

December 30, 2022

VIA eTARIFF

The Honorable Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

**Re: *PacifiCorp*, Docket No. ER23-\_\_\_\_-000  
Revisions to Generator Interconnection Procedures Regarding Electric Storage  
Resources**

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 824d, Part 35 of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations,<sup>1</sup> and Order No. 714,<sup>2</sup> PacifiCorp submits revisions to its Open Access Transmission Tariff, FERC Electric Tariff Volume No. 11 (“PacifiCorp OATT” or “Tariff”). The proposed revisions modify PacifiCorp’s Large Generator Interconnection Procedures (“LGIP”), LGIP Appendices, and the Large Generator Interconnection Agreement (“LGIA”)<sup>3</sup> to allow Electric Storage Resources<sup>4</sup> to be studied based on specific operating parameters.

As explained further below, PacifiCorp has seen a significant increase in the number of customers proposing to interconnect stand-alone Electric Storage Resources. Additionally, customers and stakeholders have also asked whether PacifiCorp can undertake interconnection studies using assumptions that reflect more realistic expected operating conditions of Electric Storage Resources. As a result, PacifiCorp proposes Tariff revisions to allow interconnection customers proposing interconnection of stand-alone Electric Storage Resources and requesting Energy Resource Interconnection Service to request pre-established operating assumptions that reflect more realistic operating assumptions. Incorporating more accurate study assumptions will reduce the likelihood that Electric Storage Resources will trigger potentially excessive or unnecessary network upgrades in the interconnection study process, which will reduce the barriers for the integration and participation of these resources.

---

<sup>1</sup> 18 C.F.R. Part 35 (2022).

<sup>2</sup> *Electronic Tariff Filings*, Order No. 714, 124 FERC ¶ 61,270 (2008), *order on reh’g*, Order No. 714-A, 147 FERC ¶ 61,115 (2014).

<sup>3</sup> PacifiCorp Open Access Transmission Tariff, Part IV, Sections 36-48, and Attachment N (“PacifiCorp Tariff”). Except as defined in this transmittal letter, capitalized terms shall have the meanings set forth in PacifiCorp’s proposed Tariff revisions or PacifiCorp’s current Tariff, as applicable.

<sup>4</sup> As discussed herein, PacifiCorp proposes to define “Electric Storage Resource” as “a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.”

PacifiCorp respectfully requests the Commission accept the enclosed Tariff revisions as consistent with or superior to the *pro forma* LGIP and LGIA and effective on the 61<sup>st</sup> day after this filing, which is March 1, 2023. Acceptance by this date will allow implementation in advance of the opening of PacifiCorp's 2023 Cluster Request Window on April 1, 2023, and, therefore, will allow potential Interconnection Customers the option to have Electric Storage Resources studied pursuant to pre-established operating assumptions.

## **I. Background**

### **A. PacifiCorp**

PacifiCorp is an Oregon corporation and vertically-integrated utility primarily engaged in providing retail electric service to approximately 1.9 million residential, commercial, industrial, and other customers in portions of six states: California, Idaho, Oregon, Utah, Washington, and Wyoming. PacifiCorp provides electric transmission service in nine Western states, and owns or has interests in approximately 16,500 miles of transmission lines and 71 thermal, hydroelectric, wind-powered generating, and geothermal facilities. PacifiCorp operates two balancing authority areas, PacifiCorp East and PacifiCorp West, and provides open access transmission service in accordance with its OATT, which is on file with the Commission.

### **B. PacifiCorp's Efforts to Reform its Interconnection Process and Refine its Study Assumptions**

Over the past several years, PacifiCorp has proposed, and the Commission has accepted, revisions to PacifiCorp's LGIP, Small Generator Interconnection Procedures ("SGIP"), LGIA, and Small Generator Interconnection Agreement ("SGIA") to facilitate PacifiCorp's goals of: (1) reducing delays in processing interconnection requests; (2) ensuring the efficient administration of the interconnection queue; (3) providing interconnection service in the most efficient manner possible; and (4) deterring speculative projects from entering the queue. For example, in May 2020, the Commission accepted PacifiCorp's proposal to transition its interconnection process from a "first-come, first-served" serial processing approach to a "first-ready, first-served" Cluster Study approach.<sup>5</sup>

Thereafter, based on its experience of undertaking two cluster studies (i.e., the transitional and first cluster study) under the revised interconnection process, PacifiCorp requested various enhancements to its first-ready, first-served cluster study process on January 18, 2022,<sup>6</sup> which the Commission largely accepted as just and reasonable in an order issued in May 2022.<sup>7</sup> One of the enhancements accepted by the Commission was permitting PacifiCorp to model existing resources at less than full output (if such modeling were supported by historical operating patterns), which

---

<sup>5</sup> *PacifiCorp*, 171 FERC ¶ 61,112, *order on reh'g*, 173 FERC ¶ 61,016 (2020).

<sup>6</sup> Revisions to Generator Interconnection Procedures, Docket No. ER22-834 (filed Jan. 18, 2022) (the "January 18<sup>th</sup> Filing").

<sup>7</sup> *See PacifiCorp*, 179 FERC ¶ 61,089 at P 51 (2022) (accepting PacifiCorp's proposed LGIP revisions and directing a further compliance filing).

would facilitate increase interconnection of additional resources by making use of underutilized transmission capacity. The Commission agreed that these revised study assumptions would “give the transmission provider the flexibility to incorporate projected operations of existing operating resources into the interconnection model when studying new interconnection requests.”<sup>8</sup>

### **C. The Need to Incorporate Realistic Operating Assumptions for Electric Storage Resources**

Recently, PacifiCorp has seen a significant increase in interconnection requests for stand-alone Electric Storage Resources. In 2020, PacifiCorp received one request to interconnect a stand-alone Electric Storage Resource. However, in 2022, PacifiCorp received 59 such requests. As PacifiCorp looks ahead to the 2023 Cluster Study and beyond, it anticipates the trend of increasing requests to integrate Electric Storage Resources to continue. Similarly, as noted above, PacifiCorp has received a number of inquiries from Interconnection Customers regarding whether PacifiCorp can perform interconnection studies using assumptions that reflect more realistic expected operating conditions of Electric Storage Resources on PacifiCorp’s system.<sup>9</sup>

As the Commission has acknowledged, the *pro forma* LGIP “includes only general requirements regarding the operating assumptions for generating facilities in interconnection studies.”<sup>10</sup> In particular, current operating assumptions for interconnection studies were developed prior to the large-scale adoption of variable energy resources and the advent of electric storage. In many instances, these operating assumptions may not reflect the real-world operation of electric storage resources. For instance, the LGIP generally requires transmission providers to assume that Electric Storage Resources will charge during peak load conditions and discharge during light load conditions, regardless of whether such actions are economically or operationally feasible. Electric Storage Resources, however, are unlikely to operate under such worst-case conditions, but rather, are able to modulate their charging and discharging based system and market conditions. Therefore, PacifiCorp proposes Tariff revisions to allow Electric Storage Resources to be studied based on specific operating parameters. The proposed revisions will help ensure the Electric Storage Resource’s impact on the transmission system is accurately reflected, thereby helping to avoid potential over-estimation of necessary system improvements.

PacifiCorp is proposing these Tariff revisions only for stand-alone Electric Storage Resources. In PacifiCorp’s view, extending proposed flexible study assumptions to other types of resources is not necessary at this time for several reasons, including:

---

<sup>8</sup> *Id.* at P 40.

<sup>9</sup> PacifiCorp is not alone in receiving this feedback from the developer community. *See, e.g.*, Limited Comments of Pine Gate Renewables, at 5-6, Docket No. AD20-9-000 (filed Sept. 20, 2021) (“Pine Gate Comments”) (suggesting that transmission providers specify pre-determined conditions under which electric storage resources could operate as load or as a generating facility).

<sup>10</sup> *Improvements to the Generator Interconnection Proc. & Agreements*, 179 FERC ¶ 61,194 at P 265 (2022) (“Interconnection NOPR”).

- First, it is not clear that existing reforms are insufficient to facilitate interconnections for non-storage, hybrid, or co-located resources. For example, pursuant to the Commission's Order No. 845, generators are permitted to request interconnection service below their nameplate capacity. This has been identified as a particularly useful reform for generators utilizing renewable and storage components.<sup>11</sup>
- Second, other resources, such as co-located and hybrid resources that incorporate storage components, raise more complicated modeling and operational concerns, which this proposal is not well-suited to accommodate. Co-located and hybrid resources, for example, have more operational optionality depending on system conditions, seasons, times of day, etc., which can be difficult to account for in modeling, as well as to monitor and enforce. In contrast, stand-alone Electric Storage Resources would likely vary their charging and discharging under only a few limited types of scenarios, which can be more easily accommodated in the study process.

## **II. PacifiCorp's Proposal is Consistent with or Superior to the *pro forma* LGIP and LGIA and will Facilitate Increased Electric Storage Resource Interconnection and Market Participation**

As the Commission and developers have recognized,<sup>12</sup> as more Electric Storage Resources, and other non-traditional generation, seek interconnection to the transmission system, the current *pro forma* study limitations will remain a difficult barrier to overcome. The proposed Tariff revisions herein build on the foundation laid by Order No. 845 and PacifiCorp's previous interconnection enhancements by allowing the use of more realistic operating assumptions for Electric Storage Resources. Such adoption will, in turn, facilitate more efficient use of the transmission system and facilitate more efficient interconnection for these resources.

PacifiCorp is aware that the Commission has opened a rulemaking docket to consider various interconnection-related reforms, including reforms for the study process.<sup>13</sup> Notwithstanding the Commission's broader interconnection reform proposals, however, this proposal stands on its own as just and reasonable and consistent with or superior to the *pro forma* LGIP and LGIA.<sup>14</sup> This proposal is also time-sensitive, given the need for both PacifiCorp and

---

<sup>11</sup> *Reform of Generator Interconnection Proc. & Agreements*, Order No. 845, 163 FERC ¶ 61,043 at P 358 (2018) (noting likely usefulness of the reform for hybrid resources), *order on reh'g & clarification*, Order No. 845-A, 166 FERC ¶ 61,137, *order on reh'g & clarification*, Order No. 845-B, 168 FERC ¶ 61,092 (2019).

<sup>12</sup> Interconnection NOPR, 179 FERC ¶ 61,194 at P 279, n.367 (referencing comments filed in the Commission's Hybrid Resources proceeding, Docket NO. AD20-9-000).

<sup>13</sup> *Id.* at PP 265-288.

<sup>14</sup> To the extent that the Commission adopts further revisions to the *pro forma* LGIP and LGIA through the Interconnection NOPR or any future proceeding, PacifiCorp would revise its Tariff accordingly on compliance.

prospective Interconnection Customers to prepare in advance of the next Cluster Study, commencing April 1, 2023.

### **A. Proposed Tariff Revisions**

As outlined below, PacifiCorp proposes revisions to its LGIP and associated appendices to utilize more flexible and realistic operating parameters for Electric Storage Resources in interconnection studies. PacifiCorp also proposes a new Appendix H to the LGIA, entitled “Operation of an Electric Storage Resource,” to memorialize and enforce any studied operating assumptions for the Electric Storage Resource.<sup>15</sup>

#### 1. Section 36 and LGIA Article 1 - Definition of “Electric Storage Resource”

In PacifiCorp Tariff Section 36, which corresponds with Section 1 of the *pro forma* LGIP, PacifiCorp proposes to define Electric Storage Resources “a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.” PacifiCorp also proposes to add the same defined term to the list of definitions in LGIA Article 1.

#### 2. Section 38.1 – Interconnection Requests

PacifiCorp proposes revisions to Tariff Section 38.1 to incorporate additional procedures for establishing and requesting flexible study assumptions. In particular, PacifiCorp proposes to post on its Open Access Same-Time Information (“OASIS”) site pre-established operating assumptions from which customers seeking to interconnect Electric Storage Resources may select. These assumptions would be specific to different subregions of PacifiCorp’s transmission system and would be posted on OASIS by no later than 30 calendar days before the Cluster Request Window.

Similar to suggestions raised in the Commission’s hybrid resources proceeding,<sup>16</sup> PacifiCorp proposes to specify pre-determined operating assumptions, rather than consider assumptions proposed by individual Interconnection Customers. PacifiCorp believes that using pre-defined set(s) of operating assumptions, based on subregional characteristics, will be more expedient and still reflect more realistic operating parameters, rather than permitting Interconnection Customers to propose individual operating assumptions, which will each necessarily require thorough safety and reliability review by PacifiCorp before commencing the Cluster study. Stated differently, PacifiCorp’s pre-determined operating assumptions will give Interconnection Customers insight into what PacifiCorp has already determined to be consistent with Good Utility Practice and Reliability Standards, as opposed to deferring that determination until later (and potentially delaying the Cluster Study). PacifiCorp would retain the ability to adjust

---

<sup>15</sup> The operating restrictions that would be noted in the proposed LGIA Appendix H would be in addition to any required protection devices that would be outlined in Appendix C of the LGIA.

<sup>16</sup> See, e.g., Pine Gate Comments at 5-6 (suggesting that transmission providers specify pre-determined conditions under which electric storage resources could operate as load or as a generating facility).

the study assumptions as necessary to be consistent with Good Utility Practice, including applicable reliability standards.

Accordingly, PacifiCorp proposes the following insert for Section 38.1:

The following paragraph applies only to Electric Storage Resources selecting Energy Resource Interconnection Service: Transmission Provider shall establish operating assumptions, including charge and discharge parameters, that reflect the anticipated operation of an Electric Storage Resource in different regions on Transmission Provider's system. By no later than 30 Calendar Days before the Cluster Request Window, Transmission Provider shall post on OASIS such preestablished operating assumptions. Transmission Provider shall have a process in place to study Electric Storage Resources using such preestablished operating assumptions, if selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise requires use of different operating assumptions. These requests for Interconnection Service shall be studied using the selected operating assumptions for purposes of Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the LGIA. The necessary operating restrictions of the Electric Storage Resource shall be established in Appendix H, and the necessary control technologies and protection systems shall be established in Appendix C of that executed, or requested to be filed unexecuted, LGIA.

3. Sections 38.2.1.2 – Energy Resource Interconnection Service Study

PacifiCorp proposes to revise the description of the Energy Resource Interconnection Service study in Tariff Section 38.2.1.2 to further clarify that the study would be done at a Large Generating Facility's full output, except for Electric Storage Resources being studied using specific operating assumptions selected in their Interconnection Requests.

4. Section 38.4.1 – Initiating an Interconnection Request

PacifiCorp proposes to revise Tariff Section 38.4.1, which outlines requirements for initiating an Interconnection Request, to include a new provision requiring Interconnection Customers of stand-alone Electric Storage Resources to identify any selected operating assumptions (chosen from the OASIS posting described above), as well as any control technologies to limit the operation of the Electric Storage Resource to achieve the operating assumptions.

To facilitate prompt processing of flexible study assumptions pursuant to this reform, PacifiCorp also proposes to post a non-exclusive list of control technologies on its OASIS website.<sup>17</sup> Interconnection Customers could suggest different control technologies (e.g., software and/or hardware) to achieve the selected operating assumptions, as well as update the selection of control technologies later in the process, consistent with existing PacifiCorp Tariff provisions. Any required control technologies would be memorialized in Appendix C of the Interconnection Customer's LGIA.

Accordingly, PacifiCorp proposes the following new language for Section 38.4.1(viii) of its LGIP:

If applicable, (1) the operating assumptions selected in the Interconnection Request, such as charge and discharge parameters, to be used by Transmission Provider that reflect the proposed operation of the Electric Storage Resource, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Electric Storage Resource to its intended operation.

5. Section 42.3 – Execution of Cluster Study Agreement and Scope of the Cluster Study

PacifiCorp proposes to amend Tariff Section 42.3, which regards the execution of the Cluster Study Agreement and the scope of Cluster Study, to state that, for purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study shall use the operating assumptions selected by the Interconnection Customer, unless Good Utility Practice otherwise requires the use of different operating assumptions. PacifiCorp also proposes to allow the Transmission Provider to: (1) specify the operating assumptions in the LGIA; (2) require the Interconnection Customer to use control technologies sufficient to limit the Electric Storage Resource's operation as intended; and (3) pursue termination of the LGIA pursuant to Article 17 of the LGIA if the Interconnection Customer fails to operate the Electric Storage Resource as agreed upon.

PacifiCorp therefore proposes to include a new subsection (d) in Tariff Section 42.3 as follows:<sup>18</sup>

The following applies only to Electric Storage Resources selecting Energy Resource Interconnection Service: For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study shall use operating assumptions, including charge and discharge parameters, that reflect the proposed operation of the Electric Storage Resource as selected by Interconnection Customer in the Interconnection Request, unless Good

---

<sup>17</sup> PacifiCorp has also updated the OASIS website in Appendix F of the LGIA as follows: <http://www.oasis.oati.com/ppw/index.html>.

<sup>18</sup> PacifiCorp Proposed Tariff Section 42.3. To help Section 42.3 of the LGIP be more reader-friendly, PacifiCorp also proposes to enumerate the sub-paragraphs therein. Under this new enumeration, this proposed language would be in the new proposed Section 42.3(d).

Utility Practice, including applicable reliability standards, otherwise require the use of different operating assumptions. If Interconnection Customer makes this request, Transmission Provider may (1) require that Interconnection Customer specify the intended operation of the resource in the LGIA, (2) require that Interconnection Customer demonstrate that the resource has control technologies sufficient to limit its operation as intended and to respond to dispatch instructions by Transmission Provider, and/or (3) pursue termination of the LGIA pursuant to Article 17 of the LGIA if Interconnection Customer fails to operate the Electric Storage Resource in accordance with its intended operation as specified in the LGIA.

6. Section 43.2 – Scope of the Interconnection Facilities Study.

PacifiCorp also proposes to revise Section 43.2 of its Tariff, which describes the Facilities Study Scope similar to Section 8.2 of the *pro forma* LGIP. In particular, PacifiCorp proposes to update this section to clarify that the Facilities Study will identify potential control equipment to facilitate the Interconnection Customer's selected Electric Storage Resource operating assumptions, unless Good Utility Practice, including applicable reliability standards, otherwise requires the use of different operating assumptions.

Accordingly, the underlined excerpt below from Section 43.2 provides PacifiCorp's proposed revisions:

...The Facilities Study will also identify any potential control equipment for (1) requests for Interconnection Service that are lower than the Generating Facility Capacity-, and/or (2) for Electric Storage Resources selecting Energy Resource Interconnection Service: requests to model an Electric Storage Resource using operating assumptions that reflect its proposed operation, as selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise require the use of different operating assumptions.

7. Appendix 1 and Appendix 2 of the LGIP.

PacifiCorp proposes to revise the Interconnection Request form in Attachment N, Appendix 1 of its Tariff to memorialize the Interconnection Customer's selected Electric Storage Resource operating assumptions and proposed control technologies to achieve the assumed operations.

In particular, PacifiCorp proposes the following new Section 9 of Appendix 1:

For Electric Storage Resources selecting Energy Resource Interconnection Service: (1) the operating assumptions reflecting the proposed operation of the Electric Storage Resource, such as charge and discharge parameters, that are provided by Transmission Provider on its OASIS for use in the Cluster Study process, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Electric Storage Resource to its intended operation.



Additionally, PacifiCorp proposes to add similar language as a new Section 6 of Appendix 2, which is the Informational Interconnection Study Request. This modification will allow Informational Interconnection Studies to utilize agreed upon operating assumptions. In particular, PacifiCorp proposes the following:

For Electric Storage Resources selecting Energy Resource Interconnection Service: requested operating assumptions to be studied, such as charge and discharge parameters, that reflect the proposed operation of the Electric Storage Resource.

8. Appendix H of the LGIA.

PacifiCorp proposes to establish a new Attachment H to the LGIA to memorialize the operating assumptions that were used for interconnection study purposes and to which the Interconnection Customer would be required to adhere upon commencing commercial operation. Similar to other material LGIA terms, if the Interconnection Customer fails to operate the Electric Storage Resource in accordance with the conditions memorialized in this new LGIA Appendix, the customer may be considered in breach, which would be resolved pursuant to Article 17 of the LGIA.

In full, the language of the new Appendix H is:

**OPERATION OF AN ELECTRIC STORAGE RESOURCE**

Interconnection Customer selected Energy Resource Interconnection Service pursuant to Article 4.1. Interconnection Customer also elected, and Transmission Provider agreed, to study Interconnection Customer's Electric Storage Resource under certain operating assumptions. Those operating assumptions are:

**[List agreed-upon operating assumptions]**

Interconnection Customer agrees to operate its Electric Storage Resource in conformity with the operating assumptions listed above. Failure to adhere to the operating assumptions constitutes a Breach under this LGIA and Transmission Provider may pursue termination pursuant to Article 17.

Notwithstanding the above, Transmission Provider reserves the right to direct the Electric Storage Resource to operate outside of the agreed upon operating assumptions if it is necessary to maintain the safety and reliability of the electric system, is required by Applicable Reliability Standards, or is otherwise necessitated by Good Utility Practice.

**B. The Proposed Revisions Meet the Commission's Standard for Review**

The Commission will accept non-independent Transmission Provider variations from the *pro forma* LGIP and LGIA so long as the Transmission Provider can demonstrate that the variations are "consistent with or superior to" its final rules in Order Nos. 2003 and 845, *et al.*<sup>19</sup>

---

<sup>19</sup> *Standardization of Generator Interconnection Agreements & Procs.*, Order No. 2003, 104 FERC ¶ 61,103, at P 825 (2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220, *order on reh'g*, Order No. 2003-B, 109

PacifiCorp's proposed Tariff revisions are consistent or superior to the *pro forma* LGIP and LGIA for several reasons, including:

- (1) The proposed Tariff revisions would allow Interconnection Customers the option to have interconnection studies consider the real-world intended operation of their Electric Storage Resources, which in turn should result in more accurate study results and identification of required interconnection facilities and network upgrades.
- (2) The use of real-world operating assumptions for Electric Storage Resources may also lead to fewer Interconnection Customer withdrawals because the Interconnection Customer will have more certainty that the study process did not identify unnecessary Network Upgrades. The resulting interconnection studies should therefore be more in-line with Interconnection Customer expectations and mitigate the need for withdrawal.
- (3) Ultimately, by reducing the risk of unnecessarily-triggered network upgrades, more accurate study assumptions for Electric Storage Resources will mitigate barriers to the integration and market participation of these resources.
- (4) The use of real-world operating assumptions for Electric Storage Resources should lead to a more efficient interconnection process, under which the potential for disputes is reduced, as the Interconnection Customer would have the opportunity to consider certain predetermined operating parameters well before the commencement of the study process. Likewise, the mitigation of over-estimating interconnection facilities and network upgrades should lead to fewer disputes over the results of the interconnection studies and identified required facilities.

