ELECTRICITY BUSINESS RULES

Appendix B
Connection Assessment Procedure

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Part 2 Introduction

2.1 Purpose

To set out the process by which Transmitters, Distributors, Transmission Users, or other persons may request the Transmission Provider to undertake assessments of connection to the Integrated Electricity System of new or modified Facilities.

This procedure also provides detail with respect to the provisions of the Transmission Tariff sections 19 and 32 and Attachment D.

2.2 Scope and Application

This procedure is applicable to all prospective and actual Connection Applicants. Connection Applicants may or may not be Transmission Users at the time of Connection Assessment, but will be required to complete the necessary agreements prior to the actual connection of any facility or the provision of service.

This procedure is applicable in the case of all new or modified connections to the Integrated Electricity System. A Facility connection is considered to be modified if:

- A transformer is changed,
- A distribution feeder is added, or its breaker rating upgraded,
- Protection is changed, including breaker ratings or settings,
- Switchyard configuration changes such as electrical relocation of switches or breakers,
- Capacitors are added or removed,
- Load increase exceeding 1 MW,
- Generation is added, including embedded generation over 1 MW, or
- Other parameters of the connection or the facility connected are altered in a way that may impact the Integrated Electricity System.

This procedure uses the term “Connection Applicants” to refer to both prospective and actual Connection Applicants.

The term "Connection Applicant" is also used in this procedure to include an Eligible Customer requesting long term Point to Point Service as provided in section 19 of the Transmission Tariff, where such Point to Point Service is beyond the transmission capacity posted by the Transmission Provider.

It is assumed that any application for new Network Service as provided in section 32 of the Transmission Tariff will be associated with application for assessment of a new or modified Facility connection. This is not therefore separately identified in this Procedure.

2.3 Connection Applicant Responsibilities

It is the responsibility of each prospective or actual Connection Applicant to:

- request the Transmission Provider to conduct a Feasibility Review, and make applications and execute contracts as required for System Impact Studies and Facilities Studies;
- pay deposits and invoiced fees;
- undertake all design of any connection proposal, including liaison as required with the responsible transmitter, and to provide the requisite information to the Transmission Provider;
- respond promptly to any queries or additional information requests;
- secure all other authorizations required; and
- In order to maintain queue position, proceed with subsequent stages and to implementation within the prescribed timelines.

2.4 Confidentiality

Public items

- List of System Impact Study requests and applications received (Connection Applicant, date of receipt of complete application, brief description, connection location), together with ongoing status updates and Connection Application date stamp.

- System Impact Study Reports (excluding report appendices containing Confidential Information).

Confidential items

- Feasibility Reviews (requests, existence, and reports)
- Needs Assessments
- Connection Applications and supporting information (but not the existence of the application or the reports thereon)
- Appendices to System Impact Study Reports containing Confidential Information
- Facilities Study Reports
- Study costs and payments

Part 3 Overview

3.1 Feasibility Review

3.1.1 Feasibility Review provides an opportunity for early identification of

- Any problems with the proposed Facility design ,
- All grid-related information needed by the Connection Applicant to design the Facility connection, and all information required by the Transmission Provider to complete the System Impact Study, and
- Any likely non-standard design requirements for the new or modified Facility.

3.1.2 Feasibility Review includes determination of needs.

3.1.3 Feasibility review is mandatory with respect to new or modified Facility connections, but (until revision of the tariff) not with respect to Point to Point Service requests.

3.2 Determination of Needs

3.2.1 The Transmission Provider will determine what assessments and studies are or may be needed in order to complete a particular System Impact Study.

3.2.2 The Transmission Provider will estimate the cost and time requirements of such assessments and studies.

3.2.3 The Transmission Provider may determine that it will (on application) be able to issue a Connection Approval without System Impact Study.

3.3 System Impact Study - Part 1: Local Impact Assessment

3.3.1 Local Impact Assessment comprises the assessment of the connection proposal's impact on local load flows, fault levels etc,. in order to determine if the new or modified Facility connection is designed to the necessary standards and if its implementation would require modification of other local connections.

3.3.2 Local Impact Assessment is not applicable to a request for new Point to Point Service between existing points unless required by virtue of a planned modification to a Facility connection.

3.4 System Impact Study – Part 2: Introduction

3.4.1 Network Impact Assessment comprises the assessment of the Integrated Electricity System to determine:

- if the connection proposal could be accommodated without reducing bulk transfer limits on the grid; and

- if consequential load flows would add to grid congestion, and if so, what operating constraints or grid enhancement would mitigate this impact. This may result in a number of options.

3.5 Facilities Study

3.5.1 Facilities Study comprises the design and estimation of cost and time requirements of those measures necessary to mitigate negative impacts identified in Local Impact Assessment or Network Impact Assessment in order to accommodate the Facility connection.

3.5.2 Facilities Study includes estimated costs and their allocation.

3.6 Criteria for Use in Assessments

3.6.1 The criteria to be used in each assessment are set out in the Transmission Providers planning criteria.

3.7 Prioritization of Connections

3.7.1 It is recognized that the transmission resource available to support new connections may be limited, and that the allocation of any rights to use of such existing resources must be definitive and non-discriminatory. The process used by the Transmission Provider to achieve this is described in section 5 of this Procedure.

3.8 Accuracy of, and Changes to, System Impact Studies and Facilities Studies

3.8.1 It is recognized that the Connection Assessment may be undertaken early in the project development and design, and that design parameters may not be fully developed at the

time of the application. The Connection Applicant shall make its best efforts to provide accurate information at all stages, and to keep the Transmission Provider advised of updates. The Connection Applicant may use "typical range" data where appropriate, in which case the Transmission Provider will generally use the worst case values in its

assessments. The Transmission Provider will accept normal design development changes during the course of its assessments, but may incur extra cost and time which shall be to the applicant's account.

