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

November 24, 2025

[redacted]

via email: [redacted]

RE: CEAP IR #56 – [redacted] – Interconnection Feasibility Study

Dear [redacted]:

Enclosed is the Interconnection Feasibility Study for the proposed Interconnection Request (IR), [redacted], 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.

Interconnection Study Costs

The Interconnection Customer is responsible for paying the full cost of all Interconnection Studies in cash. Interconnection Study costs vary depending on the scope, complexity, and other factors such as whether any scope is shared with another Interconnection Customer (not applicable to this Interconnection Feasibility Study). The deposit amounts specified in the OATT are not proxy Interconnection Study costs. If actual Interconnection Study costs exceed the deposit amount, the Interconnection Customer must pay the remaining balance in cash. Please refer to the answer for question no. 53 in the posted Questions & Answers for 2025 Call for Power for typical study cost ranges.

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 $34.9 M.

Major Scope of Work Identified:

- Add one 230 kV line position with associated equipment to terminate the Interconnection Customer's transmission line at BC Hydro's Nicola substation (NIC)
- Upgrade required substation facilities, infrastructures, and bus work to support new station equipment
- Supply and install required Protection, Control and Telecommunications equipment

Exclusions:

- GST
- Permits
- Right-of-Way & property costs

Key Assumptions:

- Construction by contractor
- 8 months of construction is considered
- Execution of early Engineering and Procurement Agreement
- No expansion of existing stations or control buildings to accommodate new equipment
- No construction during winter season
- Impact Benefit Agreements with First Nations are not considered

Key Risks:

- Expansion of the existing control building may be required leading to increased costs and/or a longer project schedule
- Major equipment delivery presents potential project cost and schedule risks, based on variance in equipment lead times
- No defined supply chain strategy; construction costs may increase depending on delivery method
- Project schedule may be longer than expected, leading to increased overhead costs
- Ground improvements may be required leading to increased construction costs
- Contaminated soil may be encountered leading to increased construction costs
- Cost of materials and major equipment may be affected by market conditions and escalation

Study Limitations and Exclusions

Protection, Control, and Telecommunications

The Interconnection Feasibility Study does not include a detailed review of the protection, control, and telecommunications system requirements specific to your Interconnection Request. Based on a high-level review, we have identified proxy costs for protection, control, and telecom Network Upgrades drawn from comparable interconnection projects with similar scope and complexity; these proxy costs have been included solely for indicative budgeting purposes. The relative interconnection cost determined by the Interconnection Feasibility Study includes a telecommunications component based on an assumed solution to deliver teleprotection and telecontrol circuit requirements necessary for the Interconnection Request. Protection, control, and telecommunications system requirements will be reviewed in detail in the System Impact Study if you are a successful participant of the CEAP and meet applicable requirements.

For Interconnection Feasibility Study purposes, it is assumed that any applicant-proposed works that could obstruct or impair the performance of existing BC Hydro microwave systems or new links from the proposed Interconnection Customer Interconnection Facilities (ICIF) to the BC Hydro microwave system would be identified and either relocated or repositioned as determined in a System Impact Study if you are a successful participant of the CEAP and meet applicable requirements. Such works may include, but are not limited to, towers, turbines, dams, support structures, panels, surface materials deposited or redistributed, water surface changes, or vegetation.

Generation Shedding/Curtailment Scheme and Electromagnetic Transient (EMT) Studies

The generation shedding/curtailment scheme reviews (e.g., Remedial Action Scheme (RAS), and a direct transfer trip for anti-islanding scheme) and EMT studies are completed in a System Impact Study. The outcomes of these studies may result in additional requirements, which could include Network Upgrades or ICIF. Any costs associated with completion of these studies, and resulting requirements, are not included in the Interconnection Feasibility Study cost estimate.

Revenue Metering

Please note that revenue metering requirements have not been determined with the Interconnection Feasibility Study. As such, any costs associated with revenue metering and other interconnection components are not included in the cost estimate provided above. Once these requirements are defined, 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 Interconnection Request'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 or delays in data submission or financial commitments may also impact the target in-service date.

