

# **Distribution Generator Interconnection Procedures (DGIP)**

*(Applicable to Generating Facilities > 100 kW  
Connected to Distribution Systems Rated  $\leq 26,400$  V,  
Including Class 2 Net Metering Service)*

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## **VERSION HISTORY**

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Jul. 8, 2011	1.0	Initial version
Aug. 30, 2019	2.0	Updated to accommodate Demonstration/Research projects and 'Behind the Meter' generation
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OPERATING AGREEMENT (SSGIA)

## SECTION 1: DEFINITIONS

When used with initial capitalization, the following terms shall have the meanings specified or referred to below. Terms used in this document with initial capitalization that are not defined below shall have the meanings specified in the section in which they are used.

**Active Interconnection Request** shall mean a valid Interconnection Request received within a three (3) year period prior to the effective date of this DGIP.

**Affected System** shall mean an electric system other than the Distribution Provider's Distribution System that may be affected by the proposed interconnection, including without limitation, the Transmission System

**Affected System Operator** shall mean the entity that operates an Affected System.

**Affiliate** - of any Person means, any corporation that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such Person. For this purpose, "control" means the direct or indirect ownership of more than fifty percent (50%) of the outstanding capital stock or other equity interest having ordinary voting power.

**Behind the Meter** shall refer to the electrical infrastructure located on the Customer side of a facility's metering point.

**BESS** shall mean Battery Energy Storage Systems, inclusive of the battery energy storage device, power electronic interface, control electronics, and packaging.

**BESS Facility** shall mean the Interconnection Customer's BESS device(s) for the storage and later injection of electricity to the Distribution System at voltages of 26,400 and below, as identified in the Generator Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities. A BESS Facility is considered a Generating Facility within this DGIP.

**Business Day** shall mean Monday to Friday, inclusive, excluding holidays. The regular business hours on a Business Day are from 08:30 to 16:30 Atlantic Time.

**Calendar Day** shall mean any day including Saturday, Sunday or a holiday.

**Confidential Information** shall mean any confidential, proprietary or trade secret information relating to the present or planned business of a Party, including any plan, specification, pattern, procedure, design, device, list, concept, policy or compilation, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise.

**Dispute Resolution** shall mean the procedure for resolution of a dispute between the Parties in which they will first attempt to resolve the dispute on an informal basis.

**Distribution Provider** shall mean the public utility (or its designated agent) that owns, controls, or operates distribution facilities used for the distribution of electricity. Distribution Provider shall mean Nova Scotia Power, Inc.

**Distribution Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled, or operated by the Distribution Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A of the SSGIA, including any modifications, additions or upgrades to such facilities and equipment. Distribution Provider's Interconnection Facilities are used solely for the purpose of interconnecting the Generating Facility to the Distribution System and shall not include Distribution Upgrades.

**Distribution System** shall mean the Distribution Provider's facilities and equipment (nominally rated at 26,400 Volts or less) used to distribute electricity to ultimate usage points such as homes and industries either directly from nearby generators or from interchanges from the Transmission System.

**Distribution System Impact Study** shall mean an engineering study that evaluates the impact of the proposed interconnection on the safety and reliability of the Distribution Provider's Distribution System and, if applicable, an Affected System. The study shall determine what changes must be made to the Distribution System, Affected System and/or the Generation Facilities to allow the interconnection to proceed, and shall provide an estimate of the capital contribution that the Interconnection Customer must pay to complete these changes. It shall provide an analysis of technical issues associated with the Generation Facility and shall identify all provisions and conditions that must be added to the SSGIA to permit the project to proceed. The System Impact Study shall be included in Appendix A of the SSGIA.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Distribution Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the distribution service necessary to affect the Interconnection Customer's sale of electricity. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date, designated on the front cover page, on which these Distribution Generator Interconnection Procedures are in effect.

**Generating Facility** shall mean the Interconnection Customer's device(s) for the production and/or storage for later injection of electricity, with a Generating Facility Capacity of > 100kW, for interconnection to the Distribution System at voltages 26,400 Volts and below, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the maximum kW electrical output of the proposed Generating Facility submitted by the Interconnection Customer in its Interconnection Request. Generating Facility Capacity may be less than the aggregate nameplate capacity of all its Generating Facility devices provided that protection is installed to limit the Generating Facility to the maximum kW electrical output identified by the Interconnection Customer in the Interconnection Request.



**Generating Facility Demand** shall mean the maximum kW electrical demand load of the proposed Generating Facility submitted by the Interconnection Customer in its Interconnection Request. Generating Facility Demand will include station service and energy storage related load (i.e., pumped storage, BESS charging, etc.). Generating Facility Demand may be less than the aggregate nameplate rating of all its load devices provided that controls are installed to limit the Generating Facility Demand to the Maximum Generating Facility Demand load identified by the Interconnection Customer in the Interconnection Request.

**Good Utility Practice** shall mean those practices, methods or acts (including but not limited to the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in North America) that at a particular time, in the exercise of reasonable judgment, would have been expected to accomplish the desired result in a manner consistent with regulations, reliability, safety, environmental protection, economy and expedition as applied and practiced in the utility industry with respect to power generation, delivery, purchase and sale.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Distribution Provider's Interconnection Facilities to obtain back feed power.

