Facility Connection Requirements

Revision History

Date	Rev	Description	Author	Reviewed
Feb. 1, 2010	R0	Issued for review.	M. Sidiropoulos	P. Chernikhowsky
Mar. 1, 2010	R1	Issued for approval.	M. Sidiropoulos	P. Chernikhowsky
Sep. 21, 2011	R2	Editorial changes.	M. Sidiropoulos	P. Chernikhowsky
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Sep. 15, 2016	R4	Major review and update for new FAC-001-2 standard.	J. Leason	P. Chernikhowsky
Sep. 19, 2019	R5	Minor review and update for the new forms, process flowchart, and FAC-001-3 standard.	J. Leason	B. Matamoros
Aug. 13, 2026	R6	Added qualified change definition and clarified response timelines.	J. Leason	J. Webber

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1.0 General

This document has been prepared to identify the processes, procedures, and requirements for connecting new Facilities to the FortisBC System and is applicable to new connections and qualified changes of Generation Facilities, Transmission Facilities, and Load (end-user) Facilities. It is intended to provide documentation in compliance with specific BC Mandatory Reliability Standards.[1]

1.1 Qualified Change[2]

The FortisBC definition of a qualified change where the requirements specified in this document apply are as follows:

- All new Transmission Facilities interconnected with the FortisBC System with a nominal phase-to-phase voltage greater than 35,000V.[3]
- All new Load (end-user) Facilities interconnected with the FortisBC System with a nominal phase-to-phase voltage greater than 35,000V.[4]
- All new Generation Facilities interconnected with the FortisBC System, that are not included in the scope of the FortisBC Net Metering Program, and where the Generation can operate in parallel with the FortisBC System.[5]
- For all existing Transmission, Load (end-user), and Generation Facilities qualified changes include the following:
    - Any substation or line configuration changes or reconfigurations.
    - Any Generation or Load, real or reactive power level permanently increased or decreased by 5% or 5 MVA/MW/MVAR, whichever is greater.
    - Addition of equipment or operational changes that would significantly impact the composite Load or Generation models used to represent the facility (installation of large motors, changes in harmonic levels, modification to Load type, change to demand pattern, etc.)
    - Any replacement or change to major equipment (transformer, line conductor, etc.) that results in a change to system impedances.

The requirements in this document do not apply to point-to-point Transmission service (wheeling) or Load interconnections with the FortisBC System with nominal phase-to-phase voltage of 35,000V or less.

- For point-to-point Transmission service, refer to FortisBC Electric Tariff Supplement No. 7.
- For distribution service (35,000V or less), refer to the FortisBC Service and Metering Guide.

[1] (FAC-001-4 and FAC-002-4)
[2] (FAC-002-4, R6)
[3] (FAC-001-4, R1.2)
[4] (FAC-001-4, R1.3)
[5] (FAC-001-4, R1.1)

These requirements will apply on a go forward basis, effective on the date of approval of this document. FortisBC may, in its sole discretion, on a case-by-case basis, request modifications of existing non-compliant Facilities to make them compliant, for those Facilities that FortisBC deems are critical to system reliability. In this and other FortisBC documents, the term material modification will be considered as having the same definition as qualified change as per this section.

1.2 Responsibility and Conflicts

The FortisBC Manager, Electric Network Assets or their designate is responsible for updating and maintaining this document. This document shall be reviewed and updated as required by FortisBC Compliance and Network Assets staff.[6]

When a revision to this document is completed and approved, it shall be posted on the FortisBC website for public use.[7] This document must be used in conjunction with the FortisBC Electric Tariff. Where there is any conflict between this policy and the FortisBC Electric Tariff, the FortisBC Electric Tariff will be the governing document.

1.3 Compliance Requirements

All Generation, Transmission, and Load (end-user) Facilities shall comply with:

- All applicable NERC Mandatory Reliability Standards (MRS), as adopted in British Columbia (BC) and enforced by the British Columbia Utilities Commission (BCUC).
- All applicable FortisBC technical standards, specifications, and operating requirements.
- The latest applicable standards issued by the Canadian Standards Association (CSA) and the Institute of Electrical and Electronics Engineers (IEEE).

In the event of a conflict between external standards and FortisBC requirements, FortisBC requirements shall prevail. Any deviation from these requirements requires prior written approval from FortisBC.

[6] (FAC-001-4, R1)
[7] (FAC-001-4, R1 and R2)

2.0 Standard Facility Interconnection Procedures

The following Standard Facility Interconnection Procedures (SFIP) are applicable to processing an Interconnection Request (IR) for any new Facility interconnecting to the FortisBC System or existing Facilities seeking to make a qualified change as defined in Section 1.1 above. FortisBC shall receive, process, and analyze all IRs on a first come, first served basis as set forth in this SFIP. Nothing in this SFIP shall constitute a request for Service or confer upon an Interconnection Customer (IC) any right to receive Service. A separate request for Service must be submitted by the IC as set out in the FortisBC Electric Tariff. In most cases, the IC should submit IR and Service applications at the same time. A flowchart detailing the SFIP process is provided in Appendix 3.

2.1 Interconnection Request Process

The IC shall submit a separate IR for each site and may submit multiple IRs for a single site. An IR to evaluate one site at two different voltage levels shall be treated as two IRs.

2.1.1 Initiation

To initiate an IR, the IC must complete all of the following:

i. Initiate a request for electricity Service via FortisBC Electricity Customer Service (1-866-436-7847, electricity.customerservice@fortisbc.com, or online at www.fortisbc.com).

ii. Submit the completed IR forms as specified in Appendix 1.

2.1.2 Acknowledgement

FortisBC shall hold a meeting with the IC after receipt of the request to discuss the scope of the IR, acknowledge receipt of the IR, and identify if the IR is valid or deficient. An IR will not be considered a valid request until all required forms and data specified in Appendix 1 have been received by FortisBC. If the required forms and data specified in Appendix 1 are not completed, FortisBC shall notify the IC of the reasons for such failure and that the IR does not constitute a valid request. The IC shall provide FortisBC with the additional requirements needed to constitute a valid request within thirty (30) Business Days after receipt of such notice. If the additional requirements are not received by FortisBC within the required timeline, the IR will be deemed withdrawn.

2.1.3 Modifications

FortisBC may request additional technical information from the IC during the required reviews or studies. In addition, the IC shall submit to FortisBC, in writing, modifications to any information provided in the IR. If the IC modifies its designated Point of Interconnection, IR, or the technical information provided therein is modified, FortisBC may extend the time to complete the required reviews or studies.

