

6911 Southpoint Drive (B03)
Burnaby, BC
V3N 4X8

July 30, 2024

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

RE: CEAP IR 20 – [REDACTED] Project - Interconnection Feasibility Study Report

Enclosed is the Interconnection Feasibility study report for the proposed [REDACTED] Project submitted under Attachment M-2: Transmission Service and Interconnection Service Procedures for Competitive Electricity Acquisition Process (CEAP) of the Open Access Transmission Tariff (OATT). This letter provides a non-binding good faith estimate of the cost and time to construct the facilities required to interconnect your project to BC Hydro's Transmission System, being the Network Upgrades, based on the findings of the Interconnection Feasibility study.

Open Access Transmission Tariff

The OATT defines Network Upgrades as additions, modifications, and upgrades to BC Hydro's Transmission System required at or beyond the Point of Interconnection to accommodate the interconnection of the Generating Facility to the BC Hydro's Transmission System. Pursuant to the OATT, BC Hydro will design, procure, construct, install, and own the Network Upgrades. While BC Hydro will pay the costs for the Network Upgrades, the Interconnection Customer provides security for such costs.

Cost Estimate

Based on the Interconnection Feasibility study, the non-binding good faith estimated cost (typical accuracy range of +150%/-50%) for Network Upgrades required to interconnect your project is \$7.2 M.

Major Scope of Work Identified:

- Supply and install one 230 kV double circuit dead-end steel pole tap structure on line 2L333
- Supply and install one 230 kV disconnect switch and steel pole structure
- Add and upgrade Protection, Control and Telecom

Exclusions:

- GST
- Right of Way
- Property Costs
- Permits

Key Assumptions:

- Construction by contractor
- 3 years of construction
- Early Engineering and Procurement
- Existing control buildings at Shell Groundbirch Switching Station (SGB) and Bear Mountain (BMT) would accommodate the new telecom equipment
- No ground improvements will be required
- No contaminated soil will be encountered

Key Risks:

- Additional Right of Way may be required for the new tap structure
- Transmission routing may be different than assumed, including number of disconnect switches and structure types may change
- No defined supply chain strategy, construction costs may increase depending on delivery method
- Project schedule may be longer than expected, leading to increased costs
- Cost of materials and major equipment may be affected by market conditions and escalation

Please note that the Revenue Metering requirements and associated costs required to interconnect your project have not been determined at this stage and, therefore, not included in the above estimate. Revenue Metering costs that are attributable to the Interconnection Customer are to be paid in cash. For more details on Revenue Metering requirements and responsibilities, please refer to:

<https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/distribution/standards/ds-rmr-complex-revenue-metering.pdf>.

Schedule

Based on the Interconnection Feasibility study, the non-binding good faith estimated in-service date for your project's Network Upgrades is Quarter 4 2028 (calendar year). To achieve this timeline, we may need to expedite certain activities, including engineering design and procurement of long-lead equipment.

Timely actions required from you to minimize risks to the schedule:

- Submission of additional technical data required for the System Impact Study and Facilities Study
- Submission of any required information or document such as demonstration of Site Control
- Execution of Combined Study Agreement and Standard Generator Interconnection Agreement
- Financial commitments and securities

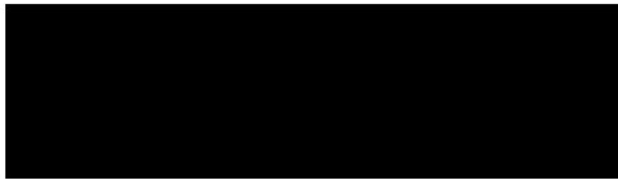
Please note that changes to your interconnection request, delays in data submission, or financial commitments may also impact the target in-service date.

Next Steps

In September 2024, we will issue a final invoice for the Feasibility Study costs. This invoice will reflect the total amount due, taking into account the \$15,000 Feasibility Study deposit you have already paid and any remaining amount on the non-refundable \$15,000 Interconnection request deposit that we did not spend in reviewing and validating your interconnection request.

If you have any questions, please contact the BC Hydro CEAP Team at ceap2024@bchydro.com.