3.8.2 In the event that a Connection Applicant provides changed or additional information that substantively changes the project, or that introduces material adverse impact on the connection or system, then the Transmission Provider may, on reasonable notice to the Connection Applicant, deem the original application to have been withdrawn. In such a case, the Connection Applicant may make a new application for System Impact Study with the revised data.

3.9 Related Connection Assessments

3.9.1 Connection Assessments are considered to be related if the (assumed or actual) implementation of one connection (or Point to Point Service request) would alter the results of any assessment or study of the other.

3.9.2 The Transmission Provider will judge the most appropriate treatment of related prior Connection Assessments when undertaking any assessment, and will consult as appropriate with the new Connection Applicant in making such judgment.

3.9.3 The Transmission Provider may combine the Network Impact Assessments of related Connection Assessment if it considers this appropriate from technical, timing, and workload considerations.

Part 4 Process Description

4.1 Project Definition – New or Modified Facility Connection

4.1.1 The Connection Applicant shall prepare the Facility and connection design.

4.1.2 Nothing in this Procedure is intended to preclude or limit direct consultation between the Connection Applicant and the Transmission Provider prior to application for a Feasibility Review. In the case of modified Facilities the Transmission Provider will advise if the modification may be materially impactive prior to such submission for review.

4.2 Feasibility Review – New or Modified Facility Connection

4.2.1 A Connection Applicant is required to request a Feasibility Review of a new or modified Facility connection, and shall use the application Form B-01 and/or Form B-02 for this purpose. A separate application is required for each project

4.2.2 For new connections involving non-embedded generation projects, the Connection Applicant shall submit to the Transmission Provider a non-refundable application fee of $5,000 per project plus taxes with the application, together with the basic information on each project. For other projects, including, embedded generation projects, and assessments of Point to Point transmission service greater than 100 MW, the non-refundable application fee is also $5,000 plus taxes. For all other projects, the application fee is zero.

4.2.3 The Feasibility Review is intended as an informal process whereby a Connection Applicant requests, and the Transmission Provider undertakes, a review of a connection scheme proposed by a Connection Applicant.

4.2.4 The Feasibility Review is not intended to substitute for or in any way mitigate the Connection Applicant's responsibility for design, but is intended to facilitate a subsequent System Impact Study through the early identification and communication of

- Any problems with proposed connection design,

- All grid-related information needed by the Connection Applicant to design the connection,
- Any likely non-standard design requirements for the particular new or modified Facility connection, and
- All information required by the Transmission Provider to complete a System Impact Study.

4.2.5 The Transmission Provider shall undertake a "determination of need" in conjunction with a Feasibility Review.

4.2.6 The Transmission Provider has the right to limit the scope of a Feasibility Review if this would otherwise impose excessive cost or workload on the Transmission Provider.

4.2.7 Findings of a Feasibility Review will be communicated to the Connection Applicant in a report comprising:

- Findings of the review with respect to the proposed design;
- Grid-related information that the Connection Applicant will need to design the Facility and the connection;
- Description of information required by the Transmission Provider to complete a System Impact Study;
- Draft schedule A to a SIS agreement (Form B-05), setting out
  - Connection Applicant description
  - Project name and brief description
  - SIS cost and time estimate
  - SIS deposit amount, and
  - Providing for sign off as part of the SIS application

4.2.8 The conduct by the Transmission Provider of a Feasibility Review has no bearing on the prioritization of a project past the completion of the Feasibility Review.

4.2.9 If the Transmission Provider has determined in a Feasibility Review that a new or modified facility connection can be approved without a System Impact Study, then this will be

indicated as part of the Feasibility Review. The Connection Applicant is still required to submit a complete application for a Facilities Study in order to secure the Transmission Provider's approval of the new or modified facility connection, and in order to secure the "date stamp", a basis for prioritization and cost allocation.

4.2.10 The existence and results of a Feasibility Review are confidential except to the extent that the Transmission Provider may procure services or assistance from the Transmitter, and except in cases where the Connection Applicant permits communication with others to facilitate the Feasibility Review.

4.3 "Determination of Need" for Point-to-Point Service Requests

4.3.1 If an eligible customer seeks new long term Point to Point Service under the tariff provisions that do not presently require a Feasibility Review, then the Transmission Provider shall undertake the "determination of need" to establish if the service can be provided from existing facilities, or if a System Impact Study is needed. If a System Impact Study is needed, then the Transmission Provider shall provide a draft schedule A to a SIS agreement (FormB-05), setting out

- Connection Applicant description
- Description of service requested
- SIS cost & time estimate
- SIS deposit amount, and
- Providing for sign off as part of the SIS application.

4.4 Application for System Impact Study

4.4.1 The Connection Applicant shall use form App-B-03 to apply for a System Impact Study in respect of a new or modified Facility connection or form App-B-04 in respect of Point to Point service not associated with a new or modified connection.

4.4.2 The application shall be considered complete on receipt by the Transmission Provider of:

- Completed Form B-03 or Form B-04;
- Executed System Impact Study Agreement (Form: B-05), as provided by the Transmission Provider in a Feasibility Review or Determination of Need (subject to section 4.4.4 below);
- Deposit in the amount shown in the SIS Agreement; and
- All information required by the Transmission Provider to complete the System Impact Study.

4.4.3 The Transmission Provider shall promptly advise the Connection Applicant if it considers an application to be incomplete.

4.4.4 The Transmission Provider shall promptly reject any application if it considers that the SIS Agreement is no longer applicable due to changes in circumstances since the completion of the Feasibility Review or "determination of need".

4.4.5 The Transmission Provider shall promptly register any complete application not rejected in accordance with section 4.4.4, and shall record the date and time on which it received the complete application. This date and time constitute the "date stamp" of the application.

4.5 Conduct of System Impact Studies – General Requirements

4.5.1 The general criteria to be used by the Transmission Provider in a System Impact Study are set out in the Transmission Provider's planning criteria. These criteria are based on NPCC and NERC requirements and good utility practice. The Transmission Provider may impose requirements more rigorous criteria if it considers such requirements necessary for Reliability and non-discriminatory access to the Integrated Electricity System.