Notwithstanding the above, anytime during the required reviews or studies, FortisBC may identify changes to the IR that may affect the costs, loading capabilities, or the ability to accommodate the IR. If the identified changes are acceptable to FortisBC and the IC, FortisBC shall modify the IR in accordance with such changes and proceed with any re-work necessary to do so.

2.1.4 Withdrawal

The IC may withdraw its IR at any time by written notice of such withdrawal to FortisBC. In addition, if the IC fails to adhere to all requirements of this SFIP, FortisBC shall deem the IR to be withdrawn and shall provide written notice to IC of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the IC shall have thirty (30) Business Days in which to respond with information or actions that corrects the deficiency. If an IR has been withdrawn, a new IR will then need to be submitted by the IC, as per the requirements of this SFIP.

2.2 Feasibility Review

Upon receipt of a complete IR and after the acknowledgement meeting described above, FortisBC will carry out a Feasibility Review. The Feasibility Review shall be based on the technical information provided by the IC in the IR, as may be modified as the result of the acknowledgement meeting, and will consist of a power flow analysis. The Feasibility Review will include analysis for estimated peak loading, select outage contingencies, and potential future Network Upgrades as determined by FortisBC. The Feasibility Review will state the assumptions upon which it is based, state the results of the analyses, and provide the requirements or potential impediments to providing the requested Service. The Feasibility Review will provide the potential available capacity and list the Facilities that may be required because of the IR with a high level, non-binding, good faith estimate of cost responsibility.

2.2.1 Procedures

FortisBC shall complete the Feasibility Review within the timeframes FortisBC reasonably requires for the study, taking into consideration the complexity and size of the IR and the number of other IRs being studied by FortisBC during the same period. However, the typical timeline for the Feasibility Review to be completed and communicated to the IC is approximately forty (40) Business Days after the IR acknowledgment meeting.

2.2.2 Approval

The IC is required to provide formal notification to FortisBC that they wish to proceed with the IR within thirty (30) Business Days after receipt of the Feasibility Review from FortisBC. If the formal notification to proceed is not received by FortisBC within the required timeline, the IR will be deemed withdrawn.

2.3 System Impact Study

Once the Feasibility Review has been completed and the IC elects to continue with the IR, FortisBC shall undertake a System Impact Study, which will study the reliability impact of: (i) interconnecting new Generation, Transmission, or Load (end-user) Facilities and (ii) existing interconnections of Generation, Transmission, or Load (end-user) Facilities seeking to make a qualified change.[8] The System Impact Study shall be based on the technical information provided by the IC in the IR, as may be modified as the result of the scoping meeting, and will include analysis of the following:

- The reliability impact of the new interconnection, or existing interconnection seeking to make a qualified change, on affected systems.

- Adherence to applicable BC MRS, regional, FortisBC planning criteria, and interconnection requirements.

[8] (FAC-002-4, R1, R2, R3, R4, and R5)

- Steady state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions during peak loading and off-peak loading for all credible outage contingencies and all planned future Network Upgrades.

- Study assumptions, system performance, alternatives considered, coordinated recommendations or potential impediments to providing the requested Service.[9]

- Confirm the available capacity and confirm the Point of Interconnection.

2.3.1 Procedures

FortisBC will have internal meetings to initiate, define, review, and approve the System Impact Study. The FortisBC personnel and departments that must be included in these meetings are:

- Transmission Planning
- Stations, Lines, and/or Distribution Engineering
- Protection and Communication Engineering
- System and Network Operations
- Resource Planning
- Power Supply
- Asset Management
- Mandatory Reliability

FortisBC shall complete the System Impact Study within the timeframes FortisBC reasonably requires for the study, taking into consideration the complexity and size of the IR and the number of other IRs being studied by FortisBC during the same period. However, the typical timeline for the System Impact Study report to be completed and issued to the IC is approximately eighty (80) Business Days after receipt of the notification from the IC to proceed with the IR after the Feasibility Review has been completed.

2.3.2 Coordination[10]

FortisBC will coordinate the completion of any System Impact Studies required to determine the impact of the IR on Affected Systems and include those results in its applicable System Impact Study within the period specified in this SFIP[11]. FortisBC will notify all Affected Systems of the timeline and potential impact of the IR[12]. The IC will cooperate with FortisBC in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

FortisBC actively participates in WECC, BC Reliability Coordinator, and BC Hydro coordinated studies of new Facilities or existing Facilities seeking to make a qualified change and their impacts on the interconnected system. FortisBC regularly submits the overall FortisBC System models and data to BC Hydro, BC Reliability Coordinator, and WECC. FortisBC will include any new Facilities or existing Facilities seeking to make a qualified change in the overall FortisBC model and data submittals, so that these Facilities would be included in the BC Hydro, BC Reliability Coordinator, and WECC models and systems.

[9] (FAC-002-4, R1.1, R1.2, R1.3, and R1.4)
[10] (FAC-001-4, R3 and R4)
[11] (FAC-001-4, R3.1 and R4.1)
[12] (FAC-001-4, R3.2 and R4.2)

The IC must provide confirmation and evidence to FortisBC that any new Facilities or existing Facilities seeking to make a qualified change specified within the IR are within the BC Hydro Balancing Authority Area.[13]

2.3.3 Approval

The IC is required to provide formal notification to FortisBC that they wish to proceed with the IR within thirty (30) Business Days after receipt of the System Impact Study from FortisBC. If the formal notification to proceed is not received by FortisBC within the required timeline, the IR will be deemed withdrawn.

2.4 Facilities Study

Once the System Impact Study has been completed and the IC elects to continue with the IR, FortisBC shall undertake a Facilities Study. The IC will be required to pay for the cost of the FortisBC Interconnection Facilities and Network Upgrades as specified in the Facilities Study. The Facilities Study shall specify and provide a cost estimate of: (i) the cost of any FortisBC Interconnection Facilities to be charged to the IC; (ii) the IC's appropriate share of the cost of any required Network Upgrades; and (iii) the time required to complete such construction and initiate the requested service.

The Facilities Study shall consider all equipment, engineering, procurement, and construction work needed to implement the conclusions from the System Impact Study required for physical and electrical connection of the IC Facility to the FortisBC System. The Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, lines, transformers, switchgear, meters, protection, supervisory, communications, and other equipment necessary to accomplish the Interconnection.

2.4.1 Procedures

FortisBC will have internal meetings to initiate, define, review, and approve the Facilities Study. The FortisBC personnel and departments that must be included in these meetings are:

- Transmission Planning
- Stations, Lines, and/or Distribution Engineering
- Protection and Communication Engineering
- System and Network Operations
- Resource Planning
- Power Supply
- Asset Management
- Mandatory Reliability

FortisBC shall complete the Facilities Study within the timeframes FortisBC reasonably requires for the study, taking into consideration the complexity and size of the IR and the number of other IRs being studied by FortisBC during the same period. However, the typical timeline for the Facilities Study report to be completed and issued to the IC is approximately one hundred eighty (180) Business Days after receipt of the notification from the IC to proceed with the IR after the System Impact Study has been completed.

