BC Hydro
Power smart

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

July 30, 2024

[redacted]

[redacted]

[redacted]

RE: CEAP IR 75 - Nulki Hills Wind Project - Interconnection Feasibility Study Report

Enclosed is the Interconnection Feasibility study report for the proposed Nulki Hills Wind 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 $93.1M.

Major Scope of Work Identified:

- Acquire adequate property for a new substation close to the existing transmission line 2L353
- Construct a new outdoor 230kV, 3- circuit breaker ring bus switching substation
- Construct a new control building and other required substation facilities and infrastructures
- Supply and install protection relays and other required protection equipment
- Supply and install microwave towers, waveguides, antennas, and other required telecommunications equipment

Exclusions:

- GST
- Right-of-way
- Permits

Key Assumptions

- Construction by contractor
- 3 years of construction
- No expansion of existing stations or control buildings to accommodate new equipment
- Early Engineering and Procurement
- No ground improvements will be required
- No piles will be required for construction
- No contaminated soil will be encountered during construction

Key Risks:

- Additional right of way or acquisition of more property may be required
- No defined supply chain strategy, construction costs may increase depending on delivery method
- Cost of construction may increase based on geotechnical condition of the actual project site
- 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,

Senior Manager, Transmission Interconnections

BC Hydro

Encl.: CEAP2024_IR_75_Nulki Hills Wind_FeS_Report_final.pdf

[redacted]

Nulki Hills Wind Project

Interconnection Feasibility Study

BC Hydro EGBC Permit to Practice No: 1002449

2024 CEAP IR # 75

Prepared for: [redacted]

[redacted]

[redacted]

Report Metadata

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Revision	Date	Description
0	2024 Jul	Initial release

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Executive Summary

[redacted] the interconnection customer (IC), requests to interconnect its Nulki Hills Wind Project (2024 CEAP IR # 75) to the BC Hydro (BCH) system. Nulki Hills Wind Project has thirty-six (36) [redacted] 5.7 MW type-3 wind turbine generators with total installed capacity of 205.2 MW. The proposed Point of Interconnection (POI) is a new switching station on BC Hydro's 230 kV line 2L353 between the Glenannan substation (GLN) and Tachick substation (TAC), approx. 19.1 km from TAC. The IC's project will connect to the POI via a 36 km 230 kV customer-built interconnection line. The IC's proposed commercial operation date (COD) is October 1, 2028.

To interconnect the Nulki Hills Wind 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 230 kV switching station (referred to as "P75T") on 2L353 is required as the proposed POI for interconnecting the IC's generating project to the BCH system. With the new switching station P75T, 2L353 will be segregated into two new lines, temporarily referred to as: 2L353_A (GLN-P75T) and 2L353_C (P75T-TAC). The proposed customer built 230 kV transmission line from P75T to their site substation (P75) is designated as 2L353_C. The temporary line designations will be replaced by permanent designations at a later stage of interconnection study.

2. The connection of Nulki Hills Wind Project does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal and single contingency conditions.

3. An Anti-islanding direct transfer trip scheme to the IC's entrance circuit breaker is required to isolate the wind farm when it is islanded with local loads during various operation conditions or under system contingencies (such as loss of 2L353_A, or GLN 2CB1/GLN 2CB2 internal breaker faults or loss of both 500/230 kV GLN transformers…).

4. In addition to entrance protection and 2L353_C line protection, the IC is required to install anti-islanding protection within their facility to disconnect the IC's wind farm from the grid when an inadvertent island with the local load forms.

5. The Nulki Hills Wind Project is required to participate in the existing North Coast Generation Shedding Application/Scheme to maintain system reliable operation under 500 kV line contingencies.

6. According to BC Hydro's TIR, the IC's project must have sufficient reactive power capability at the zero MW output level. The Nulki Hills wind farm as submitted does not meet the reactive capability requirement at zero MW output level, which is subjected to further verification in the next stage of interconnection study.