**Interconnection Customer** shall mean the entity that proposes to interconnect its Generating Facility with the Distribution Provider's Distribution System.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Distribution System. The Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Distribution Provider's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities

include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Distribution System, and shall not include Distribution Upgrades.

**MW** shall mean the abbreviation for megawatts, which is used to describe the capacity of a Generating Facility.

**Notice of Dispute** shall mean a written notice of a dispute or claim that arises out of or in connection with the SSGIA or its performance.

**Party** shall mean the Distribution Provider or the Interconnection Customer; and “Parties” means both of them.

**Person** shall mean a natural person, a corporation, a partnership, a limited partnership, a joint venture, an association, a trust, a government agency and an unincorporated organization.

**Point of Change of Ownership** shall mean the point where the Interconnection Customer's Interconnection Facilities connect to the Distribution Provider's Interconnection Facilities.

**Point of Interconnection** shall mean the point where the Interconnection Facilities connect to the Distribution System.

**Pre-application Assessment** shall mean the assessment process used to provide system information that can assist in determining the viability of a generation site prior to a formal DGIP application. This process applies to Generating Facilities greater than 100 kW connected to Distribution Systems rated 26,400 volts and under.

**Progression Milestone(s)** shall mean the prerequisite requirements required to enter the Distribution System Impact Study stage, as itemized in Section 7.2.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a

Party under this DGIP, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Transmission System** shall mean the facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under the Tariff.

## **SECTION 2: SCOPE AND APPLICATION**

### **2.1 Application of Distribution Generator Interconnection Procedures (DGIP)**

These procedures apply to Generating Facilities with aggregate capacity greater than 100 kW.

A request to interconnect a new Generating Facility, to increase the capacity of an existing Generating Facility, or to interconnect a new generator or energy storage device for later injection of electricity within an existing customer load that is connected to NSPI's Distribution System (rated 26,400 V or less) shall be subject to these procedures.

If the Distribution Interconnection Request is for an increase in capacity for an existing Generating Facility, the Distribution Interconnection Request shall be evaluated based on the lesser of the nameplate capacity of the Generating Facility and the maximum kW electrical output of the existing Generating Facility, as submitted by the Interconnection Customer in their original Interconnection Request for the existing Generating Facility.

If the Distribution Interconnection Request is for a Generating Facility that includes multiple energy production or storage devices at a site for which the Interconnection Customer seeks a single Point of Interconnection, the Distribution Interconnection Request shall be evaluated on the lesser of the aggregate nameplate capacity of the multiple devices

and the maximum kW electrical output of the Generating Facility, as submitted by the Interconnection Customer in their Interconnection Request for the Generating Facility. Unless otherwise specified by the Interconnection Customer in the Distribution Interconnection Request, the Distribution Interconnection Request shall be evaluated using the maximum rated capacity of the Generating Facility. Where an energy storage (for later injection) device is included in a Distribution Interconnection Request, the request shall be evaluated using the lesser of the aggregate nameplate capacity of the multiple devices, and the maximum kW electrical output of the Generating Facility, as submitted by the Interconnection Customer in their Interconnection Request for the Generating Facility.. For Generating Facilities with energy storage, the load impact will be evaluated based on the Generating Facility Demand as provided in the Interconnection Request.

**2.1.1** If NSPI determines that Transmission System impacts are anticipated to occur as a result of the Distribution System Interconnection, NSPI shall notify the Interconnection Customer and the Interconnection Customer shall do one of the following:

- a) Reduce the capacity of the request to a level which alleviates the anticipated Transmission System Impacts (subject to capacity confirmation in the DSIS);
- b) Withdraw the distribution Interconnection Request and submit a new transmission Interconnection Request for the full capacity under the Standard Generator Interconnection Procedures as applicable to Generating Facilities connected to the Transmission System.

## **2.2 Comparability**

NSPI shall process and analyze all Interconnection Requests it receives in a timely manner as set forth in this DGIP. NSPI will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Generating Facilities are owned by NSPI, its subsidiaries or Affiliates or others.

## **2.3 Application Information**

NSPI shall provide copies of these procedures and related application information on NSPI's Internet website.

## **2.4 Pre-Application Assessment**

Prior to submitting a formal application under the DGIP, a customer may request a Pre-application Assessment for their Generating Facility.

To request a Pre-application Assessment, a customer shall follow the Pre-application Assessment Process found on NSPI's OASIS site at [nspower.ca/OASIS/pre-application-assessment](http://nspower.ca/OASIS/pre-application-assessment), and shall submit to NSPI a completed Pre-application Form, followed by a non-refundable Pre-application Assessment fee of \$300. Should the customer choose to proceed with a formal DGIP Interconnection Request, the \$300 Pre-application Assessment fee will be applied against the \$750 DGIP application fee, reducing that fee to \$450.

The Pre-application Assessment applies to generators greater than 100 kW connected to Distribution Systems rated 26,400 volts and under, and is a high-level review of the supply substation, distribution zone, and distribution feeder supplying the proposed generation facility site. It includes system peak and minimum load levels, available distribution zone and feeder hosting capacity, feeder type, number of phases, overhead line data, voltage regulation devices, step down transformation, and a system map showing the interconnection location. It also identifies existing generation and other DGIP Interconnection Requests in the area that are in the Combined T/D Advanced Stage Interconnection Request Queue. A Pre-application Assessment may also indicate that a proposed Generating Facility is eligible for Inverter Based Resource (IBR) Fast Tracking.

