

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

October 21, 2025

[REDACTED]

[REDACTED]

Dear [REDACTED],

RE: [REDACTED] – Interconnection Feasibility Study Report

Enclosed is the Interconnection Feasibility Study for the proposed [REDACTED] submitted under Attachment M-1: Standard Generator Interconnection Procedures (SGIP) including Standard Generator Interconnection Agreement (SGIA) 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 **\$26.2 M**.

Major Scope of Work Identified:

- Add one 138kV line position with associated disconnect and surge arresters for the [REDACTED]
- Add a new 138kV circuit breaker with associated disconnect and a standalone CT.
- Supply and install protection relays and other required protection / telecom equipment.
- Perform protection and control work required to accommodate the Remedial Action Scheme (RAS) and generation shedding at several BC Hydro stations.

Exclusions:

- GST
- Outage costs (lost revenue)
- Revenue Metering cost

Key Assumptions:

- Project is required to participate in generation shedding or runback remedial action schemes (RAS)
- Construction will be done by a contractor
- Early Engineering and Procurement Agreement is utilized as required
- No piles or ground improvements will be required for construction
- No contaminated soil will be encountered during construction

Key Risks:

- 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 increase loading 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 3, 2030 (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 a Combined Study Agreement and Standard Generator Interconnection Agreement
- Financial commitments and securities

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

If you have any questions, please contact the BC Hydro Transmission Generator Interconnections team at transmission.generators@bchydro.com.

Sincerely,

[REDACTED]

[REDACTED]

Interconnections Manager, Transmission Interconnections

BC Hydro

Encl.: [REDACTED] Feasibility Study Report_Oct2025

[Redacted]

Interconnection Feasibility Study

BC Hydro EGBC Permit to Practice No: 1002449

[Redacted]

Prepared for:

[Redacted]

Prepared by:

[Redacted]

Specialist Engineer, Interconnection
Planning

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Reviewed by:

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Manager, Interconnection Planning

Accepted by:

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Manager, Transmission Planning

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Prepared for: [REDACTED]
Prepared by: [REDACTED].
Title: Specialist Engineer, Interconnection Planning
Reviewed by: [REDACTED]
Title: Manager, Interconnection Planning

Related Facilities: Telkwa Substation (TKW)
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| Revision | Date | Description |
|----------|----------|-----------------|
| 0 | 2025 Oct | Initial release |

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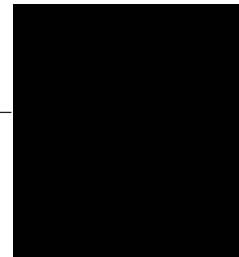
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except those
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Discipline:
Transmission Planning

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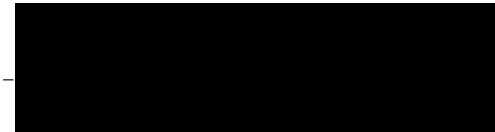
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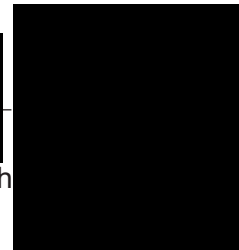
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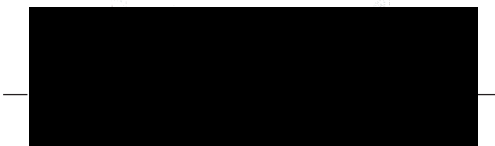
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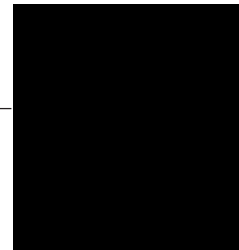
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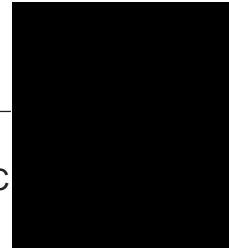
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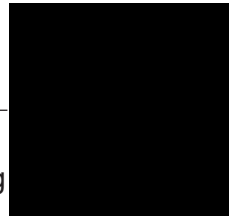
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Executive Summary

██████████, the interconnection customer (IC), requests to interconnect its ██████████ to the BC Hydro (BCH) system. ██████████ has ██████████ wind turbine generators with a total installed capacity of 266.6 MW. The proposed Point of Interconnection (POI) is at the 138 kV bus of BC Hydro's Telkwa (TKW) substation. The IC's project will be interconnected to the POI via a new customer-built 47.62 km long 138 kV transmission line. The IC's proposed commercial operation date (COD) is November 1, 2030.