If you have any questions, please contact the BC Hydro CEAP team at ceap2025@bchydro.com.

Sincerely,

[redacted]

[redacted]

Manager, Customer Interconnections

BC Hydro

Encl.: CEAP_2025_IR56_[redacted]_Feasibility_Study.pdf

[redacted]

Interconnection Feasibility Study

BC Hydro EGBC Permit to Practice No: 1002449

2025 CEAP IR # 56

Prepared for: [redacted]

Prepared by: [redacted]

[redacted]
Specialist Engineer, Transmission Planning

[redacted]

Reviewed by: [redacted]

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Engineering Team Lead, Transmission Planning

Accepted by: [redacted]

[redacted]
Manager, Transmission Planning

Report Metadata

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Subtitle:	2025 CEAP IR # 56
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Confidentiality:	Public
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Prepared for:	[redacted]
Prepared by:	[redacted]
Title:	Specialist Engineer, Transmission Planning
Checked by:	[redacted]
Title:	Sr. Engineer, Transmission Planning
Reviewed by:	[redacted]
Title:	Engineering Team Lead, Transmission Planning
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Revisions

Revision	Date	Description
0	2025 Nov	Initial release

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Contributors

The following accept responsibility for the content in the specified sections. Professionals apply their signature and/or seal as appropriate.

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Contributed by:

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Specialist Engineer, Transmission Planning

[redacted]

Section: **5.2, 5.3**

Discipline: Stations Planning

Contributed by:

[redacted]

[redacted]

Engineer, Station Planning

[redacted]

Executive Summary

[redacted] the interconnection customer (IC), requests to interconnect its [redacted] ([redacted]) - 2025 CEAP IR # 56 to the BC Hydro (BCH) system. [redacted] has one hundred-fifteen (105) [redacted] type-3 wind turbine generators, with a maximum power injection of 550 MW into the BC Hydro system at the proposed Point of Interconnection (POI). The proposed POI is the 230 kV bus at BC Hydro's Nicola substation (NIC) substation. The IC will construct a 230 kV transmission line, about 80 km in length, connecting to the proposed POI. The IC's proposed commercial operation date (COD) is August 20, 2032.

To interconnect the [redacted] and its facilities to the BCH Transmission System at the proposed POI, this Feasibility Study has made the recommendations and conclusions as follow:

1. A new 230 kV line position is required at NIC substation to facilitate the interconnection of [redacted].

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

3. The study has observed thermal overloads on the 1L203 (from SVA to SHQ tap) and 1L205 transmission lines, and SVA T3 transformer under single contingencies (P1 and P2 events). The [redacted] may need to participate in generation runback or shedding Remedial Action Scheme (RAS) to secure the system. The RAS function scope will be specified in a future System Impact Study (SIS) if the need for RAS is determined, as applicable.

4. [redacted] 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. The anti-islanding protection shall be configured in the manner that does not compromise the required ride-through performance.

5. The [redacted] is required to have the dynamic reactive power capability at a minimum of +/- 33% of its MPO at the high voltage

side of the IC's substation over the full MW operating range, per BC Hydro's TIR Section 6.4.2.

6. The "STATCOM option" for the proposed type-3 WTGs is required so that each turbine can provide reactive power capability at zero MW output. BC Hydro recognizes that Type-3 WTGs with the STATCOM option have an inherent limitation—providing only partial reactive power capability during turbine standstill.

7. Fast Frequency Response, also known as Virtual Inertia Control (VIC) in the proposed wind turbines, is required at the [redacted]. The proposed wind turbine generators, when equipped with the VIC option, are expected to temporarily boost the MW output to limit the system frequency drop during a major frequency event. The VIC settings should be determined in coordination with BC Hydro in the later stage of call process.

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 October 14, 2025.