## **2.5 Hosting Capacity**

NSPI has provided current Hosting Capacity data for each distribution zone in Nova Scotia on its OASIS site at: [nspower.ca/oasis/distribution-hosting-capacity](http://nspower.ca/oasis/distribution-hosting-capacity).

The Total Distribution Zone Hosting Capacity is the estimated amount of generation that could be integrated within a Distribution Zone without reversing power flow back through its substation supply transformer and into the transmission system under normal system conditions. The posted Distribution Zone Hosting Capacity represents the remaining Hosting Capacity after existing or committed Generation Facilities within the Distribution Zone are accounted for. Feeder Hosting Capacity represents the lesser of the available Distribution Zone Hosting Capacity and the design limit of the distribution feeder less any existing or committed generation on that feeder.

Distribution Zone hosting capacity is provided in two formats:

1. Distribution Hosting Capacity Table: The table provides estimates for the available Feeder and Distribution Zone Hosting Capacity.
2. Distribution hosting Capacity Heat Map: This interactive map illustrates the Hosting Capacity for NSPI's distribution circuits and provides insight on potential locations for distributed generation which are less likely to require significant system upgrades at the applicant's cost.

Feeder and Distribution Zone Hosting Capacity values will be updated at the beginning of each study window per the DGIP Calendar to include new generation added to the Combined T/D Advanced Stage Interconnection Request Queue. The Hosting Capacity tables and map, in conjunction with the Pre-application Assessment, assist the Interconnection Customer in determining a reasonable project capacity and location prior to their formal DGIP application.

### **SECTION 3: INTERCONNECTION REQUESTS**

### **3.1 General**

An Interconnection Customer shall submit to NSPI an Interconnection Request in the form of Appendix 1 to this DGIP and a \$750 non-refundable study fee. NSPI shall apply the fee toward the cost of an Interconnection Preliminary Assessment. The Interconnection Customer shall submit a separate Interconnection Request for each site and must submit a deposit with each Interconnection Request. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

### **3.2 Initiating an Interconnection Request**

To initiate a Distribution Interconnection Request, the Interconnection Customer must submit all of the following:

- (i) a \$750 non-refundable study fee in the form of a wire transfer, certified cheque, or bank draft per Section 3.1;
- (ii) a completed application in the form of Appendix 1;
- (iii) a site map showing location of generation

All forms, fees, and supporting documentation are to be sent to the following address:

Nova Scotia Power Inc.,  
5 Long Lake Drive  
Ragged Lake Business Park  
Halifax, NS  
B3S 1N8  
Attention: Interconnection Engineer

The Interconnection Engineer will provide wire transfer details upon request. Interconnection Request documentation may also be scanned and filed electronically to the following e-mail address: [Interconnect@nspower.ca](mailto:Interconnect@nspower.ca).

The Distribution Interconnection Request shall be date-and-time-stamped upon receipt by NSPI.

### **3.3 Acknowledgment of Interconnection Request**

NSPI shall acknowledge receipt of the Interconnection Request within five (5) Business Days of receipt of the request and shall attach a copy of the received Interconnection Request to the acknowledgement.

If the Interconnection request is deemed ‘valid’, this date-and-time-stamp will be used to establish the initial Queue position for the Interconnection Request. If the Interconnection request is not deemed ‘valid’, a revised date-and-time-stamp will be applied when the Interconnection Customer has cured the deficiencies in accordance with Section 3.4 of this DGIP. The new date-and-time-stamp will then be used to establish the initial Queue position for the Interconnection Request.

### **3.4 Deficiencies in Interconnection Request**

An Interconnection Request will not be considered to be a valid request until all items in Section 3.2 have been received by NSPI. If an Interconnection Request fails to meet the requirements set forth in Section 3.2, NSPI shall notify the Interconnection Customer within five (5) Business Days of receipt of the initial Interconnection Request of the reasons for such failure and that the Interconnection Request does not constitute a valid request.

The Interconnection Customer shall provide to NSPI the information/fee needed to constitute a valid request within ten (10) Business Days after receipt of such notice. Failure by the Interconnection Customer to provide the required items shall result in withdrawal of the Interconnection Request in accordance with Section 3.8 of this DGIP.



### **3.5 Request for Additional Information**

If at any time during the study process NSPI determines that it requires additional information from the Interconnection Customer, NSPI shall make a request in writing to the Interconnection Customer for the information. The Interconnection Customer shall provide the requested information within 10 Business Days of receipt of the request. Failure by the Interconnection Customer to provide the required information within ten (10) Business Days shall result in withdrawal of the Interconnection Request in accordance with Section 3.8 of this DGIP.

### **3.6 OASIS Posting**

NSPI will maintain on its OASIS site a list of all valid Distribution Interconnection Requests. The list will identify, for each Interconnection Request:

- (i) the maximum megawatt electrical output;
- (ii) the location by county;
- (iii) the station or distribution line where the interconnection will be made;
- (iv) the projected In-Service Date;
- (v) the status of the Interconnection Request including Queue position;
- (vi) the date of the valid Interconnection Request; and
- (vii) the type of Generating Facility to be constructed (wind, biomass, hydro)

The list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes a SSGIA.