[13] (FAC-001-4, R3.3 and R4.3)

2.4.2 Coordination

FortisBC will coordinate the completion of any Facility Studies required to determine the impact of the IR on Affected Systems and, if possible, include those results in its applicable Facilities Study within the period specified in this SFIP. The IC will cooperate with FortisBC in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

2.5 Facility Interconnection Agreement

The IC is required to provide formal notification to FortisBC that they wish to proceed with the IR within thirty (30) Business Days after receipt of the Facilities Study from FortisBC. If the formal notification to proceed is not received by FortisBC within the required timeline, the IR will be deemed withdrawn.

FortisBC shall not connect the IC to the FortisBC System unless the IC enters into a Facility Interconnection Agreement. The Facility Interconnection Agreement (FIA) is the legal document applicable to an IR pertaining to a Facility and sets out the contractual obligations of the IC and FortisBC in relation to the IR. The FIA shall include provisions setting out the IC's responsibility to reimburse FortisBC for the costs of constructing Interconnection Facilities, the amount and form of security that FortisBC may require the IC to provide for such construction costs, provisions setting out the ownership and operation of Interconnection Facilities, and FortisBC's technical requirements for interconnection and the establishment of operating orders, as well as default and dispute mechanisms.

3.0 Common Technical Requirements

This section addresses the technical requirements that are common to new or qualified changes to Generation, Transmission, and Load (end-user) Facilities connected to the FortisBC System. This document is not intended to be a comprehensive design specification. Specific design and construction of the electrical Facilities shall comply with all applicable federal, provincial, and local laws, regulations, design, and construction standards including all applicable BC MRS standards. Final design of Facility connections to the FortisBC System will be subject to FortisBC review and approval on a case-by-case basis. FortisBC reserves the right to waive or modify the technical requirements below based on the specifics of each project.

3.1 Responsibilities

The IC is responsible for providing all devices necessary to protect its own equipment from damage by abnormal conditions and operations that might occur on the interconnected electrical system. The IC shall protect its Facilities from over voltage, under voltage, overload, short circuits (including ground fault conditions), open circuits, phase unbalance, phase reversal, surges from switching and lightning, over and under frequency conditions, and other injurious electrical conditions that may arise on the interconnected system. The IC is responsible for providing for the orderly re-energization and synchronizing of their equipment to other parts of the electric system. The IC shall have appropriate operating procedures, and equipment designs to guard against out-of-synch closure or uncontrolled energization. Each Party is responsible knowing and following all applicable regulations, industry guidelines, safety requirements, and accepted practice for the design, operation and maintenance of the Facility.

3.2 Site Access

There are situations where equipment owned by FortisBC is located within the Customer's Facility. This is often required for data acquisition or metering. The Customer must provide site access to FortisBC employees where FortisBC equipment is located within the Customer's Facility.

3.3 Safety

FortisBC is strongly committed to safety of its employees and the public. All Interconnection Facilities shall be designed, installed, operated, and maintained such that it does not present a safety hazard to FortisBC personnel, the public, or other facilities. Protection systems, grounding, isolation devices, and operating procedures shall be implemented to ensure safe conditions under normal operation, maintenance activities, and system fault conditions. Strict adherence to established switching, tagging, grounding, and safety procedures by FortisBC and the IC is required at all times. Any work carried out within a Facility shall be performed in accordance with all applicable laws, rules, and regulations and in compliance with Workers Compensation Board (WCB) of British Columbia. Automatic and manual disconnect devices are to be provided by both Parties as a means of removing all sources of current and voltage to any element of the power system. Only trained operators are to perform switching functions within a Facility under the direction of the operator or designated person responsible.

3.4 Environment

The IC must adhere to all relevant environmental, occupational health and safety, and regulatory requirements. The design of the Interconnection Facilities must account for the environmental conditions typical of FortisBC's service territory, including temperature extremes, seismic factors, and weather exposure.

3.5 Operational Procedures

FortisBC and the IC shall establish operational procedures in accordance with all applicable BC MRS requirements as specified in a joint operating order. The joint operating order shall address the following:

i. 24-hour contacts for normal and emergency conditions.
ii. Operating representatives.
iii. Communication methods.
iv. Maintenance coordination procedures.
v. Actions to be taken to energize or de-energize any interconnected Facilities.
vi. Near-Term Generation and Load forecasts.
vii. Any other required operating policies.

All Parties are to be provided with current station operating diagrams. Common, agreed upon, nomenclature is to be used for naming stations, lines, and switches. Updated diagrams are to be provided when changes occur to interconnected Facilities.

The IC shall make similar joint operating arrangements, if required, with the Balancing Authority.

3.6 Operating Issues

The operator of Facilities interconnecting to the FortisBC System will not perform any switching that energizes or de-energizes portions of the FortisBC System or that may adversely affect the FortisBC System without prior notice to FortisBC or its designated operating representative. Operators of Facilities interconnecting to the FortisBC System shall notify FortisBC or its designated operating representative before performing any switching that would significantly affect voltages, power flows or reliability in the interconnected electrical system. The operator shall not disconnect a Facility without prior approval accept when necessary to prevent injury to personnel or damage to equipment.

If any operating condition or circumstance creates an undue burden on the FortisBC System, FortisBC shall have the right to open the interconnection(s) to relieve the FortisBC System of the burden imposed upon it. Prior notice will be given to the extent practical. Each party shall maintain its system and Facilities to avoid or minimize the likelihood of disturbances that might impair or interrupt service to the customers of the other party.

3.7 Maintenance of Facilities

The maintenance of Facilities is the responsibility of the owner of those Facilities. FortisBC has the right to review maintenance reports and test records of Facilities that are interconnected to the FortisBC System and could affect the FortisBC System. The IC shall notify FortisBC as soon as practicable of any out-of-service equipment that might affect the protection, monitoring, or operation of interconnected Facilities. The IC shall maintain Facilities interconnected to the FortisBC System in a manner that does not place the reliability and capability of the FortisBC System or other portions of the interconnected system at risk.