Sincerely,



Senior Manager, Transmission Interconnections
BC Hydro

Encl.: CEAP2024_IR_20_██████████_FeS_Report_final.pdf



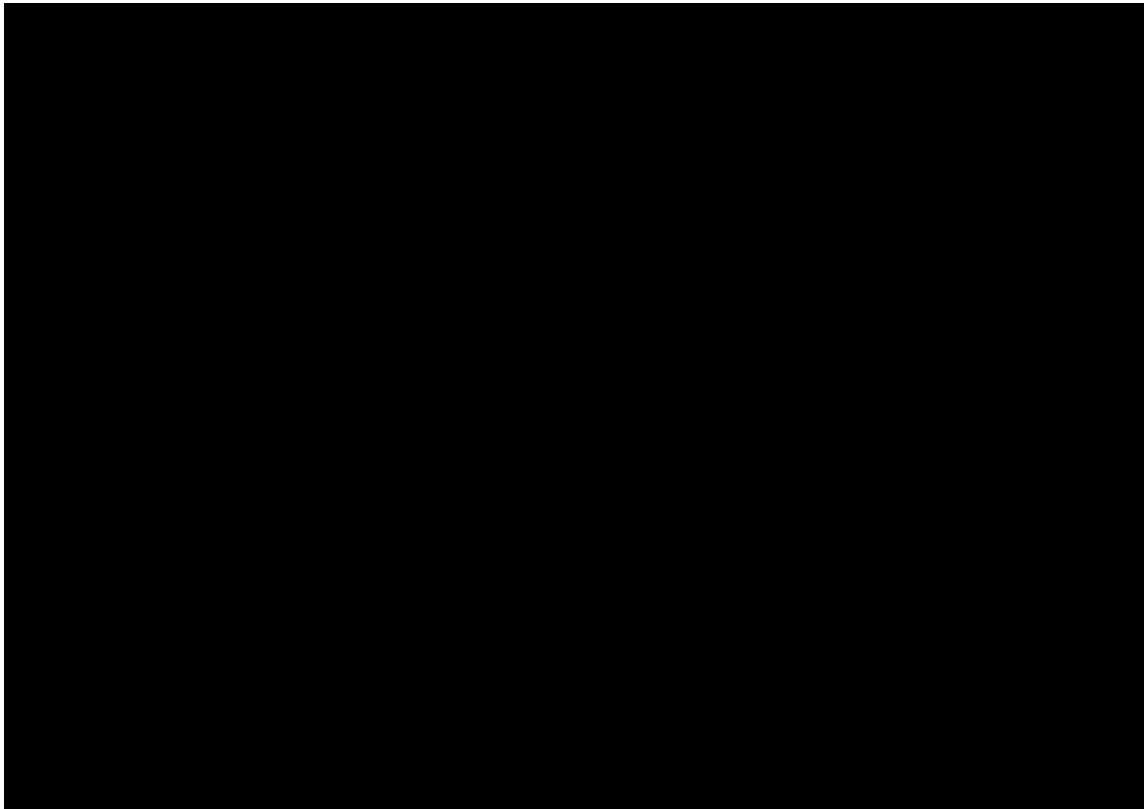
[REDACTED] Project

Interconnection Feasibility Study

BC Hydro EGBC Permit to Practice No: 1002449

2024 CEAP IR # 20

Prepared for:



Report Metadata

Header:	<div></div> Project
Subheader:	Interconnection Feasibility Study
Title:	<div></div> Project
Subtitle:	2024 CEAP IR # 20
Report Number:	1000-APR-00017
Revision:	0
Confidentiality:	Public
Date:	2024 Jul 30
Volume:	1 of 1
Prepared for:	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>
Related Facilities:	2L333
Additional Metadata:	Transmission Planning 2024-044 Filing Subcode 1350

Revisions

Revision	Date	Description
0	2024 Jul	Initial release

Disclaimer of Warranty, Limitation of Liability

This report was prepared solely for internal purposes. All parties other than BC Hydro are third parties.

BC Hydro does not represent, guarantee or warrant to any third party, either expressly or by implication:

any information, product or process disclosed, described or recommended in this report.

BC Hydro does not accept any liability of any kind arising in any way out of the use by a third party of any information, product or process disclosed, described or recommended in this report, nor does BC Hydro accept any liability arising out of reliance by a third party upon any information, statements or recommendations contained in this report. Should third parties use or rely on any information, product or process disclosed, described or recommended in this report, they do so entirely at their own risk.

This report was prepared by the British Columbia Hydro And Power Authority ("BCH") or, as the case may be, on behalf of BCH by persons or entities including, without limitation, persons or entities who are or were employees, agents, consultants, contractors, subcontractors, professional advisers or representatives of, or to, BCH (individually and collectively, "BCH Personnel").