### **III. INFORMATION RELATED TO THE EFFECT OF THE PROPOSAL**

The purpose of making the proposed changes is to allow Interconnection Customers to elect to have Electric Storage Resources studied, for interconnection purposes, pursuant to agreed-upon operating parameters. PacifiCorp will continue to charge Interconnection Customers actual costs for interconnection studies, consistent with existing PacifiCorp Tariff requirements. Furthermore, PacifiCorp is not proposing to change its Network Upgrade funding policy and so is not changing the ultimate allocation of costs of interconnection-related facilities.

### **IV. RELATIONSHIP WITH PENDING LGIP PROPOSED REFORMS**

On November 10, 2022, PacifiCorp submitted separate proposed revisions to its LGIP regarding implementing a generator replacement process and a corresponding agreement between PacifiCorp and its proposed Generator Replacement Coordinator in Docket Nos. ER23-407 and ER23-408. Because those proceedings are still pending, the proposed LGIP and LGIA revisions described herein are being made to the currently-effective versions of those documents. Following Commission action in the above-noted proceedings and the instant proceeding, PacifiCorp will make an appropriate filing in eTariff to consolidate all Commission-accepted changes.

---

FERC ¶ 61,287 (2004), *order on reh'g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff'd sub nom. Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007); Order No. 845, *supra* note 11, at 4.

## **V. ADDITIONAL INFORMATION SUBMITTED IN SUPPORT OF FILING**

The following information is required by Section 35.13 of the Commission's Regulations, 18 C.F.R. § 35.13:

### **A. Section 35.13(b)(1): Contents of Filing**

In addition to this Transmittal Letter, this filing includes the following:

- Clean version of the proposed changes to PacifiCorp's LGIP, including Attachment N of the LGIP, and LGIA; and
- Redline version comparing the proposed changes against PacifiCorp's currently-effective LGIP, including Attachment N of the LGIP, and LGIA.

### **B. Section 35.13(b)(2): Requested Effective Date**

PacifiCorp respectfully asks the Commission to accept these tariff changes for filing on the 61<sup>st</sup> day after this filing, which is March 1, 2023. Acceptance by this date will allow implementation of the proposal in advance of the opening of PacifiCorp's 2023 Cluster Request Window and, accordingly, allow potential Interconnection Customers an option to have Electric Storage Resources studied pursuant to agreed-upon operating parameters. PacifiCorp clarifies that the proposed Tariff revisions would not apply retroactively to any scoping and modeling work completed before the date of Commission acceptance.

### **C. Section 35.13(b)(3): The Names and Addresses of Persons to Whom a Copy of the Rate Change Has Been Posted**

PacifiCorp has served a copy of this filing electronically, including attachments, upon to all PacifiCorp customers taking transmission and interconnection service under PacifiCorp's OATT, as well as the state utility regulatory commissions in the jurisdictions where PacifiCorp operates: California Public Utilities Commission, Idaho Public Utilities Commission, Oregon Public Utility Commission, Utah Public Service Commission, Washington Utilities and Transportation Commission, and Wyoming Public Service Commission. Pursuant to Section 35.2(e) of the Commission's regulations,<sup>20</sup> a copy of this filing will be posted for public inspection at PacifiCorp's office: 825 N.E. Multnomah St., Portland, OR 97232 and 1407 W North Temple, Salt Lake City, UT 84116. The filing will also be posted electronically on PacifiCorp's OASIS website: <http://www.oasis.oati.com/ppw/index.html>

### **D. Section 35.13(b)(4): Brief Description of the Rate Change**

See Part II above. The proposed revisions do not constitute a rate change.

### **E. Section 35.13(b)(5): Statement of Reasons for the Rate Change**

---

<sup>20</sup> 18 C.F.R. § 35.2(e).

See Part II above. The proposed revisions do not constitute a rate change.

**F. Section 35.13(b)(7): Statement Showing Expenses or Costs Included in Cost-of-Service Statements**

None of the costs related to this filing have been alleged in any administrative or judicial proceeding to be illegal, duplicative, or unnecessary costs that are demonstrably the product of discriminatory practices.

**G. Waiver Request**

PacifiCorp asserts that this filing substantially complies with the requirements of Part 35 applicable to filings of this kind. To the extent necessary, PacifiCorp respectfully requests waiver of any applicable requirement that is found not to be completely satisfied by this filing.

**VI. COMMUNICATIONS**

Communications with respect to this filing should be sent to the following individuals.

Matthew P. Loftus  
Assistant General Counsel  
PacifiCorp  
825 N.E. Multnomah, Suite 2000  
Portland, OR 97232  
(503) 813-5612  
[Matthew.Loftus@PacifiCorp.com](mailto:Matthew.Loftus@PacifiCorp.com)

Rick Vail  
Vice President, Transmission  
PacifiCorp  
825 N.E. Multnomah, Suite 1600  
Portland, OR 97232  
(503) 813- 6938  
[Richard.Vail@PacifiCorp.com](mailto:Richard.Vail@PacifiCorp.com)

**VII. CONCLUSION**

Wherefore, for the reasons discussed herein, PacifiCorp respectfully requests that the Commission issue an order accepting the proposed Tariff revisions, with the above-requested effective date.

Respectfully submitted,



Matthew P. Loftus  
Assistant General Counsel  
PacifiCorp  
825 N.E. Multnomah, Suite 2000  
Portland, OR 97232  
(503) 813-5612  
[Matthew.Loftus@PacifiCorp.com](mailto:Matthew.Loftus@PacifiCorp.com)

Enclosures

## ATTACHMENTS



## Clean Tariff

#### IV. LARGE GENERATION INTERCONNECTION SERVICE

### 36 Definitions

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

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

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Ancillary Services** shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System to which the Generating Facility is directly interconnected.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider or Interconnection Customer.



**Breach** shall mean the failure of a Party to perform or observe any material term or condition of the Standard Large Generator Interconnection Agreement.

**Breaching Party** shall mean a Party that is in Breach of the Standard Large Generator Interconnection Agreement.

**Bureau of Land Management (BLM)** shall mean the U.S. Department of the Interior, Bureau of Land Management, or its successor agency, which manages federal public lands.

**Business Day** shall mean Monday through Friday, excluding Federal Holidays.

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

**Cluster** shall mean a group of Interconnection Requests (one or more) that are studied together for the purpose of conducting the Cluster Study.

**Cluster Area** shall mean the areas of the Transmission Provider's Transmission System that are included together in a Cluster, as described further in Section 42.4 of this LGIP.

**Cluster Request Window** shall have the meaning set forth in Section 39.2.1 of this LGIP.

**Cluster Re-Study** shall mean a re-study of a Cluster Study conducted pursuant to Section 42.4 of this LGIP.

**Cluster Re-Study Report** shall mean the report issued following completion of a Cluster Re-Study pursuant to Section 42.4 of this LGIP.

**Cluster Re-Study Meeting** shall mean the meeting held to discuss the results of a Cluster Re-Study pursuant to Section 42.4 of this LGIP.

**Cluster Study** shall mean an Interconnection Study evaluating one or more Interconnection Requests within a Cluster as described in more detail in Section 42.4 of this LGIP.

**Cluster Study Agreement** shall mean the form of agreement contained in Appendix 3 to the Standard Large Generator Interconnection Procedures for conducting the Cluster Study.

**Cluster Study Report** shall mean the report issued following completion of a Cluster Study pursuant to Section 42.4 of this LGIP.

**Cluster Study Report Meeting** shall mean the meeting held to discuss the results of a Cluster Study pursuant to Section 42.4 of this LGIP.

**Clustering** shall mean the process whereby a group of Interconnection Requests is studied together, instead of serially, as described in more detail in Section 42.

**Commercial Operation** shall mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the Standard Large Generator Interconnection Agreement.

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

**Contingent Facilities** shall mean those unbuilt Interconnection Facilities and Network Upgrades upon which the Interconnection Request's costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for Re-Studies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing.

**Control Area** shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by an Applicable Reliability Council.

**Customer Engagement Window** shall have the meaning set forth in Section 42.2 of this LGIP.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the Standard Large Generator Interconnection Agreement.

**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 System** shall mean the Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.

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

**Effective Date** shall mean the date on which the Standard Large Generator Interconnection Agreement becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Storage Resource** shall mean a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection

Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the Standard Large Generator Interconnection Agreement to possess black start capability.

**Energy Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or nonfirm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

**Engineering & Procurement (E&P) Agreement** shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission (Commission) or its successor.

**Financial Security** shall mean any of the forms of collateral or security listed in Section 2 of the Creditworthiness Procedures included in Attachment L to this Tariff.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall

not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Informational Interconnection Study** shall mean an analysis based on assumptions specified by Interconnection Customer in the

Informational Interconnection Study Agreement and conducted pursuant to Section 41 of this LGIP.

**Informational Interconnection Study Agreement** shall mean the form of agreement contained in Appendix 2A to the Standard Large Generator Interconnection Procedures for conducting the Informational Interconnection Study.

**Informational Interconnection Study Request** shall mean an Interconnection Customer's request in the form of Appendix 2 to the Standard Large Generator Interconnection Procedures.

**Initial Synchronization Date** shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

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

**Interconnection Customer** shall mean any entity, including the Transmission Provider, Transmission Owner or any of the Affiliates or subsidiaries of either, that proposes to interconnect its Generating Facility with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42 of this LGIP, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Customer" shall also mean any Small Generating Facility that is participating in a Cluster.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of the Standard Large Generator Interconnection Agreement, 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 Transmission Provider's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Transmission 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 Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Interconnection Facilities may be shared by more than one Generating Facility in a Cluster.

**Interconnection Facilities Study** shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider's Interconnection Facilities and Network Upgrades as identified in the Cluster Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider's Transmission System. The scope of the study is defined in Section 43 of the Standard Large Generator Interconnection Procedures.

**Interconnection Facilities Study Agreement** shall mean the form of agreement contained in Appendix 4 of the Standard Large Generator Interconnection Procedures for conducting the Interconnection Facilities Study.

**Interconnection Request** shall mean an Interconnection Customer's request, in the form of Appendix 1 to the Standard Large Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42 of this LGIP, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Request" shall also mean any interconnection request from a Small Generating Facility that is participating in a Cluster.

**Interconnection Service** shall mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Standard Large Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff.

**Interconnection Study** shall mean any of the following studies: the Informational Interconnection Study, the Cluster Study, the Surplus Interconnection Service System Impact Study, and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

**IRS** shall mean the Internal Revenue Service.

**Joint Operating Committee** shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's performance, or non-performance of its obligations under the Standard Large Generator Interconnection Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed at the Generating Facility pursuant to the Standard Large Generator Interconnection Agreement at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

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

**Network Resource** shall mean any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot



be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

**Network Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to integrate its Large Generating Facility with the Transmission Provider's Transmission System (1) in a manner comparable to that in which the Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an RTO or ISO with market based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service in and of itself does not convey transmission service.

**Network Upgrades** shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System.

**Notice of Dispute** shall mean a written notice of a dispute or claim that arises out of or in connection with the Standard Large Generator Interconnection Agreement or its performance.

**Party or Parties** shall mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

**Permissible Technological Advancement** shall mean a technological advancement requested by the Interconnection Customer to the components of the Large Generating Facility described in the Interconnection Customer's Interconnection Request that (a) would result in electrical performance that is equal to or better than the electrical performance expected prior to the change; (b) would not increase the interconnection customer's requested interconnection service, and (c) would not cause any reliability concerns (i.e., material impacts to the transmission system, including impacts to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response). Technological advancements that do not degrade the electrical characteristics of the generating equipment (e.g., the ratings, impedances, efficiencies, capabilities, and performance of the equipment under steady state and dynamic conditions) qualify as having performance that is equal to or better than the performance expected prior to the change. Proposed technological advancements that generally can

be considered Permissible Technological Advancements without extensive or additional studies include, without limitation, advancements to turbines, inverters, plant supervisory equipment or other proposed modifications that may affect a Large Generating Facility's ability to provide ancillary services. Proposed technological advancements that entail changes to the generation technology or fuel type (for example, and without limitation, a change from wind to solar generation technology) are not Permissible Technological Advancements.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

**Preliminary Plan of Development ("PPOD")** shall mean the plan required to be submitted to the BLM, if any, to obtain necessary permits or Right-of-Way grants as may be required for the construction of the Generating Facility and Interconnection Customer Interconnection Facilities, which are to be sited, all or partially, on BLM-managed lands.

**Provisional Interconnection Service** shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the Tariff.

**Provisional Large Generator Interconnection Agreement** shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Large Generator Interconnection Agreement, modified for provisional purposes.

**Queue Position** shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection

Requests, that is established based upon the date and time that Interconnection Customer has provided all items required pursuant to the provisions of Section 38.4.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Large Generator Interconnection Agreement, 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.

**Readiness Milestone Options** shall mean the options set forth in Section 38.4.1(v) of the LGIP.

**Resource Plan** shall mean any process authorized or required by Applicable Laws and Regulations for, inter alia, the selection of Generating Facilities.

**Resource Solicitation Process** shall mean any process authorized or required by Applicable Laws and Regulations for the acquisition of Network Resources.

**Scoping Meeting** shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing the proposed interconnection request, alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to affect such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Site Control** shall mean the exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold interest in a site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of the Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. For purposes of lands managed by a governmental entity (such as BLM), a PPOD or equivalent government-issued documentation, shall be sufficient for demonstrating Site Control as to such government-managed land.

Site Control for any co-located project is demonstrated by a contract or other agreement demonstrating shared land use for all co-located projects that meet the aforementioned provisions of this Site Control definition.

**Small Generating Facility** shall mean a Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**Stand Alone Network Upgrades** shall mean Network Upgrades that are not part of an Affected System that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement. If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

**Standard Large Generator Interconnection Agreement (LGIA)** shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in the Transmission Provider's Tariff.

**Standard Large Generator Interconnection Procedures (LGIP)** shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that are included in the Transmission Provider's Tariff.

**Surplus Interconnection Service** shall mean any unneeded portion of Interconnection Service established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Surplus Interconnection Service System Impact Study** shall mean an engineering study that evaluates the impact of a proposed request for Surplus Interconnection Service on the safety and reliability of Transmission Provider's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating

Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**Surplus Interconnection Service System Impact Study Agreement** shall mean the form of agreement contained in Appendix 5 of the Standard Large Generator Interconnection Procedures for conducting a system impact study for purposes of evaluating a request for Surplus Interconnection Service pursuant to Section 38.3 of this LGIP.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

**Tariff** shall mean the Transmission Provider's Tariff through which open access transmission service and Interconnection Service are offered, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Technological Advancement Request** shall mean an Interconnection Customer's request, submitted pursuant to Section 39.4.6.1, to incorporate a proposed technological advancement pursuant to the Transmission Provider's Technological Change Procedures.

**Technological Advancement Study** shall mean the study performed by the Transmission Provider, as necessary, to determine whether a proposed Technological Advancement constitutes a Permissible Technological Advancement.

**Technological Advancement Study Agreement** shall mean the form of agreement contained in Appendix 8 of the Standard Large Generator Interconnection Procedures for conducting the initial analysis and, if applicable, study to determine whether a proposed technological change is a Permissible Technological Advancement.

**Transmission Owner** shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the

Transmission System at the Point of Interconnection and may be a Party to the Standard Large Generator Interconnection Agreement to the extent necessary.

**Transmission Provider** shall mean the public utility (or its designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

**Transmission Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled, or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Transmission Provider's Interconnection Facilities may be shared by more than one Generating Facility in a given Cluster Study.

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

**Trial Operation** shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Withdrawal Penalty** shall have the meaning set forth in Section 38.7.1 of this LGIP.

## **Marked Tariff**

#### IV. LARGE GENERATION INTERCONNECTION SERVICE

### 36 Definitions

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

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

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Ancillary Services** shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System to which the Generating Facility is directly interconnected.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider or Interconnection Customer.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of the Standard Large Generator Interconnection Agreement.



**Breaching Party** shall mean a Party that is in Breach of the Standard Large Generator Interconnection Agreement.

**Bureau of Land Management (BLM)** shall mean the U.S. Department of the Interior, Bureau of Land Management, or its successor agency, which manages federal public lands.

**Business Day** shall mean Monday through Friday, excluding Federal Holidays.

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

**Cluster** shall mean a group of Interconnection Requests (one or more) that are studied together for the purpose of conducting the Cluster Study.

**Cluster Area** shall mean the areas of the Transmission Provider's Transmission System that are included together in a Cluster, as described further in Section 42.4 of this LGIP.

**Cluster Request Window** shall have the meaning set forth in Section 39.2.1 of this LGIP.

**Cluster Re-Study** shall mean a re-study of a Cluster Study conducted pursuant to Section 42.4 of this LGIP.

**Cluster Re-Study Report** shall mean the report issued following completion of a Cluster Re-Study pursuant to Section 42.4 of this LGIP.

**Cluster Re-Study Meeting** shall mean the meeting held to discuss the results of a Cluster Re-Study pursuant to Section 42.4 of this LGIP.

**Cluster Study** shall mean an Interconnection Study evaluating one or more Interconnection Requests within a Cluster as described in more detail in Section 42.4 of this LGIP.

**Cluster Study Agreement** shall mean the form of agreement contained in Appendix 3 to the Standard Large Generator Interconnection Procedures for conducting the Cluster Study.

**Cluster Study Report** shall mean the report issued following completion of a Cluster Study pursuant to Section 42.4 of this LGIP.

**Cluster Study Report Meeting** shall mean the meeting held to discuss the results of a Cluster Study pursuant to Section 42.4 of this LGIP.

**Clustering** shall mean the process whereby a group of

Interconnection Requests is studied together, instead of serially, as described in more detail in Section 42.

**Commercial Operation** shall mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the Standard Large Generator Interconnection Agreement.

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

**Contingent Facilities** shall mean those unbuilt Interconnection Facilities and Network Upgrades upon which the Interconnection Request's costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for Re-Studies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing.

**Control Area** shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by an Applicable Reliability Council.

**Customer Engagement Window** shall have the meaning set forth in Section 42.2 of this LGIP.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the Standard Large Generator Interconnection Agreement.

**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 System** shall mean the Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.

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

**Effective Date** shall mean the date on which the Standard Large Generator Interconnection Agreement becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Storage Resource** shall mean a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the Standard Large Generator Interconnection Agreement to possess black start capability.

**Energy Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or nonfirm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

**Engineering & Procurement (E&P) Agreement** shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission (Commission) or its successor.

**Financial Security** shall mean any of the forms of collateral or security listed in Section 2 of the Creditworthiness Procedures included in Attachment L to this Tariff.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and

exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Informational Interconnection Study** shall mean an analysis based on assumptions specified by Interconnection Customer in the Informational Interconnection Study Agreement and conducted pursuant to Section 41 of this LGIP.

**Informational Interconnection Study Agreement** shall mean the form of agreement contained in Appendix 2A to the Standard Large Generator Interconnection Procedures for conducting the Informational Interconnection Study.

**Informational Interconnection Study Request** shall mean an Interconnection Customer's request in the form of Appendix 2 to the Standard Large Generator Interconnection Procedures.

**Initial Synchronization Date** shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

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

**Interconnection Customer** shall mean any entity, including the Transmission Provider, Transmission Owner or any of the Affiliates or subsidiaries of either, that proposes to interconnect its Generating Facility with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42 of this LGIP, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Customer" shall also mean any Small Generating Facility that is participating in a Cluster.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of the

Standard Large Generator Interconnection Agreement, 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 Transmission Provider's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Transmission 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 Transmission Provider's Transmission System.

Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Interconnection Facilities may be shared by more than one Generating Facility in a Cluster.

**Interconnection Facilities Study** shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider's Interconnection Facilities and Network Upgrades as identified in the Cluster Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider's Transmission System. The scope of the study is defined in Section 43 of the Standard Large Generator Interconnection Procedures.

**Interconnection Facilities Study Agreement** shall mean the form of agreement contained in Appendix 4 of the Standard Large Generator Interconnection Procedures for conducting the Interconnection Facilities Study.

**Interconnection Request** shall mean an Interconnection Customer's request, in the form of Appendix 1 to the Standard Large Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42 of this LGIP, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Request" shall also mean any interconnection request from a Small Generating Facility that is participating in a Cluster.

**Interconnection Service** shall mean the service provided by the Transmission Provider associated with interconnecting the

Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Standard Large Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff.

**Interconnection Study** shall mean any of the following studies: the Informational Interconnection Study, the Cluster Study, the Surplus Interconnection Service System Impact Study, and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

**IRS** shall mean the Internal Revenue Service.

**Joint Operating Committee** shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's performance, or non-performance of its obligations under the Standard Large Generator Interconnection Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed at the Generating Facility pursuant to the Standard Large Generator Interconnection Agreement at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

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

**Network Resource** shall mean any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof,

that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

**Network Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to integrate its Large Generating Facility with the Transmission Provider's Transmission System (1) in a manner comparable to that in which the Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an RTO or ISO with market based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service in and of itself does not convey transmission service.

**Network Upgrades** shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System.

**Notice of Dispute** shall mean a written notice of a dispute or claim that arises out of or in connection with the Standard Large Generator Interconnection Agreement or its performance.

**Party or Parties** shall mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

**Permissible Technological Advancement** shall mean a technological advancement requested by the Interconnection Customer to the components of the Large Generating Facility described in the Interconnection Customer's Interconnection Request that (a) would result in electrical performance that is equal to or better than the electrical performance expected prior to the change; (b) would not increase the interconnection customer's requested interconnection service, and (c) would not cause any reliability concerns (i.e., material impacts to the transmission system, including impacts to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response). Technological advancements that do not degrade the electrical characteristics of the generating equipment (e.g., the ratings, impedances, efficiencies, capabilities, and performance of the equipment under steady state and dynamic conditions) qualify as having performance that is equal to or better than the performance expected prior to the change. Proposed technological advancements that generally can be considered Permissible Technological Advancements without extensive or additional studies include, without limitation, advancements to turbines, inverters, plant supervisory equipment or other proposed modifications that may affect a Large Generating Facility's ability to provide ancillary services. Proposed technological advancements that entail changes to the



generation technology or fuel type (for example, and without limitation, a change from wind to solar generation technology) are not Permissible Technological Advancements.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

**Preliminary Plan of Development ("PPOD")** shall mean the plan required to be submitted to the BLM, if any, to obtain necessary permits or Right-of-Way grants as may be required for the construction of the Generating Facility and Interconnection Customer Interconnection Facilities, which are to be sited, all or partially, on BLM-managed lands.

**Provisional Interconnection Service** shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the Tariff.

**Provisional Large Generator Interconnection Agreement** shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Large Generator Interconnection Agreement, modified for provisional purposes.

**Queue Position** shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time that Interconnection Customer has provided all items required pursuant to the provisions of Section 38.4.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Large Generator Interconnection Agreement, 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.

**Readiness Milestone Options** shall mean the options set forth in Section 38.4.1(v) of the LGIP.

**Resource Plan** shall mean any process authorized or required by Applicable Laws and Regulations for, inter alia, the selection of Generating Facilities.