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

Please note that, this Feasibility Study report does not include the descriptions of Protection, Control, and Telecommunications requirements and the associated upgrade scopes; however, as discussed in Section 2 "Purpose and Scopes of Study", the associated cost implications are captured and delivered in the cover 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
CUM	Copper Mountain Substation
ERIS	Energy Resource Interconnection Service
FeS	Feasibility Study
HLD	Highland substation
IBR	Inverter-Based Resources
IC	Interconnection Customer
IR	Interconnection Request
IPP	Independent Power Producer
KCH	Kwoiek Creek Generating Station
MIG	Merritt Green Energy Project Generating Station
MPO	Maximum Power Output
MR2	Merritt 2 Substation
NIC	Nicola Substation
NERC	North American Electric Reliability Corporation
NRIS	Network Resource Interconnection Service
OATT	Open Access Transmission Tariff
POI	Point of Interconnection
PSW	Pennask-Shinish Wind Farm
QYS	quA-ymm Solar Farm
RAS	Remedial Action Scheme
REC	Recreation Substation
SCO	Similco Substation
SIS	System Impact Study
SIW	Southern Interior West
STATCOM	Static Synchronous Compensator
TIR	BC Hydro “60 KV to 500 kV Technical Interconnection Requirements for Power Generators”

VIC	Virtual Inertia Control
WBK	Westbank Substation
WECC	Western Electricity Coordinating Council
WKTP	West Kelowna Transmission Project
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]	
Name of Interconnection Customer (IC)	[redacted]	
Point of Interconnection (POI)	NIC 230 kV bus	
IC's Proposed COD	20th August 2032	
Type of Interconnection Service	NRIS ☒	ERIS ☐
Maximum Power Injection (MW)	550 MW (Summer)	550 MW (Winter)
Number of Generator Units	105 x 5.9 MW WTGs	
Plant Fuel	Wind	

[redacted] the IC, requests to interconnect its [redacted] ([redacted]) - 2025 CEAP IR # 56 - to the BC Hydro system. [redacted] has one hundred-fifteen (105) [redacted] type-3 wind turbine generators, with a maximum power injection of 550 MW into the BC Hydro system at the proposed Point of Interconnection (POI). The proposed POI is the 230 kV bus at BC Hydro's Nicola substation (NIC). The IC will construct a 230 kV transmission line, about 80 km in length, connecting to the proposed POI. The IC's proposed COD is August 20, 2032.

Figure 1-1 shows the Nicola-Highland regional transmission system. NIC is a major substation in this area with two existing 500/230 kV transformers (NIC T2 & T3) and two 230/138 kV transformers (NIC T5 & T6). NIC presently supplies three 138 kV transmission lines — 1L251 to the Copper Mountain substation (CUM) and Similco substation (SCO), 1L243 to BC Hydro's Highland substation (HLD) and 1L244 to BC Hydro's Westbank substation (WBK).