This report is to be read in the context of the methodology, procedures and techniques used, BCH's or BCH's Personnel's assumptions, and the circumstances and constraints under which BCH's mandate to prepare this report was performed. This report is written solely for the purpose expressly stated in this report, and for the sole and exclusive benefit of the person or entity who directly engaged BCH to prepare this report. Accordingly, this report is suitable only for such purpose, and is subject to any changes arising after the date of this report. This report is meant to be read as a whole, and accordingly no section or part of it should be read or relied upon out of context.

Unless otherwise expressly agreed by BCH:

- (a) any assumption, data or information (whether embodied in tangible or electronic form) supplied by, or gathered from, any source (including, without limitation, any consultant, contractor or subcontractor, testing laboratory and equipment suppliers, etc.) upon which BCH's opinion or conclusion as set out in this report is based (individually and collectively, "Information") has not been verified by BCH or BCH's Personnel; BCH makes no representation as to its accuracy or completeness and disclaims all liability with respect to the Information;
- (b) except as expressly set out in this report, all terms, conditions, warranties, representations and statements (whether express, implied, written, oral, collateral, statutory or otherwise) are excluded to the maximum extent permitted by law and, to the extent they cannot be excluded, BCH disclaims all liability in relation to them to the maximum extent permitted by law;
- (c) BCH does not represent or warrant the accuracy, completeness, merchantability, fitness for purpose or usefulness of this report, or any information contained in this report, for use or consideration by any person or entity. In addition, BCH does not accept any liability arising out of reliance by a person or entity on this report, or any information contained in this report, or for any errors or omissions in this report. Any use, reliance or publication by any person or entity of this report or any part of it is at their own risk; and
- (d) In no event will BCH or BCH's Personnel be liable to any recipient of this report for any damage, loss, cost, expense, injury or other liability that arises out of or in connection with this report including, without limitation, any indirect, special, incidental, punitive or consequential loss, liability or damage of any kind.

Copyright Notice

Copyright and all other intellectual property rights in, and to, this report are the property of, and are expressly reserved to, BCH. Without the prior written approval of BCH, no part of this report may be reproduced, used or distributed in any manner or form whatsoever.



Executive Summary

██████████ the interconnection customer (IC), requests to interconnect its ██████████ Project (2024 CEAP IR # 20) to the BC Hydro system. ██████████ Project has twenty-nine (29) ██████████ type-3 wind turbine generators, adding a total capacity of 197.2 MW with a maximum power injection of 190 MW into the BC Hydro system at the POI. The proposed Point of Interconnection (POI) is on BC Hydro's 230 kV line 2L333, approx. 21 km from Shell Groundbirch substation (SGB). The IC's project will connect to the POI via a 0.5 km 230 kV line. The IC's proposed commercial operation date (COD) is Sept 30th, 2028.

To interconnect the ██████████ Project and its facilities to the BCH Transmission System at the proposed POI, this Feasibility Study has identified the following conclusions and requirements:

1. The T-tap connection on the BCH's existing circuit 2L333 is acceptable for interconnecting the IC's generating project to the BCH system.
2. The connection of ██████████ does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal conditions.
3. The study does not find any new thermal or voltage performance violation attributed to the new IC's project based on single contingency analysis.
4. ██████████ may be islanded with other generations and BC Hydro loads after certain contingencies, which may result in unacceptable over-voltages. ██████████ may be required to be immediately tripped off through a direct transfer trip (DTT) scheme to mitigate the impact caused by the contingencies. Subsequent further study by Analytical Studies will be performed to confirm the requirement at a later stage of the project. A list of contingencies is provided in Section 5.1.4. In addition, as a backup the IC's project is required to install anti-islanding protection within their facility to disconnect the wind farm when an inadvertent island with the local load forms.
5. BCH will design and build the tap that will include a tap structure and a switch structure on the tap side. A 253 kV rated disconnect switch will be



installed to isolate the IC's facilities from the BCH system. Additional Right-of-Way (ROW) may be required to accommodate the tap.

6. The IC shall provide entrance protection, required relays for 2L333, telecom facility, and associated equipment at its facilities to accommodate the protection requirement.

The above conclusions are made based on the IC's input data and study assumptions listed in Section 4, which represent the best available information on May 22, 2024.

A non-binding good faith estimated cost and time to construct the Network Upgrades required to interconnect the proposed project will be provided in a separate letter to the IC.