4.5.2 The System Impact Study shall:

- Incorporate the current Baseline Plan established in accordance with chapter 2 of the Electricity Business Rules, (subject to reasonable inclusion of information relating to any new Baseline Plan in preparation),

- Incorporate other new or modified Facility connections that have been committed for implementation,
- Incorporate other related new or modified Facility connections that are in the opinion of the Transmission Provider likely to be committed for implementation prior to completion of the System Impact Study, or otherwise likely to be committed to have priority over the project under study.
- Reflect long term Point to Point Transmission Service commitments, and
- To the extent practical, include sensitivity analysis with respect to other related new or modified Facility connections with earlier date stamps.

4.5.3 The Transmission Provider may rely on services or assistance from the relevant Transmitters to provide information and conduct analysis.

4.5.4 The Transmission Provider may communicate with the Connection Applicant in order to secure clarification or resolve issues.

4.5.5 The Connection Applicant shall promptly provide any additional information requested and communicate any decisions required to resolve issues.

4.5.6 The Connection Applicant may update or modify its design in the normal course of design progress, or to resolve issues identified to it by the Transmission Provider. In the case of a change that substantively changes the project, or that introduces material adverse impact on the connection or system, then the Transmission Provider may on reasonable notice to the Connection Applicant (not less than 10 business days), deem the original application to have been withdrawn.

4.5.7 In the event that requested information or decisions are not forthcoming, the Transmission Provider may give notice that, unless the situation is remedied within a specified period (no less than 10 business days) the Connection Application will be deemed to have been withdrawn.

4.6 Third Party Impacts

4.6.1 A new or modified Facility connection may give rise to changes by which existing third party facilities (i.e. those owned by, or leased to, other Transmission Users) become non-compliant with design standards or codes.

4.6.2 In completing the Local Impact Assessment, the Transmission Provider will seek to identify any such instances, based on its knowledge and based on enquiry as appropriate to other Transmission Users with local connections. Engineering studies of such identified third party impacts will be deferred to any Facilities Study.

4.7 Waivers

4.7.1 The Connection Applicant may during its design work identify benefits arising from a waiver of a particular standard or code in a manner that would not jeopardize the Reliability of the Integrated Electricity System.

4.8 SIS Report

4.8.1 The SIS report shall record either:

- In the case of an application under section 4.2.8 above, the Transmission Provider's confirmation of approval of a new or modified facility connection;
- The Transmission Provider's approval of the application, subject to system upgrades;
- The Transmission Provider's approval of the application subject to system upgrades and other technical or operational conditions; or
- The Transmission Provider's rejection of the application with reasons.

4.8.2 The SIS report shall include the project description, single line diagrams, design parameters, etc., except for such details of site location or design parameters that in the opinion of the Transmission Provider can be withheld without prejudice to the integrity and completeness of the report, and should be withheld to avoid prejudice to the commercial interests of the Connection Applicant. Examples of such information that may thus be held confidential are:

- Site location (but not grid connection point) of a project
- Equipment design parameters whose publication would prejudice forthcoming procurement processes

4.8.3 The SIS report shall identify any other studies referenced in the present study, and shall describe the new studies performed and their results.

4.8.4 The SIS report shall identify if the Connection Applicant would incur liability to compensate any prior Connection Applicant for use of facilities funded by that prior Connection Applicant.

4.8.5 The SIS report shall identify Facilities Studies required in order to finalize the connection design and any system or third party upgrades required.

4.8.6 The Transmission Provider may review a draft SIS report with the Connection Applicant if the Transmission Provider considers that this would be beneficial.

4.8.7 The SIS report shall record the “date stamp” of the application, as well as the “SIS report date”, which is the date on which the report is completed by the Transmission Provider.

4.8.8 The Transmission Provider shall make the final SIS report available to the public after providing it to the Connection Applicant.

4.8.9 The Transmission Provider shall provide to the Connection Applicant a draft schedule A to a Facilities Study agreement (Form B-04), setting out:

- Connection Applicant description;
- Description of project;
- Scope of Facilities Study required (may include options depending on decisions by the Connection Applicant);

- Facilities Study cost & time estimate;
- Facilities Study deposit amount; and
- Providing for sign off as part of the Facilities Study application.

4.9 Application for Facilities Study

4.9.1 The Connection Applicant shall apply in writing to the Transmission Provider for a Facilities Study following issue of a System Impact Study report. The Connection Applicant shall at this time indicate selection of any options indicated in the SIS report.

4.9.2 The application shall be considered complete on receipt by the Transmission Provider of:

- Completed Form B-01 and/or Form B-02;
- Executed Facilities Study Agreement (Form B-06), as provided by the Transmission Provider at the time of the SIS report (subject to section 4.10.4 below);
- Deposit in the amount shown in the FS Agreement, and
- All information required by the Transmission Provider to complete the Facilities Study.

4.9.3 The Transmission Provider shall promptly advise the Connection Applicant if it considers an application to be incomplete.

4.9.4 The Transmission Provider shall promptly reject any application if it considers that schedule A is no longer applicable due to changes in circumstances since the completion of the SIS.

4.9.5 The Transmission Provider shall promptly register any complete application not rejected in accordance with section 4.10.4 and shall record the date and time on which it received the complete application. This date and time constitute the “date stamp” of the FS application.

4.9.6 If the Connection Application has no prior date stamp, then the FS date stamp shall become the date stamp of the Connection Application.

4.10 Conduct of Facilities Studies – General Requirements

4.10.1 The general criteria to be used by the Transmission Provider in a Facilities Study are set out in the Transmission Provider's planning criteria. These criteria are based on NPCC and NERC requirements and in accordance with good utility practice. The Transmission Provider may determine facility requirements more rigorous than the general criteria if indicated by the SIS.

