the Peace Region will cause the required power transfer to exceed the available transmission capacity. System studies show that the transfer capacity of the Peace Region to Kelly Lake 500 kV transmission system is limited by thermal, voltage and transient stability and will require significant reinforcements starting in 2024 to deliver the power from the Peace Region to the south of the province without constraints.		
Discussion of Alternatives: Three alternatives were evaluated during Identification Phase: i. 65 Per Cent Series Compensation via four new capacitor stations and decommissioning of Kennedy (KDY) and McLeese (MLS) capacitor stations; ii. 65 Per Cent Series Compensation via two new capacitor stations and addition of series compensation at Williston (WSN), and decommissioning of KDY capacitor station; and iii. 65 Per cent Series Compensation via three new capacitor stations and decommissioning of KDY capacitor station. Alternative iii, 65 per cent Series Compensation via three new capacitor stations and decommissioning of KDY capacitor station, was selected as the leading alternative as it meets the project objectives, avoids current restrictions between WSN and KLY, and allows some flexibility to respond to changes in load or planning requirements during project development.		
Project Impacts and Benefits: <ul style="list-style-type: none"> Improve reliability through reinforcement of the transmission corridor between the Peace Region and Kelly Lake substation so power from new generation in the Peace Region can be moved south. Building capacitor stations will help maintain the voltage levels of the transmission lines, maximizing the amount of electricity the existing lines can move. 		

¹ Start Date of Construction is the Implementation Approval Date.

Project Implementation Phase Risk Risks are identified starting in the Identification Phase and finalized in the Implementation Phase.	Risk Treatment To be determined when the project reaches Implementation.
Additional Information: The project will require upgrades to the WSN substation, and will need to coordinate outages with any other planned outages. As the planning level estimate for this project is over \$100 million, BC Hydro expects that BCUC approval will be required for this project.	