**Resource Solicitation Process** shall mean any process authorized or required by Applicable Laws and Regulations for the acquisition of Network Resources.

**Scoping Meeting** shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing the proposed interconnection request, alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to affect such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Site Control** shall mean the exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold interest in a site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of the Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. For purposes of lands managed by a governmental entity (such as BLM), a PPOD or equivalent government-issued documentation, shall be sufficient for demonstrating Site Control as to such government-managed land.

Site Control for any co-located project is demonstrated by a contract or other agreement demonstrating shared land use for all co-located projects that meet the aforementioned provisions of this Site Control definition.

**Small Generating Facility** shall mean a Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**Stand Alone Network Upgrades** shall mean Network Upgrades that are not part of an Affected System that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement. If the Transmission Provider and

Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

**Standard Large Generator Interconnection Agreement (LGIA)** shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in the Transmission Provider's Tariff.

**Standard Large Generator Interconnection Procedures (LGIP)** shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that are included in the Transmission Provider's Tariff.

**Surplus Interconnection Service** shall mean any unneeded portion of Interconnection Service established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Surplus Interconnection Service System Impact Study** shall mean an engineering study that evaluates the impact of a proposed request for Surplus Interconnection Service on the safety and reliability of Transmission Provider's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**Surplus Interconnection Service System Impact Study Agreement** shall mean the form of agreement contained in Appendix 5 of the Standard Large Generator Interconnection Procedures for conducting a system impact study for purposes of evaluating a request for Surplus Interconnection Service pursuant to Section 38.3 of this LGIP.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

**Tariff** shall mean the Transmission Provider's Tariff through which open access transmission service and Interconnection Service are offered, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Technological Advancement Request** shall mean an Interconnection Customer's request, submitted pursuant to Section 39.4.6.1, to incorporate a proposed technological advancement pursuant to the Transmission Provider's Technological Change Procedures.

**Technological Advancement Study** shall mean the study performed by the Transmission Provider, as necessary, to determine whether a proposed Technological Advancement constitutes a Permissible Technological Advancement.

**Technological Advancement Study Agreement** shall mean the form of agreement contained in Appendix 8 of the Standard Large Generator Interconnection Procedures for conducting the initial analysis and, if applicable, study to determine whether a proposed technological change is a Permissible Technological Advancement.

**Transmission Owner** shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Standard Large Generator Interconnection Agreement to the extent necessary.

**Transmission Provider** shall mean the public utility (or its designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

**Transmission Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled, or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Transmission Provider's Interconnection Facilities may be shared by more than one Generating Facility in a given Cluster Study.

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

**Trial Operation** shall mean the period during which

Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Withdrawal Penalty** shall have the meaning set forth in Section 38.7.1 of this LGIP.

**38 Interconnection Requests and Informational Interconnection Study Requests**

## Clean Tariff

#### IV. LARGE GENERATION INTERCONNECTION SERVICE

### 38 Interconnection Requests and Informational Interconnection Study Requests

**38.1 Interconnection Requests:** An Interconnection Customer shall submit to Transmission Provider, during a Cluster Request Window, an Interconnection Request in the form of Appendix 1 to this LGIP and a refundable deposit of:

- a. \$75,000 for requests of less than 50 MW;
- b. \$150,000 for requests of 50 MW and greater, but less than 200 MW; or
- c. \$250,000 for requests of 200 MW and greater.

Pursuant to Section 39.2.2, Transmission Provider shall apply the deposit toward the cost of a Cluster Study into which Interconnection Customer is admitted including such Interconnection Customer's individual Facilities Study, and shall be used to process Interconnection Customer's request. For Small Generating Facilities, the appropriate application fee or deposit shall be determined pursuant to Section 49.3 of Transmission Provider's OATT. Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At Interconnection Customer's option, Transmission Provider and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. Interconnection Customer will select the definitive Point of Interconnection to be studied no



later than the execution of the Cluster Study Agreement. For purposes of clustering Interconnection Service requests, Transmission Provider may make reasonable changes to the requested Point of Interconnection to facilitate efficient interconnection of Interconnection Customers at common points of interconnection. Transmission Provider shall notify Interconnection Customers in writing of any intended changes to the requested Point of Interconnection and the Point of Interconnection shall only change upon mutual agreement.

Transmission Provider shall have a process in place to consider requests for Interconnection Service below the Generating Facility Capacity. These requests for Interconnection Service shall be studied at the level of Interconnection Service requested for purposes of Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer. If after the additional studies are complete, Transmission Provider determines that additional Network Upgrades are necessary, then Transmission Provider must: (1) specify which additional Network Upgrade costs are based on which studies; and (2) provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade costs required for safety and reliability also will be borne by the Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the LGIA. The necessary control technologies and protection systems shall be established in Appendix C of the executed, or requested to be filed unexecuted, LGIA.

The following paragraph applies only to Electric Storage Resources selecting Energy Resource Interconnection Service: Transmission Provider shall establish operating assumptions, including charge and discharge parameters, that reflect the anticipated operation of an Electric Storage Resource in different regions on Transmission Provider's system. By no later than 30 Calendar Days before the Cluster Request

Window, Transmission Provider shall post on OASIS such preestablished operating assumptions. Transmission Provider shall have a process in place to study Electric Storage Resources using such preestablished operating assumptions, if selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise requires use of different operating assumptions. These requests for Interconnection Service shall be studied using the selected operating assumptions for purposes of Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the LGIA. The necessary operating restrictions of the Electric Storage Resource shall be established in Appendix H, and the necessary control technologies and protection systems shall be established in Appendix C of that executed, or requested to be filed unexecuted, LGIA.

### **38.2 Identification of Types of Interconnection Services:**

At the time the Interconnection Request is submitted, Interconnection Customer must request either Energy Resource Interconnection Service or Network Resource Interconnection Service, as described; provided, however, any Interconnection Customer requesting Network Resource Interconnection Service may also request that it be concurrently studied for Energy Resource Interconnection Service, up to the point of five (5) Business Days after the initial Cluster Study Report Meeting held under Section 42.4(c). Interconnection Customer may then elect to proceed with Network Resource Interconnection Service or to proceed under a lower level of interconnection service to the extent that only certain upgrades will be completed.

#### **38.2.1 Energy Resource Interconnection Service.**

**38.2.1.1 The Product.** Energy Resource Interconnection Service allows

Interconnection Customer to connect the Large Generating Facility to the Transmission System and be eligible to deliver the Large Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. Energy Resource Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or Point of Delivery.

**38.2.1.2 The Study.** The study consists of short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The short circuit/fault duty analysis would identify direct Interconnection Facilities required and the Network Upgrades necessary to address short circuit issues associated with the Interconnection Facilities. The stability and steady state studies would identify necessary upgrades to allow full output of the proposed Large Generating Facility, except for Electric Storage Resources that request to use operating assumptions pursuant to section 38.1, and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Large Generating Facility without requiring additional Network Upgrades.

## **38.2.2 Network Resource Interconnection Service.**

**38.2.2.1 The Product.** Transmission Provider must conduct the necessary studies and construct the Network Upgrades needed to integrate the Large Generating Facility (1) in a manner comparable to that in which Transmission Provider integrates its generating facilities to serve native

load customers; or (2) in an ISO or RTO with market based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service Allows Interconnection Customer's Large Generating Facility to be designated as a Network Resource, up to the Large Generating Facility's full output, on the same basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur.

**38.2.2.2 The Study.** The Interconnection Study for Network Resource Interconnection Service shall assure that Interconnection Customer's Large Generating Facility meets the requirements for Network Resource Interconnection Service and as a general matter, that such Large Generating Facility's interconnection is also studied with Transmission Provider's Transmission System at peak load, under a variety of severely stressed conditions, to determine whether, with the Large Generating Facility at full output, the aggregate of generation in the local area can be delivered to the aggregate of load on Transmission Provider's Transmission System, consistent with Transmission Provider's reliability criteria and procedures. This approach assumes that some portion of existing Network Resources are displaced by the output of Interconnection Customer's Large Generating Facility. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery. The Transmission Provider may also study

the Transmission System under non-peak load conditions. However, upon request by the Interconnection Customer, the Transmission Provider must explain in writing to the Interconnection Customer why the study of non-peak load conditions is required for reliability purposes.

### **38.3 Utilization of Surplus Interconnection Service.**

Transmission Provider must provide a process that allows an Interconnection Customer to utilize or transfer Surplus Interconnection Service at an existing Point of Interconnection. The original Interconnection Customer or one of its affiliates shall have priority to utilize Surplus Interconnection Service. If the existing Interconnection Customer or one of its affiliates does not exercise its priority, then that service may be made available to other potential Interconnection Customers.

#### **38.3.1 Surplus Interconnection Service Requests.**

Surplus Interconnection Service requests may be made by the existing Interconnection Customer whose Generating Facility is already interconnected or one of its affiliates. Surplus Interconnection Service requests also may be made by another Interconnection Customer. Transmission Provider shall provide a process for evaluating Interconnection Requests for Surplus Interconnection Service. Studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses, and any other appropriate studies. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. If the Surplus Interconnection Service was not studied under off-peak conditions, off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. If the original system impact study or Cluster Study is not available for the Surplus Interconnection Service, both

off-peak and peak analysis may need to be performed for the existing Generating Facility associated with the request for Surplus Interconnection Service. The reactive power, short circuit/fault duty, stability, and steady-state analyses for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary.

Interconnection Customers shall request Surplus Interconnection Service by submitting to the Transmission Provider a completed request in the form of, and in accordance with, Appendix 1 of this LGIP. Surplus Interconnection Service requests shall be processed outside of the interconnection queue. In order to deem a request for Surplus Interconnection Service valid and complete, a deposit of \$10,000 must also be received by the Transmission Provider. After a request for Surplus Interconnection Service has been deemed valid and complete by the Transmission Provider, the Transmission Provider will notify the Interconnection Customer(s) and schedule a scoping meeting within five (5) Business Days.

### **38.3.2 Surplus Interconnection Service System Impact Study.**

**38.3.2.1** Within five (5) Business Days following the scoping meeting, Interconnection Customer shall notify the Transmission Provider in writing that the Interconnection Customer wants to proceed with the process for requesting Surplus Interconnection Service. Within five (5) days of the notification that Interconnection Customer wants to proceed with the process for requesting Surplus Interconnection Service, Transmission Provider shall tender to Interconnection Customer the Surplus Interconnection Service System Impact Study Agreement in the form of Appendix 5 of this LGIP, which includes a good faith estimate of the estimated timeframe for completing the Surplus Interconnection Service System Impact Study. The Surplus Interconnection Service

System Impact Study Agreement shall specify that Interconnection Customer is responsible for the actual cost of the Surplus Interconnection Service System Impact Study.

**38.3.2.2** Interconnection Customer shall execute the Surplus Interconnection Service System Impact Study Agreement and deliver the executed Surplus Interconnection Service System Impact Study Agreement to Transmission Provider no later than thirty (30) Calendar Days after its receipt.

**38.3.2.3** As part of its Surplus Interconnection Service System Impact Study process, the Transmission Provider will evaluate the original interconnection system impact study, if any, or applicable Cluster Studies, to determine their suitability for use in the evaluation of the request for Surplus Interconnection Service. Inclusive of any Surplus Interconnection Service System Impact Study(ies) performed to evaluate the existing Interconnection Service and deemed suitable for use in the evaluation of the request for Surplus Interconnection Service, studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses, and any other appropriate studies. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. If the existing Interconnection Service was not studied under off-peak conditions or such study was not deemed suitable, off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. If an existing interconnection system impact study or Cluster Study is not available or deemed suitable for the Surplus Interconnection Service, both off-peak and peak analysis may need to be performed for the existing Generating Facility associated with the request for Surplus Interconnection Service. The studies performed to evaluate a request for Surplus Interconnection Service

will identify if any additional Interconnection Facilities and/or Network Upgrades are necessary. If any additional Network Upgrades are necessary, the Surplus Interconnection Request will be denied. Necessary control technologies will also be identified in the studies performed.

**38.3.2.4** Transmission Provider shall use Reasonable Efforts to complete the Surplus Interconnection Service System Impact Study within ninety (90) Calendar Days after the receipt of the executed Surplus Interconnection Service System Impact Study Agreement and any technical data required to complete the study. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Surplus Interconnection Service System Impact Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Surplus Interconnection Service System Impact Study. If Transmission Provider is unable to complete the Surplus Interconnection Service System Impact Study within the time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

**38.3.2.5** Within ten (10) Business Days of providing a Surplus Interconnection Service System Impact Study report to Interconnection Customer, Transmission Provider shall establish a date agreeable to Interconnection Customer to meet to discuss the results of the Surplus Interconnection Service System Impact Study. Such meeting shall be no later than thirty (30) Calendar Days from issuance of the Surplus Interconnection Service System Impact Study report, unless otherwise mutually agreed upon by the Parties.

### **38.3.3 Surplus Interconnection Service Agreement.**

**38.3.3.1** Within thirty (30) Calendar Days after delivery of the Surplus Interconnection Service



System Impact Study report, Transmission Provider shall tender (1) a draft Surplus Interconnection Service Agreement to the original Interconnection Customer and the Surplus Interconnection Service Customer for their execution, and (2) a draft Amended and Restated Large Generator Interconnection Agreement to the original Interconnection Customer that is revised as necessary to reflect the new Surplus Interconnection Service. Transmission Provider is not required to execute an interconnection agreement for Surplus Interconnection Service if the agreement does not meet the definition set forth in the Tariff or if either the original or surplus Interconnection Customer does not agree to the terms of such service, including any requirements that may be identified by the Transmission Provider in the studies for Surplus Interconnection Service.

**38.3.3.2** Transmission Provider and Interconnection Customers shall negotiate concerning any disputed provisions of the appendices to the draft Surplus Interconnection Service Agreement for not more than sixty (60) Calendar Days after tender of the draft Surplus Interconnection Service Agreement. If any Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft Surplus Interconnection Service Agreement and request submission of the unexecuted Surplus Interconnection Service Agreement to FERC or initiate Dispute Resolution procedures pursuant to Section 13.5 of the LGIP. The Surplus Interconnection Service request shall be deemed withdrawn if, within sixty (60) Calendar Days of tender of the draft Surplus Interconnection Service Agreement and unless otherwise agreed by the Parties: (1) the original Interconnection Customer fails to also execute the draft amended and restated LGIA following its execution of the Surplus Interconnection Service Agreement, or (2) either the original Interconnection Customer or the surplus

Interconnection Customer has not (a) executed the Surplus Interconnection Service Agreement, (b) requested filing of an unexecuted Surplus Interconnection Service Agreement, or (c) initiated Dispute Resolution procedures pursuant to Section 13.5 of the LGIP.

**38.3.3.3** As soon as practicable, but not later than fifteen (15) Business Days after receiving the two executed originals of the tendered Surplus Interconnection Service Agreement or the request to file an unexecuted Surplus Interconnection Service Agreement, Transmission Provider shall file the executed or unexecuted Surplus Interconnection Service Agreement with FERC. To the extent the Surplus Interconnection Service Agreement is unexecuted, the filing will contain an explanation of any matters as to which Interconnection Customer(s) and Transmission Provider disagree and support for the costs that Transmission Provider proposes to charge to Interconnection Customer(s) under the Surplus Interconnection Service Agreement. An unexecuted Surplus Interconnection Service Agreement should contain terms and conditions deemed appropriate by Transmission Provider for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities under the agreed-upon terms of the unexecuted Surplus Interconnection Service Agreement, they may proceed pending FERC action.

#### **38.4 Valid Interconnection Request:**

##### **38.4.1 Initiating an Interconnection Request.**

An Interconnection Customer wishing to join a Cluster shall submit its Interconnection Request to Transmission Provider within, and no later than the close of the Cluster Request Window. To initiate an Interconnection Request, Interconnection Customer must submit all of the following:

- (i) applicable deposit amount, pursuant to Section 38.1,
- (ii) a completed application in the form of Appendix 1 (including applicable technical information),
- (iii) Site Control demonstration pursuant to Section 38.4.1(iii) (a) or (b) below:
  - a. Demonstration of actual Site Control. For demonstration of Site Control of Large Generating Facilities: Specifications for acceptable site size for the purposes of demonstrating Site Control are posted on Transmission Provider's OASIS website. Interconnection Customer may propose alternative specifications for site size to those posted on OASIS for Transmission Provider approval. In the event Transmission Provider and Interconnection Customer cannot reach agreement related to adequacy of site size, Transmission Provider will accept a Professional Engineer (licensed in the state of the Point of Interconnection) stamped site plan drawing that depicts the proposed generation arrangement and specifies the maximum facility output for that arrangement. Demonstration of Site Control for Small Generating Facilities shall be pursuant to Section 49.5.
  - b. Posting of an additional deposit of \$10,000 in lieu-of Site Control. Deposits paid pursuant to this Section 38.4.1(iii) shall be refunded to the Interconnection Customer upon Commercial Operation or upon withdrawal pursuant to Section 38.7, subject to applicable Withdrawal Penalties.
- (iv) Generating Facility size (MW) (and requested Interconnection Service amount if the requested Interconnection Service is less than the Generating Facility Capacity);

(v) One of the following Readiness Milestone Options totaling the entire capacity of the Generating Facility (or requested Interconnection Service amount if the requested Interconnection Service is less than the Generating Facility Capacity).

(a) Executed term sheet (or comparable evidence) related to a contract for sale of (i) the constructed Generating Facility to a load-serving entity or to a commercial, industrial, or other large end-use customer, (ii) the Generating Facility's energy where the term of sale is not less than five (5) years, or (iii) the Generating Facility's ancillary services if the Generating Facility is an electric storage resource where the term of sale is not less than five (5) years;

(b) Executed contract binding upon the parties for sale of (i) the constructed Generating Facility to a load-serving entity or to a commercial, industrial, or other large end-use customer, (ii) the Generating Facility's energy where the term of sale is not less than five (5) years, or (iii) the Generating Facility's ancillary services if the Generating Facility is an electric storage resource where the term of sale is not less than five (5) years;

(c) Reasonable evidence that the Generating Facility has been selected in a Resource Plan or Resource Solicitation Process by or for a load-serving entity, is being developed by a load-serving entity, or is being developed for purposes of a sale to a commercial, industrial, or other large end-use customer;

(d) A refundable deposit of \$3,000 per MW of generating capacity proposed in the Interconnection Request; or

(e) Site specific Purchase Order for generating equipment specific to the Interconnection Request, or statement signed by an officer or authorized agent of the Interconnection Customer attesting that the Generating Facility included is to be supplied with turbines (or equivalent major electric generating components) with a manufacturer's blanket purchase agreement to which Interconnection Customer is a party. This blanket purchase agreement shall be provided to Transmission Provider.

(vi) A Point of Interconnection.

(vii) Whether the Interconnection Request shall be studied as a Network Resource Interconnection Service or an Energy Resource Interconnection Service, consistent with Section 38.2.

(viii) If applicable, (1) the operating assumptions selected in the Interconnection Request, such as charge and discharge parameters, to be used by Transmission Provider that reflect the proposed operation of the Electric Storage Resource, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Electric Storage Resource to its intended operation.

Interconnection Customer shall promptly inform Transmission Provider of any material change to Interconnection Customer's demonstration of Site Control under Section 38.4.1(iii) or its satisfaction of a Readiness Milestone Option as selected under Section 38.4.1(v) or Section 43.1, as applicable. Upon Transmission Provider determining separately that Interconnection

Customer no longer satisfies Site Control or a Readiness Milestone Option, Transmission Provider shall give Interconnection Customer fifteen (15) Business Days to demonstrate satisfaction with the applicable requirement to Transmission Provider's satisfaction. Absent such demonstration, Transmission Provider will deem the subject Interconnection Request withdrawn.

The expected In-Service Date of the new Large Generating Facility or increase in capacity of the existing Generating Facility shall be no more than the process window for the regional expansion planning period (or in the absence of a regional planning process, the process window for Transmission Provider's expansion planning period) not to exceed seven (7) years from the date the Interconnection Request is received by Transmission Provider, unless Interconnection Customer demonstrates that engineering, permitting and construction of the new Large Generating Facility or increase in capacity of the existing Generating Facility will take longer than the regional expansion planning period. The In-Service Date may succeed the date the Interconnection Request is received by Transmission Provider by a period up to ten (10) years, or longer where Interconnection Customer and Transmission Provider agree, such agreement not to be unreasonably withheld.

#### **38.4.2 Acknowledgment of Interconnection Request.**

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

#### **38.4.3 Deficiencies in Interconnection Request.**

An Interconnection Request will not be considered to be a valid request until all items in Section 38.4.1 have been received by Transmission Provider. If an Interconnection Request fails to meet the requirements set forth in Section 38.4.1, Transmission Provider

shall notify 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. Interconnection Customer shall provide Transmission Provider the additional requested information needed to constitute a valid request within ten (10) Business Days after receipt of such notice but no later than the close of the Cluster Request Window. At any time, if Transmission Provider identifies issues with technical data provided by Interconnection Customer, Interconnection Customer and Transmission Provider shall work expeditiously and in good faith to remedy any data issues. Failure by Interconnection Customer to comply with this Section 38.4.3 shall be treated in accordance with Section 38.7.

Transmission Provider shall determine if the information contained in the Interconnection Request is sufficient to start the Cluster Study by the close of the Customer Engagement Window.

#### **38.4.4 Scoping Meeting.**

During the Customer Engagement Window, Transmission Provider shall hold a Scoping Meeting with all Interconnection Customers whose valid Interconnection Requests were received in that Cluster Request Window. If requested by an Interconnection Customer, Transmission Provider shall also hold individual customer-specific Scoping Meetings, which must be requested no later than fifteen (15) Business Days after the close of the Cluster Request Window.

The purpose of the Scoping Meeting shall be to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to discuss

the Cluster Area materials posted to OASIS pursuant to Section 42.4, and to analyze such information. Transmission Provider and Interconnection Customer will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. Transmission Provider and Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. The duration of the meeting shall be sufficient to accomplish its purpose.

### **38.5 OASIS Posting:**

**38.5.1** Transmission Provider will maintain on its OASIS a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the status of the Interconnection Request, including Queue Position; (vi) the type of Interconnection Service being requested; (vii) the availability of any studies related to the Interconnection Request; (viii) the date of the Interconnection Request; (ix) the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); and (x) for Interconnection Requests that have not resulted in a completed interconnection, an explanation as to why it was not completed. Except in the case of an Affiliate, the list will not disclose the identity of Interconnection Customer until Interconnection Customer executes an LGIA or requests that Transmission Provider file an unexecuted LGIA with FERC. Before holding a Scoping Meeting with its Affiliate, Transmission Provider shall post on



OASIS an advance notice of its intent to do so. Transmission Provider shall post to its OASIS site any deviations from the study timelines set forth herein. Interconnection Study reports shall be posted to Transmission Provider's OASIS site subsequent to the meeting between Interconnection Customer and Transmission Provider to discuss the applicable study results. Transmission Provider shall also post any known deviations in the Large Generating Facility's In-Service Date.