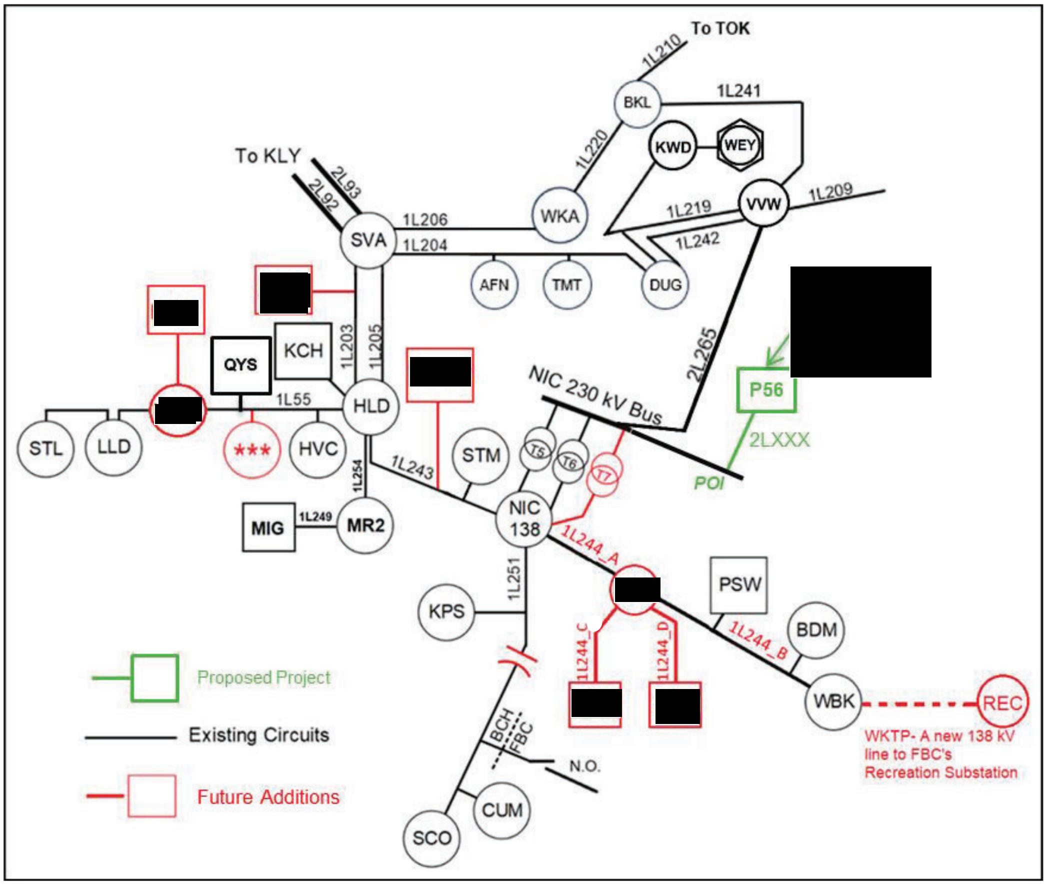

Figure 1-1: Nicola-Highland region 138/230 kV Transmission System Diagram

There are four customers' owned power plants in the study region.

- Pennask-Shinish Wind Farm (PSW).
- Kwoiek Creek Generating Station (KCH).
- Merritt Green Energy Project Generating Station (MIG).
- quA-ymn Solar farm (QYS).

In addition to the existing generators, there are five IRs/future generating projects in plan with higher queue priority in the SIW region – [redacted]. Together, these five projects represent nearly 700 MW of generating capacity addition to the region.

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) and produces the estimated cost of required Network Upgrades and the implementation schedule.

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 connected and affects.

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 will be addressed in subsequent System Impact Study if the project proceeds further. In addition, any potential impacts to the adjacent external systems to BC Hydro would be addressed in subsequent detailed and coordinated studies with the relevant adjacent entities if the proposed generator project proceeds further.

Please note that, due to the compressed study timeline for CEAP 2025 Feasibility Study, this report does not include the descriptions of the Protection, Control, and Telecommunication requirements and the associated upgrade scopes. Instead, the network upgrades associated with Protections, Controls and Telecommunications are incorporated with cost estimates in a separate cover letter to the IC.

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, Rev 2.1.1, Effective: Sept 22, 2025.
- BC Hydro Operating Order 5T-10, Ratings for All Transmission Circuits 60 kV or Higher, Sept 17, 2025.
- BC Hydro Operating Order 5T-14, Ratings for All Transmission and Distribution Transformer, Sept 22, 2025.
- BC Hydro System Operating Order 7T-22 System Voltage Control, Sept 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 Oct 14, 2025 for the study purpose. Assumptions are made wherever the IC's input is unavailable. Appendix A shows the schematic diagram of the IC's Project used in the study model.

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 generators, 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 generation in the study area are dispatched to the patterns that stress the transmission system in the study area. In these patterns, the associated generators are typically set to their MPO unless otherwise specified.

2) The West Kelowna Transmission Project (WKTP) Alterative 3E[1] is included in the study model. WKTP will build a new 138 kV line from BC Hydro's West Bank substation (WBK) to Fortis BC's Recreation substation (REC) is included in the study model. The considered in-service date for WKTP is November 2032.

