BC Hydro
Power smart

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

July 30, 2024

[redacted]

RE: CEAP IR 23 - [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 $83.5 M.

Major Scope of Work Identified:

- Acquire adequate property for a new substation close to the existing transmission line 2L154
- Construct a new 230kV, 3- circuit breaker ring bus switching substation, control building and other required substation facilities and infrastructure
- Construct a new control building and other required substation facilities and infrastructure
- Construct antenna towers and associated works and microwave terminals
- Install passive telecom receiver, which includes two antenna towers, and associated works
- Additions and upgrades to the Protection, Control and Telecom

Exclusions:

- GST
- Permits
- Right-of-Way
- Properties

Key Assumptions:

- Construction by contractor
- 3 years of construction
- Early Engineering and Procurement

Key Risks:

- No defined supply chain strategy, construction costs may increase depending on delivery method.
- Project schedule may be longer than expected, leading to increased costs
- Costs 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 3 2031 (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,

[redacted]

Senior Manager, Transmission Interconnections
BC Hydro

Encl.: CEAP2024_IR_23_[redacted]_FeS_Report_final.pdf

[redacted] Project

Interconnection Feasibility Study

BC Hydro EGBC Permit to Practice No: 1002449

2024 CEAP IR # 23

Prepared for: [redacted]

[redacted]

Report Metadata

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Revision	Date	Description
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Executive Summary

[redacted] the interconnection customer (IC), requests to interconnect its [redacted] Project (2024 CEAP IR # 23) to the BC Hydro system. [redacted] Project has twenty-nine (29) [redacted] Type-3 wind turbine generators, adding a total capacity of 197.2 MW into the BC Hydro system. The Point of Interconnection (POI) is at a new BC Hydro's 230 kV switching station looping in existing transmission line 2L154 at approx. 47 km from Gold River substation (GLD). The IC's proposed commercial operation date (COD) is September 30, 2028.

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

1. A new outdoor, 230kV 3-circuit breaker ring bus switching station (referred to as "P23T") on 2L154 is required to interconnect the customer's generating project to the BCH system. With the new switching station P23T, 2L154 will be segregated into two new lines, temporarily referred to as: 2L154_A (GLD-P23T) and 2L154_B (P23T-DMR). The customer-built 230 kV line from switching station P23T to their site substation P23 will be designated as 2L154_C (P23T-P23). The temporary line designations will be replaced by permanent designations at a later stage of interconnection study.

2. The connection of [redacted] Project does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal conditions.

3. The connection of [redacted] Project will also exacerbate the pre-existing thermal overload on the BC Hydro facilities 1L120 (GLD-SCA), 1L121 (SCA-LDR), 1L119 (JHT-DMR), 2L154_A (GLD-P23T), 1L101 (JHT-DMR), 1L102 (JHT-DMR), and Gold River 230/138 kV transformers under various single contingencies. These overloads are presently addressed by the North Vancouver Island Remedial Action Scheme (NVI RAS). The NVI RAS needs to be updated and the new wind generators at [redacted] Project are required to be included in the updated NVI RAS.

4. The study identified potential voltage instability in North Vancouver Island regional under Circuit Breaker fault (DMR 1CB15) or Loss of Transmission Line (2L154_B) single contingency caused by the connection of [redacted] Project. A new RAS is required for tripping the IC's generation at the new switching station for these events.

5. [redacted] Project is not arranged for islanded operation. The IC is required to install anti-islanding protection within its facility to disconnect the IC's wind farm from the grid when an inadvertent island with the local load forms.

6. According to BC Hydro's TIR, the IC's project must have sufficient reactive power capability over full MW operating range including at the zero MW output level. The [redacted] farm as submitted does not meet the reactive capability requirement at zero MW output level.

7. The new lines 2L154_A and 2L154_B will remain as part of BC Hydro BES. The new line 2L154_C (P23T-P23) will become an IC's BES line and the IC will be responsible for the complance with applicable MRS requirements.

8. BC Hydro will provide line protections for 2L154_A, 2L154_B and 2L154_C (BCH end only) protections. As part of the line protection replacements for each of the three lines, telecommunication facilities will be required to accommodate the new protection schemes. The IC shall provide required relays, telecom facility and associated equipment at its facilities to accommodate the new protection schemes.