7. The new line 2L353_A will become part of BC Hydro BES and need to be compliant with applicable NERC MRS requirements. The 2L353_B will be a Non-BES line. The new line 2L353_C (P75T-P75) will be an IC's BES element and the IC will be responsible for the compliance with NERC MRS requirement.

8. BC Hydro will provide line protections for 2L353_A, 2L353_B and 2L353_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
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
TIR	BC Hydro “60 KV to 500 kV Technical Interconnection Requirements for Power Generators”
WECC	Western Electricity Coordinating Council
WTG	Wind Turbine Generator
EDM	Edmonds Office
FVO	Fraser Valley Office
SIO	South Interior Office
TAC	Tachick Substation
GLN	Glenannan Substation
WSN	Williston Substation
TKW	Telwa Substation
P75V	Nulki back-to-back Microwave Repeater (unofficial site code)
P75T	Nulki Hills Wind Terminal (unofficial site code)
P75	Nulki Hills Wind Independent Power Producer (unofficial site code)

1 Introduction

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

Table 1-1 Summary of Project Information

Project Name	Nulki Hills Wind Project	
Name of Interconnection Customer (IC)	[redacted]	
Point of Interconnection (POI)	At the 230kV bus of a new switching station on 2L353, 19.1 km from TAC	
IC's Proposed COD	1st December 2028	
Type of Interconnection Service	NRIS ☒	ERIS ☐
Maximum Power Injection (MW)	200 MW (Summer)	200 MW (Winter)
Number of Generator Units	36 x 5.7 MW	
Plant Fuel	Wind	

[redacted] the interconnection customer (IC), requests to interconnect its Nulki Hills Wind Project (2024 CEAP IR # 75) to the BC Hydro (BCH) system. Nulki Hills Wind Project has thirty-six (36) [redacted] 5.7 MW type-3 wind turbine generators with total installed capacity of 205.2 MW. The proposed Point of Interconnection (POI) is a new switching station on BC Hydro's 230 kV line 2L353 between the Glenannan substation (GLN) and Tachick substation (TAC), approx. 19.1 km from TAC. The IC's project will connect to the POI via a 36 km 230 kV customer built interconnection line. The IC's proposed commercial operation date (COD) is October 1, 2028.

Figure 1-1 shows the Glenannan transmission system diagram. BC Hydro's North Coast (NC) service area is supplied through a radial 500 kV transmission circuit that comprises three transmission lines: 5L61 between the Williston substation (WSN) and the Glenannan substation, 5L62 between GLN and the Telkwa substation (TKW), and 5L63 between TKW and the Skeena substation (SKA). GLN is a major substation in North Coast with two existing 500/230 kV transformers (GLN T1 & T2) and presently supplies one 230 kV transmission line — 2L353 to TAC.