### **3.7 Coordination with Affected Systems**

NSPI will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators and, if possible, include those results in the applicable Interconnection Study within the time frame specified in this DGIP. NSPI will include such Affected System Operators in all meetings held with the Interconnection Customer as required by this DGIP. The

Interconnection Customer will cooperate with NSPI in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

### **3.8 Withdrawal**

The Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to NSPI. In addition, if the Interconnection Customer fails to adhere to all requirements of this DGIP, except as provided in Section 10.4 (Disputes), NSPI shall deem the Interconnection Request to be withdrawn and shall provide written notice to the Interconnection Customer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Interconnection Customer shall have fifteen (15) Business Days in which to either respond with information or actions that cure the deficiency or to notify NSPI of its intent to pursue Dispute Resolution.

Withdrawal shall result in the loss of the Interconnection Customer's Queue Position. If an Interconnection Customer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, the Interconnection Customer's Interconnection Request is eliminated from the queue until such time that the outcome of Dispute Resolution would restore its Queue Position. An Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request shall pay to NSPI all costs that NSPI prudently incurs with respect to that Interconnection Request prior to NSPI's receipt of notice described above. An Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request must pay all monies due to NSPI before it is allowed to obtain any Interconnection Study data or results.

NSPI shall update the OASIS Distribution Queue Position posting and refund to the Interconnection Customer any portion of the Interconnection Study deposits or payments that exceed the costs that NSPI has incurred. In the event of such withdrawal, NSPI, subject to the confidentiality provisions of Section 10.1, shall provide, at Interconnection

Customer's request, all information that NSPI developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

## **SECTION 4: QUEUE POSITION**

### **4.1 General**

NSPI shall assign an initial Queue Position based upon the date-and time-stamp of the 'valid' Distribution Interconnection Request. The initial Queue Position of each Distribution Interconnection Request will be used to determine the order in which the Preliminary Assessments will be conducted and to determine cost responsibility for the facilities necessary to accommodate the interconnection.

A higher queued Interconnection Request is one that has been placed "earlier" in the queue in relation to another Interconnection Request that is lower queued.

The initial Queue Position shall be reassigned for an Interconnection Request as it proceeds through the Distribution Generator Interconnection Procedures under the following circumstance which allows lower queued requests to advance in the Queue order:

- (i) the Interconnection Customer demonstrates to NSPI that, at any time following completion of the Preliminary Assessment, all required Progression Milestones for the Distribution System Impact Study stage have been met in accordance with Section 7.2 of this DGIP for the respective Interconnection Request prior to the Distribution Impact Study stage commencement date established in advance by NSPI.

The resulting Queue Position is based on the date and time of the demonstration of achievement of the Progression Milestones for the Interconnection Request by the Interconnection Customer, and a prioritized Queue Position is established on this basis.

Should the Interconnection Request not proceed to the Distribution System Impact Study stage within two (2) years from i) the date of the valid Interconnection Request, or ii) the effective date of this DGIP, whichever is the latter, NSPI shall deem the Interconnection Request to be withdrawn.

## **4.2 Study Grouping**

At NSPI's option, Interconnection Requests may be studied serially or in groups for the purpose of the Distribution System Impact Study.

## **4.3 Transferability of Queue Position**

An Interconnection Customer may transfer its Queue Position to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

## **4.4 Modifications**

The Interconnection Customer shall submit to NSPI, in writing, modifications to any information provided in the Interconnection Request. Any modification to machine data or equipment configuration or to the Point of Interconnection of the Generating Facility not agreed to in writing by NSPI and the Interconnection Customer will be deemed a withdrawal of the Interconnection Request and will require submission of a new Distribution Interconnection Request. The Interconnection Customer shall retain its Queue Position if the modifications requested are in accordance with Sections 2.1.1 or 4.4.1 or are determined not to be Material Modifications pursuant to Section 4.4.2.

**4.4.1** Prior to the return of the executed Distribution System Impact Study Agreement to NSPI, modifications permitted under this Section shall include specifically:

- (a) a reduction of electrical output (MW) of the proposed project.

- (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics
- (c) modifying the interconnection configuration.

**4.4.2** Prior to making any modification other than those specifically permitted by Sections 2.1.1 or 4.4.1, Interconnection Customer may first request that NSPI evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, NSPI shall evaluate the proposed modifications prior to making them and inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The Interconnection Customer shall either i) withdraw the proposed modification; ii) authorize NSPI to proceed with the modification if it has been deemed non-material; or iii) submit a new Interconnection Request if the modification has been deemed material.

**4.4.3** Upon receipt of Interconnection Customer's request for modification permitted under Section 4.4.2, NSPI shall commence and perform any necessary studies as soon as practicable, but in no event shall NSPI commence such studies later than 30 Calendar Days after receiving notice of Interconnection Customer's request. Any additional studies resulting from such modification shall be done at Interconnection Customer's cost.