Contents

Executive Summary	vii
1 Introduction	1
2 Purpose and Scopes of Study	4
3 Standard and Criteria	5
4 Assumptions and Conditions	6
5 System Studies and Results	7
5.1 Power Flow Study Results	7
5.1.1 Branch Loading Analysis	7
5.1.2 Steady-State Voltage Performance	8
5.1.3 Reactive Power Capability Evaluation	8
5.1.4 Anti-Islanding Requirements	9
5.2 Fault Analysis	9
5.3 Stations Requirements	10
5.4 Transmission Line Requirements	10
5.5 Protection & Control Requirements	11
5.6 Telecommunications Requirements	12
6 Cost Estimate and Schedule	13
7 Conclusions	14

Appendices

Appendix A Plant Single Line Diagram Used for Power Flow Study



Acronyms

The following are acronyms used in this report.

BCH	BC Hydro
CEAP	Competitive Electricity Acquisition Process
COD	Commercial Operation Date
DTT	Direct Transfer Trip
EDM	Edmonds Office
ERIS	Energy Resource Interconnection Service
FeS	Feasibility Study
FVO	Fraser Valley Office
IBR	Inverter-Based Resources
IC	Interconnection Customer
LAPS	Local Area Protection Schemes
MPO	Maximum Power Output
NERC	North American Electric Reliability Corporation
NRIS	Network Resource Interconnection Service
OATT	Open Access Transmission Tariff
POI	Point of Interconnection
RAS	Remedial Action Scheme
SIO	South Interior Office
TIR	BC Hydro “60 KV to 500 kV Technical Interconnection Requirements for Power Generators”
WECC	Western Electricity Coordinating Council
WTG	Wind Turbine Generator

1 Introduction

Table 1-1 below summarizes the project reviewed in this Feasibility Study.

Table 1-1 Summary of Project Information

Project Name	[REDACTED] Project	
Name of Interconnection Customer (IC)	[REDACTED]	
Point of Interconnection (POI)	on 2L333 at 21 km from SGB	
IC's Proposed COD	30 th September 2028	
Type of Interconnection Service	NRIS <input checked="" type="checkbox"/>	ERIS <input type="checkbox"/>
Maximum Power Injection ¹ (MW)	190 MW (Summer)	190 MW (Winter)
Number of Generator Units	29 x 6.8 MW WTGs	
Plant Fuel	Wind	
Note 1: The maximum achievable power injection at the POI is approx. 190 MW after accounting for MW losses and service load which is the same as the IC proposed amount.		

██████████ the interconnection customer (IC), requests to interconnect its ██████████ Project (2024 CEAP IR # 20) to the BC Hydro system. ██████████ Project has twenty-nine (29) ██████████ MW type-3 wind turbine generators, adding a total capacity of 197.2 MW with a maximum power injection of 190 MW into the BC Hydro system at the POI. The proposed Point of Interconnection (POI) is on BC Hydro's 230 kV line 2L333, approx. 21 km from Shell Groundbirch substation (SGB). The IC's project will connect to the POI via a 0.5 km 230 kV line. The IC's proposed commercial operation date (COD) is Sept 30th, 2028.

Figure 1-1 shows the Peace region transmission system diagram including P20 interconnection. The study area - south Peace region 230 kV/138 kV network has six existing IPPs, several transmission voltage customers, and BC Hydro distribution substations. SGB is a major substation in the 230 kV network, which normally receives power from SBK and SLS. SGB also connects to BMT substation, which has four 230/138 kV transformers and supplies DAW substation as well as 138 kV transmission voltage customers. 1L377 is normally open between PLD and ET3, which separates the north Peace 138 kV regional network from the south 230/138 kV regional network.