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

Appendices

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
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
P23	Project 23 – [redacted] Project
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)	A new switching station on 2L154, at 47 km from Gold River substation	
IC's Proposed COD	30th September 2028	
Type of Interconnection Service	NRIS ☒	ERIS ☐
Maximum Power Injection [1] (MW)	190 (Summer)	190 (Winter)
Number of Generator Units	29 x 6.8 MW WTGs	
Plant Fuel	Wind	

[redacted], the interconnection customer (IC), requests to interconnect its [redacted] Project (2024 CEAP IR # 23) to the BC Hydro system. [redacted] Project has twenty-nine (29) [redacted] Type-3 wind turbine generators, adding a total capacity of 197.2 MW into the BC Hydro system. The Point of Interconnection (POI) is a new switching station on BC Hydro's 230 kV line 2L154, approx. 47 km from Gold River substation (GLD). The IC's proposed commercial operation date (COD) is September 30, 2028.

Figure 1-1 shows the North Vancouver Island region 138/230 kV transmission system diagram. NVI is a generation-rich sub-area where most of the generation in Vancouver Island is located. Within the NVI 132/230 kV system, there are pre-existing branch overload concerns under contingencies. There is an existing remedial action scheme (RAS), named North Vancouver Island Remedial Action Scheme (NVI RAS), implemented to address the thermal overloads on 1L120 (GLD-SCA) and other 138 kV lines under the contingency of loss 2L154 (GLD-DMR) during high CSS and KKS generation conditions. This RAS will runback the CCS and KKS generation.

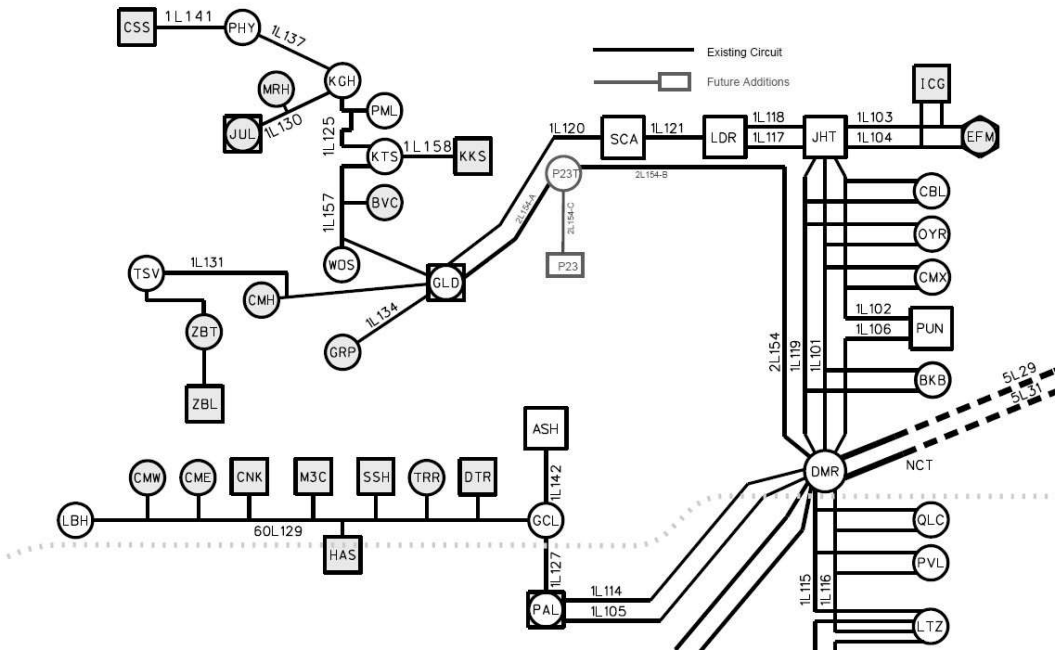

Figure 1-1: Vancouver Island 138/230 kV Transmission System Diagram with the Proposed [redacted] Project Interconnection

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 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) No major capital project is proposed in this region.
3) The existing NVI RAS is feasible to be updated.