To interconnect the ██████████ 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 138 kV line position at TKW is required to interconnect the IC's generating project to the BC Hydro system.
2. The connection of the ██████████ 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 the ██████████ will cause an overload on one of the two TKW 230/138 kV transformers (T4 or T5) under various system contingencies. To address the thermal overload under contingencies, the ██████████ is required to participate in generation shedding or runback remedial action schemes (RAS).
4. An anti-islanding transfer trip scheme is required to isolate the IC's wind farm to avoid potential islanding operations with BC Hydro loads. In addition, the IC is required to install anti-islanding protection within their facility to disconnect the IC's wind farm from the grid as a backup to the anti-islanding transfer trip protection.
5. The ██████████ is required to participate in the existing North Coast Generation Shedding RAS and GMS Area Generation Shedding RAS to maintain system reliability under 500 kV line contingency conditions.
6. The IC shall provide the 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 at the time of starting the study.

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.

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Appendices

| | |
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| Appendix A | Plant Single Line Diagram Used for Power Flow Study |
| Appendix B | One-Line Sketch for TKW Station with New Line Position |

Acronyms

The following are acronyms used in this report.

| | |
|------|--|
| BCH | BC Hydro |
| COD | Commercial Operation Date |
| DTT | Direct Transfer Trip |
| ERIS | Energy Resource Interconnection Service |
| FeS | Feasibility Study |
| FVO | FraserValley 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 |
| SKA | Skeena Substation |
| TIR | BC Hydro “60 kV to 500 kV Technical Interconnection Requirements for Power Generators” |
| TKW | Telkwa Substation |
| 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 | ██████████ | |
| Name of Interconnection Customer (IC) | ██████████ | |
| Point of Interconnection (POI) | Telkwa Substation 138 kV bus | |
| IC's Proposed COD | November 1 st , 2030 | |
| Type of Interconnection Service | NRIS <input checked="" type="checkbox"/> | ERIS <input type="checkbox"/> |
| Maximum Power Injection (MW) | 250.1 MW (Summer) | 250.1 MW (Winter) |
| Number of Generator Units | ██████████ | |
| Plant Fuel | Wind | |

██████████, the Interconnection Customer (IC), requests to interconnect its ██████████ to the BC Hydro system. ██████████ has ██████████ wind turbine generators on six (6) 34.5 kV feeders with total installed capacity of 266.6 MW. To compensate reactive losses in the facility and meet the reactive power capability requirement, the IC proposed one (1) 89 MVAR mechanically switched capacitor banks at 34.5 kV collector bus. The IC's proposed Point of Interconnection (POI) is at the 138 kV bus of BC Hydro's Telkwa (TKW) substation. The IC's project will be connected to the POI via a customer-built 47.62 km long 138 kV transmission line. The proposed commercial operation date (COD) is Nov 1, 2030.

Figure 1-1 shows the Telkwa-Glenannan-Williston region transmission system. BC Hydro's North Coast (NC) service area is supplied through a radial 500 kV transmission system that comprises three transmission lines: 5L61 between the Williston substation (WSN) and the Glenannan substation (GLN), 5L62 between GLN and the Telkwa substation (TKW), and 5L63 between TKW and the Skeena substation (SKA). TKW is a major substation in North Coast with two existing 500/230 kV transformers (TKW T2 & T3) and two 230/138 kV transformers (TKW T4 & T5). TKW presently supplies local transmission voltage customers and distribution loads via two 138 kV transmission lines — 1L385 to BC Hydro's Smithers substation (SRS) and 1L396 to BC Hydro's Houston substation (HUS).

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 separately.

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 proceeds.