3) The following system reinforcements are being planned for several higher-queued load interconnections in the study region.
   - The Nicola Substation Transformation Capacity Reinforcement (addition of a new 230/138 kV transformer (NIC T7)) is assumed to be in-service.
   - The reconducting of 1L243 line is assumed to be in-service.
   - The 1L251 Series Capacitor Project (addition of series compensation on 1L251) is assumed to be in-service.

4) The five IRs / proposed future generating projects with higher queue priority in the SIW region - [redacted]

[1] BC Hydro, West Kelowna Transmission Project, see details in https://www.bchydro.com/energy-in-bc/projects/wktp.html

[redacted] — are included in the study model.

5 System Studies and Results

Based upon the IC's submitted information and the area system conditions, a new IC owned 230 kV interconnecting line, temporarily referred to as: 2LXXX (NIC-P56), will be terminated to NIC 230 kV bus. The temporary line designation will be replaced by permanent designation at a later stage of interconnection study.

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 system reinforcement requirement based on steady state performance analysis.

The study focuses on the base scenario — 32HW/33LS/33HS system conditions that include all the higher-queued generating projects in the region and the future proposed WBK-REC tie line. These base cases were prepared based on factors such as load conditions, seasonal variation in ambient temperatures, and generation patterns that stress the transmission system.

The studies are performed for system normal conditions and under system contingencies specified in the P1 and P2 events by NERC TPL-001-4. Study results are summarized below.

5.1.1 Thermal Overload Analysis

Table 5-1 summarizes the thermal overload concerns identified in the study and the proposed solutions. Appendix B contains the details of thermal overload analysis results.

The study finds no thermal overload under system normal condition (P0) for all three load conditions studied.

The study has observed thermal overloads on the 1L203 (from SVA to SHQ tap) and 1L205 transmission lines, and SVA T3 transformer under single contingencies (P1 and P2 events). The [redacted] may need to participate in generation runback or shedding Remedial Action Scheme (RAS) to secure the system. The RAS function scope will be specified in System Impact Study (SIS) if its need is determined.

Table 5-1: Thermal Overload Concerns and Proposed Solutions

Elements	Load Conditions	Contingencies	Solution Proposed
Under system normal conditions (P0 event)			
None	LS, HS, HW	P0: system normal	None
Under contingencies (P1 & P2 events)			
1L203 (from SVA to [redacted] tap)	LS, HS, HW	P1: 1L205, 5L87 P2: Open 1L243 at NIC with no fault P2: NIC 2CB11	IC's wind farm may need to participate in Generation Runback RAS.
1L205	LS, HS, HW	P1: 1L205, 5L87 P2: Open 1L243 at NIC with no fault P2: NIC 2CB11	IC's wind farm may need to participate in Generation Runback RAS.
SVA T3	LS	P1: 5L87	IC's wind farm may need to participate in Generation Runback RAS.

5.1.2 Steady-State Voltage Analysis

With the connection of the IC's project, the stead-state voltage performance under system normal and single contingency conditions is acceptable for all the three load conditions (33LS, 33HS, 32HW). Appendix B shows the details in the steady-state voltage study results.

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 power flow model data submitted by the IC, the proposed [redacted] 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 the call process.

In addition, according to the IC-provided reactive capability data, the proposed WTG would provide +1.79 MVAr to -1.9 MVAr reactive capability at the zero MW output if the turbine's "STATCOM" function is enabled. This function needs to be re-confirmed if the IC's project proceeds to next stage of the call process.

5.1.4 Anti-Islanding Requirements

[redacted] 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. The anti-islanding protection shall be configured in the manner of not compromising the required ride-through performance.

5.1.5 Other Performance Requirements

Fast Frequency Response, also known as Virtual Inertia Control (VIC) in the proposed wind turbines, is required at the [redacted]. The proposed wind turbine generators, when equipped with the VIC option, are expected to temporarily boost the MW output to limit the system frequency drop during a major frequency event. The VIC settings should be determined in coordination with BC Hydro in the later stage of the call process.