**38.5.2 Requirement to Post Interconnection Study Metrics.**

Transmission Provider will maintain on its OASIS or its website summary statistics related to processing Interconnection Studies pursuant to Interconnection Requests, updated quarterly. If Transmission Provider posts this information on its website, a link to the information must be provided on Transmission Provider's OASIS site. For each calendar quarter, Transmission Provider must calculate and post the information detailed in Sections 38.5.2.1 through 38.5.2.4.

**38.5.2.1 Interconnection Cluster Study Processing Time.**

(A) Number of Interconnection Requests that had Cluster Studies completed within Transmission Provider's coordinated region during the reporting quarter,

(B) Number of Interconnection Requests that had Cluster Studies completed within Transmission Provider's coordinated region during the reporting quarter that were completed more than one hundred fifty (150) Calendar Days after commencement of the Cluster Study,

(C) At the end of the reporting quarter, the number of active valid Interconnection Requests with ongoing

incomplete Cluster Studies one hundred fifty (150) Calendar Days after commencement of the Cluster Study,

(D) Mean time (in days), Cluster Studies completed within Transmission Provider's coordinated region during the reporting quarter, from the commencement of the Cluster Study to the date when Transmission Provider provided the completed Cluster Study to the Interconnection Customer,

(E) Percentage of Cluster Studies exceeding one hundred fifty (150) Calendar Days to complete this reporting quarter, calculated as the sum of 38.5.2.1(B) plus 38.5.2.1(C) divided by the sum of 38.5.2.1(A) plus 38.5.2.1(C)).

**38.5.2.2 Interconnection Facilities Studies Processing Time.**

(A) Number of Interconnection Requests that had Interconnection Facilities Studies that are completed within Transmission Provider's coordinated region during the reporting quarter,

(B) Number of Interconnection Requests that had Interconnection Facilities Studies that are completed within Transmission Provider's coordinated region during the reporting quarter that were completed more 90 or 180 Calendar Days (study duration depends on Interconnection Customer's selection on Facilities Study Agreement) after receipt by Transmission Provider of the Interconnection Customer's executed Interconnection Facilities Study Agreement,

(C) At the end of the reporting quarter, the number of active valid Interconnection Service requests with ongoing incomplete Interconnection Facilities Studies where such Interconnection Requests had executed Interconnection Facilities Studies Agreement received by Transmission Provider more than 90 or 180 Calendar Days (study duration depends on Interconnection Customer's selection on Facilities Study Agreement) before the reporting quarter end,

(D) Mean time (in days), for Interconnection Facilities Studies completed within Transmission Provider's coordinated region during the reporting quarter, calculated from the date when Transmission Provider received the executed Interconnection Facilities Study Agreement to the date when Transmission Provider provided the completed Interconnection Facilities Study to the Interconnection Customer,

(E) Percentage of delayed Interconnection Facilities Studies this reporting quarter, calculated as the sum of 38.5.2.2(B) plus 38.5.2.2(C) divided by the sum of 38.5.2.2(A) plus 38.5.2.2(C).

**38.5.2.3 Interconnection Service Requests  
Withdrawn from Interconnection Queue.**

(A) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter,

(B) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before

completion of any interconnection studies or execution of any interconnection study agreements,

(C) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of a Cluster Study,

(D) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of an Interconnection Facilities Study,

(E) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue after execution of a generator interconnection agreement or Interconnection Customer requests the filing of an unexecuted, new interconnection agreement,

(F) Mean time (in days), for all withdrawn Interconnection Requests, from the date when the request was determined to be valid to when Transmission Provider received the request to withdraw from the queue.

**38.5.3** Transmission Provider is required to post on OASIS or its website the measures in paragraph 38.5.2.1(A) through paragraph 38.5.2.3(F) for each calendar quarter within 30 Calendar Days of the end of the calendar quarter. Transmission Provider will keep the quarterly measures posted on OASIS or its website for three calendar years with the first required report to be in the first quarter of 2020. If Transmission Provider retains this information on its website, a link to the information must be provided on Transmission Provider's OASIS site.

**38.5.4** In the event that any of the values calculated in paragraphs 38.5.2.1(E), or 38.5.2.2(E) exceeds 25 percent for two consecutive calendar quarters, Transmission Provider will have to comply with the measures below for the next four consecutive calendar quarters and must continue reporting this information until Transmission Provider reports four consecutive calendar quarters without the values calculated in 38.5.2.1(E) or 38.5.2.2(E) exceeding 25 percent for two consecutive calendar quarters:

(i) Transmission Provider must submit a report to the Commission describing the reason for each study or group of clustered studies pursuant to an Interconnection Request that exceeded its deadline (i.e., 150, 90 or 180 days) for completion (excluding any allowance for Reasonable Efforts). Transmission Provider must describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The report must be filed at the Commission within 45 Calendar Days of the end of the calendar quarter.

(ii) Transmission Provider shall aggregate the total number of employee-hours and third party consultant hours expended towards interconnection studies within its coordinated region that quarter and post on OASIS or its website. If Transmission Provider posts this information on its website, a link to the information must be provided on Transmission Provider's OASIS site. This information is to be posted within 30 Calendar Days of the end of the calendar quarter.

**38.6 Coordination with Affected Systems:** Transmission Provider 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 (if available) in its applicable Interconnection Study within the time frame specified in this LGIP. Transmission Provider will include such Affected System Operators in all meetings held with

Interconnection Customer as required by this LGIP. Interconnection Customer will cooperate with Transmission Provider in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A Transmission Provider which may be an Affected System shall cooperate with Transmission Provider with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems. It is the responsibility of the Affected System Owner to provide the requirements or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to (i) complete any interconnection studies and (ii) construct any necessary Interconnection Facilities and Network Upgrades needed to reliably interconnect at the requested service level.

**38.7 Withdrawal:** Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to Transmission Provider. In addition, if Interconnection Customer fails to adhere to all requirements of this LGIP, except as provided in Section 48.5 (Disputes), Transmission Provider shall deem the Interconnection Request to be withdrawn and shall provide written notice to Interconnection Customer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, Interconnection Customer shall have fifteen (15) Business Days in which to either respond with information or actions that cures the deficiency or to notify Transmission Provider of its intent to pursue Dispute Resolution.

Withdrawal shall result in the loss of Interconnection Customer's Queue Position, including any placement in a particular Cluster. If an Interconnection Customer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, 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 Transmission Provider all costs

that Transmission Provider prudently incurs with respect to that Interconnection Request prior to Transmission Provider's receipt of notice described above. Interconnection Customer must pay all monies due to Transmission Provider before it is allowed to obtain any Interconnection Study data or results.

In the case of a withdrawal, Transmission Provider shall:

(i) update OASIS as appropriate, including any Queue Position changes;

(ii) impose the applicable Withdrawal Penalty described in Section 38.7.1, if any; and

(iii) issue any refund to Interconnection Customer pursuant to Section 48.3.2.

In the event of such withdrawal, Transmission Provider, subject to the confidentiality provisions of Section 48.1, shall provide, at Interconnection Customer's request, all information that Transmission Provider developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

**38.7.1 Withdrawal Penalty.** Except as provided in Attachment W of Transmission Provider's Tariff, an Interconnection Customer shall be subject to a penalty ("Withdrawal Penalty") if it withdraws its Interconnection Request or the Generating Facility does not otherwise reach Commercial Operation unless (1) the withdrawal does not negatively affect the timing or cost of other projects within the same Cluster as determined by Transmission Provider; (2) the Interconnection Customer withdraws after receiving the most recent Cluster Study Report and the costs assigned to the Interconnection Request identified in that report have increased by more than twenty-five percent (25%) compared to costs identified in the previous Cluster Study Report; (3) the Interconnection Customer withdraws after receiving the individual Facilities Study report and the costs assigned to the

Interconnection Request identified in that report have increased by more than 100 percent compared to costs identified in the most recent Cluster Study Report. For the avoidance of doubt, Small Generating Facilities participating in the Cluster Study process pursuant to Section 42 shall not be subject to Withdrawal Penalties.

**38.7.1.1 Calculation of the Withdrawal Penalty.** If the withdrawing Interconnection Customer has demonstrated any of the Readiness Milestone Options in Sections 38.4.1(v) (a)-(c) or Section 38.4.1(v) (e), and is withdrawing prior to executing an LGIA, the Interconnection Customer shall be charged one (1) times its actual allocated cost of all studies performed up until that point.

If the withdrawing Interconnection Customer only demonstrated the Readiness Milestone Option in Section 38.4.1(v) (d) and is withdrawing prior to executing an LGIA, that Interconnection Customer's Withdrawal Penalty shall be as follows:

(a) If Interconnection Customer withdraws either (i) following commencement of the Cluster Study and before receipt of a Cluster Study Report, or (ii) after receipt of a Cluster Study Report, the Interconnection Customer shall be charged two (2) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. This amount shall be capped at one (1) million dollars.

(b) If Interconnection Customer withdraws after receipt of any applicable restudy reports issued pursuant to Section 42.4, the Interconnection Customer shall be charged three (3) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal



Penalty revenues received. This amount shall be capped at one and one half (1.5) million dollars.

(c) If Interconnection Customer withdraws after receipt of the individual Facility Study report issued pursuant to Section 43, the Interconnection Customer shall be charged five (5) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. This amount shall be capped at two (2) million dollars.

The Withdrawal Penalty for any Interconnection Customer that, before achieving Commercial Operation, withdraws after executing an LGIA shall be nine (9) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. In the event that the Interconnection Customer suspends its interconnection agreement, the Interconnection Customer shall be obligated to pay for costs associated with any studies or restudies required as a result of the suspension of the interconnection agreement, including any restudies associated with any affected lower-queued customers.

#### **38.7.1.2 Distribution of the Withdrawal Penalty.**

Any Withdrawal Penalty revenues shall be used to fund generation interconnection studies, including individual Interconnection Facility Studies. Withdrawal Penalty revenues shall first be applied, in the form of a bill credit, to not-yet-invoiced study costs for other Interconnection Customers in the same Cluster, and to the extent that such studies are fully credited, shall be applied to study costs of future Clusters in queue order. Withdrawn Interconnection Customers shall not receive a bill credit associated with Withdrawal Penalty revenues. Distribution of Withdrawal Penalty revenues to a specific study shall not exceed the total actual study costs. Allocation of Withdrawal Penalty revenues within a Cluster to a specific Interconnection Customer shall be (1) fifty

percent (50%) on a per capita basis based on number of Interconnection Requests in the applicable Cluster; and (2) fifty percent (50%) to Interconnection Customers on a pro-rata basis based on requested megawatts included in the applicable Cluster. Distribution of Withdrawal Penalty revenue associated with Section 38.7.1.1(c) shall not be distributed to the remaining Interconnection Customers in that Cluster until all Interconnection Customers in that Cluster have reached Commercial Operation and thereafter shall be distributed as described above. Transmission Provider shall not change the distribution of Withdrawal Penalty revenue without authorization by the Commission. Transmission Provider shall post the Withdrawal Penalty balance on its OASIS site.

### **38.8 Identification of Contingent Facilities.**

**38.8.1. In general.** Transmission Provider's method for identifying the Contingent Facilities to be provided to the Interconnection Customer at the conclusion of the Cluster Study and included in Interconnection Customer's Standard Large Generator Interconnection Agreement is set forth below. The method permits the parties to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request.

**38.8.2. Baseline assumptions.** Transmission Provider uses a technical screening process to identify Contingent Facilities, which includes starting with the baseline assumption that the following are in-service: (i) Generating Facilities that are directly interconnected to the Transmission System; (ii) Generating Facilities that are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) Generating Facilities that have a pending higher queued Interconnection Request to interconnect to the Transmission System and their associated Interconnection Facilities and Network Upgrade requirements; (iv) Generating Facilities that have no Queue Position, but have executed an interconnection agreement, or requested that an unexecuted interconnection agreement be filed with FERC, and their associated Interconnection Facilities and Network Upgrades; (v) pending and

granted requests for transmission service and their associated facilities or upgrade requirements to the extent they have an impact on the Interconnection Request; and (vi) Transmission Provider's transmission expansion plan components, or the transmission expansion plan components of third-party transmission providers, to the extent they have an impact on the Interconnection Request.

**38.8.3. Technical Screening Process.** The technical screening process for identifying Contingent Facilities is comprised of the following steps:

**(1) Identify Potential Contingent Facilities.**

Transmission Provider will review all applicable Interconnection Study results for higher queued Interconnection Requests to identify any unbuilt Interconnection Facilities and/or Network Upgrades as potential Contingent Facilities to be evaluated pursuant to Steps 2-5 below.

**(2) Remove a Potential Contingent Facility and Perform Applicable Contingency Analyses.**

The Transmission Provider will take a potential Contingent Facility out of service in its study model and: (a) perform steady state, short circuit, voltage stability, and/or transient stability analyses to determine if the Transmission System demonstrates acceptable pre- and post-contingency system performance, in accordance with current Transmission Provider, WECC, NERC, or Reliability Coordinator criteria or standards; and (b) document the resulting Transmission System performance deficiencies following the analysis in Step 2(a).

**(3) Add the proposed Generating Facility into Model and Rerun Contingency Analyses.**

Transmission Provider will add the proposed Generating Facility into the model after taking the potential Contingent Facility out of service as provided in Step 2 above, and: (a) perform the same analysis for the added proposed Generating Facility as the analysis outlined in Step 2(a) for the removed potential Contingent Facility; and (b) document the resulting Transmission

System performance deficiencies following the analysis in Step 3(a).

**(4) Apply Threshold and Categorize.** If the Transmission System performance deficiencies observed in Step 3(b) are: (a) exacerbated by one percent (1%) or greater than the Transmission System performance deficiencies initially observed in Step 2(b), then the potential Contingent Facility that is individually evaluated in Step 2 will be deemed a Contingent Facility; or (b) exacerbated by less than one percent (1%) than the Transmission System performance deficiencies initially observed in Step 2(b), then the potential Contingent Facility that is individually evaluated in Step 2 will not be deemed a Contingent Facility.

**(5) Repeat for Each Identified Potential Contingent Facility.** Transmission Provider will repeat Steps 2-4 for each potential Contingent Facility identified in Step 1.

**(6) Per Se Contingent Facilities.** Notwithstanding Steps 1-5, an Interconnection Facility or Network Upgrade of a higher-queued Interconnection Request shall automatically be deemed a Contingent Facility if such Interconnection Facility or Network Upgrade would be necessary for the proper functioning of the proposed Generating Facility's System Protection Facilities (as defined in Appendix 6 to Attachment N of Transmission Provider's OATT).

**38.8.4.** The Cluster Study report will list Contingent Facilities in an appendix, which will include: (a) a description of each Contingent Facility; and (b) the Interconnection Request, transmission service request or planned project for which the Contingent Facility was initially required. This list of Contingent Facilities is subject to updates if a Cluster is Re-Studied pursuant to Section 42.5.

**38.8.5.** If requested by the Interconnection Customer, and if readily available and not commercially sensitive, Transmission Provider will also provide an estimate of the costs of and the in-service date for

each Contingent Facility, which may be subject to later updates if a Contingent Facility's estimated costs and in-service dates change.

**38.9. Informational Interconnection Study Requests.**

Interconnection Customers evaluating different options (such as different sizes, sites, or voltages) are encouraged but not required to use the Informational Interconnection Study Process in Section 41 before entering the Cluster Study process.

## **Marked Tariff**

#### IV. LARGE GENERATION INTERCONNECTION SERVICE

### 38 Interconnection Requests and Informational Interconnection Study Requests

**38.1 Interconnection Requests:** An Interconnection Customer shall submit to Transmission Provider, during a Cluster Request Window, an Interconnection Request in the form of Appendix 1 to this LGIP and a refundable deposit of:

- a. \$75,000 for requests of less than 50 MW;
- b. \$150,000 for requests of 50 MW and greater, but less than 200 MW; or
- c. \$250,000 for requests of 200 MW and greater.

Pursuant to Section 39.2.2, Transmission Provider shall apply the deposit toward the cost of a Cluster Study into which Interconnection Customer is admitted including such Interconnection Customer's individual Facilities Study, and shall be used to process Interconnection Customer's request. For Small Generating Facilities, the appropriate application fee or deposit shall be determined pursuant to Section 49.3 of Transmission Provider's OATT. Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At Interconnection Customer's option, Transmission Provider and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. Interconnection Customer will select the definitive Point of Interconnection to be studied no later than the execution of the Cluster Study Agreement. For purposes of clustering Interconnection Service requests, Transmission Provider may make reasonable changes to the requested Point of Interconnection to facilitate efficient interconnection of Interconnection Customers at common points of interconnection. Transmission Provider shall notify

Interconnection Customers in writing of any intended changes to the requested Point of Interconnection and the Point of Interconnection shall only change upon mutual agreement.

Transmission Provider shall have a process in place to consider requests for Interconnection Service below the Generating Facility Capacity. These requests for Interconnection Service shall be studied at the level of Interconnection Service requested for purposes of Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer. If after the additional studies are complete, Transmission Provider determines that additional Network Upgrades are necessary, then Transmission Provider must: (1) specify which additional Network Upgrade costs are based on which studies; and (2) provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade costs required for safety and reliability also will be borne by the Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the LGIA. The necessary control technologies and protection systems shall be established in Appendix C of the executed, or requested to be filed unexecuted, LGIA.

The following paragraph applies only to Electric Storage Resources selecting Energy Resource Interconnection Service: Transmission Provider shall establish operating assumptions, including charge and discharge parameters, that reflect the anticipated operation of an Electric Storage Resource in different regions on Transmission Provider's system. By no later than 30 Calendar Days before the Cluster Request Window, Transmission Provider shall post on OASIS such preestablished operating assumptions. Transmission Provider shall have a process in place to study Electric Storage Resources using such preestablished operating assumptions, if selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise requires use of different operating assumptions. These requests for Interconnection Service shall be studied using the selected operating assumptions for purposes of Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies



at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the LGIA. The necessary operating restrictions of the Electric Storage Resource shall be established in Appendix H, and the necessary control technologies and protection systems shall be established in Appendix C of that executed, or requested to be filed unexecuted, LGIA.

**38.2 Identification of Types of Interconnection Services:** At the time the Interconnection Request is submitted, Interconnection Customer must request either Energy Resource Interconnection Service or Network Resource Interconnection Service, as described; provided, however, any Interconnection Customer requesting Network Resource Interconnection Service may also request that it be concurrently studied for Energy Resource Interconnection Service, up to the point of five (5) Business Days after the initial Cluster Study Report Meeting held under Section 42.4(c). Interconnection Customer may then elect to proceed with Network Resource Interconnection Service or to proceed under a lower level of interconnection service to the extent that only certain upgrades will be completed.

**38.2.1 Energy Resource Interconnection Service.**

**38.2.1.1 The Product.** Energy Resource Interconnection Service allows Interconnection Customer to connect the Large Generating Facility to the Transmission System and be eligible to deliver the Large Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. Energy Resource Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or Point of Delivery.

**38.2.1.2 The Study.** The study consists of short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The short circuit/fault duty analysis would identify direct Interconnection

Facilities required and the Network Upgrades necessary to address short circuit issues associated with the Interconnection Facilities. The stability and steady state studies would identify necessary upgrades to allow full output of the proposed Large Generating Facility, except for Electric Storage Resources that request to use operating assumptions pursuant to section 38.1, and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Large Generating Facility without requiring additional Network Upgrades.

### **38.2.2 Network Resource Interconnection Service.**

**38.2.2.1 The Product.** Transmission Provider must conduct the necessary studies and construct the Network Upgrades needed to integrate the Large Generating Facility (1) in a manner comparable to that in which Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an ISO or RTO with market based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service Allows Interconnection Customer's Large Generating Facility to be designated as a Network Resource, up to the Large Generating Facility's full output, on the same basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur.

**38.2.2.2 The Study.** The Interconnection Study for Network Resource Interconnection Service shall assure that Interconnection Customer's Large Generating Facility meets the requirements for Network Resource Interconnection Service and as a general matter, that such Large

Generating Facility's interconnection is also studied with Transmission Provider's Transmission System at peak load, under a variety of severely stressed conditions, to determine whether, with the Large Generating Facility at full output, the aggregate of generation in the local area can be delivered to the aggregate of load on Transmission Provider's Transmission System, consistent with Transmission Provider's reliability criteria and procedures. This approach assumes that some portion of existing Network Resources are displaced by the output of Interconnection Customer's Large Generating Facility. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery. The Transmission Provider may also study the Transmission System under non-peak load conditions. However, upon request by the Interconnection Customer, the Transmission Provider must explain in writing to the Interconnection Customer why the study of non-peak load conditions is required for reliability purposes.

### **38.3 Utilization of Surplus Interconnection Service.**

Transmission Provider must provide a process that allows an Interconnection Customer to utilize or transfer Surplus Interconnection Service at an existing Point of Interconnection. The original Interconnection Customer or one of its affiliates shall have priority to utilize Surplus Interconnection Service. If the existing Interconnection Customer or one of its affiliates does not exercise its priority, then that service may be made available to other potential Interconnection Customers.

#### **38.3.1 Surplus Interconnection Service Requests.**

Surplus Interconnection Service requests may be made by the existing Interconnection Customer whose Generating Facility is already interconnected or one of its affiliates. Surplus Interconnection Service requests also may be made by another Interconnection Customer. Transmission Provider shall provide a

process for evaluating Interconnection Requests for Surplus Interconnection Service. Studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses, and any other appropriate studies. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. If the Surplus Interconnection Service was not studied under off-peak conditions, off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. If the original system impact study or Cluster Study is not available for the Surplus Interconnection Service, both off-peak and peak analysis may need to be performed for the existing Generating Facility associated with the request for Surplus Interconnection Service. The reactive power, short circuit/fault duty, stability, and steady-state analyses for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary.

Interconnection Customers shall request Surplus Interconnection Service by submitting to the Transmission Provider a completed request in the form of, and in accordance with, Appendix 1 of this LGIP. Surplus Interconnection Service requests shall be processed outside of the interconnection queue. In order to deem a request for Surplus Interconnection Service valid and complete, a deposit of \$10,000 must also be received by the Transmission Provider. After a request for Surplus Interconnection Service has been deemed valid and complete by the Transmission Provider, the Transmission Provider will notify the Interconnection Customer(s) and schedule a scoping meeting within five (5) Business Days.

### **38.3.2 Surplus Interconnection Service System Impact Study.**

**38.3.2.1** Within five (5) Business Days following the scoping meeting, Interconnection Customer shall notify the Transmission Provider in writing that the Interconnection Customer wants to proceed with the process for

requesting Surplus Interconnection Service. Within five (5) days of the notification that Interconnection Customer wants to proceed with the process for requesting Surplus Interconnection Service, Transmission Provider shall tender to Interconnection Customer the Surplus Interconnection Service System Impact Study Agreement in the form of Appendix 5 of this LGIP, which includes a good faith estimate of the estimated timeframe for completing the Surplus Interconnection Service System Impact Study. The Surplus Interconnection Service System Impact Study Agreement shall specify that Interconnection Customer is responsible for the actual cost of the Surplus Interconnection Service System Impact Study.