## **SECTION 5: TRANSITION PROCEDURES FOR INTERCONNECTION REQUESTS SUBMITTED PRIOR TO EFFECTIVE DATE OF THE DISTRIBUTION GENERATOR INTERCONNECTION PROCEDURES.**

### **5.1 Transition Procedures**

5.1.1 NSPI will post to the OASIS site a Distribution Interconnection Request Queue

consisting of all Active Interconnection Requests.

- 5.1.2 Active Interconnection Requests which, prior to the Effective Date of this DGIP, have a Standard Small Generator Interconnection and Operating Agreement (SSGIA) executed or in progress will proceed under the terms and requirements of this DGIP.
- 5.1.3 Active Interconnection Requests which, prior to the Effective Date of this DGIP, have a DSIS in progress will proceed under the terms and requirements of this DGIP.
- 5.1.4 Active Distribution Interconnection Requests that have executed a DSIS Agreement prior to the Effective Date of this DGIP and which do not have a DSIS in progress will be required to conform fully to the requirements of Section 7.2 of this DGIP prior to entry into the DSIS study stage.
- 5.1.5 Active Distribution Interconnection Requests that have not executed a DSIS Agreement prior to the Effective Date of this DGIP will be required to conform fully to the requirements of this DGIP.

## **SECTION 6: PRELIMINARY ASSESSMENT**

### **6.1 Preliminary Assessment**

A valid Distribution Interconnection Request shall be considered authorization to conduct a Preliminary Assessment by NSPI.

The Preliminary Assessment shall identify any potential adverse system impacts that would result from the interconnection of the Generating Facility. It will not determine the maximum capacity of Generating Facility that can be installed at the specified Point of Interconnection.

If the Interconnection Customer and NSPI agree to forego the Preliminary Assessment, the Interconnection Customer may then initiate the Distribution System Impact Study process per Section 7 of this DGIP and the \$750 fee will be applied towards the cost of the Distribution System Impact Study. If the Interconnection Customer had previously applied for and received a Pre-application Assessment for their proposed Generating Facility, and subsequently submits an Interconnection Request and is permitted to forego the Preliminary Assessment, the \$450 fee will be applied to the towards the cost of the Distribution System Impact Study.

## **6.2 Scope of the Preliminary Assessment**

The Scope of the Preliminary Assessment shall include:

- Preliminary identification of any thermal limits exceeded by the interconnection of the Generating Facility.
- Preliminary identification of any power quality limits exceeded by the interconnection of the Generating Facility, such as flicker or voltage levels.
- Identification of basic system parameters such as expected peak and minimum load levels, and available fault levels.
- Identification of Generating Facilities that are expected to impact this Interconnection Request and that: i) are interconnected to the Distribution System, ii) have established a pending higher Queued Interconnection Request by virtue of having met the DSIS Progression Milestones listed in Section 7.2 of this DGIP, or iii) have an executed SSGIA or a SSGIA in negotiation.
- Preliminary identification of any required system additions and upgrades to accommodate the Generating Facility, along with an order of magnitude cost estimate of such additions and upgrades.
- Preliminary identification of transmission impacts.
- Identification of eligibility for IBR Fast Tracking of the DSIS.

## **6.3 Preliminary Assessment Procedures**

NSPI shall use Reasonable Efforts to complete the Preliminary Assessment no later than thirty (30) Calendar Days after NSPI deems the Distribution Interconnection Request to be valid in accordance with Section 3.2. At the request of the Interconnection Customer, or at any time NSPI determines that it will not meet the required time frame for completing the Preliminary Assessment, NSPI shall notify the Interconnection Customer as to the schedule status of the Preliminary Assessment and shall provide an estimated completion date with an explanation of the reasons why additional time is required.

#### **6.3.1 Meeting with NSPI**

Within ten (10) Business Days of providing the Preliminary Assessment report to the Interconnection Customer, NSPI and Interconnection Customer shall meet to discuss the results of the Preliminary Assessment. The Interconnection Customer may waive the Preliminary Assessment meeting by providing written notice to NSPI within the ten (10) Business Day period.

## **SECTION 7: DISTRIBUTION SYSTEM IMPACT/FACILITIES STUDY**

### **7.1 Distribution System Impact Study Agreement**

Simultaneously with the delivery of the Preliminary Assessment, NSPI shall provide to the Interconnection Customer a Distribution System Impact Study Agreement in the form of Appendix 2 to this DGIP along with a non-binding good faith estimate of the cost and timeframe for completing the Distribution System Impact/Facility Study (DSIS). The Distribution System Impact Study Agreement shall provide that the Interconnection Customer shall compensate NSPI for the actual cost of the DSIS.

NSPI may at its sole discretion, contract with consultants to perform activities related to



the DSIS.

## **7.2 Execution of the Distribution System Impact Study Agreement**

The Interconnection Customer shall execute two copies of the Distribution System Impact Study Agreement and deliver both copies of the executed Distribution System Impact Study Agreement to NSPI no later than thirty (30) Calendar Days after its receipt. Failure to meet this requirement shall result in withdrawal of the Distribution Interconnection Request from the Distribution Queue.