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, July 16, 2025.
- BC Hydro Operating Order 5T-14, Ratings for All Transmission and Distribution Transformer, August 18, 2025.
- 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 June 19, 2025 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 outputs are dispatched to the patterns that stress the transmission system in the study area. In these patterns, the regional generators are typically set to their Maximum Power Outputs (MPO) unless otherwise specified.
- 2) There are planned capital projects 5L64 and 5L65 to install new lines in parallel with 5L61 and 5L62 connecting GLN and TKW with a preliminary in-service date of September 30, 2030. However, due to uncertainty of the capital project schedule plus for being conservative, this study is focused on the scenarios without the planned capital projects 5L64 and 5L65.
- 3) The successful 2024 power call projects in the study area ([REDACTED]) and other higher-queue generation interconnection projects ([REDACTED]) are included in the study model.

5 System Studies and Results

The new line from ██████████ to the TKW substation, temporarily named 1LXXX, will become an IC's Bulk Electric System (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 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 2031 light summer (31LS) 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 2031 heavy summer (31HS) and 2030 heavy winter (30HW) cases are also checked 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 power flow study finds no thermal overloads on transformers or lines under system normal conditions for all three load conditions (31LS, 31HS, 30HW) studied. Thermal overloads on the TKW 230/138 kV transformers (T4 or T5) are observed under various contingencies. These thermal overloads under contingencies are driven by the addition of ██████████.

To address those thermal overload concerns under the various contingencies, the ██████████ will need to participate in the generation shedding or runback remedial action scheme (RAS).

Table 5-1: Summary of Branch/Transformer Loading Analysis Results

| Case | IC's Plant Output | Contingency | | Branch Loading | | | |
|---------------------|-------------------|-------------|---|----------------|---------|-------------|-------------|
| | | | | 5L61 | 5L62 | TKW T4 | TKW T5 |
| | | Cat. | Description | WSN-GLN | GLN-TKW | | |
| Summer Rating (MVA) | | | | 1917 | 2099 | 168 | 168 |
| 31LS | MAX | P0 | System Normal | 36% | 26% | 71% | 72% |
| | MAX | P1 | 1L385 (TKW-SRS) | 37% | 27% | 75% | 76% |
| | MAX | P1 | TKW T2 & T4 ^{note 1} | 37% | 26% | - | 145% |
| | MAX | P1 | Loss of [REDACTED] | 25% | 17% | 7% | 6% |
| | MAX | P2 | TKW 1CB6 Internal Fault ^{note 2} | 37% | 27% | - | 152% |
| | MAX | P2 | TKW 1CB9 Internal Fault ^{note 3} | 37% | 27% | 149% | - |
| 31HS | MAX | P0 | System Normal | 32 | 22 | 69 | 70 |
| | MAX | P1 | 1L385 (TKW-SRS) | 33 | 23 | 74 | 76 |
| | MAX | P1 | TKW T2 & T4 | 32 | 22 | - | 140% |
| | MAX | P1 | Loss of [REDACTED] | 21 | 12 | 9 | 9 |
| | MAX | P2 | TKW 1CB6 Internal Fault | 33 | 23 | - | 152% |
| | MAX | P2 | TKW 1CB9 Internal Fault | 33 | 23 | 146% | - |
| Winter Rating (MVA) | | | | 2598 | 2598 | 168 | 168 |
| 30HW | MAX | P0 | System Normal | 22% | 17% | 59% | 59% |
| | MAX | P1 | 1L385 (TKW-SRS) | 24% | 19% | 72% | 73% |
| | MAX | P1 | TKW T2 & T4 | 22% | 17% | - | 118% |
| | MAX | P1 | Loss of [REDACTED] | 15% | 9% | 17% | 17% |
| | MAX | P2 | TKW 1CB6 Internal Fault | 24% | 18% | - | 146% |
| | MAX | P2 | TKW 1CB9 Internal Fault | 23% | 17% | 127% | - |

Note 1: TKW transformer T2 and T4 are in the same protection zone.

Note 2: TKW 138 kV bus breaker 1CB6 fault results in tripping of 1L385, TKW T2 & T4.