**38.3.2.2** Interconnection Customer shall execute the Surplus Interconnection Service System Impact Study Agreement and deliver the executed Surplus Interconnection Service System Impact Study Agreement to Transmission Provider no later than thirty (30) Calendar Days after its receipt.

**38.3.2.3** As part of its Surplus Interconnection Service System Impact Study process, the Transmission Provider will evaluate the original interconnection system impact study, if any, or applicable Cluster Studies, to determine their suitability for use in the evaluation of the request for Surplus Interconnection Service. Inclusive of any Surplus Interconnection Service System Impact Study(ies) performed to evaluate the existing Interconnection Service and deemed suitable for use in the evaluation of the request for Surplus Interconnection Service, studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses, and any other appropriate studies. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. If the existing Interconnection Service was not studied under off-peak conditions or such study was not deemed suitable, off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. If an existing interconnection system impact study or Cluster

Study is not available or deemed suitable for the Surplus Interconnection Service, both off-peak and peak analysis may need to be performed for the existing Generating Facility associated with the request for Surplus Interconnection Service. The studies performed to evaluate a request for Surplus Interconnection Service will identify if any additional Interconnection Facilities and/or Network Upgrades are necessary. If any additional Network Upgrades are necessary, the Surplus Interconnection Request will be denied. Necessary control technologies will also be identified in the studies performed.

**38.3.2.4** Transmission Provider shall use Reasonable Efforts to complete the Surplus Interconnection Service System Impact Study within ninety (90) Calendar Days after the receipt of the executed Surplus Interconnection Service System Impact Study Agreement and any technical data required to complete the study. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Surplus Interconnection Service System Impact Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Surplus Interconnection Service System Impact Study. If Transmission Provider is unable to complete the Surplus Interconnection Service System Impact Study within the time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

**38.3.2.5** Within ten (10) Business Days of providing a Surplus Interconnection Service System Impact Study report to Interconnection Customer, Transmission Provider shall establish a date agreeable to Interconnection Customer to meet to discuss the results of the Surplus Interconnection Service System Impact Study. Such meeting shall be no later than thirty (30) Calendar Days from issuance of the Surplus Interconnection Service System Impact Study report, unless otherwise mutually agreed upon by the Parties.

### **38.3.3 Surplus Interconnection Service Agreement.**

**38.3.3.1** Within thirty (30) Calendar Days after delivery of the Surplus Interconnection Service System Impact Study report, Transmission Provider shall tender (1) a draft Surplus Interconnection Service Agreement to the original Interconnection Customer and the Surplus Interconnection Service Customer for their execution, and (2) a draft Amended and Restated Large Generator Interconnection Agreement to the original Interconnection Customer that is revised as necessary to reflect the new Surplus Interconnection Service. Transmission Provider is not required to execute an interconnection agreement for Surplus Interconnection Service if the agreement does not meet the definition set forth in the Tariff or if either the original or surplus Interconnection Customer does not agree to the terms of such service, including any requirements that may be identified by the Transmission Provider in the studies for Surplus Interconnection Service.

**38.3.3.2** Transmission Provider and Interconnection Customers shall negotiate concerning any disputed provisions of the appendices to the draft Surplus Interconnection Service Agreement for not more than sixty (60) Calendar Days after tender of the draft Surplus Interconnection Service Agreement. If any Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft Surplus Interconnection Service Agreement and request submission of the unexecuted Surplus Interconnection Service Agreement to FERC or initiate Dispute Resolution procedures pursuant to Section 13.5 of the LGIP. The Surplus Interconnection Service request shall be deemed withdrawn if, within sixty (60) Calendar Days of tender of the draft Surplus Interconnection Service Agreement and unless otherwise agreed by the Parties: (1) the original Interconnection Customer fails to also execute the draft amended and restated LGIA following its execution of the Surplus Interconnection Service Agreement, or (2) either the original Interconnection Customer or the surplus Interconnection Customer has not (a) executed the Surplus Interconnection Service Agreement, (b) requested filing of an unexecuted Surplus

Interconnection Service Agreement, or (c) initiated Dispute Resolution procedures pursuant to Section 13.5 of the LGIP.

**38.3.3.3** As soon as practicable, but not later than fifteen (15) Business Days after receiving the two executed originals of the tendered Surplus Interconnection Service Agreement or the request to file an unexecuted Surplus Interconnection Service Agreement, Transmission Provider shall file the executed or unexecuted Surplus Interconnection Service Agreement with FERC. To the extent the Surplus Interconnection Service Agreement is unexecuted, the filing will contain an explanation of any matters as to which Interconnection Customer(s) and Transmission Provider disagree and support for the costs that Transmission Provider proposes to charge to Interconnection Customer(s) under the Surplus Interconnection Service Agreement. An unexecuted Surplus Interconnection Service Agreement should contain terms and conditions deemed appropriate by Transmission Provider for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities under the agreed-upon terms of the unexecuted Surplus Interconnection Service Agreement, they may proceed pending FERC action.

#### **38.4 Valid Interconnection Request:**

##### **38.4.1 Initiating an Interconnection Request.**

An Interconnection Customer wishing to join a Cluster shall submit its Interconnection Request to Transmission Provider within, and no later than the close of the Cluster Request Window. To initiate an Interconnection Request, Interconnection Customer must submit all of the following:

- (i) applicable deposit amount, pursuant to Section 38.1,
- (ii) a completed application in the form of Appendix 1 (including applicable technical information),
- (iii) Site Control demonstration pursuant to Section 38.4.1(iii) (a) or (b) below:



a. Demonstration of actual Site Control. For demonstration of Site Control of Large Generating Facilities: Specifications for acceptable site size for the purposes of demonstrating Site Control are posted on Transmission Provider's OASIS website. Interconnection Customer may propose alternative specifications for site size to those posted on OASIS for Transmission Provider approval. In the event Transmission Provider and Interconnection Customer cannot reach agreement related to adequacy of site size, Transmission Provider will accept a Professional Engineer (licensed in the state of the Point of Interconnection) stamped site plan drawing that depicts the proposed generation arrangement and specifies the maximum facility output for that arrangement. Demonstration of Site Control for Small Generating Facilities shall be pursuant to Section 49.5.

b. Posting of an additional deposit of \$10,000 in lieu-of Site Control. Deposits paid pursuant to this Section 38.4.1(iii) shall be refunded to the Interconnection Customer upon Commercial Operation or upon withdrawal pursuant to Section 38.7, subject to applicable Withdrawal Penalties.

(iv) Generating Facility size (MW) (and requested Interconnection Service amount if the requested Interconnection Service is less than the Generating Facility Capacity);

(v) One of the following Readiness Milestone Options totaling the entire capacity of the Generating Facility (or requested Interconnection Service amount if the requested Interconnection Service is less than the Generating Facility Capacity).

(a) Executed term sheet (or comparable evidence) related to a contract for sale of (i) the constructed Generating Facility to a load-serving entity or to a commercial, industrial, or other large

end-use customer, (ii) the Generating Facility's energy where the term of sale is not less than five (5) years, or (iii) the Generating Facility's ancillary services if the Generating Facility is an electric storage resource where the term of sale is not less than five (5) years;

(b) Executed contract binding upon the parties for sale of (i) the constructed Generating Facility to a load-serving entity or to a commercial, industrial, or other large end-use customer, (ii) the Generating Facility's energy where the term of sale is not less than five (5) years, or (iii) the Generating Facility's ancillary services if the Generating Facility is an electric storage resource where the term of sale is not less than five (5) years;

(c) Reasonable evidence that the Generating Facility has been selected in a Resource Plan or Resource Solicitation Process by or for a load-serving entity, is being developed by a load-serving entity, or is being developed for purposes of a sale to a commercial, industrial, or other large end-use customer;

(d) A refundable deposit of \$3,000 per MW of generating capacity proposed in the Interconnection Request; or

(e) Site specific Purchase Order for generating equipment specific to the Interconnection Request, or statement signed by an officer or authorized agent of the Interconnection Customer attesting that the Generating Facility included is to be supplied with turbines (or equivalent major electric generating components) with a manufacturer's blanket purchase agreement to which Interconnection Customer is a party. This blanket purchase agreement shall be provided to Transmission Provider.

(vi) A Point of Interconnection.

(vii) Whether the Interconnection Request shall be studied as a Network Resource Interconnection Service or an Energy Resource Interconnection Service, consistent with Section 38.2.

(viii) If applicable, (1) the operating assumptions selected in the Interconnection Request, such as charge and discharge parameters, to be used by Transmission Provider that reflect the proposed operation of the Electric Storage Resource, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Electric Storage Resource to its intended operation.

Interconnection Customer shall promptly inform Transmission Provider of any material change to Interconnection Customer's demonstration of Site Control under Section 38.4.1(iii) or its satisfaction of a Readiness Milestone Option as selected under Section 38.4.1(v) or Section 43.1, as applicable. Upon Transmission Provider determining separately that Interconnection Customer no longer satisfies Site Control or a Readiness Milestone Option, Transmission Provider shall give Interconnection Customer fifteen (15) Business Days to demonstrate satisfaction with the applicable requirement to Transmission Provider's satisfaction. Absent such demonstration, Transmission Provider will deem the subject Interconnection Request withdrawn.

The expected In-Service Date of the new Large Generating Facility or increase in capacity of the existing Generating Facility shall be no more than the process window for the regional expansion planning period (or in the absence of a regional planning process, the process window for Transmission Provider's expansion planning period) not to exceed seven (7) years from the date the Interconnection Request is received by Transmission Provider, unless Interconnection Customer demonstrates that engineering, permitting and construction of the new Large Generating Facility or increase in capacity of the existing Generating Facility will take longer than the regional expansion planning period. The In-Service Date may succeed the date the Interconnection Request is received by Transmission Provider by a

period up to ten (10) years, or longer where Interconnection Customer and Transmission Provider agree, such agreement not to be unreasonably withheld.

#### **38.4.2 Acknowledgment of Interconnection Request.**

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

#### **38.4.3 Deficiencies in Interconnection Request.**

An Interconnection Request will not be considered to be a valid request until all items in Section 38.4.1 have been received by Transmission Provider. If an Interconnection Request fails to meet the requirements set forth in Section 38.4.1, Transmission Provider shall notify 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. Interconnection Customer shall provide Transmission Provider the additional requested information needed to constitute a valid request within ten (10) Business Days after receipt of such notice but no later than the close of the Cluster Request Window. At any time, if Transmission Provider identifies issues with technical data provided by Interconnection Customer, Interconnection Customer and Transmission Provider shall work expeditiously and in good faith to remedy any data issues. Failure by Interconnection Customer to comply with this Section 38.4.3 shall be treated in accordance with Section 38.7.

Transmission Provider shall determine if the information contained in the Interconnection Request is sufficient to start the Cluster Study by the close of the Customer Engagement Window.

#### **38.4.4 Scoping Meeting.**

During the Customer Engagement Window, Transmission Provider shall hold a Scoping Meeting with all Interconnection Customers whose valid Interconnection Requests were received in that Cluster Request Window. If requested by an Interconnection Customer, Transmission Provider shall also hold individual customer-specific Scoping Meetings, which must be requested no later than fifteen (15) Business Days after the close of the Cluster Request Window.

The purpose of the Scoping Meeting shall be to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to discuss the Cluster Area materials posted to OASIS pursuant to Section 42.4, and to analyze such information. Transmission Provider and Interconnection Customer will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. Transmission Provider and Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. The duration of the meeting shall be sufficient to accomplish its purpose.

### **38.5 OASIS Posting:**

**38.5.1** Transmission Provider will maintain on its OASIS a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the status of the Interconnection Request, including Queue Position; (vi) the type of Interconnection Service being requested; (vii) the availability of any studies related to the Interconnection Request; (viii) the date of the Interconnection Request; (ix) the type of Generating Facility

to be constructed (combined cycle, base load or combustion turbine and fuel type); and (x) for Interconnection Requests that have not resulted in a completed interconnection, an explanation as to why it was not completed. Except in the case of an Affiliate, the list will not disclose the identity of Interconnection Customer until Interconnection Customer executes an LGIA or requests that Transmission Provider file an unexecuted LGIA with FERC. Before holding a Scoping Meeting with its Affiliate, Transmission Provider shall post on OASIS an advance notice of its intent to do so. Transmission Provider shall post to its OASIS site any deviations from the study timelines set forth herein. Interconnection Study reports shall be posted to Transmission Provider's OASIS site subsequent to the meeting between Interconnection Customer and Transmission Provider to discuss the applicable study results. Transmission Provider shall also post any known deviations in the Large Generating Facility's In-Service Date.

**38.5.2 Requirement to Post Interconnection Study Metrics.**

Transmission Provider will maintain on its OASIS or its website summary statistics related to processing Interconnection Studies pursuant to Interconnection Requests, updated quarterly. If Transmission Provider posts this information on its website, a link to the information must be provided on Transmission Provider's OASIS site. For each calendar quarter, Transmission Provider must calculate and post the information detailed in Sections 38.5.2.1 through 38.5.2.4.

**38.5.2.1 Interconnection Cluster Study Processing Time.**

(A) Number of Interconnection Requests that had Cluster Studies completed within Transmission Provider's coordinated region during the reporting quarter,

(B) Number of Interconnection Requests that had Cluster Studies completed within Transmission Provider's coordinated region during the reporting quarter that were

completed more than one hundred fifty (150) Calendar Days after commencement of the Cluster Study,

(C) At the end of the reporting quarter, the number of active valid Interconnection Requests with ongoing incomplete Cluster Studies one hundred fifty (150) Calendar Days after commencement of the Cluster Study,

(D) Mean time (in days), Cluster Studies completed within Transmission Provider's coordinated region during the reporting quarter, from the commencement of the Cluster Study to the date when Transmission Provider provided the completed Cluster Study to the Interconnection Customer,

(E) Percentage of Cluster Studies exceeding one hundred fifty (150) Calendar Days to complete this reporting quarter, calculated as the sum of 38.5.2.1(B) plus 38.5.2.1(C) divided by the sum of 38.5.2.1(A) plus 38.5.2.1(C)).

**38.5.2.2 Interconnection Facilities Studies Processing Time.**

(A) Number of Interconnection Requests that had Interconnection Facilities Studies that are completed within Transmission Provider's coordinated region during the reporting quarter,

(B) Number of Interconnection Requests that had Interconnection Facilities Studies that are completed within Transmission Provider's coordinated region during the reporting quarter that were completed more 90 or 180 Calendar Days (study duration depends on Interconnection Customer's selection on Facilities Study Agreement) after receipt by Transmission Provider of the Interconnection Customer's executed

Interconnection Facilities Study Agreement,

(C) At the end of the reporting quarter, the number of active valid Interconnection Service requests with ongoing incomplete Interconnection Facilities Studies where such Interconnection Requests had executed Interconnection Facilities Studies Agreement received by Transmission Provider more than 90 or 180 Calendar Days (study duration depends on Interconnection Customer's selection on Facilities Study Agreement) before the reporting quarter end,

(D) Mean time (in days), for Interconnection Facilities Studies completed within Transmission Provider's coordinated region during the reporting quarter, calculated from the date when Transmission Provider received the executed Interconnection Facilities Study Agreement to the date when Transmission Provider provided the completed Interconnection Facilities Study to the Interconnection Customer,

(E) Percentage of delayed Interconnection Facilities Studies this reporting quarter, calculated as the sum of 38.5.2.2(B) plus 38.5.2.2(C) divided by the sum of 38.5.2.2(A) plus 38.5.2.2(C)).

**38.5.2.3 Interconnection Service Requests  
Withdrawn from Interconnection Queue.**

(A) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter,

(B) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of any interconnection



studies or execution of any interconnection study agreements,

(C) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of a Cluster Study,

(D) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of an Interconnection Facilities Study,

(E) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue after execution of a generator interconnection agreement or Interconnection Customer requests the filing of an unexecuted, new interconnection agreement,

(F) Mean time (in days), for all withdrawn Interconnection Requests, from the date when the request was determined to be valid to when Transmission Provider received the request to withdraw from the queue.

**38.5.3** Transmission Provider is required to post on OASIS or its website the measures in paragraph 38.5.2.1(A) through paragraph 38.5.2.3(F) for each calendar quarter within 30 Calendar Days of the end of the calendar quarter. Transmission Provider will keep the quarterly measures posted on OASIS or its website for three calendar years with the first required report to be in the first quarter of 2020. If Transmission Provider retains this information on its website, a link to the information must be provided on Transmission Provider's OASIS site.

**38.5.4** In the event that any of the values calculated in paragraphs 38.5.2.1(E), or 38.5.2.2(E) exceeds 25 percent for two consecutive calendar quarters, Transmission Provider will have to comply with the measures below for the next four consecutive calendar quarters and must

continue reporting this information until Transmission Provider reports four consecutive calendar quarters without the values calculated in 38.5.2.1(E) or 38.5.2.2(E) exceeding 25 percent for two consecutive calendar quarters:

(i) Transmission Provider must submit a report to the Commission describing the reason for each study or group of clustered studies pursuant to an Interconnection Request that exceeded its deadline (i.e., 150, 90 or 180 days) for completion (excluding any allowance for Reasonable Efforts). Transmission Provider must describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The report must be filed at the Commission within 45 Calendar Days of the end of the calendar quarter.

(ii) Transmission Provider shall aggregate the total number of employee-hours and third party consultant hours expended towards interconnection studies within its coordinated region that quarter and post on OASIS or its website. If Transmission Provider posts this information on its website, a link to the information must be provided on Transmission Provider's OASIS site. This information is to be posted within 30 Calendar Days of the end of the calendar quarter.

**38.6 Coordination with Affected Systems:** Transmission Provider 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 (if available) in its applicable Interconnection Study within the time frame specified in this LGIP. Transmission Provider will include such Affected System Operators in all meetings held with Interconnection Customer as required by this LGIP. Interconnection Customer will cooperate with Transmission Provider in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A Transmission Provider which may be an Affected System shall cooperate with Transmission Provider with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems. It is the responsibility of the Affected System Owner to provide the requirements or potential impediments to providing

the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to (i) complete any interconnection studies and (ii) construct any necessary Interconnection Facilities and Network Upgrades needed to reliably interconnect at the requested service level.

**38.7 Withdrawal:** Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to Transmission Provider. In addition, if Interconnection Customer fails to adhere to all requirements of this LGIP, except as provided in Section 48.5 (Disputes), Transmission Provider shall deem the Interconnection Request to be withdrawn and shall provide written notice to Interconnection Customer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, Interconnection Customer shall have fifteen (15) Business Days in which to either respond with information or actions that cures the deficiency or to notify Transmission Provider of its intent to pursue Dispute Resolution.

Withdrawal shall result in the loss of Interconnection Customer's Queue Position, including any placement in a particular Cluster. If an Interconnection Customer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, 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 Transmission Provider all costs that Transmission Provider prudently incurs with respect to that Interconnection Request prior to Transmission Provider's receipt of notice described above. Interconnection Customer must pay all monies due to Transmission Provider before it is allowed to obtain any Interconnection Study data or results.

In the case of a withdrawal, Transmission Provider shall:

(i) update OASIS as appropriate, including any Queue Position changes;

(ii) impose the applicable Withdrawal Penalty described in Section 38.7.1, if any; and

(iii) issue any refund to Interconnection Customer pursuant to Section 48.3.2.

In the event of such withdrawal, Transmission Provider, subject to the confidentiality provisions of Section 48.1, shall provide, at Interconnection Customer's request, all information that Transmission Provider developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

**38.7.1 Withdrawal Penalty.** Except as provided in Attachment W of Transmission Provider's Tariff, an Interconnection Customer shall be subject to a penalty ("Withdrawal Penalty") if it withdraws its Interconnection Request or the Generating Facility does not otherwise reach Commercial Operation unless (1) the withdrawal does not negatively affect the timing or cost of other projects within the same Cluster as determined by Transmission Provider; (2) the Interconnection Customer withdraws after receiving the most recent Cluster Study Report and the costs assigned to the Interconnection Request identified in that report have increased by more than twenty-five percent (25%) compared to costs identified in the previous Cluster Study Report; (3) the Interconnection Customer withdraws after receiving the individual Facilities Study report and the costs assigned to the Interconnection Request identified in that report have increased by more than 100 percent compared to costs identified in the most recent Cluster Study Report. For the avoidance of doubt, Small Generating Facilities participating in the Cluster Study process pursuant to Section 42 shall not be subject to Withdrawal Penalties.

**38.7.1.1 Calculation of the Withdrawal Penalty.** If the withdrawing Interconnection Customer has demonstrated any of the Readiness Milestone Options in Sections 38.4.1(v)(a)-(c) or Section 38.4.1(v)(e), and is withdrawing prior to executing an LGIA, the Interconnection Customer shall be charged one (1) times its actual allocated cost of all studies performed up until that point.

If the withdrawing Interconnection Customer only demonstrated the Readiness Milestone Option in Section 38.4.1(v)(d) and is withdrawing prior to

executing an LGIA, that Interconnection Customer's Withdrawal Penalty shall be as follows:

(a) If Interconnection Customer withdraws either (i) following commencement of the Cluster Study and before receipt of a Cluster Study Report, or (ii) after receipt of a Cluster Study Report, the Interconnection Customer shall be charged two (2) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. This amount shall be capped at one (1) million dollars.

(b) If Interconnection Customer withdraws after receipt of any applicable restudy reports issued pursuant to Section 42.4, the Interconnection Customer shall be charged three (3) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. This amount shall be capped at one and one half (1.5) million dollars.

(c) If Interconnection Customer withdraws after receipt of the individual Facility Study report issued pursuant to Section 43, the Interconnection Customer shall be charged five (5) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. This amount shall be capped at two (2) million dollars.

The Withdrawal Penalty for any Interconnection Customer that, before achieving Commercial Operation, withdraws after executing an LGIA shall be nine (9) times of its actual allocated cost of all studies performed for Interconnection Customers in the Cluster up until that point, regardless of any previous Withdrawal Penalty revenues received. In the event that the Interconnection Customer suspends its interconnection agreement, the Interconnection Customer shall be obligated to pay for costs associated with any studies or restudies required as a result of the suspension of the interconnection agreement, including any restudies associated with any affected lower-queued customers.