5 System Studies and Results

Based upon the IC's submitted information and the area system conditions, a new switching station (referred to as "P23T") on 2L154 is proposed as the POI to interconnect the IC's generating project with the BCH system. There are multiple terminals and multiple sources on the existing line 2L154. The new switching station would help to maintain reliability and adequate protection performance to serve the existing customers and the new addition

With the new switching station P23T, the existing line 2L154 will be segregated into two new lines, temporarily referred to as: 2L154_A (GLD-P23T), 2L154_B (P23T-DMR). The proposed customer-built 230 kV line (P23T-P23) will be designated as 2L154_C. The temporary line designations will be replaced by permanent designations at a later stage of interconnection study.

The new lines 2L154_A and 2L154_B will remain as part of BC Hydro Bulk Electric System (BES) and compliant with applicable MRS requirements. The new line 2L154_C will become an IC's BES line and the IC will be responsible for the compliance with applicable MRS requirements

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 have been conducted with the focus on the 2029 light summer (29LS) system condition, taking into considerations of factors such as load conditions, seasonal variation in ambient temperatures, and generation patterns that stress the transmission system. The 2031 heavy winter (31HW), 2032 light summer (32LS), and 2032 heavy summer (32HS) cases are also checked at a high level to capture any 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 (P0) for all three load conditions studied.

For all the studied load conditions, the study finds pre-existing branch overloads on BC Hydro facilities 1L120 (GLD-SCA), 1L121 (SCA-LDR), 1L119 (JHT-DMR), 2L154 (GLD-DMR),, 1L101 (JHT-DMR), 1L102 (JHT-DMR), and Gold River 230/138 kV transformers under various single contingencies. The connection of [redacted] project will aggravate these pre-existing overloads, which is currently addressed by NVI RAS. The NVI RAS needs to be updated and [redacted] shall be included into the NVI RAS. The [redacted] generation is required to be tripped at the IC's substation P23 under various system contingencies.

Table 5-1 Summary of Branch Loading Study Results

Case	IC's PInat Output	Contingency Identified		Branch Loading			
				2L154.1	2L154.2	1L120	1L121
		Cat.	Description	DMR-POI	GLD-POI	GLD-SCA	SCA-LDR
Summer Rating (Amp)				1009	844	635	639
29LS	MAX	P0	System Normal	73.9 %	33.2 %	34.4 %	81.5 %
	MAX	P1	1L121 (LDR-SCA) OOS	103.0 %	68.9 %	42.4 %	-
	MAX	P2	LDR Bus Section Fault	103.0 %	68.9 %	42.4 %	-
	MAX	P2	1L121 or LDR Bus w RAS[1]	27.8 %	31.9 %	44.3 %	-
	MAX	P2	DMR 1CB15 Internal Fault	131.8 %	106.8 %	120.5 %	82.8 %
	MAX	P2	DMR 1CB15 w RAS[1]	38.0 %	44.0 %	40.1 %	21.3 %
	MAX	P1	2L154 (DMR - POI) OOS	-	59.4 %	236.3 %	286.4 %
	MAX	P1	2L154 (DMR-POI) OOS with RAS[1]	-	1.3 %	47.2 %	95.4 %
32HS	MAX	P0	System Normal	70.1 %	28.9 %	40.3 %	86.0 %
	MAX	P1	1L121 (LDR-SCA) OOS	101.7 %	67.3 %	41.5%	-
	MAX	P2	LDR Bus Section Fault	101.7 %	67.3 %	41.5%	-
	MAX	P2	1L121 or LDR Bus w RAS	26.1 %	30.6 %	42.7 %	-
	MAX	P2	DMR 1CB15 Internal Fault	116.3 %	86.1 %	80.6 %	43.0 %
	MAX	P2	DMR 1CB15 with RAS[1]	35.7 %	42.0 %	82.3 %	46.3 %
	MAX	P1	2L154 (DMR - POI) OOS	-	59.3 %	229.2 %	278.9 %
	MAX	P1	2L154 (DMR-POI) OOS with RAS[1]	-	1.7 %	49.2 %	96.0 %
32LS	MAX	P0	System Normal	73.0 %	32.5 %	37.0 %	82.9 %
	MAX	P1	1L121 (LDR-SCA) OOS	103.5 %	69.7 %	41.7%	-
	MAX	P2	LDR Bus Section Fault	103.5 %	69.7 %	41.7%	-
	MAX	P2	1L121 or LDR Bus w RAS	26.8 %	32.0 %	43.0 %	-
	MAX	P2	DMR 1CB15 Internal Fault	135.4 %	108.4 %	119.4 %	81.1 %
	MAX	P2	DMR 1CB15 with RAS[1]	36.9 %	43.9 %	38.4 %	19.8 %
	MAX	P1	2L154 (DMR - POI) OOS	-	60.0 %	235.2 %	285.6 %
	MAX	P1	2L154 (DMR-POI) OOS with RAS[1]	-	1.8 %	47.8 %	94.7 %