4.10.2 The Facilities Study shall:

- Incorporate the current Baseline Plan established in accordance with Chapter 2 of the Electricity Business Rules, (subject to reasonable inclusion of information relating to any new Baseline Plan in preparation),
- Incorporate other new or modified Facility connections that have been committed for implementation,
- Incorporate other related new or modified Facility connections that are in the opinion of the Transmission Provider likely to be committed for implementation prior to completion of the System Impact Study, or otherwise likely to be committed to have priority over the project under study.
- Reflect long term Point to Point Transmission Service commitments, and
- To the extent practical, include sensitivity analysis with respect to other related new or modified Facility connections with earlier date stamps.
- Include cost estimates and allocations

4.10.3 To the extent that there is any waiver Application under consideration, the Transmission Provider shall consult with the Connection Applicant to establish the appropriate assumptions.

4.10.4 To the extent that a Facilities Study depends on information or clarification from the Connection Applicant, the Connection Applicant shall provide such information or clarification promptly in response to any request. In the event that requested

information or decisions are not forthcoming, the Transmission Provider may give notice that, unless the situation is remedied within a specified period (no less than 10 business days) the Connection Application will be deemed to have been withdrawn

4.11 Facilities Study Report

4.11.1 The Facilities Study report shall set out:

- The nature and design of the facilities and upgrades required to accommodate a new or modified Facility connection or new Point-to-Point Service;
- The nature and design of any third party facilities or upgrades required to permit implementation of a new or modified connection;
- The costs estimates (including all assumptions and detailed calculations) and schedule to implement the above facilities and upgrades;
- The Transmission Provider's allocation of responsibility for the costs, including the basis of such determination; and
- Any uncertainties with respect to time, cost, or cost allocation (e.g. arising from uncertainty over implementation of prior projects or cost recovery from subsequent projects).

4.11.2 The SIS report shall record the "date stamp" of the application.

4.11.3 The Transmission Provider may review a draft Facilities Study report with the Connection Applicant if the Transmission Provider considers that this would be beneficial.

4.11.4 The Facilities Study report shall record the Connection Application date stamp as well as the FS report date, which is the date on which the report is completed by the Transmission Provider.

4.11.5 The Facilities Study report is confidential unless released by the Connection Applicant.

4.11.6 The Transmission Provider shall publish the date stamp of the Facilities Study application and the Facilities Study report date.

4.12 Costs of Connection Assessments

4.12.1 The Transmission Provider will record actual costs of System Impact Studies and Facilities Studies and will invoice these costs to Connection Applicants, net of deposit amounts, within a week of the completion of each report or of any earlier termination of a study.

4.12.2 The Connection Applicant shall pay such invoiced amounts owing within 30 Business Days of invoicing by the Transmission Provider.

4.12.3 The Transmission Provider shall pay any amounts owing to a Connection Applicant as a result of costs less than deposit amounts, within 30 Business days of invoicing.

4.12.4 The principles of cost sharing as described in the Tariff, Attachment K, shall also apply to the Connection Assessment Costs and the Transmission User will be refunded accordingly.

Part 5 Timelines and Prioritization

5.1 Overview

5.1.1 The capabilities of the existing system are essentially allocated on a “first-come, first-served” basis. The use of date stamps for the prioritization of applications is designed to support this, and to provide a basis for allocation of costs that are required to be incurred to permit new or modified Facility connections to be made without jeopardy to the Reliability of the Integrated Electricity System.

5.1.2 The date stamp of a Connection Application (including an application for Point to Point Service) is first awarded on receipt by the Transmission Provider of the complete application for System Impact Study as noted in section 4.4.5 above.

5.1.3 A Connection Application is deemed to lapse, and thus to lose its date stamp, if the Connection Applicant fails to maintain progress on the project in accordance with the deadlines set out in this Part 5 of this Procedure.

5.1.4 A Connection Applicant may secure a new date stamp by submitting a new application for System Impact Study or Facilities Study as appropriate.

5.1.5 The date stamp thus defines the scope and cost of work to implement a new or modified facility connection or new Point to Point Service, and potentially the allocation of cost responsibility as discussed in Part 6 of this Procedure.

5.2 Feasibility Review and determination of need

5.2.1 The Feasibility Review and determination of need are typically expected to be complete within two weeks of a completed application, but this will depend on the workload of the Transmission Provider and of any Transmitter's resources required to undertake the review. In view of the uncertainties associated with projects at this early stage, the Transmission Provider's obligation is general diligence rather than specific timelines.

5.2.2 The Feasibility Review and determination of need have no fixed "validity" period. If there has been material change in circumstances between the completion of the Feasibility Review / determination of need and the application for System Impact Study, then the Transmission Provider may reject the SIS application in accordance with section 4.4.4 above, and require that the Connection Applicant undertake an updated Feasibility Review or determination of need as a basis of an acceptable application for System Impact Study. This may arise through the passage of significant time, or as a result of other Connection Applications.

5.3 System Impact Study

5.3.1 The date stamp of a Connection Application is first established in accordance with section 4.4.5 above on the Transmission Provider's receipt of a complete application for System Impact Study.

5.3.2 Connection Applications for System Impact Studies are placed into two separate queues; (i) the generation SIS queue, and (ii) the load SIS queue. The generation SIS queue will include all projects that involve the connection of new non-embedded generation to the IES. The load SIS queue will include all other projects, including the connection of load projects, embedded generation projects, and assessments of new Point to Point transmission service.

5.3.3 The undertaking of System Impact Studies will be based on the following priority:

- System Impact Studies in the generation SIS queue and the load SIS queue have equal priority, and will be worked on concurrently.
- Transmission reservation status – First priority in both the generation SIS queue and the load SIS queue will be given to projects associated with firm transmission service. The Transmission Provider will associate a project with firm transmission service if it meets the following criteria:
  - The transmission service must be firm for at least five years, and
  - The transmission service must be for at least 50% of the project size, and
  - The project may acquire transmission service directly or indirectly by contracting with another Transmission User who can provide the transmission service.
- For projects that are equal in terms of transmission reservation status, the Transmission Provider will undertake System Impact Studies in the order of their date stamps. The Transmission Provider may choose to group related applications for efficiency or workload considerations, but shall continue to assume that implementation would follow date stamp order.