### **38.7.1.2 Distribution of the Withdrawal Penalty.**

Any Withdrawal Penalty revenues shall be used to fund generation interconnection studies, including individual Interconnection Facility Studies. Withdrawal Penalty revenues shall first be applied, in the form of a bill credit, to not-yet-invoiced study costs for other Interconnection Customers in the same Cluster, and to the extent that such studies are fully credited, shall be applied to study costs of future Clusters in queue order. Withdrawn Interconnection Customers shall not receive a bill credit associated with Withdrawal Penalty revenues. Distribution of Withdrawal Penalty revenues to a specific study shall not exceed the total actual study costs. Allocation of Withdrawal Penalty revenues within a Cluster to a specific Interconnection Customer shall be (1) fifty percent (50%) on a per capita basis based on number of Interconnection Requests in the applicable Cluster; and (2) fifty percent (50%) to Interconnection Customers on a pro-rata basis based on requested megawatts included in the applicable Cluster. Distribution of Withdrawal Penalty revenue associated with Section 38.7.1.1(c) shall not be distributed to the remaining Interconnection Customers in that Cluster until all Interconnection Customers in that Cluster have reached Commercial Operation and thereafter shall be distributed as described above. Transmission Provider shall not change the distribution of Withdrawal Penalty revenue without authorization by the Commission. Transmission Provider shall post the Withdrawal Penalty balance on its OASIS site.

## **38.8 Identification of Contingent Facilities.**

**38.8.1. In general.** Transmission Provider's method for identifying the Contingent Facilities to be provided to the Interconnection Customer at the conclusion of the Cluster Study and included in Interconnection Customer's Standard Large Generator Interconnection Agreement is set forth below. The method permits the parties to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request.

**38.8.2. Baseline assumptions.** Transmission Provider uses a technical screening process to identify Contingent Facilities, which includes starting with the baseline assumption that the following are in-service: (i) Generating Facilities that are directly interconnected to the Transmission System; (ii) Generating Facilities that are interconnected to

Affected Systems and may have an impact on the Interconnection Request; (iii) Generating Facilities that have a pending higher queued Interconnection Request to interconnect to the Transmission System and their associated Interconnection Facilities and Network Upgrade requirements; (iv) Generating Facilities that have no Queue Position, but have executed an interconnection agreement, or requested that an unexecuted interconnection agreement be filed with FERC, and their associated Interconnection Facilities and Network Upgrades; (v) pending and granted requests for transmission service and their associated facilities or upgrade requirements to the extent they have an impact on the Interconnection Request; and (vi) Transmission Provider's transmission expansion plan components, or the transmission expansion plan components of third-party transmission providers, to the extent they have an impact on the Interconnection Request.

**38.8.3. Technical Screening Process.** The technical screening process for identifying Contingent Facilities is comprised of the following steps:

**(1) Identify Potential Contingent Facilities.**

Transmission Provider will review all applicable Interconnection Study results for higher queued Interconnection Requests to identify any unbuilt Interconnection Facilities and/or Network Upgrades as potential Contingent Facilities to be evaluated pursuant to Steps 2-5 below.

**(2) Remove a Potential Contingent Facility and Perform Applicable Contingency Analyses.**

The Transmission Provider will take a potential Contingent Facility out of service in its study model and: (a) perform steady state, short circuit, voltage stability, and/or transient stability analyses to determine if the Transmission System demonstrates acceptable pre- and post-contingency system performance, in accordance with current Transmission Provider, WECC, NERC, or Reliability Coordinator criteria or standards; and (b) document the resulting Transmission System performance deficiencies following the analysis in Step 2(a).

**(3) Add the proposed Generating Facility into Model and Rerun Contingency Analyses.**

Transmission Provider will add the proposed Generating Facility into the model after taking the potential Contingent Facility out of service as provided in

Step 2 above, and: (a) perform the same analysis for the added proposed Generating Facility as the analysis outlined in Step 2(a) for the removed potential Contingent Facility; and (b) document the resulting Transmission System performance deficiencies following the analysis in Step 3(a).

**(4) Apply Threshold and Categorize.** If the Transmission System performance deficiencies observed in Step 3(b) are: (a) exacerbated by one percent (1%) or greater than the Transmission System performance deficiencies initially observed in Step 2(b), then the potential Contingent Facility that is individually evaluated in Step 2 will be deemed a Contingent Facility; or (b) exacerbated by less than one percent (1%) than the Transmission System performance deficiencies initially observed in Step 2(b), then the potential Contingent Facility that is individually evaluated in Step 2 will not be deemed a Contingent Facility.

**(5) Repeat for Each Identified Potential Contingent Facility.** Transmission Provider will repeat Steps 2-4 for each potential Contingent Facility identified in Step 1.

**(6) Per Se Contingent Facilities.** Notwithstanding Steps 1-5, an Interconnection Facility or Network Upgrade of a higher-queued Interconnection Request shall automatically be deemed a Contingent Facility if such Interconnection Facility or Network Upgrade would be necessary for the proper functioning of the proposed Generating Facility's System Protection Facilities (as defined in Appendix 6 to Attachment N of Transmission Provider's OATT).

**38.8.4.** The Cluster Study report will list Contingent Facilities in an appendix, which will include: (a) a description of each Contingent Facility; and (b) the Interconnection Request, transmission service request or planned project for which the Contingent Facility was initially required. This list of Contingent Facilities is subject to updates if a Cluster is Re-Studied pursuant to Section 42.5.

**38.8.5.** If requested by the Interconnection Customer, and if readily available and not commercially sensitive, Transmission Provider will also provide an estimate of the costs of and the in-service date for each Contingent Facility, which may be subject to later



updates if a Contingent Facility's estimated costs and in-service dates change.

**38.9. Informational Interconnection Study Requests.**

Interconnection Customers evaluating different options (such as different sizes, sites, or voltages) are encouraged but not required to use the Informational Interconnection Study Process in Section 41 before entering the Cluster Study process.



## Clean Tariff

#### **IV. LARGE GENERATION INTERCONNECTION SERVICE**

### **42 Cluster Study**

**42.1 Cluster Study Agreement:** No later than five (5) Business Days after the close of a Cluster Request Window, Transmission Provider shall tender to each Interconnection Customer that submitted a valid Interconnection Request a Cluster Study Agreement in the form of Appendix 3 to this LGIP. The Cluster Study Agreement shall require the Interconnection Customer to compensate Transmission Provider for the actual cost of the Cluster Study. The specifications, assumptions, or other provisions in the appendices of the Cluster Study Agreement provided pursuant to this Section 42.1 shall be subject to change by Transmission Provider following conclusion of the Scoping Meeting.

#### **42.2 Customer Engagement Window**

Upon the close of each Cluster Request Window, Transmission Provider will open a thirty (30) Calendar Day period ("Customer Engagement Window"). During the Customer Engagement Window, Transmission Provider shall hold a Scoping Meeting with all interested Interconnection Customers. Notwithstanding the preceding sentence and upon written consent of all Interconnection Customers within a specific Cluster, Transmission Provider may shorten the Customer Engagement Window in order to start the Cluster Study earlier. Within the first ten (10) Business Days following the close of the Cluster Request Window, Transmission Provider shall post on its OASIS site a list of Interconnection Requests for that Cluster. The list shall identify, for each Interconnection Request: (i) the requested amount of Interconnection Service; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the type of Interconnection Service requested; (vi) the type of Generating Facility to be constructed including fuel type such as wind, natural gas, coal, or solar; and (vii) the Cluster Area assigned to each Interconnection Request. During the Customer Engagement Window, Transmission Provider will provide to Interconnection Customer a non-binding

updated good faith estimate of the cost and timeframe for completing the Cluster Study.

At the end of the Customer Engagement Window, all Interconnection Requests deemed valid that have executed a Cluster Study Agreement in the form of Appendix 3 shall be included in that Cluster Study. Any Interconnection Requests not deemed valid or undergoing Dispute Resolution at the close of the Customer Engagement Window shall not be included in that Cluster. Immediately following the Customer Engagement Window, Transmission Provider shall initiate the Cluster Study described in more detail in Section 42.

**42.3 Execution of Cluster Study Agreement and Scope of Cluster Study.**

- (a) Interconnection Customer shall execute the Cluster Study Agreement and deliver the executed Cluster Study Agreement to Transmission Provider no later than the close of the Customer Engagement Window.
  
- (b) The Cluster Study shall evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The Cluster Study will consider the Base Case as well as all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Cluster Request Window closes:
  - (i) are existing and directly interconnected to the Transmission System;
  - (ii) are existing and interconnected to Affected Systems and may have an impact on the Interconnection Request;
  - (iii) have a pending higher queued or higher clustered Interconnection Request to interconnect to the Transmission System; and

- (iv) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.
- (c) For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study shall consider the level of Interconnection Service requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.
- (d) The following applies only to Electric Storage Resources selecting Energy Resource Interconnection Service: For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study shall use operating assumptions, including charge and discharge parameters, that reflect the proposed operation of the Electric Storage Resource as selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise require the use of different operating assumptions. If Interconnection Customer makes this request, Transmission Provider may (1) require that Interconnection Customer specify the intended operation of the resource in the LGIA, (2) require that Interconnection Customer demonstrate that the resource has control technologies sufficient to limit its operation as intended and to respond to dispatch instructions by Transmission Provider, and/or (3) pursue termination of the LGIA pursuant to Article 17 of the LGIA if Interconnection Customer fails to operate the Electric Storage Resource in accordance with its intended operation as specified in the LGIA.
- (e) The Cluster Study shall consist of power flow, stability, and short circuit analyses, the results of which are documented in a single Cluster Study Report, or Cluster Re-Study Report, as applicable.

- (f) For purposes of identifying Network Upgrades and other facilities caused by requests for Network Resource Interconnection Service, Transmission Provider will run two iterations of the Cluster Study. The first iteration of the Cluster Study shall assume all requests in the applicable Cluster Study have requested Energy Resource Interconnection Service, to establish a baseline of shared Network Upgrades. In the second iteration, the Transmission Provider shall update the study with any requests for Network Resource Interconnection Service, as applicable, to identify the incremental Network Upgrades caused by the requests for Network Resource Interconnection Service.
  - (i) In conducting the first iteration of the Cluster Study and determining the necessary Interconnection Facilities and Network Upgrades, Transmission Provider may model operating resources in the Transmission System at less than full output to the extent consistent with maintaining system reliability, Good Utility Practice, and expected operation of the resources in the Transmission System based on historical operating patterns and/or capacity factors. All such modeling assumptions shall be described in the Cluster Study Report.
- (g) At the conclusion of the Cluster Study, Transmission Provider will issue a Cluster Study Report. The Cluster Study report will state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection.

- (h) The Cluster Study Report shall identify Transmission Provider's Interconnection Facilities and Network Upgrades expected to be required to reliably interconnect the Generating Facilities in that Cluster Study at the requested Interconnection Service level and shall provide non-binding estimates for required upgrades.
- (i) The Cluster Study Report shall identify each Interconnection Customer's estimated allocated costs for Transmission Provider's Interconnection Facilities and Transmission Provider's Network Upgrades pursuant to the methodology in Section 39.2.3.
- (j) Transmission Provider shall hold an open stakeholder meeting pursuant to Section 42.4 below.
- (k) The Cluster Study report will provide a list of facilities that are required as a result of the Interconnection Requests and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.
- (l) Upon issuance of a Cluster Study Report, or Cluster Re-Study Report, if any, Transmission Provider shall simultaneously tender a draft Facility Study Agreement, subject to the conditions in Section 43.1.

#### **42.4 Cluster Study Procedures.**

Transmission Provider shall coordinate the Cluster Study with any Affected System that is affected by the Interconnection Request pursuant to Section 38.6 above. Transmission Provider shall utilize existing studies to the extent practicable when it performs the Cluster Study. Interconnection Requests for a Cluster Study may be submitted only within the Cluster Request Window and Transmission Provider shall initiate the Cluster Study process pursuant to Section 39.2.1.

- a. Transmission Provider may segment and perform Cluster Studies according to geographically



and/or electrically relevant areas on the Transmission Provider's Transmission System ("Cluster Area"). Cluster Areas shall be determined by the Transmission Provider at the end of each Customer Engagement Window and shall be based on the valid Interconnection Requests that are submitted during the Cluster Request Window. Before the Scoping Meeting, the Transmission Provider shall initially determine each Cluster Area and shall post on its OASIS website, for discussion during the Scoping Meeting, a draft plan for the Cluster Study, including a map and table defining the Cluster Areas assigned to each valid Interconnection Request received during the Cluster Request Window. Transmission Provider shall post an updated Cluster Area map, table, and final Cluster Study plan on OASIS by no later than the end of the Customer Engagement Window. The Cluster Study shall consist of all valid Interconnection Requests in each respective Cluster Area that have executed a Cluster Study Agreement and have provided all required information before the close of the Customer Engagement Window.

- b. Unless restudies are required pursuant to Section 42.5, Transmission Provider shall use Reasonable Efforts to complete the Cluster Study and issue the Cluster Study Report within one hundred fifty (150) Calendar Days of the close of the Customer Engagement Window. If the Cluster Study Report is due on a non-Business Day, Transmission Provider shall issue the report on the first Business Day after the date the Cluster Study Report would otherwise be due.
- c. Within ten (10) Business Days of simultaneously furnishing a Cluster Study Report (or, as applicable, Cluster Re-Study Report) and a draft Interconnection Facilities Study Agreement to Interconnection Customers and posting such report on OASIS, Transmission Provider shall convene an open meeting to discuss the study results ("Cluster Study Report Meeting" or "Cluster Re Study Report Meeting"). Transmission Provider shall, upon request, also make itself available

to meet with individual Interconnection Customers after the report is provided.

#### **42.5 Cluster Study Withdrawals and Re-Studies**

- a. If no Interconnection Customer withdraws from the Cluster after completion of the Cluster Study or Cluster Re-Study or is deemed withdrawn pursuant to Section 38.7, Transmission Provider shall electronically notify Interconnection Customers in the Cluster that a Cluster Re-Study is not required.
- b. If one or more Interconnection Customer withdraw(s) from the Cluster, Transmission Provider shall determine if a Cluster Re-Study of the Cluster is necessary. If Transmission Provider determines a Cluster Re-Study is not necessary, Transmission Provider shall provide an updated Cluster Study Report within thirty (30) Calendar Days of such determination. When the updated Cluster Study Report is issued, Transmission Provider shall electronically notify Interconnection Customers in the Cluster that a Cluster Re-Study is not required.
- c. If one or more Interconnection Customers withdraws from the Cluster and Transmission Provider determines a restudy of the Cluster is necessary as a result, Transmission Provider will continue with such re-studies as described in Section 42.5.d below, until Transmission Provider determines that no further re-studies are required. If an Interconnection Customer withdraws after Section 42.5.a, Section 42.5.c, during the Interconnection Facilities Study, or after other Interconnection Customers in the same Cluster have executed LGIAs, and Transmission Provider determines a restudy of the Cluster is necessary, the Cluster (including any Cluster Area) shall be restudied as described in Section 42.5.d below. Transmission Provider shall electronically notify Interconnection Customers in the Cluster and post on OASIS that a re-study is required.
- d. The scope of any Cluster Re-study shall be consistent with the scope of an initial Cluster

Study pursuant to Section 42.3. Transmission Provider shall use Reasonable Efforts to complete the Cluster Re-Study for all Cluster Areas within one hundred fifty (150) Calendar Days of the commencement of the first Cluster Area Re-Study. The results of the Cluster Re-Study shall be combined into a single report ("Cluster Re-Study Report"), and Transmission Provider shall hold an open stakeholder meeting ("Cluster Re-Study Report Meeting") within ten (10) Business Days of publishing Cluster Re-Study Report on OASIS.

If additional re-studies are required, Interconnection Customer and Transmission Provider shall follow the procedures of this Section 42.5 until such time that Transmission Provider determines that no further re-studies are required. Transmission Provider shall electronically notify Interconnection Customers in the Cluster when no further re-studies are required.

- e. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required timeframe for completing the Cluster Study, Transmission Provider shall notify Interconnection Customers as to the schedule status of the Cluster Study. If Transmission Provider is unable to complete the Cluster Study within the time period, it shall notify Interconnection Customers and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, Transmission Provider shall provide to Interconnection Customer all supporting documentation, workpapers, and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Cluster Study, subject to confidentiality arrangements consistent with Section 48.1.

- f. If Re-Study of the Cluster Study other than the Re-Study described in Section 42.5(a)-(d) is required due to a higher or equal priority queued project dropping out of the queue, or a

modification of a higher queued project subject to Section 39.4, Transmission Provider shall notify Interconnection Customer(s) in writing. The Transmission Provider shall make Reasonable Efforts to ensure such Re-Study takes no longer than one hundred fifty (150) Calendar Days from the date of notice. Except as provided in Section 38.7 in the case of withdrawing Interconnection Customers, any cost of Re-Study shall be borne by Interconnection Customer(s) being re-studied.

## Marked Tariff

#### **IV. LARGE GENERATION INTERCONNECTION SERVICE**

### **42 Cluster Study**

**42.1 Cluster Study Agreement:** No later than five (5) Business Days after the close of a Cluster Request Window, Transmission Provider shall tender to each Interconnection Customer that submitted a valid Interconnection Request a Cluster Study Agreement in the form of Appendix 3 to this LGIP. The Cluster Study Agreement shall require the Interconnection Customer to compensate Transmission Provider for the actual cost of the Cluster Study. The specifications, assumptions, or other provisions in the appendices of the Cluster Study Agreement provided pursuant to this Section 42.1 shall be subject to change by Transmission Provider following conclusion of the Scoping Meeting.

#### **42.2 Customer Engagement Window**

Upon the close of each Cluster Request Window, Transmission Provider will open a thirty (30) Calendar Day period ("Customer Engagement Window"). During the Customer Engagement Window, Transmission Provider shall hold a Scoping Meeting with all interested Interconnection Customers. Notwithstanding the preceding sentence and upon written consent of all Interconnection Customers within a specific Cluster, Transmission Provider may shorten the Customer Engagement Window in order to start the Cluster Study earlier. Within the first ten (10) Business Days following the close of the Cluster Request Window, Transmission Provider shall post on its OASIS site a list of Interconnection Requests for that Cluster. The list shall identify, for each Interconnection Request: (i) the requested amount of Interconnection Service; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the type of Interconnection Service requested; (vi) the type of Generating Facility to be constructed including fuel type such as wind, natural gas, coal, or solar; and (vii) the Cluster Area assigned to each Interconnection Request. During the Customer Engagement Window, Transmission Provider will provide to Interconnection Customer a non-binding updated good faith estimate of the cost and timeframe for completing the Cluster Study.

At the end of the Customer Engagement Window, all Interconnection Requests deemed valid that have executed a Cluster Study Agreement in the form of

Appendix 3 shall be included in that Cluster Study. Any Interconnection Requests not deemed valid or undergoing Dispute Resolution at the close of the Customer Engagement Window shall not be included in that Cluster. Immediately following the Customer Engagement Window, Transmission Provider shall initiate the Cluster Study described in more detail in Section 42.

#### **42.3 Execution of Cluster Study Agreement and Scope of Cluster Study.**

- (a) Interconnection Customer shall execute the Cluster Study Agreement and deliver the executed Cluster Study Agreement to Transmission Provider no later than the close of the Customer Engagement Window.
- (b) The Cluster Study shall evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The Cluster Study will consider the Base Case as well as all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Cluster Request Window closes:

  - (i) ~~(i)~~ are existing and directly interconnected to the Transmission System;
  - (ii) ~~(ii)~~ are existing and interconnected to Affected Systems and may have an impact on the Interconnection Request;
  - (iii) ~~(iii)~~ have a pending higher queued or higher clustered Interconnection Request to interconnect to the Transmission System; and
  - (iv) ~~(iv)~~ have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.
- (c) For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study shall consider the level of Interconnection Service requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

(d) For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study shall use operating assumptions, including charge and discharge parameters, that reflect the proposed operation of the Electric Storage Resource as selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise require the use of different operating assumptions. If Interconnection Customer makes this request, Transmission Provider may (1) require that Interconnection Customer specify the intended operation of the resource in the LGIA, (2) require that Interconnection Customer demonstrate that the resource has control technologies sufficient to limit its operation as intended and to respond to dispatch instructions by Transmission Provider, and/or (3) pursue termination of the LGIA pursuant to Article 17 of the LGIA if Interconnection Customer fails to operate the Electric Storage Resource in accordance with its intended operation as specified in the LGIA.

(e) The Cluster Study shall consist of power flow, stability, and short circuit analyses, the results of which are documented in a single Cluster Study Report, or Cluster Re-Study Report, as applicable.

(f) For purposes of identifying Network Upgrades and other facilities caused by requests for Network Resource Interconnection Service, Transmission Provider will run two iterations of the Cluster Study. The first iteration of the Cluster Study shall assume all requests in the applicable Cluster Study have requested Energy Resource Interconnection Service, to establish a baseline of shared Network Upgrades. In the second iteration, the Transmission Provider shall update the study with any requests for Network Resource Interconnection Service, as applicable, to identify the incremental Network Upgrades caused by the requests for Network Resource Interconnection Service.

(i) In conducting the first iteration of the Cluster Study and determining the necessary Interconnection Facilities and



Network Upgrades, Transmission Provider may model operating resources in the Transmission System at less than full output to the extent consistent with maintaining system reliability, Good Utility Practice, and expected operation of the resources in the Transmission System based on historical operating patterns and/or capacity factors. All such modeling assumptions shall be described in the Cluster Study Report.

- (g) At the conclusion of the Cluster Study, Transmission Provider will issue a Cluster Study Report. The Cluster Study report will state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection.
- (h) The Cluster Study Report shall identify Transmission Provider's Interconnection Facilities and Network Upgrades expected to be required to reliably interconnect the Generating Facilities in that Cluster Study at the requested Interconnection Service level and shall provide non-binding estimates for required upgrades.
- (i) The Cluster Study Report shall identify each Interconnection Customer's estimated allocated costs for Transmission Provider's Interconnection Facilities and Transmission Provider's Network Upgrades pursuant to the methodology in Section 39.2.3.
- (j) Transmission Provider shall hold an open stakeholder meeting pursuant to Section 42.4 below.
- (k) The Cluster Study report will provide a list of facilities that are required as a result of the Interconnection Requests and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

- (1) Upon issuance of a Cluster Study Report, or Cluster Re-Study Report, if any, Transmission Provider shall simultaneously tender a draft Facility Study Agreement, subject to the conditions in Section 43.1.

#### **42.4 Cluster Study Procedures.**

Transmission Provider shall coordinate the Cluster Study with any Affected System that is affected by the Interconnection Request pursuant to Section 38.6 above. Transmission Provider shall utilize existing studies to the extent practicable when it performs the Cluster Study. Interconnection Requests for a Cluster Study may be submitted only within the Cluster Request Window and Transmission Provider shall initiate the Cluster Study process pursuant to Section 39.2.1.