To be eligible for inclusion in the Distribution System Impact Study stage, and thereby advance the Interconnection Request's initial Queue Position, the following designated Progression Milestones must be met by the Interconnection Customer at least ten (10) Business Days prior to the Distribution System Impact Study period commencement date:

- (i) Study Deposit in the form of a certified cheque or bank draft:
  - a. IBR Fast Track: \$2,500
  - b. All other Generation Resources: \$10,000;
- (ii) provision of generator data;
- (iii) provision of a completed Attachment A to Appendix 1;
- (iv) confirmation of the Point of Interconnection;
- (v) provision of a one-line diagram, stamped and signed by an engineer registered with Engineers Nova Scotia, showing the Generating Facility and associated electrical equipment with appropriate rating and impedance information;
- (vi) confirmation of generation MW output; and
- (vii) provision of any one of the following:
  - a. confirmation of the existence of an executed contract for sale of energy from the generating facility for at least 50% of the generation project capability;
  - b. demonstration of approval by the Nova Scotia Utility and Review Board for the expenditures necessary for the Generating Facility;

- c. demonstration of approval by the Minister of Energy under Section 28 of the Renewable Energy Regulations for a Community-based Feed in Tariff (COMFIT) project interconnecting to the NSPI distribution system;
- d. confirmation by NSPI of eligibility for Net Metering Service in accordance with the Renewable Energy Regulations for a Net Metered project interconnecting to the NSPI distribution system;
- e. demonstration by a Load Serving Entity that the project's energy or capacity has been identified as required to meet demand, reliability or Renewable Energy Standard requirements;
- f. confirmation that the Generating Facility will be connected Behind the Meter at a premises owned and/or controlled by the Interconnection Customer and currently taking service from NSPI under the *Nova Scotia Power Inc. Tariffs and Regulations*, as approved by the Nova Scotia Utility and Review Board; or
- g. confirmation from NSPI that the Generating Facility will be connected for research or demonstration purposes or confirmation from the Minister of Energy that the Generating Facility has been approved as part of a research program established pursuant to section 4D of the Electricity Act, 2004, c. 25, as amended.

If NSPI determines there are deficiencies in the technical data provided by the Interconnection Customer to address items ii) to vi), NSPI shall notify the Interconnection Customer of the deficiency. To be included in the DSIS study group, the Interconnection Customer shall cure the deficiency within five (5) Business Days of receipt of the notice, provided, however, such deficiency does not include failure to deliver the study deposit, or demonstration of Progression Milestone achievement required in item vii).

Where an IR is eligible for IBR Fast Tracking and has met the Progression Milestones listed above, and where there are no other IRs proposed for the same Distribution Zone having met their Progression Milestones ahead of the eligible IR, the IBR Fast Track DSIS for the eligible IR shall be initiated within 10 Business Days of receipt of all Progression Milestones. In such cases, the eligible IR shall enter the Combined T/D Advanced Stage

Interconnection Request Queue as part of the next scheduled Study Window even though its DSIS may have been initiated prior to this posting. The IR Queue position will be based on the date all Progression Milestones were met.

### **7.3 Scope of the Distribution System Impact Study (DSIS)**

The Distribution System Impact Study (DSIS) shall evaluate the impact of the proposed interconnection on the reliability of the Distribution System. The DSIS shall consider all generating facilities (including any identified upgrades associated with higher queued requests) that, on the date the DSIS is commenced:

- (i) Are directly interconnected with NSPI's Distribution or Transmission Systems;
- (ii) Are interconnected with Affected Systems and may have an impact on the proposed interconnection;
- (iii) Have established a pending higher queued Interconnection Request to interconnect with NSPI's electric system by virtue of having met the required Progression Milestones listed in Section 7.2 of the DGIP (distribution projects) or Section 7.2 of the GIP (transmission projects);
- (iv) Have executed or are negotiating an SSGIA or a GIA

A DSIS shall consist of a short circuit analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as necessary. It will state the assumptions upon which it is based and shall provide a list of facilities that are required as a result of the Distribution Interconnection Request. The DSIS shall provide a non-binding good faith estimate of the cost (including overheads) of equipment, engineering, procurement, and construction work needed to implement the conclusions of the DSIS and shall identify any operational conditions placed upon the Generation Facility. A one-line diagram depicting all Interconnection Facilities shall also be included in the DSIS.

NSPI reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good

Utility Practice during the course of the DSIS. If the Interconnection Customer modifies the Distribution Interconnection Request in accordance with Section 4.4.1 the time to complete the DSIS may be extended.

### **7.3.1 IBR Fast Tracking**

NS Power will use the Pre-application Assessment and Preliminary Assessment processes to identify those Inverter Based Resource (IBR) projects that are not expected to have a material impact on the operation of the existing transmission & distribution system inclusive of higher queued projects in the Combined T/D Advanced Stage Interconnection Request Queue.

IBR Fast Tracking will be permitted where the Preliminary Assessment determines that the Generating Facility:

- a. Has a Point of Interconnection (POI) at the 12.5kV or 25kV voltage level.
- b. Has a net Nameplate Capacity  $\leq 0.5$  MW at 12.5kV, or  $\leq 1.0$  MW at 25kV.
- c. Is an Inverter Based Resource of a type that is non-sustaining.
- d. Is connected to a three-phase distribution circuit that does not include an existing synchronous generator.
- e. Is located  $< 5$ km from the supply substation if connected at 12.5kV, or  $< 10$ km from the supply substation if connected at 25kV.
- f. Does not require system network upgrades.
- g. Does not have any expected transmission impacts.
- h. Has a POI such that:
  - i. The path between the Generating Facility POI and the supply substation has a minimum conductor size of #2 AWG ASC.
  - ii. There are no step-down transformers or voltage regulators between the Generating Facility POI and the supply substation.