5.3.4 The Transmission Provider will endeavor to complete System Impact Studies in accordance with the time estimates set out in schedule A of the agreement. It is expected that these will typically be in the order of one month, but this will depend on the workload of the Transmission Provider and of any transmitter's resources required to undertake the review.

In view of the uncertainties associated with projects at this early stage, the Transmission Provider's obligation is general diligence rather than specific timelines.

5.3.5 Sections 4.5.6 and 4.5.7 set out obligations with respect to a Connection Applicant's performance during a System Impact Study. A Connection Application that lapses or is deemed to be withdrawn in accordance with those sections loses its date stamp.

5.3.6 The System Impact Study and the time and cost estimates for Facilities Study have a specified validity of 30 days from the report date as defined in section 4.9.7, or if that day is not a Business Day, until the next Business Day thereafter. The Transmission Provider may extend such validity only in circumstances where this would not cause harm to another Connection Applicant and where there is no material change in the parameters on which the SIS was based.

5.4 Facilities Study

5.4.1 If the Transmission Provider receives a complete application for Facilities Study within the validity period (original or extended) of the SIS, then the date stamp of the Connection Application shall continue to be the date stamp established under section 4.4.5.

5.4.2 If the Transmission Provider receives a complete application for FS in respect of a Connection Application for which there is no valid date stamp, then the Connection Application date stamp shall be the FS application date stamp in accordance with section 4.10.6.

5.4.3 The Transmission Provider will generally undertake Facilities Studies in the order of their Connection Application date stamps. The Transmission Provider may choose to group related applications for efficiency or workload considerations, but shall continue to assume that implementation would follow date stamp order.

5.4.4 The Transmission Provider will endeavor to complete Facilities Studies in accordance with the time estimates set out in the FS agreement. It is expected that these will typically be in the order of one month, but this will depend on the workload of the Transmission Provider and of any Transmitter's resources required to undertake the review. In view of the

uncertainties associated with projects at this early stage, the Transmission Provider's obligation is general diligence rather than specific timelines.

5.4.5 Section 4.11.4 sets out obligations with respect to a Connection Applicant's performance during a Facilities Study. A Connection Application that lapses or is deemed to be withdrawn in accordance with that section loses its date stamp.

5.4.6 A Facilities Study has a specified validity of three months. The Transmission Provider may extend such validity only in circumstances where this would not cause harm to another Connection Applicant and where there is no material change in the parameters on which the Facilities Study or the underlying System Impact Study were based.

5.5 Commitment to implement

5.5.1 The Connection Applicant may make a commitment to the implementation of the project and the Facilities defined in the Facilities Study, within the validity of the Facilities Study. Unless such a commitment is made in accordance with the following provisions, the Connection Applicant will not be permitted to synchronize its new or modified Facility connection, or to contract for Point to Point Service, as applicable.

5.5.2 Such a commitment must include:

- The making of a financial commitment to the transmitter for the construction of all transmission system upgrades specified in the Facilities Study,
- The commitment to the Transmission Provider that the connection will be constructed in accordance with the requirements of the System Impact Study and the Facilities Study, and the making of financial commitments for such construction,
- The commitment to the Transmission Provider that the Connection Applicant will secure the modification of third party facilities as specified in the Facilities Study

- The commitment to the Transmission Provider that the facility will be constructed and operated in accordance with any relevant conditions of the System Impact Study
- Notice to the Transmission Provider that the project is proceeding, and notification of the project schedule.

Part 6 Cost Allocation

6.1 Principles of cost allocation

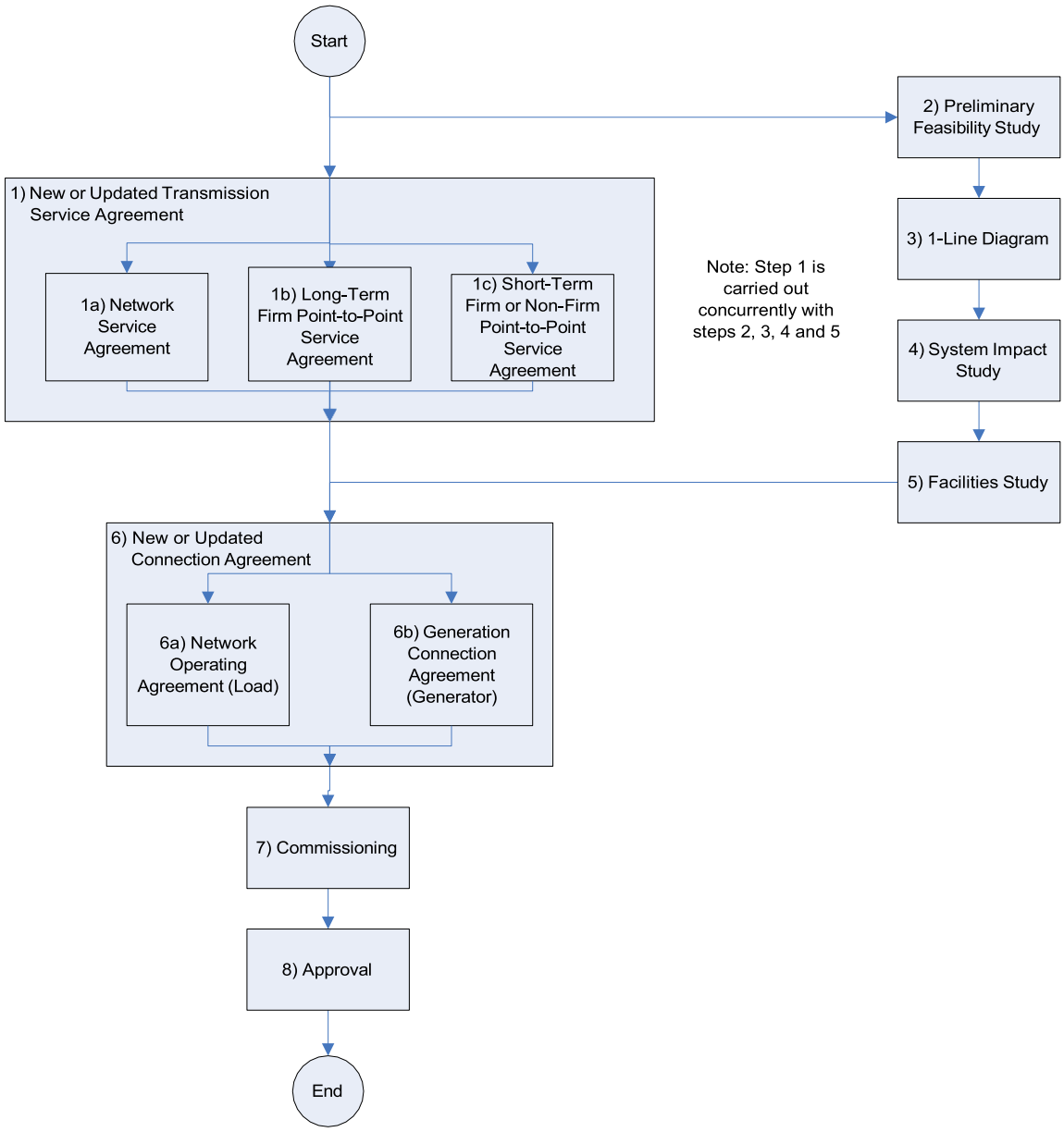
6.1.1 The allocation of the costs of connections and of associated changes to the IES shall be in accordance with the Tariff cost sharing principles.