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 Nicola substation will be upgraded to provide a 230 kV line termination to allow connection to the [redacted]. The station upgrade scope at the existing Nicola substation (NIC) is as follows.

- Add one 230 kV line position with the associated substation equipment to terminate the 230 kV [redacted] interconnecting transmission line.
- Upgrade required substation facilities, infrastructures, and bus work to support new station equipment.

Refer to the one-line sketch in Appendix C for details.

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] 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 line position is required at NIC substation to facilitate the interconnection of [redacted].
2. The interconnection of [redacted] does not cause any performance violation (i.e. thermal overload, voltage performance violation or voltage stability concern) under system normal conditions.
3. The study has observed thermal overloads on the 1L203 (from SVA to SHQ tap) and 1L205 transmission lines, and SVA T3 transformer under single contingencies (P1 and P2 events). The [redacted] may need to participate in generation runback or shedding Remedial Action Scheme (RAS) to secure the system. The RAS function scope will be specified in System Impact Study (SIS) if the need for RAS is determined.
4. [redacted] 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. The anti-islanding protection shall be configured in the manner that does not compromise the required ride-through performance.
5. The [redacted] is required to have the dynamic reactive power capability at a minimum of +/- 33% of its MPO at the high voltage side of the IC's substation over the full MW operating range, per BC Hydro's TIR Section 6.4.2.
6. The "STATCOM option" for the proposed type-3 WTGs is required so that each turbine can provide reactive power capability at zero MW output. BC Hydro recognizes that Type-3 WTGs with the STATCOM option have an inherent limitation—providing only partial reactive power capability during turbine standstill.
7. Fast Frequency Response, also known as Virtual Inertia Control (VIC) in the proposed wind turbines, is required at the [redacted]. The proposed wind turbine generators, when equipped with the VIC option,

are expected to temporarily boost the MW output to limit the system frequency drop during a major frequency event. The VIC settings should be determined in coordination with BC Hydro in the later stage of call process.

Appendix A
Schematic Diagram of the IC's Project

Figure A-1 shows the schematic diagram for the [redacted]. Note that the proposed plant configuration includes a total of three 3x17 MVAr and one 3x12.5 MVAr switchable shunt capacitors at 34.5 kV collector systems.

