

System Impact Study Addendum

AREF: 101825966

Addendum to Report No.: Transmission Planning 2023-070 (September 2023)

**Long Term Point-To-Point OASIS Request
AREF: 101825966**

On the POWELL.RIVER to BC.US.BORDER Path October 1, 2024 to January 1, 2029

BC Hydro EGBC Permit to Practice No.: 1002449

ACKNOWLEDGEMENTS

This report was prepared and reviewed by Transmission Planning

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On the POWELL.RIVER to BC.US.BORDER Path
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EXECUTIVE SUMMARY

Pursuant to BC Hydro OATT Section 19, Long Term Firm Point-to-Point (LTFPTP) transmission service requests (TSR) with OASIS AREF# 101825966 was studied:

AREF	POR	POD	MW	Start Time	Stop Time	Term	Submitted
101825966	POWELL.RIVER	BC.US.BORDER	33	October 1, 2024	January 1, 2029	4 years, 3 months. No Rollover Rights	January 12, 2024

This SIS concludes the following with reference to the BCH transmission system:

- The 33 MW Service with OASIS AREF# 101825966 can be accommodated in whole as Long Term Firm transmission service without system upgrades.

It should be noted that the requested service is subject to an interruption when a single contingency occurs on the radial connections discussed in the report.

BC Hydro (Transmission Provider) will tender Service Agreements related to the outcomes of this SIS.

1. INTRODUCTION

This is an addendum to the Interconnection System Impact Study Report:

- Long Term Point-To-Point OASIS Request, AREF: 99723538, 99723543 On the POWELL.RIVER to BC.US.BORDER Path January 1, 2024 to January 1, 2029, Report No.: Transmission Planning 2023-070, dated September 22, 2023

Pursuant to BC Hydro Open Access Transmission Tariff (OATT) Sections 17.1, 17.2, and 17.3, the Transmission Service Request (TSR) with OASIS AREF# 101825966 was submitted by the Transmission Customer, Evolgen Trading and Marketing LP (ETML), to the Transmission Provider, British Columbia Hydro and Power Authority (BC Hydro). The request was accepted and deemed complete. An excerpt of the key information is as follows, with the full details shown in Appendix A.

Table 1-1: OASIS AREF 101825966

AREF OASIS #	101825966
Point of Receipt (POR)	POWELL.RIVER
Point of Delivery (POD)	BC.US.BORDER
Amount Requested	33 MW
Start Time	2024-10-01
Stop Time	2029-01-01
Term	4 years and 3 months With No Rollover Rights
Submission Date	2024-01-12

In accordance with the BC Hydro OATT Sections 19.1 and 19.2, BC Hydro (Transmission Provider) determined that a System Impact Study (SIS) was needed to accommodate the service that was requested by ETML on January 12, 2024, and subsequently a System Impact Study Agreement was executed on January 30, 2024.

Due to the similarities in the specifications between TSR AREF: 101825966, and the TSRs studied in the recently completed SIS Report No.: Transmission Planning 2023-070, titled "Long Term Point-To-Point OASIS Request, AREF: 99723538, 99723543 On the POWELL.RIVER to BC.US.BORDER Path January 1, 2024 to January 1, 2029", dated on September 22, 2023, this SIS is completed as an addendum to SIS Report No.: Transmission Planning 2023-070.

As of the date of this report, a service agreement has been executed for TSR AREF: 99723538 (45 MW), while the customer had withdrawn TSR AREF: 99723543 (33 MW).

This addendum discusses changes relative to SIS Report No.: Transmission Planning 2023-070 for the study of TSR AREF: 101825966, and its outcome on provision of transmission service. Unless otherwise stated, the condition, assumptions, and limitations as discussed in SIS Report No.: Transmission Planning 2023-070 apply.

2. STUDY SCOPE

This SIS only determines, under specified assumptions and limitations, whether 33 MW of transfer capability is available for AREF: 101825966, for a period of 4 years and 3 months, between October 1, 2024 and January 1, 2029, with no rollover rights.

The study scope accommodates the following outcomes since the SIS Report No.: Transmission Planning 2023-070 has been issued:

- A service agreement has been executed for TSR AREF: 99723538 (45 MW)
- The customer has withdrawn TSR AREF: 99723543 (33 MW)

3. PLANNING CRITERIA AND STUDY METHODOLOGY

3.1. PLANNING STANDARDS AND CRITERIA

No change from SIS Report No.: Transmission Planning 2023-070.

3.2. GENERATION DISPATCH METHODOLOGY

No change from SIS Report No.: Transmission Planning 2023-070.

4. SYSTEM STUDY CONDITIONS

The system study conditions accommodate the following outcomes since SIS Report No.: Transmission Planning 2023-070 has been issued:

- a service agreement has been executed for TSR AREF 99723538 (45 MW)
- the customer has withdrawn TSR AREF 99723543 (33 MW)

4.1. RESOURCE PLAN

No change from SIS Report No.: Transmission Planning 2023-070.

4.2. LOAD FORECASTS

No change from SIS Report No.: Transmission Planning 2023-070.

4.3. SYSTEM INTERCHANGES

No change from SIS Report No.: Transmission Planning 2023-070.

4.4. TRANSMISSION CAPITAL PROJECTS

No change from SIS Report No.: Transmission Planning 2023-070 except the listed items 1 and 2 that need to be replaced with the following:

1. Burrard Synchronous Condensers Ceasing Operation

Burrard synchronous condenser station (BSY) currently has three operable units. These units are near their end-of-life and were originally scheduled to cease operation by winter 2025. The planned ceasing of operation has been delayed as BCH's application for Certificate of Public Convenience and Necessity (CPCN) for the Lower Mainland Reactive Power Reinforcement (LMRPR)¹ project was rejected recently by the BCUC as described below.