Part 7 Flow Charts

Refer to next page for the flow chart:

Process for Connection of New and Modified Facilities)

Process for Connection of New and Modified Facilities



Part 8 Forms

B-01	Application for Feasibility Review for Generation and/or Loads
B-02	Application for Feasibility Review for Transmission Lines and/or Substations
B-03	System Impact Study Datasheet
B-04	Application for Assessment in Respect of New Long-Term Point-to-Point Service
B-05	System Impact Study Agreement
B-06	Facilities Study Agreement

Connection Applicant Form (B-01)
Application for Feasibility Review for Generation and/or Load

Proponent

Project **Description of the project to be studied.**

Type	**(e.g. Coal plant, Wind farm, etc.)**
Size (MW)	
Location	
PCC Voltage	kV
Longitude	
Latitude	
Map Datum	
PID	

Connection Option Selected **Connection to the Transmission System.**

Line Number	
Voltage (kV)	kV
Distance from project (km)	km

Continued on next page

Service **Type of transmission services requested.**

Services Requested	(Point-to-Point or Network Services)
Customer	
Expected in-service date	

Connection Applicant Form (B-02)
Application for Feasibility Review for
Transmission Lines and/or Substations

1. **Applicant**_____ **Date** _____

2. **General Description of Project:**

3. **Type of Facility** _____ **In-Service Date** _____

4. **Transmission Line or Substations**

   a) **From** _____ **To** _____
   (Terminal – Name - Location) **(Terminal – Name – Location)**

   b) **Third terminal or tap (if any)** _____

   c) **Distance** _____**km** **Voltage** _____**kV**

   Conductor size _____

   d) **Type of line relaying**
   Backup relaying
   Breaker Failure
   SPS

4. Transformer rating

MVA _____

HV _____kV

LV _____kV

Tertiary _____kV

Resistance _____ Reactance _____

5. Attach simplified one-line diagram of transmission/substation with breaker configuration.

6. List facility ratings

7. Reliability Studies completed (if required)

Short Circuit _____

Load Flow _____

Stability _____

Other _____

Connection Applicant Form (B-03)
System Impact Study Data Sheet

Proponent

Project **Description of the project to be studied.**

Type	**(e.g. Coal plant, Wind farm, etc.)**
Size (MW)	
Location	
PCC Voltage	kV
Longitude	
Latitude	
Map Datum	
PID	

Connection Option Selected **Connection to the Transmission System.**

Line Number	
Voltage (kV)	kV
Distance from project (km)	km

Continued on next page

Service **Type of transmission services requested.**

Services Requested	Point-to-Point or Network Services
Customer	
Expected in-service date	

Generators **Generator characteristics.**

Manufacturer	
Model	
Type	
Voltage (kV)	
Max MW	
Max MVA	
Power Factor	
Frequency	60 Hz
Number of generators	

Transformers **Step-up transformer data.**

Rating	/ / MVA
Voltage	kV / kV
Configuration	
Taps (Number and Range)	± x %
Impedance (on 100 MVA base)	%
X/R Ratio	
Number of transformers	

Continued on next page

Unit Transformers **Unit transformer data.**

Rating	/ MVA
Voltage	kV / kV
Configuration	
Taps (Number and Range)	± x %
Impedance (on 100 MVA base)	%
X/R Ratio	

Breakers **Circuit breakers information**

Primary voltage level	
Voltage	kV
Number of breakers	
Secondary voltage level	
Voltage	kV
Number of breakers	

One-Line
Diagram

Continued on next page

Proposed Generation Facility One-Line Diagram

PSS/E Model **Power System Simulation (PSS/E) software.**

PSS/E model supplied?	