- a. Transmission Provider may segment and perform Cluster Studies according to geographically and/or electrically relevant areas on the Transmission Provider's Transmission System ("Cluster Area"). Cluster Areas shall be determined by the Transmission Provider at the end of each Customer Engagement Window and shall be based on the valid Interconnection Requests that are submitted during the Cluster Request Window. Before the Scoping Meeting, the Transmission Provider shall initially determine each Cluster Area and shall post on its OASIS website, for discussion during the Scoping Meeting, a draft plan for the Cluster Study, including a map and table defining the Cluster Areas assigned to each valid Interconnection Request received during the Cluster Request Window. Transmission Provider shall post an updated Cluster Area map, table, and final Cluster Study plan on OASIS by no later than the end of the Customer Engagement Window. The Cluster Study shall consist of all valid Interconnection Requests in each respective Cluster Area that have executed a Cluster Study Agreement and have provided all required information before the close of the Customer Engagement Window.
- b. Unless restudies are required pursuant to Section 42.5, Transmission Provider shall use Reasonable Efforts to complete the Cluster Study and issue the Cluster Study Report within one hundred fifty (150) Calendar Days of the close of the Customer Engagement Window. If the Cluster Study Report is due on a non-Business Day, Transmission Provider shall issue the report on the first Business Day

after the date the Cluster Study Report would otherwise be due.

- c. Within ten (10) Business Days of simultaneously furnishing a Cluster Study Report (or, as applicable, Cluster Re-Study Report) and a draft Interconnection Facilities Study Agreement to Interconnection Customers and posting such report on OASIS, Transmission Provider shall convene an open meeting to discuss the study results ("Cluster Study Report Meeting" or "Cluster Re Study Report Meeting"). Transmission Provider shall, upon request, also make itself available to meet with individual Interconnection Customers after the report is provided.

#### **42.5 Cluster Study Withdrawals and Re-Studies**

- a. If no Interconnection Customer withdraws from the Cluster after completion of the Cluster Study or Cluster Re-Study or is deemed withdrawn pursuant to Section 38.7, Transmission Provider shall electronically notify Interconnection Customers in the Cluster that a Cluster Re-Study is not required.
- b. If one or more Interconnection Customer withdraw(s) from the Cluster, Transmission Provider shall determine if a Cluster Re-Study of the Cluster is necessary. If Transmission Provider determines a Cluster Re-Study is not necessary, Transmission Provider shall provide an updated Cluster Study Report within thirty (30) Calendar Days of such determination. When the updated Cluster Study Report is issued, Transmission Provider shall electronically notify Interconnection Customers in the Cluster that a Cluster Re-Study is not required.
- c. If one or more Interconnection Customers withdraws from the Cluster and Transmission Provider determines a restudy of the Cluster is necessary as a result, Transmission Provider will continue with such re-studies as described in Section 42.5.d below, until Transmission Provider determines that no further re-studies are required. If an Interconnection Customer withdraws after Section 42.5.a, Section 42.5.c, during the Interconnection Facilities Study, or after other Interconnection Customers in the same Cluster have executed LGIAs, and Transmission Provider determines a restudy of the Cluster is necessary, the Cluster (including any Cluster Area) shall be

restudied as described in Section 42.5.d below. Transmission Provider shall electronically notify Interconnection Customers in the Cluster and post on OASIS that a re-study is required.

- d. The scope of any Cluster Re-study shall be consistent with the scope of an initial Cluster Study pursuant to Section 42.3. Transmission Provider shall use Reasonable Efforts to complete the Cluster Re-Study for all Cluster Areas within one hundred fifty (150) Calendar Days of the commencement of the first Cluster Area Re-Study. The results of the Cluster Re-Study shall be combined into a single report ("Cluster Re-Study Report"), and Transmission Provider shall hold an open stakeholder meeting ("Cluster Re-Study Report Meeting") within ten (10) Business Days of publishing Cluster Re-Study Report on OASIS.

If additional re-studies are required, Interconnection Customer and Transmission Provider shall follow the procedures of this Section 42.5 until such time that Transmission Provider determines that no further re-studies are required. Transmission Provider shall electronically notify Interconnection Customers in the Cluster when no further re-studies are required.

- e. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required timeframe for completing the Cluster Study, Transmission Provider shall notify Interconnection Customers as to the schedule status of the Cluster Study. If Transmission Provider is unable to complete the Cluster Study within the time period, it shall notify Interconnection Customers and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, Transmission Provider shall provide to Interconnection Customer all supporting documentation, workpapers, and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Cluster Study, subject to confidentiality arrangements consistent with Section 48.1.

- f. If Re-Study of the Cluster Study other than the Re-Study described in Section 42.5(a)-(d) is required due to a higher or equal priority queued

project dropping out of the queue, or a modification of a higher queued project subject to Section 39.4, Transmission Provider shall notify Interconnection Customer(s) in writing. The Transmission Provider shall make Reasonable Efforts to ensure such Re-Study takes no longer than one hundred fifty (150) Calendar Days from the date of notice. Except as provided in Section 38.7 in the case of withdrawing Interconnection Customers, any cost of Re-Study shall be borne by Interconnection Customer(s) being re-studied.

**43 Interconnection Facilities Study**

## Clean Tariff

#### **IV. LARGE GENERATION INTERCONNECTION SERVICE**

##### **43 Interconnection Facilities Study**

###### **43.1 Interconnection Facilities Study Agreement:**

Simultaneously with the delivery of the final Cluster Study Report, or Cluster Re-Study Report if applicable, Transmission Provider shall provide to Interconnection Customer an Interconnection Facilities Study Agreement in the form of Appendix 4 to this LGIP. The Interconnection Facilities Study Agreement shall provide that Interconnection Customer shall compensate Transmission Provider for the actual cost of the Interconnection Facilities Study. Transmission Provider shall provide to Interconnection Customer a non-binding good faith estimate of the cost and timeframe for completing the Interconnection Facilities Study.

Interconnection Customer shall execute the Interconnection Facilities Study Agreement and deliver the executed Interconnection Facilities Study Agreement to Transmission Provider within thirty (30) Calendar Days after its receipt, together with:

- a. any required technical data;
- b. a demonstration of Site Control pursuant to Section 38.4.1(iii) (a); and
- c. demonstration of a Readiness Milestone option in Sections 38.4.1(v) (b)-(c), a site-specific Purchase Order for generating equipment specific to the Interconnection Request or a Financial Security payment equal to the Network Upgrade costs allocated to Interconnection Customer in the most recent Cluster Study Report minus any amounts already paid pursuant to Section 38.4.1(v) (d). Such additional Financial Security shall be refunded in accordance with Section 48.3.3.

**43.2 Scope of Interconnection Facilities Study:** The Interconnection Facilities Study shall be specific to each Interconnection Request and performed on an individual, i.e. non-clustered, basis. The



Interconnection Facilities Study shall specify and provide a non-binding estimate of the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Cluster Study Report (and any associated restudies) in accordance with Good Utility Practice to physically and electrically connect the Interconnection Facilities to the Transmission System. The Interconnection Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Transmission Provider's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities. The Facilities Study will also identify any potential control equipment for requests for (1) Interconnection Service that are lower than the Generating Facility Capacity and/or (2) for Electric Storage Resources selecting Energy Resource Interconnection Service: requests to model an Electric Storage Resource using operating assumptions that reflect its proposed operation, as selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise require the use of different operating assumptions.

#### **43.3 Interconnection Facilities Study Procedures:**

Transmission Provider shall coordinate the Interconnection Facilities Study with any Affected System pursuant to Section 38.6 above. Transmission Provider shall utilize existing studies to the extent practicable in performing the Interconnection Facilities Study. Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after receipt of an executed Interconnection Facilities Study Agreement: ninety (90) Calendar Days, with no more than a +/- 20 percent cost estimate contained in the report; or one hundred eighty (180) Calendar Days, if Interconnection Customer requests a +/- 10 percent cost estimate. If the Facilities Study Report is due on a non-Business Day, Transmission

Provider shall issue the report on the first Business Day following the day the Facilities Study Report would otherwise be due.

At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Facilities Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Facilities Study. If Transmission Provider is unable to complete the Interconnection Facilities Study and issue a draft Interconnection Facilities Study report within the time required, it shall notify Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

Interconnection Customer may, within thirty (30) Calendar Days after receipt of the draft Interconnection Facilities Study report, provide written comments to Transmission Provider, which Transmission Provider shall include in completing the final Interconnection Facilities Study report. Transmission Provider shall issue the final Interconnection Facilities Study report within fifteen (15) Business Days of receiving Interconnection Customer's comments or promptly upon receiving Interconnection Customer's statement that it will not provide comments. Transmission Provider may reasonably extend such fifteen (15) Business Day period upon notice to Interconnection Customer if Interconnection Customer's comments require Transmission Provider to perform additional analyses or make other significant modifications prior to the issuance of the final Interconnection Facilities Study Report. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers, and databases or data developed in the preparation of the Interconnection Facilities Study, subject to confidentiality arrangements consistent with Section 48.1.

**43.4 Meeting with Transmission Provider:** Within ten (10) Business Days of providing a draft Interconnection Facilities Study report to Interconnection Customer, Transmission Provider and Interconnection Customer

shall meet to discuss the results of the Interconnection Facilities Study.

**43.5 Re-Study:** If Re-Study of the Interconnection Facilities Study, or Facilities Study for a Small Generating Facility performed under Section 51.5, is required due to a higher or equal priority queued project dropping out of the queue or a modification of a higher queued project pursuant to Section 39.4, Transmission Provider shall so notify Interconnection Customer in writing. Transmission Provider shall make Reasonable Efforts to ensure such Re-Study shall take no longer than sixty (60) Calendar Days from the date of notice. Re-Studies that require rerunning the Cluster Study analysis may take longer than sixty days. Except as provided in Section 38.7 in the case of withdrawing Interconnection Customers, any cost of Re-Study shall be borne by the Interconnection Customer being re-studied.

## **Marked Tariff**

#### **IV. LARGE GENERATION INTERCONNECTION SERVICE**

#### **43 Interconnection Facilities Study**

##### **43.1 Interconnection Facilities Study Agreement:**

Simultaneously with the delivery of the final Cluster Study Report, or Cluster Re-Study Report if applicable, Transmission Provider shall provide to Interconnection Customer an Interconnection Facilities Study Agreement in the form of Appendix 4 to this LGIP. The Interconnection Facilities Study Agreement shall provide that Interconnection Customer shall compensate Transmission Provider for the actual cost of the Interconnection Facilities Study. Transmission Provider shall provide to Interconnection Customer a non-binding good faith estimate of the cost and timeframe for completing the Interconnection Facilities Study.

Interconnection Customer shall execute the Interconnection Facilities Study Agreement and deliver the executed Interconnection Facilities Study Agreement to Transmission Provider within thirty (30) Calendar Days after its receipt, together with:

- a. any required technical data;
- b. a demonstration of Site Control pursuant to Section 38.4.1(iii) (a); and
- c. demonstration of a Readiness Milestone option in Sections 38.4.1(v) (b)-(c), a site-specific Purchase Order for generating equipment specific to the Interconnection Request or a Financial Security payment equal to the Network Upgrade costs allocated to Interconnection Customer in the most recent Cluster Study Report minus any amounts already paid pursuant to Section 38.4.1(v) (d). Such additional Financial Security shall be refunded in accordance with Section 48.3.3.

##### **43.2 Scope of Interconnection Facilities Study:**

The Interconnection Facilities Study shall be specific to each Interconnection Request and performed on an individual, i.e. non-clustered, basis. The Interconnection Facilities Study shall specify and provide a non-binding estimate of the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Cluster Study Report (and any associated restudies) in accordance with Good Utility Practice to physically and electrically connect the Interconnection Facilities to

the Transmission System. The Interconnection Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Transmission Provider's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities. The Facilities Study will also identify any potential control equipment for requests for (1) Interconnection Service that are lower than the Generating Facility Capacity and/or (2) for Electric Storage Resources selecting Energy Resource Interconnection Service: requests to model an Electric Storage Resource using operating assumptions that reflect its proposed operation, as selected by Interconnection Customer in the Interconnection Request, unless Good Utility Practice, including applicable reliability standards, otherwise require the use of different operating assumptions.

#### **43.3 Interconnection Facilities Study Procedures:**

Transmission Provider shall coordinate the Interconnection Facilities Study with any Affected System pursuant to Section 38.6 above. Transmission Provider shall utilize existing studies to the extent practicable in performing the Interconnection Facilities Study. Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after receipt of an executed Interconnection Facilities Study Agreement: ninety (90) Calendar Days, with no more than a +/- 20 percent cost estimate contained in the report; or one hundred eighty (180) Calendar Days, if Interconnection Customer requests a +/- 10 percent cost estimate. If the Facilities Study Report is due on a non-Business Day, Transmission Provider shall issue the report on the first Business Day following the day the Facilities Study Report would otherwise be due.

At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Facilities Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Facilities Study. If Transmission Provider is unable to complete the Interconnection Facilities Study and issue a draft

Interconnection Facilities Study report within the time required, it shall notify Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

Interconnection Customer may, within thirty (30) Calendar Days after receipt of the draft Interconnection Facilities Study report, provide written comments to Transmission Provider, which Transmission Provider shall include in completing the final Interconnection Facilities Study report. Transmission Provider shall issue the final Interconnection Facilities Study report within fifteen (15) Business Days of receiving Interconnection Customer's comments or promptly upon receiving Interconnection Customer's statement that it will not provide comments. Transmission Provider may reasonably extend such fifteen (15) Business Day period upon notice to Interconnection Customer if Interconnection Customer's comments require Transmission Provider to perform additional analyses or make other significant modifications prior to the issuance of the final Interconnection Facilities Study Report. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers, and databases or data developed in the preparation of the Interconnection Facilities Study, subject to confidentiality arrangements consistent with Section 48.1.

**43.4 Meeting with Transmission Provider:** Within ten (10) Business Days of providing a draft Interconnection Facilities Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection Facilities Study.

**43.5 Re-Study:** If Re-Study of the Interconnection Facilities Study, or Facilities Study for a Small Generating Facility performed under Section 51.5, is required due to a higher or equal priority queued project dropping out of the queue or a modification of a higher queued project pursuant to Section 39.4, Transmission Provider shall so notify Interconnection Customer in writing. Transmission Provider shall make Reasonable Efforts to ensure such Re-Study shall take no longer than sixty (60) Calendar Days from the date of notice. Re-Studies that require rerunning the Cluster Study analysis may take longer than sixty days. Except as provided in Section 38.7 in the case of withdrawing Interconnection Customers, any cost of Re-Study shall be borne by the Interconnection Customer being re-studied.

**ATTACHMENT N**



## Clean Tariff

**ATTACHMENT N**

**APPENDICES TO LARGE GENERATOR INTERCONNECTION PROCEDURES  
(Refer to Part IV of the Tariff)**

APPENDIX 1 INTERCONNECTION REQUEST FOR A LARGE GENERATING FACILITY

APPENDIX 2 INFORMATIONAL INTERCONNECTION STUDY REQUEST

APPENDIX 2A INFORMATIONAL INTERCONNECTION STUDY AGREEMENT

APPENDIX 3 CLUSTER STUDY AGREEMENT

APPENDIX 4 INTERCONNECTION FACILITIES STUDY AGREEMENT

APPENDIX 5 SURPLUS INTERCONNECTION SERVICE SYSTEM IMPACT STUDY AGREEMENT

APPENDIX 6 STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT

APPENDIX 7 INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

APPENDIX 8 TECHNOLOGICAL ADVANCEMENT STUDY AGREEMENT

**APPENDIX 1 to LGIP**

**INTERCONNECTION REQUEST FOR A  
LARGE GENERATING FACILITY**

1. The undersigned Interconnection Customer submits this request to interconnect its Large Generating Facility with Transmission Provider's Transmission System pursuant to a Tariff.
  
2. This Interconnection Request is for (check one):  
\_\_\_\_\_ A proposed new Large Generating Facility.  
\_\_\_\_\_ An increase in the generating capacity or a Material Modification of an existing Generating Facility.  
\_\_\_\_\_ Surplus Interconnection Service.
  
3. The type of interconnection service requested (check one):  
\_\_\_\_\_ Energy Resource Interconnection Service  
\_\_\_\_\_ Network Resource Interconnection Service  
  
(Note: For Surplus Interconnection Service requests, the type of Interconnection Service requested cannot exceed the type of interconnection service already provided by the original Interconnection Customer's LGIA)
  
4. \_\_\_\_\_ Check here only if Interconnection Customer requesting Network Resource Interconnection Service also seeks to have its Generating Facility studied for Energy Resource Interconnection Service, subject to the requirements of Section 38.2 of the Tariff.
  
5. Readiness Milestone Option selected, as specified in the LGIP, along with any supporting documentation:  
  
\_\_\_\_\_

(Note that if the Readiness Milestone Option in Section 38.4.1(v)d. is selected at this stage, pursuant to the LGIP, Interconnection Customer will also need to satisfy the requirements of Section 43.1 to proceed to a Facilities Study)

6. Interconnection Customer provides the following information:

- a. Address or location of the proposed new Large Generating Facility site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility;
  - b. Maximum summer at \_\_\_\_\_ degrees C and winter at \_\_\_\_\_ degrees C megawatt electrical output of the proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
  - c. General description of the equipment configuration;
  - d. Commercial Operation Date (Day, Month, and Year);
  - e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person;
  - f. Approximate location of the proposed Point of Interconnection;
  - g. Interconnection Customer Data (set forth in Attachment A);
  - h. Primary frequency response operating range for electric storage resources; and
  - i. Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity).
  - j. For Surplus Interconnection Service: Completed Attachment B to this LGIP Appendix 1.
7. Applicable deposit amount as specified in the LGIP.
  8. Site Control as specified in the LGIP (check one)
    - \_\_\_\_\_ Evidence is attached to this Interconnection Request
    - \_\_\_\_\_ Site Control deposit provided in accordance with this LGIP
  9. \_\_\_\_\_ For Electric Storage Resources selecting Energy Resource Interconnection Service: (1) *the operating assumptions reflecting the proposed operation of the Electric Storage Resource, such as charge and discharge parameters, that are provided by Transmission Provider on its OASIS for use in the Cluster Study process, and* (2)

*a description of any control technologies (software and/or hardware) that will limit the operation of the Electric Storage Resource to its intended operation.*

10. This Interconnection Request shall be submitted to the representative indicated below:

[To be completed by Transmission Provider]

11. Representative of Interconnection Customer to contact:

[To be completed by Interconnection Customer]

12. This Interconnection Request is submitted by:

Name of Interconnection Customer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A to Appendix 1  
Interconnection Request**

**LARGE GENERATING FACILITY DATA**

**UNIT RATINGS**

kVA \_\_\_\_\_ °F \_\_\_\_\_ Voltage \_\_\_\_\_  
 Power Factor \_\_\_\_\_  
 Speed (RPM) \_\_\_\_\_ Connection (e.g. Wye) \_\_\_\_\_  
 Short Circuit Ratio \_\_\_\_\_ Frequency, Hertz \_\_\_\_\_  
 Stator Amperes at Rated kVA \_\_\_\_\_ Field Volts \_\_\_\_\_  
 Max Turbine MW \_\_\_\_\_ °F \_\_\_\_\_

Primary frequency response operating range for electric storage resources:

Minimum State of Charge: \_\_\_\_\_  
 Maximum State of Charge: \_\_\_\_\_

**COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA**

Inertia Constant, H = \_\_\_\_\_ kW sec/kVA  
 Moment-of-Inertia, WR<sup>2</sup> = \_\_\_\_\_ lb. ft.<sup>2</sup>

**REACTANCE DATA (PER UNIT-RATED KVA)**

	<b>DIRECT AXIS</b>	<b>QUADRATURE AXIS</b>
Synchronous - saturated	X <sub>dv</sub> _____	X <sub>qv</sub> _____
Synchronous - unsaturated	X <sub>di</sub> _____	X <sub>qi</sub> _____
Transient - saturated	X' <sub>dv</sub> _____	X' <sub>qv</sub> _____
Transient - unsaturated	X' <sub>di</sub> _____	X' <sub>qi</sub> _____
Subtransient - saturated	X'' <sub>dv</sub> _____	X'' <sub>qv</sub> _____
Subtransient - unsaturated	X'' <sub>di</sub> _____	X'' <sub>qi</sub> _____
Negative Sequence - saturated	X <sub>2v</sub> _____	
Negative Sequence - unsaturated	X <sub>2i</sub> _____	
Zero Sequence - saturated	X <sub>0v</sub> _____	
Zero Sequence - unsaturated	X <sub>0i</sub> _____	
Leakage Reactance	X <sub>1m</sub> _____	

**FIELD TIME CONSTANT DATA (SEC)**

Open Circuit T'<sub>do</sub> \_\_\_\_\_ T'<sub>qo</sub> \_\_\_\_\_

Three-Phase Short Circuit Transient	$T'_{d3}$	_____	$T'_q$	_____
Line to Line Short Circuit Transient	$T'_{d2}$	_____		
Line to Neutral Short Circuit Transient	$T'_{d1}$	_____		
Short Circuit Subtransient	$T''_d$	_____	$T''_q$	_____
Open Circuit Subtransient	$T''_{do}$	_____	$T''_{qo}$	_____

**ARMATURE TIME CONSTANT DATA (SEC)**

Three Phase Short Circuit	$T_{a3}$	_____
Line to Line Short Circuit	$T_{a2}$	_____
Line to Neutral Short Circuit	$T_{a1}$	_____

NOTE: If requested information is not applicable, indicate by marking "N/A."

**MW CAPABILITY AND PLANT CONFIGURATION  
LARGE GENERATING FACILITY DATA**

**ARMATURE WINDING RESISTANCE DATA (PER UNIT)**

Positive	$R_1$	_____
Negative	$R_2$	_____
Zero	$R_0$	_____

Rotor Short Time Thermal Capacity  $I_2^2t =$  \_\_\_\_\_  
 Field Current at Rated kVA, Armature Voltage and PF = \_\_\_\_\_ amps  
 Field Current at Rated kVA and Armature Voltage, 0 PF = \_\_\_\_\_ amps  
 Three Phase Armature Winding Capacitance = \_\_\_\_\_ microfarad  
 Field Winding Resistance = \_\_\_\_\_ ohms \_\_\_\_\_ °C  
 Armature Winding Resistance (Per Phase) = \_\_\_\_\_ ohms \_\_\_\_\_ °C

**CURVES**

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

**GENERATOR STEP-UP TRANSFORMER DATA RATINGS**

Capacity	Self-cooled/ Maximum Nameplate	
_____	/	_____ kVA

Voltage Ratio(Generator Side/System side/Tertiary) \_\_\_\_\_ kV  
/ /

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))  
/ /

Fixed Taps Available

Present Tap Setting

#### IMPEDANCE

Positive  $Z_1$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

Zero  $Z_0$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

#### EXCITATION SYSTEM DATA

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

#### GOVERNOR SYSTEM DATA

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

#### WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request: \_\_\_\_\_

Elevation: \_\_\_\_\_ Single Phase \_\_\_\_\_ Three Phase

Inverter manufacturer, model name, number, and version:

\_\_\_\_\_

List of adjustable set-points for the protective equipment or



software:

---

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

### **INDUCTION GENERATORS**

- (\* ) Field Volts: \_\_\_\_\_
- (\* ) Field Amperes: \_\_\_\_\_
- (\* ) Motoring Power (kW): \_\_\_\_\_
- (\* ) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_
- (\* )  $I_2^2t$  or K (Heating Time Constant): \_\_\_\_\_
- (\* ) Rotor Resistance: \_\_\_\_\_
- (\* ) Stator Resistance: \_\_\_\_\_
- (\* ) Stator Reactance: \_\_\_\_\_
- (\* ) Rotor Reactance: \_\_\_\_\_
- (\* ) Magnetizing Reactance: \_\_\_\_\_
- (\* ) Short Circuit Reactance: \_\_\_\_\_
- (\* ) Exciting Current: \_\_\_\_\_
- (\* ) Temperature Rise: \_\_\_\_\_
- (\* ) Frame Size: \_\_\_\_\_
- (\* ) Design Letter: \_\_\_\_\_
- (\* ) Reactive Power Required In Vars (No Load): \_\_\_\_\_
- (\* ) Reactive Power Required In Vars (Full Load): \_\_\_\_\_
- (\* ) Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on KVA Base

Note: Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (\*) is required

**Attachment B to Appendix 1  
Interconnection Request**

**Supplemental Information for Surplus Interconnection Service  
Requests**

Consistent with Transmission Provider's Open Access Transmission Tariff ("OATT") Section 38.3 and implementing business practices, Surplus Interconnection Service may be requested.