2. Lower Mainland Reactive Power Reinforcement (LMRPR)

The LMRPR project proposed to provide reactive power support to the transmission system to replace the function of the Burrard synchronous condensers, allowing them to cease operation and to support Fraser Valley load growth. The project includes the addition of several 230 kV shunt capacitors and reactors to provide support to the Interior-to-Lower Mainland

¹ LMRPR used to be named as LMCRPR in the previous SIS report No.: Transmission Planning 2023-070

bulk 500kV transmission system, the Fraser Valley regional transmission system, and the Metro regional transmission system. This project was included as an assumption in the previous SIS.

However, on January 24, 2024, the BCUC rejected BC Hydro's CPCN application in its decision as per Order G-20-24. The LMRPR project is no longer a valid assumption for this SIS addendum, and this SIS has been re-assessed without LMRPR and with three synchronous condensers online at BSY, which is the expected interim system condition pending outcome of further follow-up actions from the LMRPR CPCN application. For the purposes of this SIS, BC Hydro has assumed there will be three units online at BSY until after the winter of 2028.

5. TRANSFER CAPABILITY AND DEMAND ANALYSIS

The analysis accommodates the following outcomes since the SIS Report No.: Transmission Planning 2023-070 has been issued:

- A service agreement has been executed for TSR AREF 99723538 (45 MW)
- The customer has withdrawn TSR AREF 99723543 (33 MW)

5.1. POWELL RIVER AREA TRANSMISSION SYSTEM

No change from SIS Report No.: Transmission Planning 2023-070.

5.2. INTERIOR TO LOWER MAINLAND CUT-PLANE (ILM)

With the BSY units remaining in service beyond the winter of 2028, it has been concluded that the ILM grid will be able to accommodate the 33 MW LTFPTP transmission service in full for the entire requested period without system upgrades.

No change from SIS Report No.: Transmission Planning 2023-070.

5.3. OTHER CUT-PLANES

No change from SIS Report No.: Transmission Planning 2023-070.

5.4. TRANSFER ANALYSIS RESULTS

The key results for TSR AREF: 101825966 are summarized below:

- It has been observed that the ILM cut-plane would experience slight overloading under a single contingency before the 33 MW LTFPTP transmission service. This system constraint is a pre-existing issue, and it will be addressed with the request from another transmission customer.
- The 33 MW LTFPTP transmission service can be accommodated in full for the entire requested period without system upgrades. This is because the pre-existing overload on the ILM cut-plane can be marginally improved with the transmission service.
- No rollover rights will be offered as the LTFPTP transmission service period is less than 5 years.

6. CONCLUSIONS

This SIS addendum to SIS Report No.: Transmission Planning 2023-070 concludes the following with reference to the BCH transmission system:

- The 33 MW Service with OASIS AREF# 101825966 can be accommodate in whole as Long Term Firm transmission service without system upgrades.

7. RESULTING OFFERS

Given the results from the System Impact Study, BC Hydro (Transmission Provider) will tender the following Service Agreement.

AREF	Offer	Rollover Rights
101825966	33 MW of LTFPTP	No rollover rights due to service period is less than 5 years

APPENDIX A: TSR AREF 102825966

TSR 101825966 - Profile 1 - Microsoft Edge
 https://www.oasis.oati.com/webSmartOASIS/TransmissionReservationDetail?TSRID=34532479&AREF=101825966&TP=BCHA&FromHistory=0&overrideTimeZone=PD

Transmission Reservation Detail [AREF : 101825966] - [STUDY] [ORIGINAL] (All times are in PD)

Status Flow & Actions

TSR Information

TP	Seller	Customer	POR	POD	Path	Start Time	Stop Time	MW Req	MW Grant
			Source:		Request Type: ORIGINAL				
BCHA	BCHA	ETML	POWELL RIVER	BC.US.BORDER	W/BCHA/BCHA-BPAT/POWELL RIVER-BC.US.BORDER/	2024-10-01 00:00 PD	2029-01-01 00:00 PS	33	
			Sink:		Service Code: YRLY_FIRM_PTP_EXTENDED				

Reservation Profile

Start Time	Stop Time	MW Req	MW Grant	MWH	Bid Price	Offer Price	Extension Flag
2024-10-01 00:00 PD	2029-01-01 00:00 PS	33		1230009.00	\$85094.0000		0
Profile Total:				1230009.00			

Service Details

Preconfirmed	Increment	Class	Type	Period	Window	Subclass	Nerc Priority	Ceiling Price	Price Unit
NO	YEARLY	FIRM	POINT_TO_POINT	FULL_PERIOD	EXTENDED		7	\$85094.0000	\$/MWH

Comments

Status	Seller	Provider	Customer
	Not enough ATC. ATC pending on higher queued.	System Impact Study Agreement Executed Jan 30, 2024.	

Additional Information

Competing Request Flag:	Related:	Provider Approval:
Negotiated:	Reassigned:	Provisions:
Affiliate: NO	Sale:	Rollover Waived:
Impacted: 0	Request:	CG Status:
Effective Queued Time:	Seller:	CG Deadline:
Queued: 2024-01-12 11:13:39 PS	Deal:	Concomitant Eval Flag:
Updated: 2024-01-30 13:13:37 PS	Posting:	Status Notification: mailto:grptrading@evolugen.com
Response:	SIS: NO	
Unconditional:		Service Update Flag: 0

Customer/Seller Information

Type	Entity	Name	Phone	Email	Fax
Customer	ETML	alexpoit_brtm	819-561-8052	Alexandre.Poitevin@brookfieldrenewable.com	819-561-7188
Seller	BCHA	PaulusMau		Paulus.Mau@bchydro.com	

Audit Statuses

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