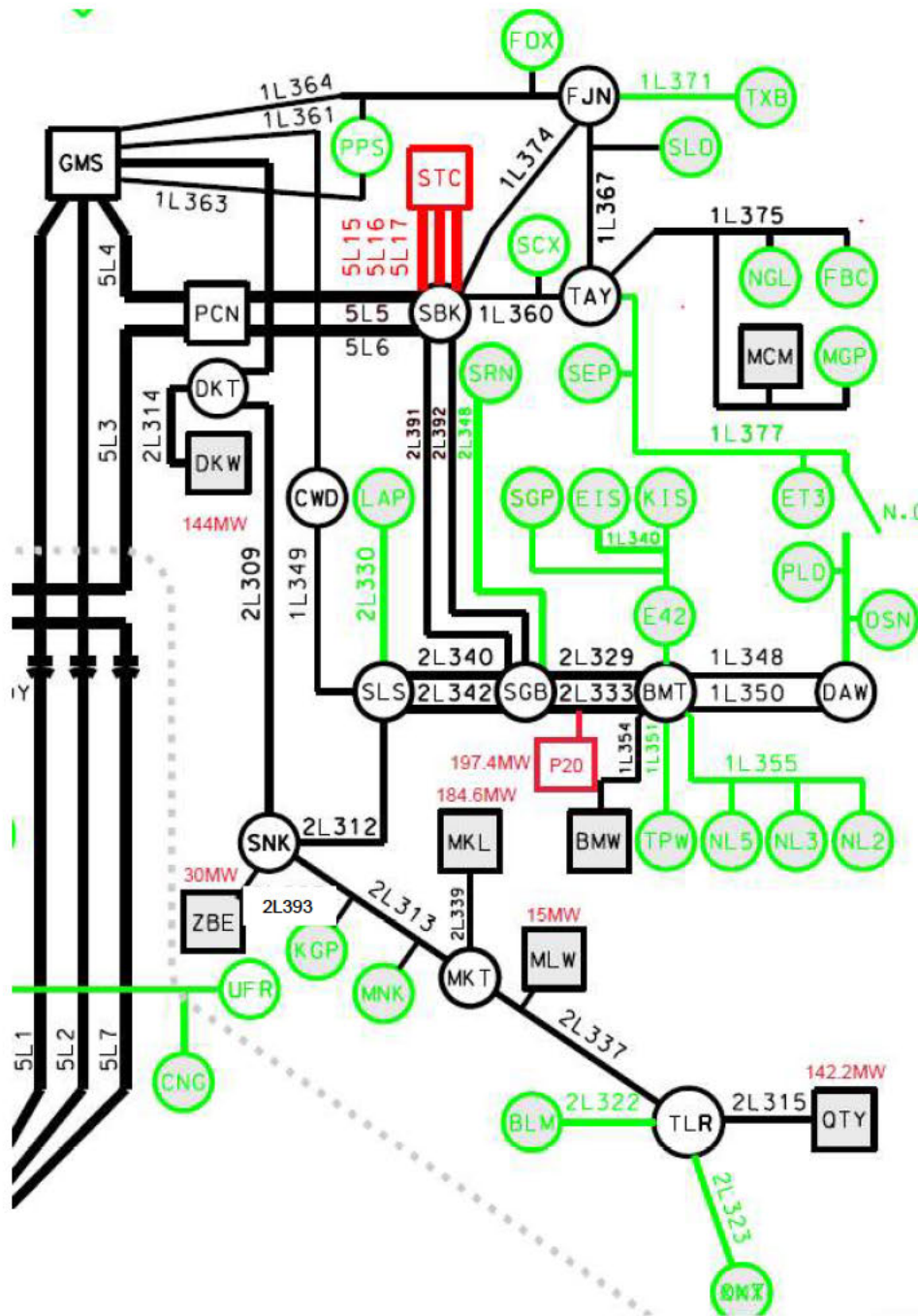


Figure 1-1: Peace region 138/230 kV Transmission System Diagram

The existing wind farms are as follows:

- Moose Lake Wind Farm (MLW) has a total capacity of 15 MW and is tap connected on 2L337
- Zonnebeke Wind Farm (ZBE) has a total capacity of 30 MW and is connected to SNK via 2L393.
- Meikle Wind Farm (MKL) has a total capacity of 184.6 MW and is connected to MKT via 2L339.
- Quality Wind Farm (QTY) has a total capacity of 142.2 MW and is connected to TLR via 2L315.
- Dokie Wind Farm (DKW) has a total capacity of 144 MW and is connected to DKT via 2L314.
- Bear Mountain Wind Farm (BMW) has a total capacity of 105.4 MW and is connected to BMT via 1L354.

There are major network upgrades being planned in the Peace region as follows.

- Site C generating project under construction will add six hydroelectric generators with a total installed capacity of 1200 MW. Two parallel 500 kV lines (5L5 and 5L6) to Peace Canyon substation (PCN) came to service in 2023. Based on the current schedule the Site C project will be completed by end of 2025.
- A new 230 kV/138 kV transformer at BMT (i.e. BMT T4) is planned to be installed in June 2026 to accommodate load addition.