3.8 Point of Interconnection

The Point of Interconnection defines the location where facility ownership changes from FortisBC to the IC. The voltage level, MW and MVAR capacity or demand at Point of Interconnection shall be compatible and coordinated with FortisBC. The interconnecting facility must be connected to the FortisBC System through a primary fault-interrupting device. Facilities interconnecting to the FortisBC System must have an isolating device installed at the Point of Interconnection. This isolating device, typically a disconnect switch, must be capable of physically and visibly isolating

the IC Facilities from the FortisBC System and may require remote motorized control if specified by FortisBC. This isolating device must be lockable in the open position by FortisBC. The IC must provide FortisBC with drawings, including single-line, protection diagrams, general arrangement, and sections diagrams of the proposed facilities that reflect the actual configuration.

FortisBC, at its sole discretion, may require the IC to connect to the FortisBC System through a radial or looped connection. A radial point of connection means there is a single Point of Interconnection between the FortisBC System and the IC's Facilities to deliver or export power from the IC Facilities. A looped connection means there are multiple Points of Interconnection between two or more entities' respective systems. Looped connections are normally operated in parallel such that it is possible for power to flow in either direction.

3.9 Grounding

Each Party's interconnection substation must have a ground grid that solidly grounds all metallic structures and other non-energized metallic equipment. If the interconnection substation is close to another substation, the two grids may be isolated or connected. If the ground grids are to be isolated, there shall be no metallic ground connections between the two substation ground grids. There must also be sufficient physical separation to limit soil conduction. If the ground grids are to be interconnected, the interconnecting cables must have sufficient capacity to handle the fault currents, duration, and duty. FortisBC must approve any connection to a FortisBC substation ground grid. Each Party's overhead line structures must be adequately bonded and grounded to control step and touch potential and to provide adequate lightning performance. Any exceptions to a continuous ground wire shall be supported by a system study. All ground wires and bond wires must be adequately sized to handle anticipated maximum fault currents and duty without damage. Interconnections may substantially increase fault current levels at nearby substations and lines. Modifications to the ground grids of existing substations and overhead ground wires of existing lines may be necessary. The Interconnection Studies will determine if modifications are required and the scope and cost of the modifications.

3.10 Insulation Coordination

New IC Facilities connected to the FortisBC System shall not degrade existing operating performance and capabilities and must have insulation levels and overvoltage protection that is comparable to the existing FortisBC System. Basic Impulse Levels (BILs), surge arresters, conductor spacing and gap application, substation and line insulation strength, protection and shielding shall be documented and submitted for evaluation to FortisBC as part of the interconnection plan.

3.11 Equipment Ratings

All current-carrying IC Facilities shall be designed to carry the maximum power flows that are predicted and used in power flow analysis under normal and applicable contingency conditions. In addition, all equipment must be rated to carry and interrupt the fault levels that are or will be available at the Interconnection Facilities, including the ultimate fault currents specified by FortisBC. If the equipment supplied is not designed for the ultimate fault duty, the IC assumes the responsibility for upgrading when necessary to accommodate changes to the system and the IC is responsible for contacting FortisBC to ensure their equipment is suitably rated. FortisBC assumes no responsibility should fault currents exceed or be expected to exceed those originally specified.

Additionally, the IC must ensure that electrical voltage insulation requirements are met at the Facility and that they align with the electrical voltage levels on the FortisBC System, which are as follows:

- Continuous operating voltage (kV) = 0.9 to 1.1 per unit of nominal voltage.
- Emergency Operating Voltage (kV) = 0.8 to 1.25 per unit of nominal voltage for up to 30 minutes.

3.12 System Stability and Reliability

The IC shall participate, if required by FortisBC and at FortisBC's sole discretion, in Remedial Action Schemes (RAS), Anti-Islanding Protection Schemes, Underfrequency Load Shedding (UFLS), and Undervoltage Load Shedding (UVLS) programs as specified by FortisBC including communication-based transfer tripping of circuits, under/over frequency protection, under/over voltage protection, rate-of-change of frequency protection, reverse/under power protection, vector jump protection, breaker failure, and reactive compensation switching.

FortisBC has the right to require IC Facilities responsible for Load serving delivery points to implement or participate in emergency Load shedding programs to the extent that such a program is required to assure system integrity under adverse conditions. The amount of Load to be interrupted by emergency Load shedding programs will be distributed and administered by FortisBC on a non-discriminatory basis.

High-speed automatic reclosing is applied on portions of the FortisBC System. Interconnection Facilities shall be designed to trip promptly for line faults and remain disconnected during reclosing operations unless explicitly permitted by FortisBC.

3.13 Protective Relaying

Protective relaying systems and associated communications systems for all Interconnection Facilities shall be planned, designed, constructed, coordinated, and maintained in accordance with applicable BC MRS standards. Utility grade protective relays and fault clearing systems shall be provided on the interconnected power system. Adjoining power systems may share a common zone of protection between two Parties. Compatible relaying equipment as specified by FortisBC must be used on each side of the point of ownership within a given zone of protection.

The design must provide coordination for speed and sensitivity in order to maintain power system, security and reliability. Interconnections must be protected with primary and secondary relay systems that provide no intentional time delay when clearing faults for 100% of the protected system. Protection systems must detect and clear both internal and external faults, coordinate with FortisBC's system protection, and meet required operating times.

A power source for tripping and control must be provided at substations by a DC storage battery. The battery is to be sized with sufficient capacity to operate all tripping devices after eight hours without a charger.

Communication assisted protections and transfer trips are required for many installations. Fiber optics is the preferred means of communication. Power line carrier or wireless communication may also be used if approved by FortisBC.

3.14 Synchronizing Requirements

Synchronizing Facilities consisting of potential transformers and associated protective relaying/controls are required at the point where energy can be sourced on both sides of an interconnection circuit breaker. These Facilities verify that the voltages on both sides of a circuit

breaker fall within certain tolerances of both magnitude and phase angle as established by system conditions, supervise the closing and automatic reclosing of the circuit breaker, and prevent the closing of the circuit breaker when the two systems are out of synchronism. Voltage magnitudes, frequency, breaker close compensation, slip and phase angle matching elements shall be set on a case-by-case basis to ensure orderly synchronization to the FortisBC System depending on system characteristics, conditions, and interconnection location. All automatic synchronization shall be supervised by a synchronizing check relay. This is to ensure that Generation is not connected to the energized power system out of synchronization. It is preferred to use two independent sources of voltage transformer connections to the automatic synchronizer and synchro check relays.

IC Facilities are normally energized in the direction from FortisBC to the IC. Owners of interconnected Facilities must be familiar with FortisBC policies and procedures regarding re-energization following an interruption. IC Facilities with sensitive control systems or large motors shall apply appropriate protection measures.