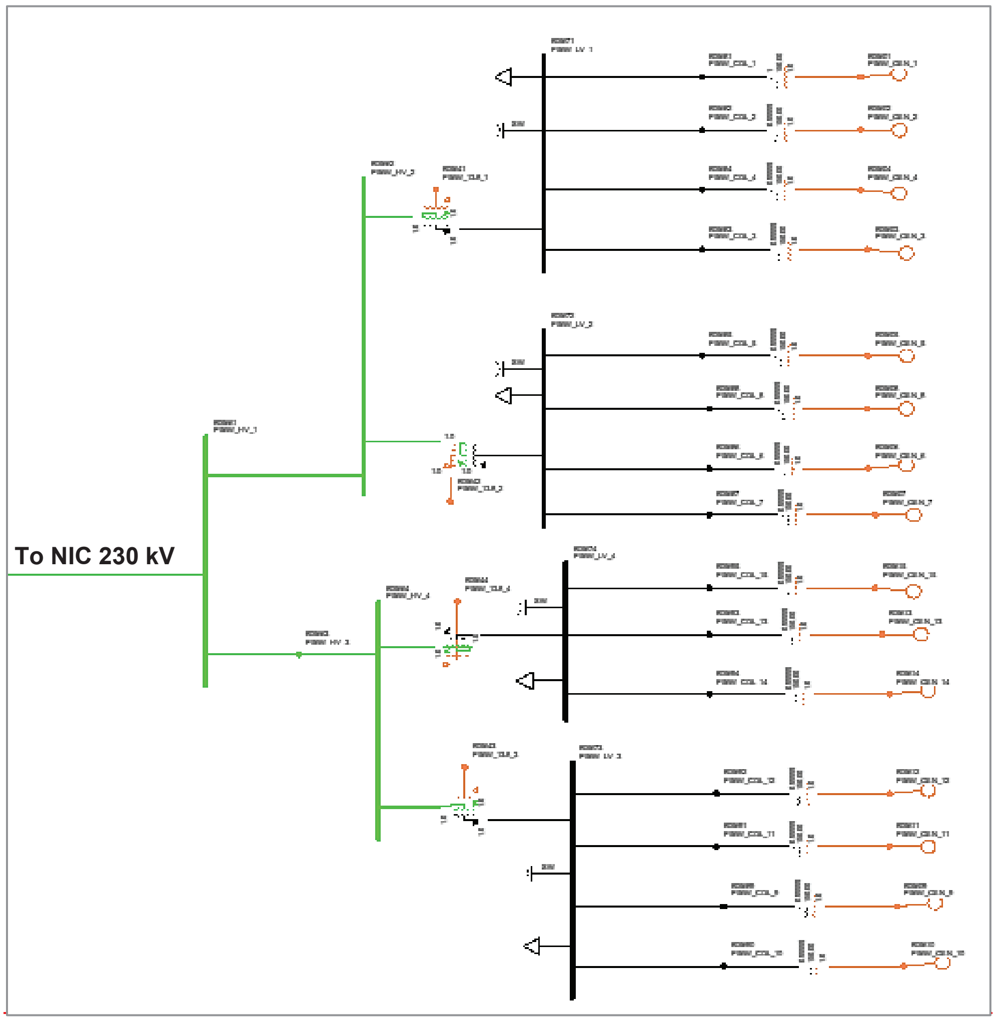

Figure A-1: [redacted] Plant Schematic Diagram.

Appendix B

Power Flow Study Results

Base Scenario (32HW/33HS/33LS)

Table B-1: Thermal Overload Study Results

Case	Contingency			Branch Loading					
	Category	Description	1L203 (SVA-[redacted]	1L205	SVA T3	NIC T3	NIC T5	NIC T7	2L265
Winter Rating			191.2 MVA	149.6 MVA	178 MVA	1425 MVA	287 MVA	300 MVA	319 MVA
32HW	P0	System Normal	86%	78%	45%	26%	20%	23%	43%
	P1	1L203	-	**116%**	28%	26%	20%	24%	53%
	P1	1L205	**123%**	-	38%	28%	25%	29%	47%
	P1	NIC T2 & NIC T6 [1]	90%	83%	51%	49%	26%	31%	48%
	P1	5L87	**101%**	96%	83%	22%	14%	16%	59%
	P2	1L243 open at NIC	**113%**	**110%**	61%	24%	9%	11%	34%
	P2	1L203 open at SVA	-	**146%**	37%	28%	27%	31%	50%
	P2	NIC 2CB11 [2]	**102%**	97%	37%	58%	20%	23%	-
Summer Rating			172.8 MVA	118.6 MVA	150 MVA	1200 MVA	287 MVA	300 MVA	319 MVA
33HS	P0	System Normal	95 %	99%	57%	27%	20%	23%	40%
	P1	1L203	-	**147%**	36%	26%	21%	24%	50%
	P1	1L205	**135%**	-	47%	29%	24%	28%	44%
	P1	NIC T2 & NIC T6 [1]	**99%**	**105%**	63%	51%	26%	31%	44%
	P1	5L87	**108%**	**117%**	95%	23%	15%	17%	53%
	P2	1L243 open at NIC	**128%**	**144%**	76%	24%	8%	9%	31%
	P2	1L203 open at SVA	**-**	**183%**	44%	29%	27%	31%	47%
	P2	NIC 2CB11 [2]	**110%**	**120%**	49%	59%	21%	24%	-
33LS	P0	System Normal	95%	98%	68%	34%	30%	35%	17%
	P1	1L203	-	**145%**	48%	33%	31%	36%	27%
	P1	1L205	**135%**	-	61%	35%	35%	40%	21%
	P1	NIC T2 & NIC T6 [1]	**101%**	**106%**	77%	63%	40%	47%	24%
	P1	5L87	**107%**	**115%**	**104%**	30%	26%	30%	30%
	P2	1L243 open at NIC	**137%**	**156%**	94%	30%	15%	18%	3%
	P2	1L203 open at SVA	**-**	**182%**	57%	35%	37%	43%	24%
	P2	NIC 2CB11 [2]	**107%**	**115%**	68%	67%	37%	43%	-

Note 1: NIC T2 and NIC T6 are in the same protection zone.
Note 2: NIC 230 kV bus breaker 2CB11 fault results in tripping of 2L265, NIC T2, NIC T6, VVW T2 and VVW T3.