2 Purpose and Scopes of Study

This Feasibility Study is a preliminary evaluation of the system impact of interconnecting the proposed project to the BC Hydro system based on power flow and short circuit analysis in accordance with BCH's Open Access Transmission Tariff (OATT). A non-binding good faith estimated cost of required Network Upgrades and estimated time to construct will be provided.

Per OATT, the feasibility study is performed individually for each of the participating projects in the CEAP process and focuses specifically on the BC Hydro regional transmission system where the proposed generating project is proposed to be constructed. An assessment of the incremental effect on the 500kV bulk transmission system is beyond this study scope.

This is a "limited scope" study which is restricted to power flow studies of P0, P1 and P2 planning events as defined in TPL-001-4 and short circuit analysis. The study does not address other technical aspects such as transient stability and switching transients and impact of multiple contingencies. These subjects would be addressed in subsequent System Impact Study if the project is a Successful Participant of the CEAP.

In case impact to the adjacent external systems to BC Hydro is observed, such impact would be addressed in subsequent detailed and coordinated studies with the relevant adjacent entities if the proposed interconnection proceeds further.

3 Standard and Criteria

The Feasibility Study is performed in compliance with the North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) reliability standards, and the BCH interconnection requirements in the TIR, and upon the ratings of the existing BCH transmission facilities described in Operating Orders, specifically:

- NERC standards: TPL-001-4 and FAC-002-3 relevant to the scope of this Feasibility Study.
- WECC criteria TPL-001-WECC-CRT-4 Transmission System Planning Performance, July 1, 2023.
- BC Hydro's 60 kV to 500 kV Technical Interconnection Requirements for Power Generators.
- BC Hydro Operating Order 5T-10, Ratings for All Transmission Circuits 60 kV or Higher, April 16, 2024.
- BC Hydro Operating Order 5T-14, Ratings for All Transmission and Distribution Transformer, November 8, 2022.
- BC Hydro System Operating Order 7T-22 System Voltage Control, September 19, 2023.

4 Assumptions and Conditions

This Feasibility Study is performed based on the IC's submitted data and information available to BC Hydro on May 22, 2024 for the study purpose. Appendix A shows the plant single line diagram for the IC's project used in the study model. Certain assumptions were, as set out below, made to the extent required.

The power flow study cases used in this Feasibility Study are established based upon the BC Hydro's base resource plan and load forecasts available at the time of performing the study, which includes existing and future generations, transmission facilities, and loads in addition to the subject interconnection project in this study. Applicable seasonal conditions and the appropriate study years for the study planning horizon are also incorporated.

Additional assumptions are listed as follows.

- 1) The regional generation are dispatched to the patterns that stress the transmission system in the study area. In these patterns, the regional generations are typically set to their Maximum Power Outputs (MPO) unless otherwise specified.
- 2) Based on the latest information at the time of this study, the projected in-service date for BMT T4 project is June 2026, which is before the projected in-service date of this IC.
- 3) Based on the schedule available at the time of this study, the Site C project will be completed by end of 2025.
- 4) This study is based on 1D6L377 normally open between PLD and ET3 for 1L377. Change of this configuration could affect the study results.

5 System Studies and Results

5.1 Power Flow Study Results

Power flow studies were performed to evaluate whether the IC's generating project would cause any unacceptable system performance (e.g. equipment overloads, steady-state voltage violation and voltage instability) and to determine the reinforcement requirement based on steady state performance analysis.

The study focuses on the 2029 light summer (29LS) system load condition which is typically a stressed condition for a generation interconnection project, taking into considerations of factors such as load conditions, seasons and generation patterns. The 2029 heavy summer (29HS) and 2028 heavy winter (28HW) cases are also checked at a high level to capture any possibility of performance violations under high load conditions.

5.1.1 Branch Loading Analysis

Table 5-1 shows a summary of branch loading analysis under system normal and single contingencies (P1, P2) for various load conditions.

The study finds no transformer or line overload under system normal conditions for all three load conditions studied.

The study does not find any new thermal violation attributed to the IC's project based on single contingency analysis.

Table 5-1: Summary of Branch Loading Analysis Results

Case	IC's Plant Output	Contingency Identified		Branch Loading	Branch Loading	Branch Loading
				2L333	2L333	2L329
		Cate-gory	Description	SGB-P20 TAP	P20 TAP-BMT	SGB-BMT
Summer Rating				778.4 MVA	778.4 MVA	778.4 MVA
29LS	197.2 MW	P0	System Normal	9%	19%	7%
		P1	2L329	7%	25%	NA
		P2	BMT 1CB10	18 %	9 %	5%

5.1.2 Steady-State Voltage Analysis

For all the studied load conditions (29ls, 29hs, 28hw), the voltage performance under system normal condition (P0) is acceptable.