3.15 Power Quality

Interconnection Facilities shall be designed to withstand short-term and post-contingency voltage and frequency conditions to comply with applicable ride-through and response requirements without loss of stability or equipment damage and shall not trip unnecessarily during credible events on the interconnected system. The IC's contribution at the Point of Interconnection shall not cause voltage unbalances greater than 1% of the normal interconnecting voltage, phase current unbalances greater than 5% of the normal rated interconnecting current, and harmonic currents greater than 5% of the normal rated interconnecting current.

The IC will not operate its equipment or allow the equipment of others under contract of the IC to be operated in a manner that will cause a sudden fluctuation to FortisBC System voltages, or introduce any element into the FortisBC System that, in FortisBC's opinion, disturbs or threatens to disturb the FortisBC System or the property or service of any other customer. The IC must mitigate any potential fluctuations such as installing static synchronous compensators, battery energy storage system combinations, or other equivalent technology at the expense of the IC.

3.16 Transformers

All transformers at the IC's site shall be configured to maintain effective grounding, block zero-sequence harmonics, and provide voltage regulation through appropriate tap-changer arrangements as required by FortisBC. The IC shall provide FortisBC with the initial transformer data and provide updated information when transformer changes are made.

The IC shall coordinate step-up, step-down, and auxiliary transformer ratio and tap settings with FortisBC to optimize the reactive power capability (lagging and leading) that can be provided to the FortisBC System. FortisBC will provide the expected nominal operating voltage at the Point of Interconnection to assist in the transformer ratio selection. The ratio should not be based solely on the nominal voltage or the voltage class of the Point of Interconnection.

The FortisBC System must normally be effectively grounded. This requires all transformers connected to the FortisBC System to have solidly grounded high-voltage windings, so that the high-voltage winding is an effective source of zero sequence current. For Generation Facilities, a high-voltage grounded WYE to low-voltage Delta is the conventional optimum configuration. Other transformer winding configurations such as auto-transformers may be necessary and appropriate where there is an underlying collector network, and the Point of Interconnection has suitable network switching to permit selective system protective relaying.

Transformers, their auxiliaries, controls, protection, and operating procedures must allow the IC Facility to receive and/or deliver its continuous real and reactive power capabilities. Transformers must also be able to withstand the voltage and frequency excursions associated with Load rejection and system separation events.

FortisBC recommends transformers to have off-load taps on the high-voltage side with a minimum range of two 2.5% steps above and two 2.5% steps below the normal delivery voltage. Other transformer winding configurations such as auto-transformers or on-load tap changers may be necessary and appropriate. FortisBC must approve the selected voltage, winding connections, and adjustment range and type for each interconnection.

3.17 Circuit Breakers

All circuit breakers installed at the IC's site, the interconnecting substation, the Point of Interconnection, or any other location on the interconnected system shall have:

i. An interrupting rating higher than the current and ultimate fault levels at the specific location as determined by FortisBC.
ii. A stated interrupting capability that does not rely on fault reduction schemes such as intentional time delays in clearing.
iii. An ability to perform all required switching duties, including but not limited to capacitive current switching (line/cable dropping in particular), Load current switching, and out-of-phase opening.
iv. An ability to perform all required duties without creating transient over-voltages that could damage equipment of FortisBC or other third parties.
v. A 3-cycle maximum interrupting time excluding communication and protection time.

The IC shall upgrade its circuit breakers to ratings determined by FortisBC to accommodate higher fault duties due to changes in the system.

3.18 Metering Equipment

Unless agreed otherwise, FortisBC will own, operate, and maintain the metering equipment, including the instrument transformers, secondary conductors, cables, meters and transducers. The IC shall bear all reasonable documented costs associated with the purchase, installation, operation, testing, and maintenance of the metering equipment. Meters shall be Revenue Canada Sealed and Approved installed as close to the Point of Interconnection as practicable. The metering and communication of such metered quantities shall be in accordance with FortisBC requirements. Power for the metering and communication equipment, if needed, is to be provided by the station battery. A check meter for the Point of Interconnection will be installed at FortisBC's discretion. Metering shall be designed, installed, and maintained in accordance with all applicable Measurement Canada federal regulations. Other devices must not be connected directly to a voltage or current transformer secondary used for revenue metering.

3.19 Control and Communications

All Facilities connected to the FortisBC System may be required to provide control and communications Facilities, including those for protective relaying and RAS. All such Facilities will require FortisBC approval to ensure that applicable standards and required functionality and reliability are met. In some cases, specific equipment may be required to ensure compatibility with existing equipment such as Supervisory Control and Data Acquisition (SCADA), Distributed Network Protocol (DNP 3.0), and other data monitoring systems or requirements. FortisBC may modify its control and communications requirements when detailed equipment information becomes available or changes. All costs to install, maintain, and support communication access are the responsibility of the IC.

FortisBC will specify the type of equipment required, the interface points and other characteristics required at the Facilities Study stage. Facilities, which may be required initially or in the future at the IC Facility, communicating with the FortisBC Control Centre for real-time operation of the power system, include:

i. Digital and/or analog metering equipment.
ii. Remote control and dispatch including equipment operation, voltage regulation, real power control, frequency response, and ramp-rate limiting.
iii. Status and alarm reporting equipment.
iv. Equipment for RAS actions.
v. Voice communications for operating.
vi. Data communications for SCADA equipment.
vii. Suitable battery and charger systems for the above.

To ensure design and operation compatibility, FortisBC will provide technical requirements to the IC for the communications equipment at the IC Facility needed to transmit data from the IC Facility to FortisBC.

3.20 Future Modifications

Any qualified changes that affect an interconnection must be submitted to FortisBC for review in advance. These include modifications to the metering, control, or protection schemes as well as associated settings after the interconnection project has been completed. Information about expected increased Load and Generation flows or higher fault current levels due to system changes must be provided in a timely manner. The connection of new Facilities to the FortisBC System or a qualified change to existing Facilities shall require a written request to FortisBC and further actions in accordance with the procedures specified in this SFIP.

3.21 Commissioning Requirements

The Facility Owner has full responsibility for the inspection, testing, and commissioning of its equipment up to the Point of Interconnection. A Professional Engineer, licensed in the Province of British Columbia, must declare that the IC's Facility has been designed, constructed and tested in accordance with the requirements stated in this document, project specific requirements as required by FortisBC, and any other applicable standards. FortisBC has the right to review the commissioning plan as well as copies of the commissioning test records or reports signed by the IC's Professional Engineer for the testing of new Facilities or qualified changes to existing interconnected Facilities. Commissioning tests shall normally include the following items:

i. Ratio, phase, and polarity testing of current transformers and voltage transformers.
ii. Calibration and functional tests of protective relaying, including secondary injection.
iii. Load tests of protective relays and telemetry immediately after initial energization.
iv. Functional end-to-end testing of telemetry, protection, RAS, alarms, voice, circuit breakers, telecommunications, and related equipment.
v. Interconnection phasing checks.
vi. Testing to prove the proper operation of synchronization controls, governors, excitation systems, voltage regulators, PSS systems, and other control schemes.
vii. Power factor tests of high voltage equipment to ensure insulation adequacy.
viii. Timing and resistance tests of circuit breakers.
ix. Equipment testing performed in accordance with an industry accepted standard for electrical commissioning of electrical power equipment and systems (ANSI, NETA, CSA, CEA, etc.).
x. Continuity checks on control, power, protection and ground cabling to equipment.