Table B-2: Steady-State Voltage Study Results

Case	Contingency		Bus Voltage (PU)				
	Category	Description	NIC 500	NIC 230	NIC 138	VVW 230	P56W 230
32HW	P0	System Normal	1.05	1.03	1.02	1.01	1.05
	P1	1L203	1.05	1.03	1.02	1.01	1.05
	P1	1L205	1.05	1.03	1.02	1.01	1.05
	P1	NIC T2 & NIC T6 [1]	1.05	1.02	1.02	1.01	1.05
	P1	5L87	1.03	1.02	1.02	1.00	1.03
	P2	1L243 open at NIC	1.05	1.04	1.02	1.01	1.0
	P2	1L203 open at SVA	1.05	1.03	1.02	1.01	1.0
	P2	NIC 2CB11 [2]	1.05	1.03	1.01	-	1.0
33HS	P0	System Normal	1.06	1.04	1.01	1.01	1.0
	P1	1L203	1.06	1.04	1.01	1.01	1.0
	P1	1L205	1.06	1.04	1.01	1.01	1.0
	P1	NIC T2 & NIC T6 [1]	1.06	1.03	1.01	1.00	1.0
	P1	5L87	1.05	1.03	1.02	1.00	1.0
	P2	1L243 open at NIC	1.06	1.04	1.01	1.01	1.0
	P2	1L203 open at SVA	1.06	1.04	1.02	1.00	1.0
	P2	NIC 2CB11 [2]	1.06	1.03	1.02	-	1.0
33LS	P0	System Normal	1.06	1.04	1.02	1.04	1.0
	P1	1L203	1.06	1.04	1.02	1.04	1.0
	P1	1L205	1.06	1.04	1.02	1.04	1.0
	P1	NIC T2 & NIC T6 [1]	1.06	1.03	1.02	1.03	1.0
	P1	5L87	1.05	1.04	1.02	1.04	1.01
	P2	1L243 open at NIC	1.06	1.04	1.02	1.04	1.0
	P2	1L203 open at SVA	1.05	1.04	1.02	1.04	1.0
	P2	NIC 2CB11 [2]	1.06	1.02	1.02	-	1.0

Note 1: NIC T2 and NIC T6 are in the same protection zone.
Note 2: NIC 230 kV bus breaker 2CB11 fault results in tripping of 2L265, NIC T2, NIC T6, VVW T2 and VVW T3.

Appendix C
One-Line Sketch of Interconnecting [redacted] at Nicola Substation (NIC)

Figure C-1 shows the Stations Planning One-Line Sketch for the interconnection of [redacted] at NIC 230 kV bus.

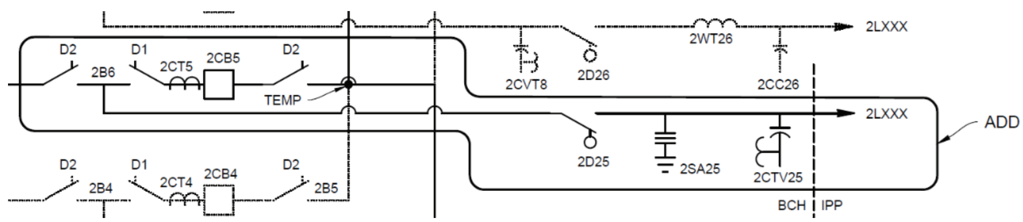

Figure C-1: One-Line Sketch for the NIC Substation.