There are no voltage deviation violations for P1 or P2 contingencies. The summary below for 29LS case demonstrates the voltages in the surrounding 230/138 kV buses are within acceptable ranges with limited deviations for representative contingencies.

Table 5-2: Summary of Steady-State Voltage Study Results

Case	IC's Plant Output	Contingency		Bus Voltage (PU)		
		Cate-gory	Description	SGB 230	BMT 230	BMT 138
29LS	197.2 MW	P0	System Normal	1.04	1.04	1.01
		P1	2L329	1.04	1.03	1.01
		P2	BMT 1CB10	1.04	1.04	1.01

5.1.3 Reactive Power Capability Evaluation

The BC Hydro TIR requires IBR power plant to have the dynamic reactive power capability at a minimum of +/- 33% of its MPO at the high voltage side of the IC's switchyard over the full MW operating range.

Based on the PSS/E power flow data submitted by the IC and the power flow study, the proposed generating project would be capable of meeting the BC Hydro's reactive capability requirement at the plant's maximum MW output, which is subject to further verification in the next stage of interconnection study.

Furthermore, the BCH TIR requires the IC's project to provide sufficient reactive power capability over full MW operating range including at zero MW output level. According to the IC-provided reactive capability curve, the proposed WTG has + 3.75 /- 3.5 Mvar reactive capability at 25 kW output, which needs to be re-confirmed adequate in subsequent detailed studies if the IC's project proceeds further.



5.1.4 Anti-Islanding Requirements

██████████ may be islanded with BMW and other BC Hydro loads in BMT/DAW area for the following contingencies, resulting in potential over-voltages and possible equipment damage which is not allowed.

1. Loss of 2L329 with 2L333 open ended at SGB.
2. 2L333 open ended at SGB with 2L329 OOS.

██████████ may be required to be immediately tripped off through a direct transfer trip (DTT) scheme to mitigate the impact of above contingencies. Subsequent further study by Analytical Studies will be performed to confirm the requirement at a later stage of the project

In addition, as a back up the IC is required to install anti-islanding protection within their facility to disconnect the wind farm when an inadvertent island with the local load forms.



5.2 Fault Analysis

The short circuit analysis in the FeS is based upon the latest BC Hydro system model, which includes the generating facility information and associated impedance data provided by the IC. A more detailed study will be performed at the system impact study stage if needed.

5.3 Stations Requirements

The POI of the ██████████ Project is a tap connection on 230 kV 2L333 line. No station work is required.

5.4 Transmission Line Requirements

No transmission line upgrade has been identified for this project.

At the POI, BCH will design and build the tap that will include a tap structure and a switch structure on the tap side. A 253 kV rated disconnect switch will be installed to isolate the IC's facilities from the BCH system. Additional Right-of-Way (ROW) may be required to accommodate the tap.

Terminating existing OPGW by adding a splice to the 230kV tap structure and then form the fiber connections between IC and SGB/BMT.



5.5 Protection & Control Requirements

The IC needs to provide the following for the interconnection of ██████████ project:

- Entrance protection that complies with the latest version of the “60 kV to 500 kV BC Hydro Technical Interconnection Requirements for Power Generators.”
- Provide two SEL-411L-1 relays (firmware and options specified by BC Hydro) relays at the entrance of ██████████ station to provide protection coverage for 2L333. BC Hydro P&C Planning will provide settings for these relays.
- The IC is responsible for NERC PRC-related tasks, settings to compliance standards within their facilities.
- The IC is responsible for providing a communications link for remote interrogation of the line protection relays and PPIS equipment by BCH servers.
- Provide anti-islanding protection as stated in Section 5.1

If the proposed project proceeds through the CEAP process, subsequent System Impact Studies may identify additional RAS requirements for this interconnection. These RAS functional requirements will include initiating events, control actions, and latency times. Depending on these supplementary requirements, additional telecommunication facilities may be needed to facilitate signal transmission between the BC Hydro substations and customer facilities.



5.6 Telecommunications Requirements

BC Hydro performed a high-level feasibility assessment of a telecom solution to meet the following requirements.