4.0 Generation Facility Technical Requirements

This section addresses the technical requirements for connecting new synchronous Generation Facilities to the FortisBC System or qualified changes to existing synchronous Generation Facilities connected to the FortisBC System. General overviews of functional requirements are described in this section, and the synchronous Generation Facility shall be designed to meet these requirements under all studied and operating conditions. Detailed, project specific requirements will be developed by FortisBC as part of the System Impact Study or the Facilities Study. FortisBC reserves the right to waive or modify the technical requirements below based on the specifics of each project.

Technical requirements for connecting new asynchronous Generation Facilities to the FortisBC System or qualified changes to existing asynchronous Generation Facilities connected to the FortisBC System are defined as per the current applicable version of IEEE 2800 (Standard for Interconnection and Interoperability of Inverter-Based Resources (IBRs) Interconnecting with Associated Transmission Electric Power Systems), all applicable BC MRS standards, and any future FortisBC Inverter-Based Resource (IBR) Facility Technical Requirements documents.

4.1 Real and Reactive Power

The Generation Facility total real power output to the Point of Interconnection should be limited to the lesser of the combined continuous ratings of the Generation Facility units or other elements in the generating system such as power transformers and circuit breakers. The combined total real power output from individual generating units of a Generation Facility less its local loads shall not result in the maximum power injection to the FortisBC System exceeding the limits at the Point of Interconnection as proposed or permitted for the IR. For a Generation Facility that needs to be charged or energized from the FortisBC System, the maximum charging or energization current shall not exceed the limits at the Point of Interconnection as proposed or permitted for the IR.

All Generation Facilities shall have the ability to operate continuously in a range from an over-excited power factor of 95% to an under-excited power factor of 95% over the Generation Facilities' complete range of output power. Each individual generating unit shall also be equipped with the ability to provide reactive power support at zero MW output. For all Generation Facilities, dynamic reactive capability should be fully utilized during or following system disturbances. For example, the plant's dynamic reactive power capability should not be artificially limited to ±0.95 power factor across the full range of real power outputs.

The Generation Facility shall demonstrate that its dynamic response, real, and reactive power capability match the behavior represented in the approved models. Any changes to controls, firmware, or equipment affecting dynamic response, real, and reactive power capability shall be submitted to FortisBC for review and approval. The IC shall also provide real and reactive power capability curves to FortisBC.

4.2 Voltage Schedule

All Generation Facilities shall have the ability to follow a specified voltage or MVAR schedule issued by FortisBC on an hourly, daily, or seasonal basis depending upon the location of the Facility. FortisBC will specify the desired voltage setting or desired MVAR output level for each Generation Facility connected to the FortisBC System. The Generation Facility may be required to change its voltage reference set point from time to time depending on system conditions and its location. If the FortisBC System Operator does not have direct control over the Generation Facilities voltage regulator via supervisory control, the Generation Facilities operator shall be able to implement the new MVAR output or voltage reference set point within an agreed time

4.3 Voltage Control

All Generation Facilities shall be equipped and capable of providing automatic voltage control of Point of Interconnection voltages during full range of output operations. The IC shall provide a copy of all excitation system controls, limiters, and protective equipment settings to FortisBC.

4.4 Excitation Equipment

Excitation equipment shall comply with industry best practices and applicable industry standards for excitation equipment. Excitation equipment including the excitation transformer, controlled rectifier, Automatic Voltage Regulator (AVR), Power System Stabilizer (PSS), and over/under-excitation limiters shall meet BC MRS requirements and the following requirements.

a. Automatic Voltage Regulator

Each generator excitation system shall be equipped and operated with an AVR set to control the generator terminal voltage. AVR shall be kept in service at all times while each generator is synchronized unless exempted as per BC MRS requirements. Operating the AVR on power factor regulation mode is not allowed. The AVR shall be capable of automatically maintaining the generator steady state terminal voltage, without hunting, to within 1% of any set point. The Generation Facility owner is responsible for maintaining the AVR equipment in good working order and promptly reporting to FortisBC any problems interfering with its proper operation.

b. Excitation System Limiters

Excitation limiters shall be coordinated with protective relay settings in such a manner that limiters shall operate before the protective elements with sufficient margin and shall meet the following requirements:

- Limiter settings shall not restrict the Generation Facilities operating range (terminal voltage and MVAR limits) to less than 100% of the continuous capability of the equipment.
- Limiters shall be able to control the excitation system output to avoid unnecessary operation of the generator’s protective relays in the event of any sudden abnormal system condition.
- Limiters shall be instantaneously reset.
- Limiters shall not switch the excitation system from automatic to manual voltage control.

c. Power System Stabilizers

All synchronous Generation Facilities connected to the FortisBC System shall be equipped with a PSS. The PSS shall be kept in service at all times while each generator is synchronized unless exempted as per BC MRS requirements. Technical evaluations of oscillatory stability shall be conducted by the Generation Facility owner prior to the interconnection of new Generation Facilities. The determination of the PSS control settings shall be coordinated with FortisBC. Typically, this coordination would be to provide FortisBC with preliminary PSS settings prior to the stabilizer’s field commissioning tests with the final settings provided after the field commissioning tests. The Generation Facility owner is responsible for maintaining the PSS equipment in good working order and promptly reporting to FortisBC any problems interfering with its proper operation.

4.5 Governor Requirements and Frequency Control

All Generation Facilities shall be equipped with the capability for speed, output, and/or frequency control. Any request for exception shall be reviewed and accepted by FortisBC. Governor equipment shall comply with industry's best practices and applicable industry standards for synchronous generator governor equipment. Governor equipment shall meet BC MRS requirements and the following requirements:

- Have speed governors installed on the prime movers of all generators.
- Have governor droop settings normally set at 5% and no less than 3%. Droop setting of more than 5% is not allowed.
- Have governor dead-bands shall not exceed +/-0.036 Hz.
- Be capable of providing immediate and sustained response to abnormal frequency excursions and provide sufficient control actions to damp the frequency oscillations.