Confirmation

Signature: _____ Date: _____

Title: _____

Connection Applicant Form (B-04)

Application for Assessment in Respect of

New Long-Term Point-to-Point Service

Transmission Provider

Transmission User

Company Name:

Contact 1:

Address:

Telephone:

Fax:

Email:

Contact 2:

Address:

Telephone:

Fax:

Email:

Specifications for Long-Term Point-to-Point Transmission Service

1. **Term of Transmission:** _____

   Start Date: _____

   Termination Date: _____

2. **Description of capacity and energy to be transmitted by Transmission Provider including the electric Control Area in which the transaction originates.**

   Options to be studied:

   Option 1: _____

   _____

Option 2: _____

_____

3. Point-of-Receipt:

	Option 1	**Option 2**
Point-of-Receipt		
Delivering Party		
Capacity Reservation to be reserved and posted at Point(s) of Receipt		

4. Point-of-Delivery:

	Option 1	**Option 2**
Point-of-Delivery		
Receiving Party		
Capacity Reservation to be reserved and posted at Point(s) of Delivery		

5. Maximum amount of capacity and energy to be transmitted:

	Option 1	**Option 2**
Reserved Capacity		
Energy		

6. Name(s) of any Intervening Systems providing transmission service:

_____

7. Designation of parties subject to reciprocal service obligation:

_____

8. Service under this Agreement may be subject to some combination of the charges detailed below. (The approximate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

8.1. Transmission Charge:

_____

8.2. System Impact and/or Facilities Study Charges(s):

_____

8.3. Direct Assignment Facilities Charge:

_____

8.4. Ancillary Service Charges:

8.4.1. Load following: **Scheduling, system control and dispatch service:**

Option 1: _____

Option 2: _____

8.4.2. Reactive supply and voltage control from generation source:

_____

8.4.3. Automatic generation control:

_____

8.4.4. Load Following:

_____

8.4.5. Operating reserve spinning reserve service:

_____

8.4.6. Operating Reserve Services:

_____

Connection Applicant Form (B-05)

System Impact Study Agreement

System Impact Study Agreement

"project name"

This Agreement made this _____ day of _____in the year _____
.

BETWEEN: **(the "Connection Applicant").**

AND

NEW BRUNSWICK POWER CORPORATION having its head office at the city of Fredericton, Province of New Brunswick

Both of which may hereinafter be referred to as a "Party" or collectively as the "Parties"

WHEREAS:

A. The Connection Applicant proposes to connect _____ to the Integrated Electricity System at or near a location known as _____.

B. Any additions to the Integrated Electricity System are subject to the requirements of the Open Access Transmission Tariff (the Tariff).

C. The Tariff requires that a System Impact Study be conducted respecting any proposed additions to the Integrated Electricity System.

D. The Connection Applicant has requested the Transmission Provider conduct a System Impact Study respecting its proposal.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, and other good and valuable consideration, the Parties agree as follows:

1. a) Except where otherwise defined in this Agreement, capitalized terms used in this Agreement shall have the meaning ascribed to them in the Tariff, including Attachment J thereto.

   b) "Integrated Electricity System" has the meaning ascribed to it in the *Electricity Act*.

2. The Transmission Provider shall cause a System Impact Study to be conducted in accordance with the Tariff.

3. The scope of the System Impact Study shall be as defined and described in the attached Schedule A of this Agreement.

4. Connection Applicant agrees to provide to the Transmission Provider all technical data or other information specifically noted in Schedule A. The Transmission

   Provider reserves the right to request additional technical data or information as it determines is necessary during the course of the System Impact Study and Connection Applicant agrees to provide all such additional technical data or information.

5. Connection Applicant agrees to pay all costs and expenses incurred, directly or indirectly, by or on behalf of the Transmission Provider in conducting the System Impact Study. Transmission Provider's estimate of the total cost to Connection Applicant is … Dollars Cdn., plus all applicable taxes. The Transmission Provider agrees to promptly notify Connection Applicant of any material change in this estimate.

6. Payment of costs and expenses referred to in Article 5 above shall include an initial payment of … Dollars Cdn., payable prior to the commencement of the System Impact Study. Subject to Articles 7 and 10 herein, payment of remaining amounts owing will be due upon completion of the System Impact Study.

7. Connection Applicant may at any time withdraw its request for the completion of the System Impact Study and in such event shall be liable to the Transmission Provider only for all costs incurred by or on behalf of Transmission Provider up to the date of receipt of Connection Applicant's withdrawal notification.

8. The Transmission Provider agrees to make its best effort to complete the System Impact Study in a timely manner and in accordance with Good Utility Practice. Under no circumstances, however, shall the Transmission Provider be liable to the Connection Applicant for any loss, damage, claim, cost, charge or expense, whether direct, indirect, incidental, punitive, special or consequential arising from the

9. Transmission Provider's performance or non-performance of its obligations under this Agreement, except in the case of gross negligence or willful misconduct on the part of the Transmission Provider, in which case the Transmission Provider's liability to the Connection Applicant shall be limited to the amount paid by the Connection Applicant to the Transmission Provider pursuant to Article 5 herein.

10. The provisions of section 10.2 of the Tariff respecting Indemnification apply to this Agreement and are hereby incorporated by reference herein, with all references in such section to Transmission User being deemed to be referenced to the Connection Applicant, and all references in such section to Transmission Provider being deemed to the references to the Transmission Provider.

11. Results of the System Impact Study shall not be released until arrangements satisfactory to the Transmission Provider have been made for the payment of all costs and expenses referred to in Article 5 above.

12. The Connection Applicant acknowledges that notice of completion of the System Impact Study will be posted on the Transmission Provider's web site and the final results will be available to others upon submission of a request to the Transmission Provider.

13. Connection Applicant acknowledges and agrees that the results of the System Impact Study are estimates only and that actual connection to the Integrated Electricity System is subject to the terms and conditions of a Generator Connection Agreement, which agreement must be substantially in the form of Attachment J of the Tariff, entered into between the Connection Applicant and New Brunswick Power Corporation.

14. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and permitted assigns.

15. This Agreement shall be governed by and construed in accordance with the laws of the Province of New Brunswick.

16. Any notices required under this Agreement must be in writing and shall be made to the appropriate Party's representative as indicated below:

    In the case of the Transmission Provider:

    New Brunswick Power Corporation

    515 King St.

    Fredericton, NB

    E3B 4X1

    Attention:

    In the case of the Connection Applicant:

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed by their respective authorized officials as of the date first above written.