Note 1: Update the existing NVI RAS to include [redacted] Project.

5.1.2 Steady-State Voltage Analysis

For all the studied load conditions (32LS, 32HS, 31HW, and 29LS), the voltage performance under system normal condition (P0) is acceptable.

For internal breaker fault event (P2) of DMR 1CB15 breaker, all the 132 kV breakers connected to DMR bus 1B1 and 1B3 opens causing isolation of lines 1L119, 1L101 and 1L106 connecting to North Vancouver Island system resulting 2L154 as the only connected path to deliver NVI generation to DMR. The connection of [redacted] Project causes potential voltage instability issues at North Vancouver Island. Additionally, the connection of [redacted] causes potential voltage instability during loss of 2L154_B. A new RAS is required for tripping the new [redacted] generation at the switching station P23T for these events. Further details of the RAS scheme will be studied and determined in subsequent studies.

5.1.3 Reactive Power Capability Evaluation

The BCH TIR requires IBR generators have the dynamic reactive power capability at a minimum of +/- 33% of its Maximum Power Output (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, 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 subjected 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. The proposed wind farm does not meet this requirement at near zero MW output.

5.1.4 Anti-Islanding Requirements

The IC is required to install anti-islanding protection within its facility to disconnect the IC's wind farm from the grid 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

A new outdoor 230kV, 3-circuit breaker ring bus switching station (P23T) will be built at POI, close to the existing 230kV transmission line 2L154. The existing transmission line 2L154 will be cut and looped in to, and 230kV line of [redacted] Project will be terminated at the new substation.

Scope of substation work:

- Acquire adequate property for a new substation close to the existing transmission line 2L154.
- Construct a new outdoor 230kV, 3- circuit breaker ring bus switching substation. Refer to the one-line diagram in Appendix B for details. The designation of the new station and the new line connecting to the customer and two new lines derived from 2L154 will be assigned in next stage.
- Construct a new control building and other required substation facilities and infrastructures.
- Cut the existing 2L154 and loop into the substation.
- Terminate 230 kV line of [redacted] Project at the station.

5.4 Protection & Control Requirements

BC Hydro will provide line protections for 2L154_A, 2L154_B and 2L154_C (BC Hydro end only) protections. Existing 2L154 is a single transmission line but will be segregated into three as a part of this project: GLD to P23T is 2L154_A, P23T to DMR is 2L154_B and P23T to P23 is 2L154_C. BCH to build a new 230 kV three-breaker-ring terminal switching station (tentatively designated as P23T) for interconnecting to the new proponent [redacted] Project (tentatively designated as P23).

The IC, [redacted] to provide the following for the interconnection of P23:

- 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) at the entrance of P23 to provide protection coverage for 2L154_C. BC Hydro P&C Planning will provide core protection settings for these relays to protect transmission line 2L154_C during a transmission line fault. Non-core protection such as local breaker failure, auto-reclosing, backup protection for station elements will not be provided by BC Hydro P&C Planning.
- 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 PPIS equipment by BCH servers.
- Provide anti-islanding protection as per Section 5.1.4.