4.6 Black Start Capability

Black start capability is the Generation Facilities capability to self-start its Facility in isolation from a supply from the FortisBC System and to pick up part of the FortisBC System under islanding conditions. If black start capability is needed, FortisBC will advise the IC at the time of interconnection studies and this service will be subject to a separate agreement and technical evaluation by FortisBC and the IC.

4.7 Generator Testing

Generation Facility owners shall test the gross and net reactive capability of their Facilities with an initial test result provided to FortisBC prior to Commercial Operation and every five years thereafter. The Generation Facility owner shall provide FortisBC with the confirmed Generation capabilities as listed below:

i. Summer continuous gross MW, lagging MVAR, and leading MVAR.
ii. Winter continuous gross MW, lagging MVAR, and leading MVAR.
iii. Summer total plant auxiliary power usage MW and MVAR.
iv. Winter total plant auxiliary power usage MW and MVAR.

Updated information shall be provided by the Generation Facility owner to FortisBC any time there is a revision available.

Appendix 1 – Interconnection Request Forms

Interconnection request

FORTIS BC

Please provide information in all fields in each section, if applicable. Do not leave any fields blank. If any particular field is not applicable to your project please write N/A (not applicable).

Interconnection customer information

Project name	Company name	Contact name

Phone	Fax	Email

Address	Unit/suite	Town/city	Province/state	Country	Postal/zip code

Interconnection service information

The interconnection request is for (check one)

☐ A proposed new facility ☐ An increase in capacity of an existing facility ☐ A material modification to an existing facility

The interconnection request type is (check all that apply)

☐ Generation ☐ Transmission ☐ End user (load)

General facility information

Address or location or the proposed new facility site or, the name and specific location of the existing facility

Maximum rating of the proposed new facility or, amount of capacity increase of an existing facility in MVA

Winter (Oct. – April): Summer (July – Sept.): Spring (May – June):

General description of the equipment configuration for the facility

Proposed in-service date (YYYY/MM/DD)

Approximate location of the proposed point of interconnection

Additional submission information

Check the boxes below to confirm each applicable document is being provided, along with this form:

☐ Generation ☐ Transmission ☐ End-user (load)

This interconnection request must be submitted via email or mail as follows:

Email: electricity.customerservice@fortisbc.com, cc: dane.qretchen@fortisbc.com	Mail: FortisBC - Electricity 300 – 750 Vaughan Ave Kelowna, BC, V1Y 7E4	Attention: Key Account Manager – Shared Services, Energy Solutions

The undersigned Interconnection Customer submits this request to interconnect its facility with the FortisBC Electrical System pursuant to the FortisBC Electrical Tariff and FortisBC Facility Connection Requirements.

This interconnection request is submitted by:

Name (please print) _____ Signature Date (YYYY/MM/DD)

FortisBC USE ONLY

Received by Date and time received _____ Signature

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Transmission facility technical data

Please provide information in all blue shaded fields in each section, if applicable. Do not leave any fields blank. If any particular field is not applicable to your project please write N/A (not applicable). Use additional forms if additional facility information is required.

Overhead line or underground cable information

Nominal voltage (kV)	Length (km)	Conductor type	Conductor size
Conductor code name	Overhead ground wire type	Overhead ground wire size	Overhead ground wire code name
Pos-seq resistance R_1 (Ohms/km)	Pos-seq reactance X_1 (Ohms/km)	Zero-seq resistance R_0 (Ohms/km)	Zero-seq reactance X_0 (Ohms/km)
Summer continuous rating (MVA)	Summer emergency rating	Winter continuous rating (MVA)	Winter emergency rating (MVA)

Provide a description of the protection systems

Provide a description of the communications systems

Check the boxes below to confirm each mandatory document is being provided, along with this form:

☐ Route map ☐ Single line diagram including all electrical and all protection equipment

Reactive compensation device information (if applicable)

Connection location			Rated voltage (kV)
Type	Rating (MVAR)	Configuration	Switching device type

Provide a description of the protection systems

Provide a description of the criteria for automatic switching

Transformer information (if applicable)

Primary voltage rating (kV)	Secondary voltage rating (kV)	Tertiary voltage rating (kV)	Primary connection configuration
Secondary connection configuration	Tertiary connection configuration	Positive sequence impedance (%)	Zero sequence impedance (%)
Summer continuous rating (MVA)	Summer emergency rating	Winter continuous rating (MVA)	Winter emergency rating (MVA)
Tap changer location (HV or LV)	Tap changer type	Number of taps	Tap step voltage (%)

Provide a description of the protection systems

Additional information

Provide a description of any additional applicable information, if required

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Generation facility technical data

Please provide information in all blue shaded fields in each section. Do not leave any fields blank. If any particular field is not applicable to your project please write N/A (not applicable). Use additional forms if additional facility information is required.

Generator information

Maximum generator rating (MVA)	Maximum turbine rating (MW)	Rated voltage (kV)	Rated power factor (PU)
Rated amperes (A)	Rated speed (RPM)	Rated frequency (Hz)	Number of phases
Short circuit ratio	Type of generation (synchronous, induction, etc.)	Amortisseur windings connected	Synchronous condenser ☐ Yes ☐ No
Connection (delta/wye)	Type of grounding	Grounding resistance	Turbine and generator inertia constant (H)
Turbine and generator moment of inertia (WR^2)		Energy source (water, steam, wind, etc.)	

Provide a description of the protection systems

Provide a description of the communications systems

Check the boxes below to confirm each mandatory document is being provided, along with this form:

- ☐ Site plan(s) showing the location of the customer's facility and the proposed point of interconnection.
- ☐ Single line diagram(s) which include all electrical and protection equipment.
- ☐ Governor and exciter (including power system stabilizer, if applicable) model block diagrams and data sheets provided in a WECC approved model and in PSSE format.