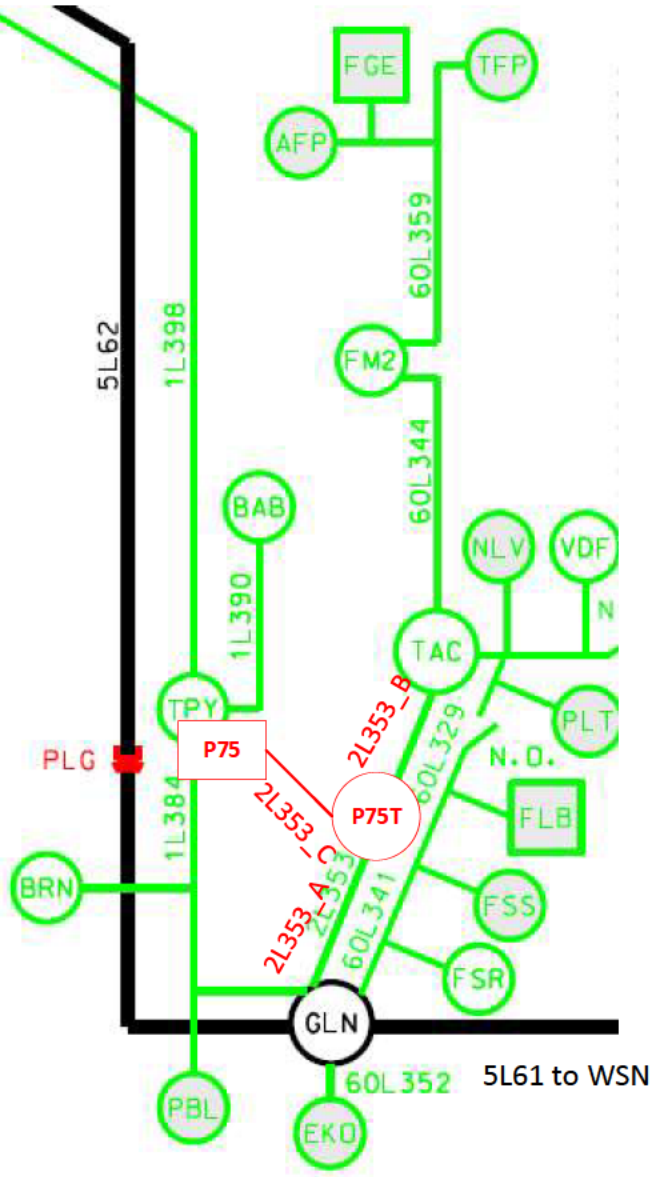

Figure 1-1: Glenannan Regional Transmission System Diagram with the Proposed Nulki Wind Project Interconnection

In the Glenannan region, there are two generation plants:

- Fort St. James Green Energy Generating Station (FGE) has a total capacity of 40 MW and is connected to TAC via the line 60L344.
- Fraser Lake Biomass Generating Station (FLB) has a total capacity of 7.2 MW and is connected to GLN Substation via 60L329.

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 estimate 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 made, 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.

5 System Studies and Results

Based upon the IC's submitted information and the area system conditions, a new switching station (referred to as "P75T") as the proposed POI on 2L353 is required to interconnect the IC's generating project to the BCH system. There are multiple terminals and multiple sources on the existing line 2L353. 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 P75T, the existing line 2L353 will be segregated into two new lines, temporarily referred to as: 2L353_A (GLN-P75T) and 2L353_B (P75T-TAC). The customer built 230kV transmission line from P75T to the customer's substation (P75) is designated as 2L353_C. The temporary line designations will be replaced by permanent designations at a later stage of interconnection study.

The new lines 2L353_A will become part of BC Hydro BES and need to be compliant with applicable NERC MRS requirements. The new line 2L353_B (P75T-TAC) will be a non-BES line. The new line 2L353_C (P75T-P75) will be an IC's BES element and the IC will be responsible for the compliance with NERC MRS requirement.

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 2029 heavy winter (29HW) 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.

For all the studied load conditions (29LS, 29HS, 29HW), there is no other branch or transformer overload identified under system normal condition and single contingencies.

Table 5-1: Summary of Branch Loading Analysis Results

Case	IC's Plant Output	Contingency		Branch Loading	
				2L353_A	GLN T1
		Cat.	Description	GLN-P75T	500/230kV transformer
Winter Rating				1200 Amps	714 MVA
29HW	Max	P0	System Normal	41%	9%
	Max	P1	60L329-VDF	47%	9%
	Max	P1	GLN T2	41%	18%
Summer Rating				1055 Amps	600 MVA
29HS	Max	P0	System Normal	50%	13%
	Max	P1	60L329-VDF	54%	13%
	Max	P1	GLN T2	50%	26%
29LS	Max	P0	System Normal	53%	14%
	Max	P1	60L329-VDF	55%	14%
	Max	P1	GLN T2	53%	28%

5.1.2 Steady-State Voltage Analysis

With the connection of the IC's project, the voltage performance under system normal condition and single contingencies is acceptable for all the three load conditions (29LS, 29HS, 29HW). Table 5-2 shows a summary of steady-state voltage performance under various system conditions and contingencies.