5.5 Telecommunications Requirements

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

Teleprotection Requirements for Telecom

- WECC Level 3 PY & SY, DMR – P23T, with C37.94 interfaces.
- WECC Level 3 PY & SY, GLD – P23T, with C37.94 interfaces.
- WECC Level 3 PY & SY, P23T – P23, with C37.94 interfaces.

Telecontrol Requirements for Telecom

- Provide P23 SCADA circuit to FVO and SIO.
- Provide P23 SCADA circuit to FVO and SIO.
- Provide P23 REMACC circuit to EDM.

Other Requirements for Telecom

- None identified.

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

The 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.

7 Conclusions

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

1. A new outdoor, 230kV 3-circuit breaker ring bus switching station (referred to as "P23T") on 2L154 is required to interconnect the customer's generating project to the BCH system. With the new switching station P23T, 2L154 will be segregated into two new lines, temporarily referred to as: 2L154_A (GLD-P23T) and 2L154_B (P23T-DMR). The customer-built 230 kV line from switching station P23T to their site substation P23 will be designated as 2L154_C (P23T-P23). The temporary line designations will be replaced by permanent designations at a later stage of interconnection study.

2. The connection of [redacted] Project does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal conditions.

3. The connection of [redacted] Project will also exacerbate the pre-existing thermal overload on the BC Hydro facilities 1L120 (GLD-SCA), 1L121 (SCA-LDR), 1L119 (JHT-DMR), 2L154_A (GLD-P23T), 1L101 (JHT-DMR), 1L102 (JHT-DMR), and Gold River 230/138 kV transformers under various single contingencies. These overloads are presently addressed by the North Vancouver Island Remedial Action Scheme (NVI RAS). The NVI RAS needs to be updated and the new wind generators at [redacted] Project are required to be included in the updated NVI RAS.

4. The study identified potential voltage instability in North Vancouver Island regional under Circuit Breaker fault (DMR 1CB15) or Loss of Transmission Line (2L154_B) single contingency caused by the connection of [redacted] Project. A new RAS is required for tripping the IC's generation at the new switching station for these events.

5. [redacted] Project is not arranged for islanded operation. The IC is required to install anti-islanding protection within its facility to disconnect the IC's wind farm from the grid when an inadvertent island with the local load forms.

6. According to BC Hydro's TIR, the IC's project must have sufficient reactive power capability over full MW operating range including at the zero MW output level. The [redacted] farm as submitted does not meet the reactive capability requirement at zero MW output level.

7. The new lines 2L154_A and 2L154_B will remain as part of BC Hydro BES. The new line 2L154_C (P23T-P23) will become an IC's BES line and the IC will be responsible for the complance with applicable MRS requirements.

8. BC Hydro will provide line protections for 2L154_A, 2L154_B and 2L154_C (BCH end only) protections. As part of the line protection replacements for each of the three lines, telecommunication facilities will be required to accommodate the new protection schemes. The IC shall provide required relays, telecom facility and associated equipment at its facilities to accommodate the new protection schemes.

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.