Teleprotection Requirements for Telecom

- Provide WECC Level 3 64 kbps synchronous circuits between BMT and P20 for “BMT-P20 2L333 PY DIGITAL TELEPROT” and “BMT-P20 2L333 SY DIGITAL TELEPROT” with C37.94 interfaces.
- Provide WECC Level 3 64 kbps synchronous circuits between SGB and P20 for “SGB-P20 2L333 PY DIGITAL TELEPROT” and “SGB-P20 SY DIGITAL TELEPROT” with C37.94 interfaces.

Telecontrol Requirements for Telecom

- Provide P20 SCADA circuit off FVO & SIO.

Other Requirements for Telecom

- Provide PY & SY T1s between BMT-P20
- Provide PY & SY T1s between SGB-P20

Certain assumptions were made for determining a potential telecom solution. Details of the telecom solution (e.g. assumptions made, alternatives investigated and work required for BCH and the IC) would be provided at the next study stage.



6 Cost Estimate and Schedule

A non-binding good faith cost for required network upgrades and estimated schedule for construction are included in a separate letter to the IC.

7 Conclusions

To interconnect the ██████████ Project and its facilities to the BCH Transmission System at the POI, this Feasibility Study has identified the following conclusions and requirements:

1. The T-tap connection on the BCH's existing circuit 2L333 is acceptable for interconnecting the IC's generating project to the BCH system.
2. The connection of ██████████ does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal conditions.
3. The study does not find any new thermal or voltage performance violation attributed to the new IC's project based on single contingency analysis.
4. ██████████ may be islanded with other generations and BC Hydro loads after certain contingencies, which may result in unacceptable over-voltages. ██████████ may be required to be immediately tripped off through a direct transfer trip (DTT) scheme to mitigate the impact caused by the contingencies. Subsequent further study by Analytical Studies will be performed to confirm the requirement at a later stage of the project. A list of contingencies is provided in Section 5.1.4. In addition, as a backup the IC's project is required to install anti-islanding protection within their facility to disconnect the wind farm when an inadvertent island with the local load forms.
5. BCH will design and build the tap that will include a tap structure and a switch structure on the tap side. A 253 kV rated disconnect switch will be installed to isolate the IC's facilities from the BCH system. Additional Right-of-Way (ROW) may be required to accommodate the tap.
6. The IC shall provide entrance protection, required relays for 2L333, telecom facility, and associated equipment at its facilities to accommodate the protection requirement.

A non-binding good faith cost for required network upgrades and estimated schedule for construction are included in a separate letter to the IC.

Appendix A

Plant Single Line Diagram Used for Power Flow Study

Figure A-1 shows [REDACTED] Project single line diagram used for power flow study.

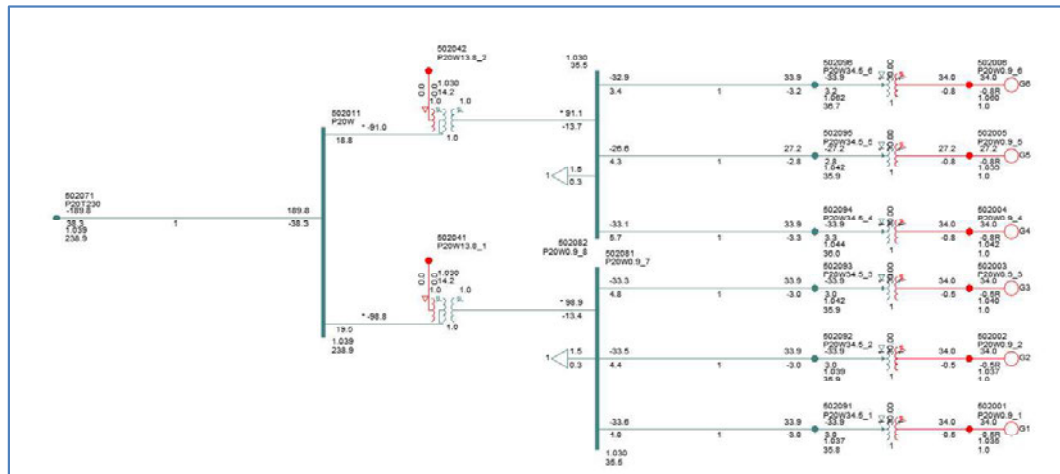


Figure A-1: [REDACTED] Project Single Line Diagram for Power Flow Study.

As seen in the diagram, [REDACTED] Project has two main power transformers dividing the plant into two parts.

- Part 1 has two (3) feeders connecting 15 wind turbines to the collector station,.
- Part 2 has three (3) feeders connecting 14 wind turbines to the collector station,.