(the "Connection Applicant")	**NEW BRUNSWICK POWER CORPORATION**
BY: _____	**BY:** _____
NAME: _____	**NAME:** _____
TITLE: _____	**TITLE:** _____

Connection Applicant Form (B-06)

Facilities Study Agreement

Facilities Study Agreement

"project name"

This Agreement made this _____day of _____in the year _____.

BETWEEN: **(the "Connection Applicant")**

AND

NEW BRUNSWICK POWER CORPORATION, having its head office at the City of Fredericton, Province of New Brunswick.

Both of which may hereinafter be referred to as a "Party" or collectively as the "Parties".

WHEREAS:

A. The Connection Applicant proposes to interconnect … to the Integrated Electricity System near _____, NB.

B. Any additions to the Integrated Electricity System are subject to the requirements of the Open Access Transmission Tariff (the "Tariff").

C. The Tariff requires that a System Impact Study be conducted respecting any proposed additions to the Integrated Electricity System.

D. The required System Impact Study was conducted pursuant to an agreement between the Parties dated …

E. The Connection Applicant has requested the Transmission Provider conduct a Facilities Study respecting its proposal.

NOW THEREFORE:

In consideration of the mutual covenants set forth herein, and other good and valuable consideration, the Parties agree as follows:

1. a) Except where otherwise defined in this Agreement, capitalized terms used in this Agreement shall have the meaning ascribed to them in the Tariff, including Attachment J thereto.

   b) "Integrated Electricity System" has the meaning ascribed to it in the Electricity Act

2. The Transmission Provider shall cause a Facilities Study to be conducted in accordance with the Tariff.

3. The Facilities Study shall be based upon the result of the System Impact Study. The scope of the Facilities Study and the contents of the final Facilities Study report shall be as defined and described in the attached Schedule A of this Agreement.

4. Connection Applicant agrees to provide to the Transmission Provider all technical data or other information required, in the opinion of the Transmission Provider, to conduct the Facilities Study. Transmission Provider reserves the right to request additional technical data or information as it determines is necessary during the course of the Facilities Study and Connection Applicant agrees to provide all such additional technical data or information.

5. Connection Applicant agrees to pay all costs and expenses incurred, directly or indirectly, by or on behalf of the Transmission Provider in conducting the Facilities Study. Transmission Provider's estimate of the total cost to Connection Applicant is _____Dollars Cdn., plus all applicable taxes. Transmission Provider agrees to promptly notify Connection Applicant of any material change in this estimate.

6. Payment of costs and expenses referred to in Article 5 above shall include an initial payment of … Dollars Cdn., payable prior to the commencement of the Facilities Study. Subject to Articles 7 and 10 herein, payment of remaining amounts owing will be due upon completion of the Facilities Study.

7. Connection Applicant may at any time withdraw its request for the completion of the Facilities Study and in such event shall be liable to the Transmission Provider only for all costs incurred by or on behalf of Transmission Provider up to the date of receipt of Connection Applicant's withdrawal notification.

8. The Transmission Provider agrees to make its best effort to complete the Facilities Study in a timely manner. Under no circumstances, however, shall the Transmission Provider be liable to Connection Applicant for any costs or damages Connection Applicant suffers or alleges it has suffered as a result of the timeliness of the completion of the Facilities Study or the results of the Facilities Study.

9. Results of the Facilities Study shall not be released until arrangements satisfactory to the Transmission Provider have been made for the payment of all costs and expenses referred to in Article 5 above.

10. Connection Applicant acknowledges and agrees that the results of the Facilities Study are estimates only and that actual connection to the Transmission System is subject to the terms and conditions of the Generator Connection Agreement, which agreement must be substantially in the form provided in Attachment J of the Tariff, entered into between the Connection Applicant and the Transmitter.

11. Where any conflict arises between the terms of this Agreement and the Tariff, the provisions of the Tariff shall prevail.

12. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and permitted assigns.

13. This Agreement shall be governed by and construed in accordance with the laws of the Province of New Brunswick.

14. Any notices required under this Agreement must be in writing and shall be made to the appropriate Party's representative as indicated below:

In the case of the Transmission Provider:

New Brunswick Power Corporation
515 King St.
Fredericton, NB
E3B 4X1

In the case of the Connection Applicant:

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed by their respective authorized officials as of the date first above written.

(the "Connection Applicant")	**NEW BRUNSWICK POWER CORPORATION**
BY: _____	**BY:** _____
NAME: _____	**NAME:** _____
TITLE: _____	**TITLE:** _____

SCHEDULE A

SCOPE: Following are the specific tasks and deliverables associated with the Facilities Study to be conducted by NB Power Corporation on behalf of the Connection Applicant.

The scope of this study is to provide estimates for following:

- The design, purchase and installation of all necessary protection and control equipment associated with the transmission line from the wind farm substation(s) to the tap point on the IES. This will include coordination with the protection at the substation site.

- The design and construction of a transmission line from the wind farm substation to the IES, not including any required Environmental Impact Assessment.

- The design, purchase, and installation of any required apparatus and associated civil work to connect the transmission line from the wind farm substation to the IES.

- The design, purchase and installation of the communications facilities that are required for the protection and control equipment as well as to transmit SCADA data associated with the line and protection equipment from the wind farm substations to the NB Power Energy Control Centre (ECC) and the Backup Control Centre (BUCC). This does not include the costs of, or associated with, the required RTU and communications at the wind farm.

- The design, purchase, and installation of the required revenue metering equipment including the communications link to transmit the metered data from the wind farm to the ECC.

Study Deliverables

The FS report provides detailed estimates of the schedule and costs for the work described in the scope including

- engineering and design;
- line routing options;
- line right-of-way property or easement acquisition;
- labour;
- material procurement;
- project overhead;
- financial charges, and
- any other items identified during the study.