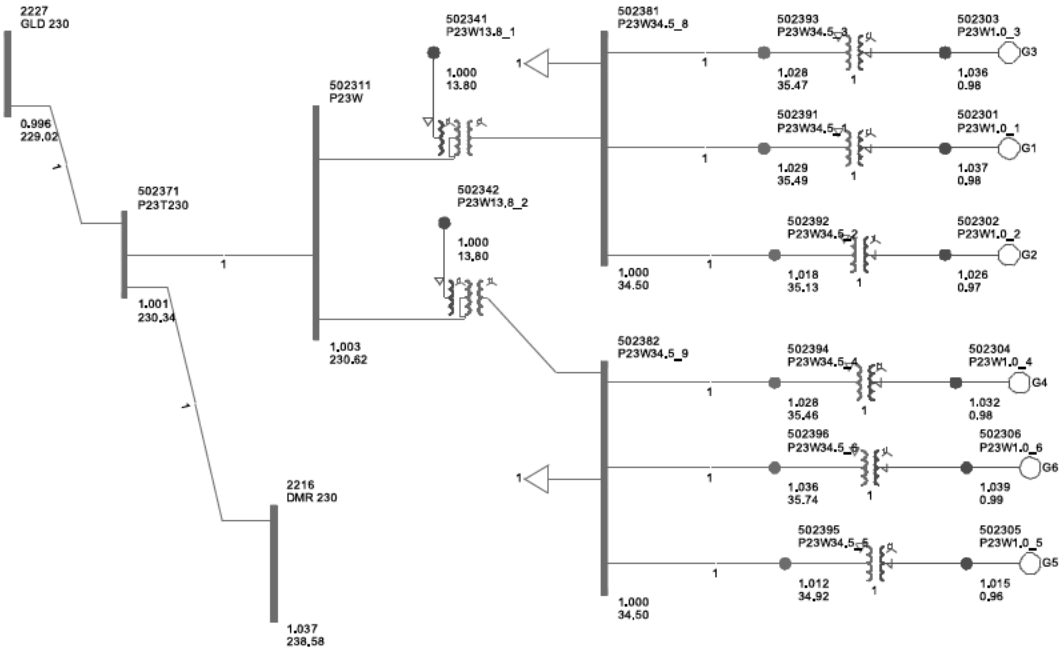

Figure A-1: [redacted] Project Single Line Diagram for Power Flow Study.

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

- Part 1 has two (3) feeders.
- Part 2 has three (3) feeders.

Appendix B
One-Line Sketch for New Switching Station

Figure B-1 shows the Stations Planning One-Line Sketch for the New Switching Station P23T.

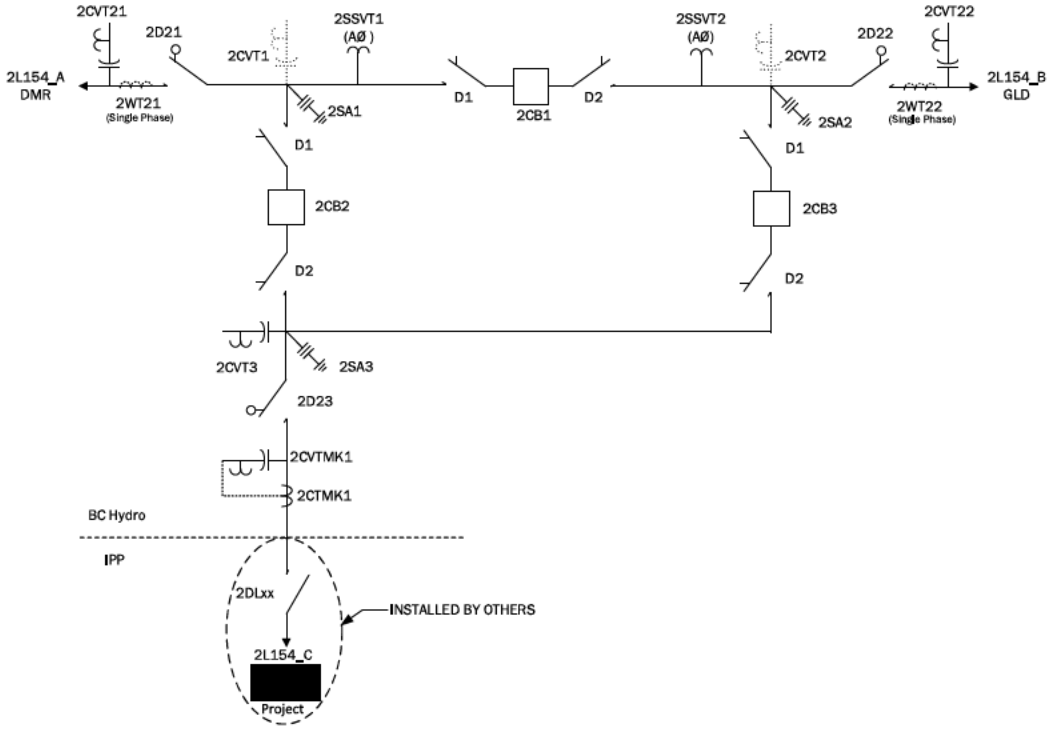

Figure B-1: Stations Planning One-Line Sketch for the New Switching Station P23T.