Note 3: TKW 138 kV bus breaker 1CB9 fault results in tripping of 1L396, TKW T3 & T5.

5.1.2 Steady-State Voltage Analysis

With the connection of the IC's project, the voltage performance under system normal conditions (P0) and single contingencies (P1 and P2) is acceptable for all three load conditions (31LS, 31HS, 30HW).

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, the proposed generating project would be capable of meeting the BC Hydro's reactive capability requirement over the entire MW operating range (including full to zero MW output), which is subjected to further verification in the next stage of interconnection study. No additional reactive resource is required at the facility.

5.1.4 Anti-Islanding Requirements

If the new 138 kV transmission line connected to IC's project is islanded with some of the BCH loads such as with 1L385 (or 1L396) during various operation conditions or under system contingency operation conditions, an anti-islanding transfer trip scheme is required to isolate the IC's project to avoid potential islanding operations with BC Hydro loads.

In addition, the IC is required to install anti-islanding protection within its facility to disconnect the IC's wind farm from the grid as a backup to the anti-islanding transfer trip protection.

The ██████████ is required to participate in the existing North Coast and GMS Generation Shedding RAS to maintain system reliability under 500 kV line contingency operating conditions. North Coast regional transmission system including the ██████████ will form an island operating condition when loss of the 500 kV radial connection to North Coast from Williston substation.

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

To interconnect the IC's project, the following are the station work required at the Telkwa substation:

- Add one 138kV line position with the associated substation equipment.
- Add a new 138kV circuit breaker with associated disconnect and a standalone CT.
- Add disconnect for the 1CB8 circuit breaker
- Terminate the ██████████ IC's 138 kV transmission line.
- Other associated station work.

Refer to Appendix B - One-Line Sketch at TKW for details.

5.4 Transmission Line Requirements

BCH will have the owner’s engineering review of the last span into TKW of the IC’s line 1LXXX with a single-mode fibre optic cable (minimum 48°F). It is assumed the IC will design and build the last span into TKW for BCH.

A dead-end structure should be installed as a demarcation point between IC owned and BCH owned portion of the line.

5.5 Protection & Control Requirements

For successfully integration of the ██████████, new line protection relays will need to be installed at BC Hydro’s TKW and at the new IC’s station for the protection of the new line 1LXXX. Telecommunication facilities will also be required at both TKW and the new IC’s station.

The IC of the ██████████ is required to provide the following for the interconnection of the IC’s station:

- 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 the IC’s station to provide protection coverage for the new IC’s line 1LXXX. BC Hydro P&C Planning will provide core settings for these relays. Non-core settings shall be provided by the IC.
- The IC is responsible for NERC PRC-related tasks and settings to compliance standards within their facilities.
- The IC is responsible for providing a communications link for remote interrogation of PPIS equipment by BCH servers.
- Provide anti-islanding protection as per 5.1.4.
- Provide RAS facilities to receive and initiate runback and/or generation shedding as per 5.1.1
- Provide SCADA facilities and data reporting to the control centers as per the TIR.

Protection and control work shall be required at BC Hydro TKW station to accommodate the new line position. Additional work shall be required at SBK, SKA and TKW substations to accommodate the RAS additions.

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 TKW and IC's station for "TKW- IC's station 1LXXX PY/SY DIGITAL TELEPROT".
- Provide WECC Level 1 direct transfer trip facilities from SKA to IC's station for "IC's Station G/S RAS PY/SY".

Telecontrol Requirements for Telecom

- Provide IC's station SCADA circuit off FVO & SIO.

Other Requirements for Telecom

- Install multiple MPLS links and other telecom circuits in BCH's network.