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

Case	IC's Plant Output	Contingency		Bus Voltage (P.U.)		
		Cat.	Description	GLN 230	TAC 230	P75T 230
29HW	Max	P0	System normal	1.02	1.00	1.00
	0 MW	P0	System normal	1.02	1.01	1.02
29HS	Max	P0	System normal	1.02	1.00	1.00
	0 MW	P0	System normal	1.03	1.02	1.02
29LS	Max	P0	System normal	1.02	1.00	1.00
	0 MW	P0	System normal	1.03	1.02	1.03

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.

Nulki Hills wind turbines (WTG) offers the full reactive power range (+/- 3Mvar) from full active power (5.7 MW) down to 25 kW generation. The proposed generating project would be capable of meeting the BC Hydro's reactive capability requirement over this MW operating range.

According to BC Hydro's TIR, the IC's project must have sufficient reactive power capability at the zero MW output level. The Nulki Hills wind farm as submitted does not meet the reactive capability requirement at zero MW output level, which is subjected to further verification in the next stage of interconnection study.

5.1.4 Anti-Islanding Requirements

During various operation conditions or under system contingencies (such as such as loss of 2L353_A, or GLN 2CB1 & GLN 2CB2 internal breaker faults or loss of both 500/230 kV GLN transformer…), the IC's project will be inadvertently islanded with the existing generators and BC Hydro loads, which is not allowed. An Anti-islanding transfer trip scheme to P75 is required to isolate the wind farm.

In addition, 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.

North Coast regional transmission system including the Nulki Hills Wind Project will form an island operating condition from the rest of BCH system when loss of major North Coast 500 kV transfer cut-plane between WSN and GLN. The Nulki Hills Wind Project is required to participate in the existing North Coast Generation Shedding Application/Scheme to maintain system reliability under 500 kV line contingency operating conditions.

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 230 kV, 3-circuit breaker ring bus switching station (P75T temporarily) will be built at the proposed POI, close to the existing 230 kV transmission line 2L353. The existing transmission line 2L353 will be cut and looped in to, and 230 kV line of Nulki Hills Wind Project (2L353_C/2LXX) will be terminated at the new switching station.

The scope at the new switching station P75T is as follows.

- Acquire adequate property for a new switching station close to the existing transmission line 2L353.
- Construct a new outdoor 230 kV, three-circuit breaker ring bus switching station.
- Construct a new control building and other required switching station facilities and infrastructures.
- Cut the existing 2L353 and loop into the switching station.
- Terminate 230 kV transmission line Nulki Hills wind (2L353_C/2LXX) at the station.

Refer to Appendix B one-line sketch for the new switching station P75T for details.

5.4 Protection & Control Requirements

BC Hydro will provide line protections for 2L353_A (GLN-P75T), 2L353_B (P75T-TAC) and 2L353_C (P75T-P75) protections (BC Hydro end only). 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 is to provide the following for the interconnection of Nulki Hills wind 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) at the entrance of P75 to provide protection coverage for 2L353_C. BC Hydro P&C Planning will provide core protection settings for these relays to protect transmission line 2L353_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 stated in Section 5.1.
- Nulki Hills Wind will be required to participate in North Coast RAS.

The RAS requirements stated in Section 5.1 are mainly to address the islanding concerns, which are preliminary. These RAS requirements may utilize the communication channels required for protection purposes included in the cost estimate. 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.

5.5 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 GLN and P75T for "GLN- P75T 2L353_A PY DIGITAL TELEPROT" and "GLN- P75T 2L353_A SY DIGITAL TELEPROT". Physical interface shall be C37.94 optical over multimode fibre using ST connectors.