The scope of the DSIS analysis for IBR Fast tracking will be limited to short circuit analysis and load flow analysis, with review of protection, set point coordination, and grounding as

necessary. It will state the assumptions upon which it is based and shall provide a non-binding good faith estimate of the costs to implement the conclusions of the DSIS and shall identify any operational conditions placed upon the Generation Facility. A one-line diagram depicting all Interconnection Facilities shall also be included in the DSIS.

## **7.4 Distribution System Impact Study Procedures**

NSPI shall use Reasonable Efforts to complete the draft Distribution System Impact Study within ninety (90) Calendar Days after the Distribution System Impact Study Commencement date. Where a Distribution Interconnection Request is eligible to proceed with a DSIS under IBR Fast Tracking, NSPI shall use Reasonable Efforts to complete the draft Distribution System Impact Study within thirty (30) Calendar Days after the Distribution System Impact Study Commencement date.

If at the request of the Interconnection Customer, or at any time NSPI determines that it will not meet the required time frame for completing the draft Distribution System Impact Study, NSPI shall notify the Interconnection Customer as to the schedule status of the draft Distribution System Impact Study and shall provide an estimated completion date with an explanation of the reasons why additional time is required.

### **7.4.1 Meeting with NSPI**

Within ten (10) Business Days of providing the draft Distribution System Impact Study report to Interconnection Customer, NSPI and Interconnection Customer shall meet to discuss the results of the draft Distribution System Impact Study.

### **7.4.2 Interconnection Customer Comments**

The Interconnection Customer may, within fifteen (15) Calendar Days after receipt of the draft Distribution System Impact Study report, provide written comments to NSPI. NSPI shall deliver a final DSIS within fifteen (15) Calendar Days after

receipt of the comments or promptly upon receiving a statement that the Interconnection Customer will not provide comments. If required, NSPI may reasonably extend such fifteen-day period, upon notice to the Interconnection Customer, to complete the final report.

## **7.5 Distribution System Impact Study Costs**

The Interconnection Customer must pay any study costs that exceed the deposit within thirty (30) calendar days on receipt of the DSIS invoice. If the deposit exceeds the actual costs incurred, NSPI shall refund such excess within ninety (90) calendar days of delivery of the final DSIS report. If at any time NSPI identifies that costs are expected to exceed the amounts deposited by the Interconnection Customer, NSPI reserves the right to request an additional refundable deposit for the additional amount. Final study costs shall be based on NSPI's actual incurred costs with overheads.

## **7.6 Re-Study**

If Re-Study of the Distribution System Impact Study is required due to a higher queued project dropping out of the queue or a modification of a higher queued project subject to Section 4.4, NSPI shall notify Interconnection Customer in writing. Such Re-Study shall take no longer than sixty (60) Calendar Days from the date of notice. Any cost of Re-Study shall be borne by the Interconnection Customer being re-studied.

# **SECTION 8: OPTIONAL DISTRIBUTION SYSTEM IMPACT STUDY**

## **8.1 Optional Distribution System Impact Study Agreement**

On or after the date when the Interconnection Customer receives the final Distribution System Impact Study, the Interconnection Customer may request, and NSPI shall perform a reasonable number of Optional Distribution System Impact Studies (Optional DSIS's).

The request shall describe the assumptions that the Interconnection Customer wishes NSPI to study within the scope described in Section 8.2.

Within ten (10) Business Days after receipt of a request for an Optional DSIS, NSPI shall provide to the Interconnection Customer an Optional DSIS Agreement in the form of Appendix 3. The Optional DSIS Agreement shall provide that the Interconnection Customer shall compensate NSPI for the actual cost of each Optional DSIS.

NSPI shall not be required to delay the completion of any other DSIS related to this or any other Interconnection Request as a result of an Optional Interconnection Study Request. NSPI may at its sole discretion, utilize external consultants to perform activities related to the Optional DSIS.

IBR Fast Tracking does not apply to Optional Studies.

## **8.2 Execution of the Optional Distribution System Impact Study Agreement**

The Interconnection Customer shall execute two copies of the Optional DSIS Agreement within ten (10) Business Days of receipt and deliver both copies of the Optional DSIS Agreement, the technical data and \$7,500 deposit to NSPI in the form of certified cheque or bank draft.

NSPI shall execute the Optional DSIS Study Agreement and deliver a fully executed copy to the Interconnection Customer.

## **8.3 Scope of Optional Distribution System Impact Study**

The Optional DSIS will consist of a sensitivity analysis based on the assumptions specified by the Interconnection Customer in the Optional DSIS Agreement and on the results of the original DSIS. The Optional DSIS shall be performed solely for informational purposes.

NSPI reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Optional DSIS.

#### **8.4 Optional Distribution System Impact Study Procedures**

The executed Optional DSIS Agreement, the deposit, and technical data called for therein must be provided to NSPI within ten (10) Business Days of Interconnection Customer receipt of the Optional DSIS Agreement. NSPI shall complete the Optional DSIS on a best efforts basis after allocating available study resources to non-optional studies and will use Reasonable Efforts to complete the study within the time period specified within the Optional DSIS Agreement.