Impedance information (per-unit values on machine base kV and base MVA)

Base MVA		Base kV	
Unsaturated values		**Saturated values**	
D-Axis Synchronous Reactance (Xdi)	D-Axis Transient Reactance (X'di)	D-Axis Synchronous Reactance (Xdv)	D-Axis Transient Reactance (X'dv)
D-Axis Sub-Transient Reactance (X"di)	Q-Axis Synchronous Reactance (Xqi)	D-Axis Sub-Transient Reactance (X"dv)	Q-Axis Transient Reactance (X'qv)
Q-Axis Transient Reactance (X'qi)	Q-Axis Sub-Transient Reactance (X"qi)	Q-Axis Synchronous Reactance (Xqv)	Negative Sequence Resistance (R_2)
Negative Sequence Reactance (X_{2i})	Zero Sequence Reactance (X_{0i})	Q-Axis Sub-Transient Reactance (X"qv)	Zero Sequence Resistance (R_0)
Leakage Reactance (X_{lm})		Armature Resistance Per Phase (Ra)	Field Winding Resistance (Rf)

Time constant information (seconds)

D-axis values		**Q-axis values**	
Open Circuit Transient (T'do)	Open Circuit Sub-Transient (T"do)	Open Circuit Transient (T'qo)	Open Circuit Sub-Transient (T"qo)
Short Circuit Transient (T'd)	Short Circuit Sub-Transient (T"d)	Short Circuit Transient (T'q)	Short Circuit Sub-Transient (T"q)

Transformer information (if applicable)

Primary voltage rating (kV)	Secondary voltage rating (kV)	Tertiary voltage rating (kV)	Primary connection configuration
Secondary connection configuration	Tertiary connection configuration	Positive sequence impedance (%)	Zero sequence impedance (%)
Maximum continuous rating (MVA)	Maximum continuous rating (MVA)	Tap changer location (HV or LV)	Tap changer type
Number of taps	Tap step voltage	Current tap setting	

Additional information

Provide a description of any additional applicable information, if required

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End-user (load) facility technical data

(Transmission service: for load connection requirements greater than 63kV or distribution service: for loads >5 MVA to be connected at 25kV and under)

Please provide information in all blue shaded fields in each section. Do not leave any fields blank. If any particular field is not applicable to your project please write N/A (not applicable). Use additional forms if additional facility information is required.

Interconnection voltage (kV)	Total connected load (kVA)	Proposed future connected load (kVA)	Existing peak demand (kW)
Additional expected peak demand (kW)	Load factor (%)	Expected power factor (%)	Electric heating load (kW)

Lighting load (kW)	Motor load (kW)	Other load (kW)	Hours of operation per day	Days of operation per week

Provide a description of the loads that are included in the 'Other load' total above

Provide a description of the type of business or operation

Check the boxes below to confirm each mandatory document is being provided, along with this form:

- ☐ Site plan(s) showing the location of the customer's facility and the proposed Point-of-Interconnection.
- ☐ Single line diagram(s) clearly showing the connection of all major electrical equipment.

Motor information (if applicable)

Provide the following information for all motors 50Hp and larger (attach a list if required).

Type (induction, synchronous)	Nameplate size (Hp)	Nameplate voltage (kV)	Starting (VFD, soft, direct)	Running (VFD, direct, etc.)	Comments

Generation information (if applicable)

The customer facility has onsite generation for the following purposes (check all that apply)	Generator size (MW)
☐ Emergency generation only, not to be paralleled with the FortisBC system	
☐ Onsite generation paralleled with the FortisBC system, with no intent to export.	
☐ Onsite generation paralleled with the FortisBC system, with intent to export.	

Reactive compensation device information (if applicable)

Connection location	Type	Configuration
Rated voltage (kV)	Rating (MVAR)	Switching device type

Provide a description of the protection systems

Provide a description of the criteria for automatic switching

Transformer information (if applicable)

Primary voltage rating (kV)	Secondary voltage rating (kV)	Tertiary voltage rating (kV)	Primary connection configuration
Secondary connection configuration	Tertiary connection configuration	Positive sequence impedance (%)	Zero sequence impedance (%)
Summer continuous rating (MVA)	Summer emergency rating	Winter continuous rating (MVA)	Winter emergency rating (MVA)
Tap changer location (HV or LV)	Tap changer type	Number of taps	Tap step voltage (%)

Provide a description of the protection systems

Additional information

Provide a description of any additional applicable information, if required

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Appendix 2 – Definitions

Affected System shall mean an electrical system or entity other than FortisBC that may be affected by the proposed interconnection. This can include any affected FortisBC customers and any interconnected or neighbouring Generator Owners, Generator Operators, Transmission Owners, Transmission Operators, Transmission Planners, Planning Coordinators, Balancing Authorities, and Reliability Coordinators.

Balancing Authority shall mean the responsible entity that integrates resource plans ahead of time, maintains Demand and resource balance within a Balancing Authority Area, and supports interconnection frequency in real time.

Balancing Authority Area shall mean the collection of Generation, Transmission, and Load within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

BC Hydro shall mean British Columbia Hydro and Power Authority.

BC Reliability Coordinator (BCRC) shall mean the Reliability Coordinator for the Province of British Columbia or its successor organization.

British Columbia Mandatory Reliability Standards (BC MRS) are the NERC/WECC standards that have been approved for enforcement in British Columbia.

Business Day shall mean any day except a Saturday, Sunday, or statutory holiday in British Columbia.

Commercial Operation shall mean the status of a Facility that has concluded commissioning and trials and commenced operation.

Facility or Facilities shall mean a set of electrical devices that are connected to other electrical devices such as generators, transformers, circuit breakers, bus sections, overhead lines, and end-user electrical equipment.

FortisBC shall mean FortisBC Inc.

FortisBC System shall mean the electrical Facilities owned by FortisBC.

Generation shall mean a plant or site that is installed for the production and/or storage for later injection of electricity into the FortisBC System and refers to the system in its entirety, including the main power transformers, switchgear, etc. This term covers synchronous generators (such as hydro, gas, biomass, etc.) and asynchronous Inverter-Based Resource (IBR) generators (such as solar photovoltaic, wind, battery energy storage systems, fuel cell devices, etc.).

In-Service Date shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of FortisBC's Interconnection Facilities.

Interconnection Customer (IC) shall mean any entity that proposes to interconnect its Generation, Transmission, or Load (end-user) Facility with the FortisBC System.

Interconnection Facilities shall mean the FortisBC's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all Facilities and equipment between the Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary for physical and electrical connection of the Facility to the FortisBC System.

Interconnection Request (IR) shall mean an Interconnection Customer's request in the form of Appendix 1 to this SFIP.

Load shall mean an end-use device or customer that receives power from the FortisBC System.

NERC shall mean the North American Electric Reliability Corporation or its successor organization.

Network Upgrades shall mean the additions, modifications, and upgrades to the FortisBC System required at or beyond the point at which the Interconnection Facilities connect to the FortisBC System.

Party shall mean FortisBC or the Interconnection Customer and **Parties** shall mean both of them.

Point of Interconnection shall mean the point, as set forth in the Interconnection Request, where the Interconnection Facilities connect to the FortisBC System.

Reliability Coordinator (RC) shall mean the entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the wide area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations.

Service any electrical Service provided by FortisBC Inc. as specified in the FortisBC Electric Tariff.

Transmission shall mean an interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems.

WECC shall mean the Western Electricity Coordinating Council or its successor organization.

Appendix 3 – SFIP Flowchart