Certain assumptions were made to determine a potential telecom solution. Details of the telecom solution (e.g., assumptions made, alternatives investigated, and work required for BCH and the IC) will 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 ██████████ and its facilities to the BCH Transmission System at the POI, this Feasibility Study has identified the following conclusions and requirements:

1. A new 138 kV line position at TKW is required to interconnect the IC's generating project to the BC Hydro system.
2. The connection of the ██████████ 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 the ██████████ will cause an overload on one of the two TKW 230/138 kV transformers (T4 or T5) under various system contingencies. To address the thermal overload under contingencies, the ██████████ is required to participate in generation shedding or runback RAS.
4. An anti-islanding transfer trip scheme is required to isolate the IC's wind farm to avoid potential islanding operations with BC Hydro loads. In addition, the IC is required to install anti-islanding protection within their facility to disconnect the IC's wind farm from the grid as a backup to the anti-islanding transfer trip protection.
5. The ██████████ is required to participate in the existing North Coast Generation Shedding RAS and GMS Area Generation Shedding RAS to maintain system reliability under 500 kV line contingency operating conditions.
6. The IC shall provide the 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] single line diagram used for power flow study.

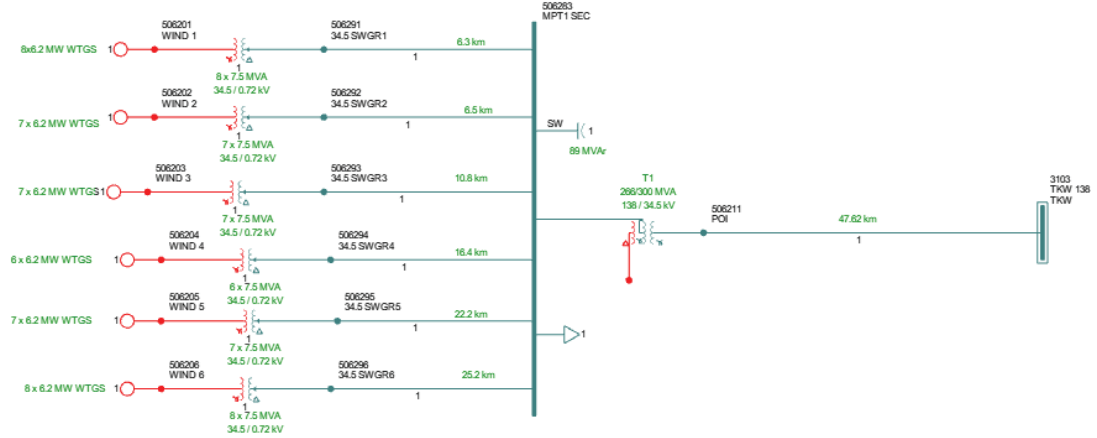


Figure A-1: [redacted] Single Line Diagram for Power Flow Study.

Appendix B

One-Line Sketch for TKW Station with New Line Position

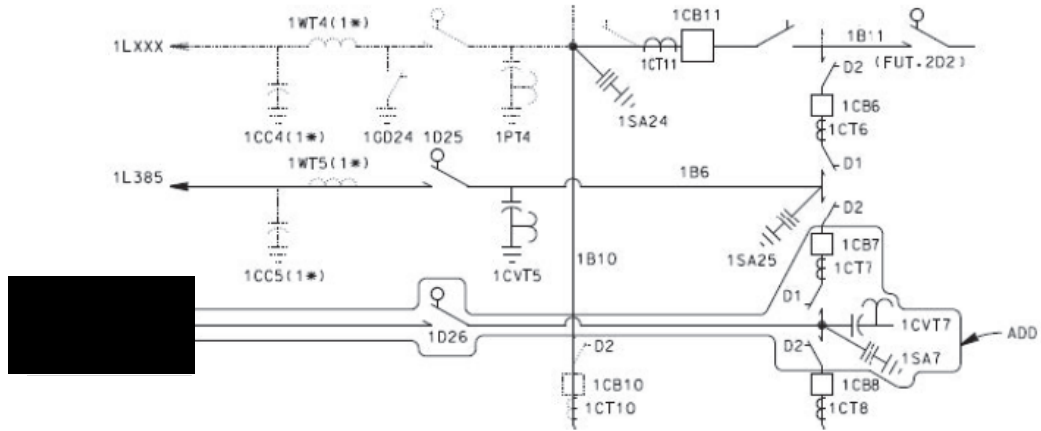


Figure B-1: Stations Planning One-Line Sketch for the TKW Substation with the new line position.