- Provide WECC Level 3 38,400 bps RS-232 circuits between TAC and P75T "TAC- P75T 2L353_B PY DIGITAL TELEPROT" and "TAC- P75T 2L353_B SY DIGITAL TELEPROT".
- Provide WECC Level 3 64 kbps synchronous circuits between P75T and P75V for "P75T -P75V 2L353_C PY DIGITAL TELEPROT" and "P75T - P75V 2L353_C SY DIGITAL TELEPROT". Physical interface shall be C37.94 optical over multimode fibre using ST connectors.
- Decommission existing TAC T2, T3, T5 – GLN 2L353 DTT's

Telecontrol Requirements for Telecom

- Provide P75T SCADA circuits to FVO & SIO.
- Provide P75V SCADA circuit to FVO and SIO.

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 Nulki Hills Wind 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 230 kV switching station (referred to as "P75T") on 2L353 is required as the proposed POI for interconnecting the IC's generating project to the BCH system. With the new switching station P75T, 2L353 will be segregated into two new lines, temporarily referred to as: 2L353_A (GLN-P75T), 2L353_B (P75T-TAC). The customer built 230kV transmission line from P75T to their site substation (P75) is designated as 2L353_C. The temporary line designations will be replaced by permanent designations at a later stage of interconnection study.

2. The connection of Nulki Hills Wind Project does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal and single contingency conditions.

3. An Anti-islanding transfer trip scheme to P75 is required to isolate the wind farm when it is islanded with local loads during various operation conditions or under system contingencies (such as loss of 2L353_A, or GLN 2CB1 & GLN 2CB2 internal breaker faults or loss of both 500/230 kV GLN transformers…).

4. In addition to entrance protection and 2L353_C line protection, the IC is required to install anti-islanding protection within their facility to disconnect the IC's wind farm from the grid when an inadvertent island with the local load forms.

5. The Nulki Hills Wind Project is required to participate in the existing North Coast Generation Shedding Application/Scheme to maintain system reliable operation under 500 kV line contingencies.

6. According to BC Hydro's TIR, the IC's project must have sufficient reactive power capability at the zero MW output level. The Nulki Hills wind farm as submitted does not meet the reactive capability requirement at zero MW output level, which is subjected to further verification in the next stage of interconnection study.

7. The new line 2L353_A will become part of BC Hydro BES and need to be compliant with applicable NERC MRS requirements. The new line 2L353_B (P75T-TAC) will be a non-BES line. The interconnection line 2L353_C (P75T-P75) will be an IC's BES line and the IC will be responsible for the compliance with MRS requirements.

8. BC Hydro will provide line protections for 2L353_A, 2L353_B and 2L353_C 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