#### **8.5 Optional Distribution System Impact Study Costs**

The Interconnection Customer must pay any study costs that exceed the deposit within thirty (30) calendar days on receipt of the invoice. If the deposit exceeds the actual costs incurred, NSPI shall refund such excess within ninety (90) calendar days of delivery of the Optional DSIS report. If at any time NSPI identifies that costs are expected to exceed the amounts deposited by the Interconnection Customer, NSPI reserves the right to request an additional refundable deposit for the additional amount. Final study costs shall be based on NSPI's actual incurred costs with overheads.

### **SECTION 9: STANDARD SMALL GENERATOR INTERCONNECTION AGREEMENT (SSGIA)**

#### **9.1 Tender**

Simultaneously with the delivery of the final Distribution System Impact Study to the



Interconnection Customer, NSPI shall tender a copy of the Standard Small Generator Interconnection and Operating Agreement (SSGIA) to the Interconnection Customer along with draft appendices completed to the extent practical. The draft SSGIA shall be in the form of NSPI's standard form SSGIA, as provided in Appendix 4. The Interconnection Customer shall have thirty (30) Calendar Days to complete and return the SSGIA Appendices to NSPI. If the Interconnection Customer does not complete and return the SSGIA Appendices within 30 Calendar Days, the Distribution Interconnection Request shall be deemed withdrawn.

## **9.2 SSGIA Appendices**

Within 15 Calendar Days of receipt of the SSGIA from the Interconnection Customer, NSPI shall review the completed SSGIA Appendices. If NSPI does not accept any Milestone Dates proposed in the SSGIA Appendices, it shall notify the Interconnection Customer and the Interconnection customer shall provide alternative dates that are acceptable to NSPI within this same 15 Calendar Day period. Upon receipt of the revised Milestone Dates, NSPI shall return two (2) original copies of the final SSGIA with Appendices to the Interconnection Customer.

## **9.3 Interconnection Customer Execution of SSGIA**

Within 15 Calendar Days of receipt of the final SSGIA, the Interconnection Customer shall execute two original copies of the final SSGIA and return them to NSPI.

## **9.4 NSPI Execution of SSGIA**

NSPI shall execute the SSGIA and deliver a fully executed copy to the Interconnection Customer.

## **9.5 Commencement of Interconnection Activities**

Upon execution of the SSGIA, NSPI and the Interconnection Customer shall perform their respective obligations in accordance with the terms of the SSGIA.

## **SECTION 10: MISCELLANEOUS.**

### **10.1 Confidentiality**

Confidential information shall mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential." For purposes of these procedures all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed confidential information regardless of whether it is clearly marked or otherwise designated as such.

Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce any Agreement resulting from this DGIP. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under these procedures, or to fulfill legal or regulatory requirements.

Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.

Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of

this provision.

## **10.2 Delegation of Responsibility**

NSPI may use the services of subcontractors as it deems appropriate to perform its obligations under this DGIP. NSPI shall remain primarily liable to the Interconnection Customer for the performance of such subcontractors and compliance with its obligations of this DGIP. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

## **10.3 Reasonable Efforts**

NSPI shall make reasonable efforts to meet time frames provided in these procedures. If NSPI cannot meet the required time frame provided herein, it shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reason why additional time is required.

## **10.4 Disputes**

In the event of a dispute or claim arising out of or in connection with this DGIP, a Party (the "Disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the senior representatives are unable to resolve the claim or dispute within thirty (30) Calendar Days of issuance of the Notice of Dispute, such claim or dispute shall, upon Agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have

in equity or at law consistent with the terms of this section.

The Parties agree to submit the dispute to binding arbitration, pursuant to the terms of the Commercial Arbitration Act, S.N.S. 1999, c.5. In particular, the Parties agree to utilize the arbitration procedure attached as Schedule “A” to the Commercial Arbitration Act in the conduct of the arbitration. Any matter in dispute that is submitted for arbitration shall be heard by a single arbitrator chosen unanimously by the parties. In the event the parties cannot agree on a Person to act as a single arbitrator, each party shall choose one panelist and the two panelists shall choose an independent third panelist who shall also chair the arbitration. No such arbitrator shall have previously been employed by either party and shall not have a direct or indirect interest in either party or the subject matter of the arbitration. The cost of the arbitration, excluding a party’s legal fees and disbursements shall, unless otherwise ordered by the arbitrator or the panel, be borne equally by the parties.

**APPENDICES TO THE DGIP**

**APPENDIX 1 to DGIP**

**DISTRIBUTION GENERATOR INTERCONNECTION REQUEST FORM**

**APPENDIX 2 to DGIP**

**DISTRIBUTION SYSTEM IMPACT STUDY (DSIS) AGREEMENT**

**APPENDIX 3 to DGIP**

**OPTIONAL DISTRIBUTION SYSTEM IMPACT STUDY AGREEMENT**

**APPENDIX 4 to DGIP**

**STANDARD SMALL GENERATOR INTERCONNECTION AND OPERATING  
AGREEMENT (SSGIA)**