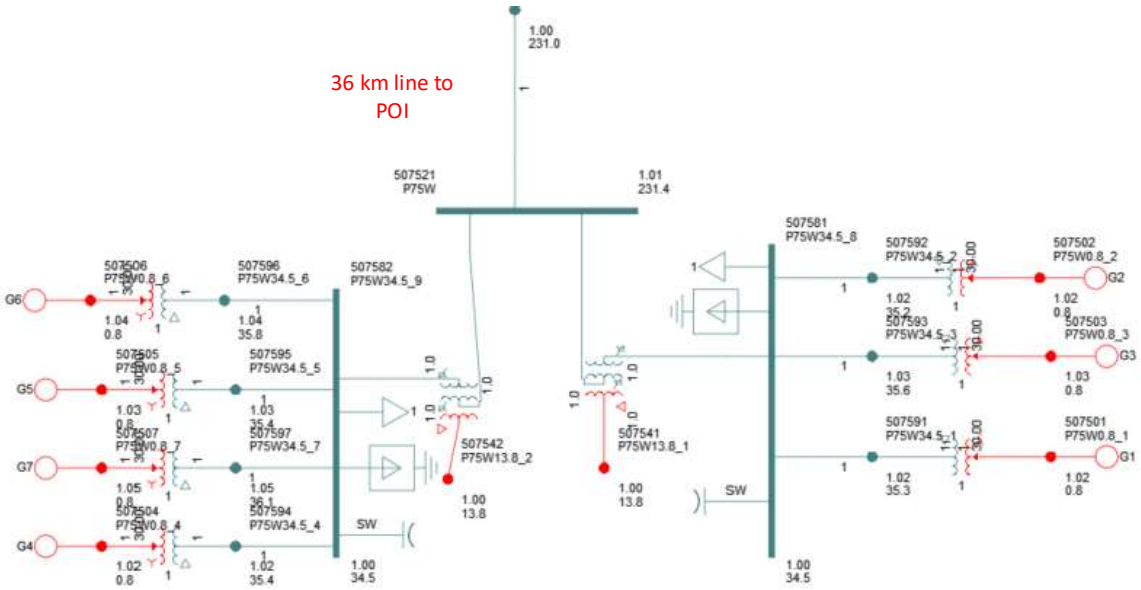

Figure A-1: Nulki Hills Wind Project Single Line Diagram for Power Flow Study.

As seen in the diagram, Nulki Hills Wind Project has two main power transformers with seven (7) feeders connecting thirty-six (36) wind turbines, two 6 Mvar switchable shunt capacitors, and two +/- 10 Mvar STATCOM.

Appendix B
One-Line Sketch for New Switching Station

Figure B-1 shows the Stations Planning One-Line Sketch for the New Switching Station P75T.

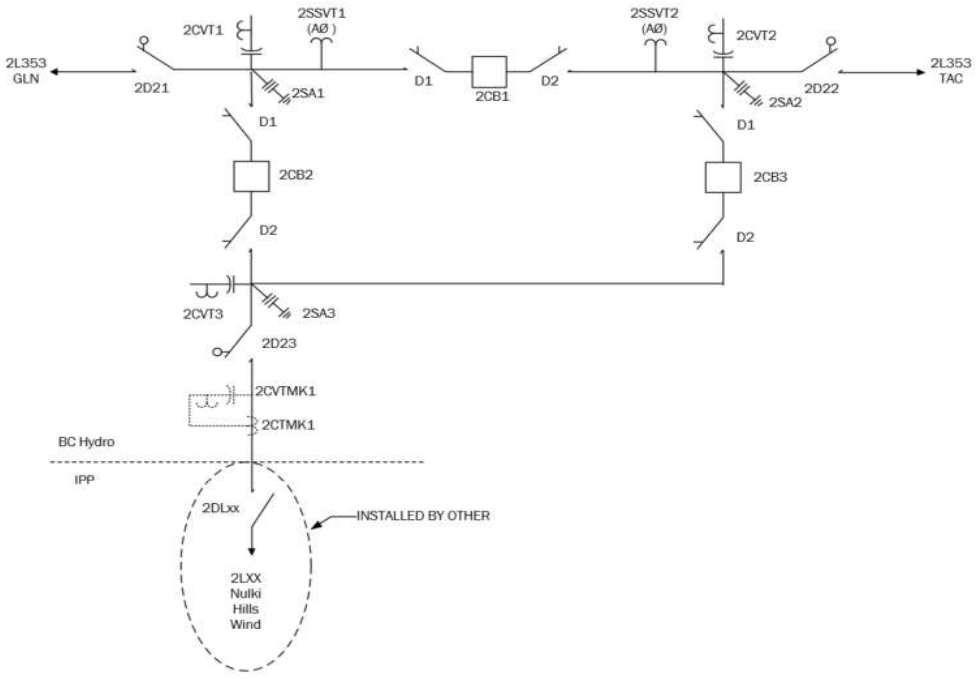

Figure B-1: Stations Planning One-Line Sketch for the New Switching Station P75T.