**I. SUBMITTING A SURPLUS INTERCONNECTION SERVICE REQUEST**

Interconnection Customers shall request Surplus Interconnection Service by submitting this completed LGIP Appendix 1 (including Attachments) to the person or department noted in the Transmission Provider's currently-effective Surplus Interconnection Business Practice posted on OASIS along with any other additional technical information that may be required to process the Surplus Interconnection Service request.

**II. ONE-LINE DIAGRAMS, DYNAMIC STUDY MODELS**

An Interconnection Customer requesting Surplus Interconnection Service shall include the following information with a completed LGIP Appendix 1:

- A. A detailed one line diagram demonstrating the interaction between the existing and new generators and containing:
  - o Maximum Nameplate MW
  - o Generator make, model and specifications
  - o Power Factor
  - o Number of transformers
  - o Transformer sizes, impedances and winding configurations
  - o Collector system lengths and impedances
  
- B. Dynamic Stability Study Model - A WECC approved PSSE standard model in version 33 and above as well as a detailed user written model if the generating facility is renewable generation

Transmission Provider will notify the original interconnection customer of any technical information it will require for the existing generator in order to perform the Surplus

Interconnection Service analysis.

**III. Information about Parties to the Surplus Interconnection Service Utilization or Transfer**

<b>Section 1: About Original Interconnection Customer</b>		
a	Original Interconnection Customer Queue number	
b	Company name	
c	Customer Contact Name	
d	Project Name	
e	Customer Mailing Address	
F	Customer Phone Number and Email	
<b>Section 2: About Surplus Interconnection Customer</b>		
b	Company name	
c	Contact Name	
d	Project Name	
e	Mailing Address	
f	Phone Number and Email	
g	Affiliate of Original Interconnection Customer? (if No, see Sec.3(d))	
h	Expected Commercial Operation Date	
<b>Section 3: Description of Surplus Service Request</b>		
a	Describe request for Surplus Interconnection Service. Description of availability and plans for surplus; explain why surplus capacity is not being used by Original Interconnection Customer	
b	Amount of Surplus requested (MW)	
c	Date of Surplus request	
d	If Answer to Sec. 2(g) is No, confirmation by Original Interconnection Customer that neither it nor Affiliates seek this Surplus service	
e	When Surplus is available for use	
f	Describe any conditions	

	under which Surplus may be used (Excludes other conditions/requirements from Transmission Provider)	
--	---	--

**IV. Verifications and Other Conditions**

Regardless of the submitting entity, this request for Surplus Interconnection Service is supported by both Original Interconnection Customer (as defined in Part III to this LGIP Appendix 1, Attachment B) and Surplus Interconnection Customer (as defined in Part III to this LGIP Appendix 1, Attachment B), and both customers agree to cooperate with and provide additional information to enable Transmission Provider to evaluate and, if necessary study, the Surplus Interconnection Service request.

Any and all terms of surplus service will be subject to a later Surplus Interconnection Agreement to be executed by the Original Interconnection Customer, Surplus Interconnection Customer, and Transmission Provider, to be filed at the Commission.

Both Original Interconnection Customer and Surplus Interconnection Customer acknowledge that, pursuant to Commission requirements, this is an expedited process and that this Surplus Interconnection Service request may be deemed withdrawn if certain action is not timely taken pursuant to Transmission Provider's OATT Section 38.3.

**Original Interconnection Customer**

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Surplus Interconnection Customer**

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX 2 to LGIP**  
**INFORMATIONAL INTERCONNECTION STUDY REQUEST**

1. The undersigned Interconnection Customer submits this request for an Informational Interconnection Study pursuant to Transmission Provider's Tariff.
2. The type of interconnection service to be evaluated (check one):  
\_\_\_\_\_ Energy Resource Interconnection Service  
\_\_\_\_\_ Network Resource Interconnection Service
3. Check here \_\_\_\_\_ only if Network Resource Interconnection Service was selected above and Interconnection Customer also requests to have its proposed Generating Facility studied for Energy Resource Interconnection Service, for informational purposes.
4. Interconnection Customer provides the following information:
  - a. Address or location of the proposed new Large Generating Facility site to be studied (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility;
  - b. Maximum summer at \_\_\_\_\_ degrees C and winter at \_\_\_\_\_ degrees C megawatt electrical output of the proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
  - c. General description of the equipment configuration;
  - d. Commercial Operation Date to be studied (Day, Month, and Year);
  - e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person;
  - f. Approximate location of the proposed Point of Interconnection;
  - g. Interconnection Customer Data (set forth in Attachment A);

- h. Primary frequency response operating range for electric storage resources; and
  - i. Requested capacity (in MW) of Interconnection Service to be studied (if lower than the Generating Facility Capacity).
5. \$10,000 study deposit amount as specified in the LGIP.
6. For an Electric Storage Resources selecting Energy Resource Interconnection Service: requested operating assumptions to be studied, such as charge and discharge parameters, that reflect the proposed operation of the Electric Storage Resource.
7. This Interconnection Request shall be submitted to the representative indicated below:  
[To be completed by Transmission Provider]
8. Representative of Interconnection Customer to contact:  
[To be completed by Interconnection Customer]
9. This Informational Interconnection Request is submitted by:

Name of Interconnection Customer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A to Appendix 2  
Informational Interconnection Study Request**

**LARGE GENERATING FACILITY DATA**

**UNIT RATINGS**

kVA \_\_\_\_\_ °F \_\_\_\_\_ Voltage \_\_\_\_\_  
 Power Factor \_\_\_\_\_  
 Speed (RPM) \_\_\_\_\_ Connection (e.g. Wye) \_\_\_\_\_  
 Short Circuit Ratio \_\_\_\_\_ Frequency, Hertz \_\_\_\_\_  
 Stator Amperes at Rated kVA \_\_\_\_\_ Field Volts \_\_\_\_\_  
 Max Turbine MW \_\_\_\_\_ °F \_\_\_\_\_

Primary frequency response operating range for electric storage resources:

Minimum State of Charge: \_\_\_\_\_

Maximum State of Charge: \_\_\_\_\_

**COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA**

Inertia Constant, H = \_\_\_\_\_ kW sec/kVA  
 Moment-of-Inertia, WR<sup>2</sup> = \_\_\_\_\_ lb. ft.<sup>2</sup>

**REACTANCE DATA (PER UNIT-RATED KVA)**

	<b>DIRECT AXIS</b>	<b>QUADRATURE AXIS</b>
Synchronous - saturated	X <sub>dv</sub> _____	X <sub>qv</sub> _____
Synchronous - unsaturated	X <sub>di</sub> _____	X <sub>qi</sub> _____
Transient - saturated	X' <sub>dv</sub> _____	X' <sub>qv</sub> _____
Transient - unsaturated	X' <sub>di</sub> _____	X' <sub>qi</sub> _____
Subtransient - saturated	X'' <sub>dv</sub> _____	X'' <sub>qv</sub> _____
Subtransient - unsaturated	X'' <sub>di</sub> _____	X'' <sub>qi</sub> _____
Negative Sequence - saturated	X <sub>2v</sub> _____	
Negative Sequence - unsaturated	X <sub>2i</sub> _____	
Zero Sequence - saturated	X <sub>0v</sub> _____	
Zero Sequence - unsaturated	X <sub>0i</sub> _____	
Leakage Reactance	X <sub>1m</sub> _____	

**FIELD TIME CONSTANT DATA (SEC)**

Open Circuit T'<sub>do</sub> \_\_\_\_\_ T'<sub>qo</sub> \_\_\_\_\_



Three-Phase Short Circuit Transient	$T'_{d3}$	_____	$T'_q$	_____
Line to Line Short Circuit Transient	$T'_{d2}$	_____		
Line to Neutral Short Circuit Transient	$T'_{d1}$	_____		
Short Circuit Subtransient	$T''_d$	_____	$T''_q$	_____
Open Circuit Subtransient	$T''_{do}$	_____	$T''_{qo}$	_____

**ARMATURE TIME CONSTANT DATA (SEC)**

Three Phase Short Circuit	$T_{a3}$	_____
Line to Line Short Circuit	$T_{a2}$	_____
Line to Neutral Short Circuit	$T_{a1}$	_____

NOTE: If requested information is not applicable, indicate by marking "N/A."

**MW CAPABILITY AND PLANT CONFIGURATION  
LARGE GENERATING FACILITY DATA**

**ARMATURE WINDING RESISTANCE DATA (PER UNIT)**

Positive	$R_1$	_____
Negative	$R_2$	_____
Zero	$R_0$	_____

Rotor Short Time Thermal Capacity  $I_2^2t =$  \_\_\_\_\_  
 Field Current at Rated kVA, Armature Voltage and PF = \_\_\_\_\_ amps  
 Field Current at Rated kVA and Armature Voltage, 0 PF = \_\_\_\_\_ amps  
 Three Phase Armature Winding Capacitance = \_\_\_\_\_ microfarad  
 Field Winding Resistance = \_\_\_\_\_ ohms \_\_\_\_\_ °C  
 Armature Winding Resistance (Per Phase) = \_\_\_\_\_ ohms \_\_\_\_\_ °C

**CURVES**

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

**GENERATOR STEP-UP TRANSFORMER DATA RATINGS**

Capacity	Self-cooled/ Maximum Nameplate	
_____	/	_____ kVA

Voltage Ratio(Generator Side/System side/Tertiary) \_\_\_\_\_ kV  
/ /

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))  
/ /

Fixed Taps Available

Present Tap Setting

#### IMPEDANCE

Positive  $Z_1$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

Zero  $Z_0$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

#### EXCITATION SYSTEM DATA

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

#### GOVERNOR SYSTEM DATA

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

#### WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request: \_\_\_\_\_

Elevation: \_\_\_\_\_ Single Phase \_\_\_\_\_ Three Phase

Inverter manufacturer, model name, number, and version:

\_\_\_\_\_

List of adjustable set-points for the protective equipment or

software:

---

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

### **INDUCTION GENERATORS**

- (\* ) Field Volts: \_\_\_\_\_
- (\* ) Field Amperes: \_\_\_\_\_
- (\* ) Motoring Power (kW): \_\_\_\_\_
- (\* ) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_
- (\* )  $I_2^2t$  or K (Heating Time Constant): \_\_\_\_\_
- (\* ) Rotor Resistance: \_\_\_\_\_
- (\* ) Stator Resistance: \_\_\_\_\_
- (\* ) Stator Reactance: \_\_\_\_\_
- (\* ) Rotor Reactance: \_\_\_\_\_
- (\* ) Magnetizing Reactance: \_\_\_\_\_
- (\* ) Short Circuit Reactance: \_\_\_\_\_
- (\* ) Exciting Current: \_\_\_\_\_
- (\* ) Temperature Rise: \_\_\_\_\_
- (\* ) Frame Size: \_\_\_\_\_
- (\* ) Design Letter: \_\_\_\_\_
- (\* ) Reactive Power Required In Vars (No Load): \_\_\_\_\_
- (\* ) Reactive Power Required In Vars (Full Load): \_\_\_\_\_
- (\* ) Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on KVA Base

Note: Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (\*) is required

**APPENDIX 2A TO LGIP  
INFORMATIONAL INTERCONNECTION STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is developing a Large Generating Facility or generating capacity addition to an existing Generating Facility; and

**WHEREAS**, Interconnection Customer is proposing to evaluate an interconnection with the Transmission System; and

**WHEREAS**, Interconnection Customer has submitted to Transmission Provider an Informational Interconnection Study Request; and

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an Informational Interconnection Study consistent with Section 41 of the Tariff.
- 3.0 The scope of the Informational Interconnection Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Informational Interconnection Study shall be performed solely for informational purposes and is not binding on either Party.
- 5.0 The Informational Interconnection Study shall be based on the technical information provided by Interconnection Customer in the Informational Interconnection Study Request, as may be modified as

the result of the optional scoping meeting. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Informational Interconnection Study. If Interconnection Customer modifies its Informational Interconnection Study Request, the time to complete the Informational Interconnection Study may be extended.

6.0 The Informational Interconnection Study Report shall provide the following information:

- preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and
- preliminary description and non-bonding estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit and power flow issues.

7.0 Interconnection Customer shall provide a deposit of \$10,000 for the performance of the Informational Interconnection Study.

Upon receipt of the Informational Interconnection Study Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Informational Interconnection Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

8.0 Miscellaneous. The Informational Interconnection Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the

electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A to Appendix 2A  
Informational Interconnection  
Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
INFORMATIONAL INTERCONNECTION STUDY**

The Informational Interconnection Study will be based upon the information set forth in the Informational Interconnection Study Request and agreed upon in the optional scoping meeting held on \_\_\_\_\_:

Designation of Point of Interconnection and configuration to be studied.

Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by the Interconnection Customer and other assumptions to be provided by the Interconnection Customer and Transmission Provider]

**APPENDIX 3 TO LGIP  
CLUSTER STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is proposing to develop a [*CHOOSE: Large Generating Facility or Small Generating Facility*] or generating capacity addition (or modification) to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated \_\_\_\_\_; and

**WHEREAS**, Interconnection Customer desires to interconnect the [*CHOOSE: Large Generating Facility or Small Generating Facility*] or generating capacity addition (or modification) to an existing Generating Facility with the Transmission System; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform a Cluster Study to assess the impact of interconnecting the [*CHOOSE: Large Generating Facility or Small Generating Facility*] or generating capacity addition (or modification) to an existing Generating Facility to the Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP and, if applicable, SGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed a Cluster Study consistent with, as applicable, Section 42 of the LGIP or Section 51 of the SGIP in accordance with the Tariff and any associated Business Practices as posted by Transmission provider on its OASIS page.



- 3.0 The scope of the Cluster Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Cluster Study will be based upon the information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with, as applicable, Section 39.4 of the LGIP or Section 51 of the SGIP. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Cluster Study. If Interconnection Customer modifies its Interconnection Request or the technical information provided therein, the time to complete the Cluster Study may be extended.
- 5.0 The Cluster Study report shall provide the following information:
- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
  - description and non-binding, good faith estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6.0 Interconnection Customer's deposit, paid pursuant to, as applicable, Section 38.1, or Tariff Attachment O, Appendix 2, or, Attachment W, as may be applicable, shall be used to pay Interconnection Customer's share of Cluster Study costs allocated pursuant to, as applicable, Section 39.2.2 or Section 51.4.2. Transmission Provider's good faith estimate for the

time of completion of the Cluster Study is [insert date].

Upon receipt of the Cluster Study, Transmission Provider shall charge and Interconnection Customer shall pay its actual allocable costs of the Cluster Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate. As provided in Section 48.3 of the LGIP, Interconnection Customer has thirty (30) Calendar Days of receipt of an invoice from Transmission Provider to pay any undisputed costs. If invoices are not paid within thirty (30) Calendar Days of receipt of an invoice, Transmission Provider shall draw upon the security and deposits provided to settle all accounts, which shall include any offsets of amounts due and owing by Transmission Provider. After the final invoice is paid and all accounts are settled, Transmission Provider shall refund all remaining security and deposits.

- 7.0 Miscellaneous. [The Cluster Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.]

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if**

**applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A To Appendix 3  
Cluster Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
CLUSTER STUDY**

The Cluster Study will be based upon the results of the information set forth in the Interconnection Request and results of applicable prior Interconnection Studies, subject to any modifications in accordance with Section 39.4 of the LGIP and Section 49.4 of the SGIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

**APPENDIX 4 TO LGIP  
INTERCONNECTION FACILITIES STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated \_\_\_\_\_; and

**WHEREAS**, Interconnection Customer desires to interconnect the Large Generating Facility with the Transmission System;

**WHEREAS**, Transmission Provider has completed a Cluster Study and provided the results of said study to Interconnection Customer; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Large Generating Facility to the Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause an Interconnection Facilities Study consistent with Section 43.0 of this LGIP to be

performed in accordance with the Tariff.

2.1 Interconnection Customer shall provide (a) a demonstration of Site Control and (b) a Readiness Milestone Option or additional financial security payment in accordance with Section 43.1 of the Tariff.

- 3.0 The scope of the Interconnection Facilities Study shall be subject to the assumptions set forth in Attachment A and the data provided in Attachment B to this Agreement.
- 4.0 The Interconnection Facilities Study report (i) shall provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the Large Generating Facility to the Transmission System and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
- 5.0 Interconnection Customer shall pay the actual costs of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment A.

Transmission Provider shall invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within thirty (30) Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.

- 6.0 Miscellaneous. The Interconnection Facility Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A To Appendix 4  
Interconnection Facilities  
Study Agreement**

**INTERCONNECTION CUSTOMER SCHEDULE ELECTION FOR CONDUCTING THE  
INTERCONNECTION FACILITIES STUDY**

Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after of receipt of an executed copy of this Interconnection Facilities Study Agreement:

\_\_\_\_\_ ninety (90) Calendar Days with no more than a +/- 20 percent cost estimate contained in the report, or

\_\_\_\_\_ one hundred eighty (180) Calendar Days with no more than a +/- 10 percent cost estimate contained in the report.



**Attachment B to Appendix 4  
Interconnection Facilities  
Study Agreement**

**DATA FORM TO BE PROVIDED BY INTERCONNECTION CUSTOMER WITH THE  
INTERCONNECTION FACILITIES STUDY AGREEMENT**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No                      (Please indicate on one line diagram).

What type of control system or PLC will be located at Interconnection Customer's Large Generating Facility?

\_\_\_\_\_

What protocol does the control system or PLC use?

\_\_\_\_\_

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

\_\_\_\_\_

Bus length from generation to interconnection station:

\_\_\_\_\_

Line length from interconnection station to Transmission Provider's transmission line.

---

Tower number observed in the field. (Painted on tower leg)\*

---

Number of third party easements required for transmission lines\*:

---

\* To be completed in coordination with Transmission Provider.

Is the Large Generating Facility in the Transmission Provider's service area?

Yes       No      Local provider: \_\_\_\_\_

Please provide proposed schedule dates:

Begin Construction	Date: _____
Generator step-up transformer receives back feed power	Date: _____
Generation Testing	Date: _____
Commercial Operation	Date: _____

**APPENDIX 5 TO LGIP**

**SURPLUS INTERCONNECTION SERVICE SYSTEM IMPACT STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, in accordance with a request submitted to the Transmission Provider on \_\_\_\_\_ Interconnection Customer is proposing to utilize Surplus Interconnection Service associated with a Large Generating Facility operating under an LGIA between \_\_\_\_\_ ("Original Interconnection Customer") and Transmission Provider dated \_\_\_\_\_;

**WHEREAS**, Interconnection Customer desires to utilize Surplus Interconnection Service of an existing Generating Facility interconnected with the Transmission System; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform a Surplus Interconnection Service System Impact Study to assess the impact of utilization of Surplus Interconnection Service on the Transmission System, and any Affected Systems.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed a Surplus Interconnection Service System Impact Study consistent with Section 38.3 of the Tariff and any associated Business Practices as posted by Transmission provider on its OASIS page.

- 3.0 The scope of the Surplus Interconnection Service System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Surplus Interconnection Service System Impact Study will be performed based on the requirements of Section 38.3 of the Tariff and the technical information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 39.4 of the Tariff. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Surplus Interconnection Service System Impact Study. If Interconnection Customer modifies its Interconnection Request, or the technical information provided therein is modified, the time to complete the Surplus Interconnection Service System Impact Study may be extended.
- 5.0 The Surplus Interconnection Service System Impact Study report shall provide the following information:
- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
  - description and non-binding, good faith estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6.0 Transmission Provider's good faith estimate for the time of completion of the Surplus Interconnection Service System Impact Study is [insert date].

Interconnection Customer's deposit for the Surplus Interconnection Service System Impact Study shall be the same \$10,000 provided by the Interconnection Customer as part of the Surplus Interconnection Service Request.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Surplus Interconnection Service System Impact Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 7.0 Miscellaneous. [The Interconnection System Impact Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.]

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if**

**applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A To Appendix 5  
Surplus Interconnection Service System Impact  
Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
SURPLUS INTERCONNECTION SERVICE SYSTEM IMPACT STUDY**

The Surplus Interconnection Service System Impact Study will be based upon the results of the Original Interconnection Customer's system impact study (if any) or Cluster Study, and the following assumptions:

Existing Point of Interconnection of Original Interconnection Customer:

Note: For Surplus Interconnection Service requests, the request cannot exceed the type of Interconnection Service already provided by the Original Interconnection Customer's LGIA.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

Appendix 6 to the Standard Large  
Generator Interconnection Procedures

STANDARD LARGE GENERATOR

INTERCONNECTION AGREEMENT (LGIA) TABLE OF CONTENTS

RECITALS

Article 1.	Definitions
Article 2.	Effective Date, Term, and Termination
2.1	Effective Date
2.2	Term of Agreement
2.3	Termination Procedures
2.3.1	Written Notice
2.3.2	Default
2.3.3	
2.4	Termination Costs
2.4.1	
2.4.2	
2.4.3	
2.5	Disconnection
2.6	Survival
Article 3.	Regulatory Filings
3.1	Filing
Article 4.	Scope of Service
4.1	Interconnection Product Options
4.1.1	Energy Resource Interconnection Service
4.1.1.1	The Product
4.1.1.2	Transmission Delivery Service Implications
4.1.2	Network Resource Interconnection Service
4.1.2.1	The Product
4.1.2.2	Transmission Delivery Service Implications
4.2	Provision of Service
4.3	Performance Standards
4.4	No Transmission Delivery Service
4.5	Interconnection Customer Provided Services
Article 5.	Interconnection Facilities Engineering, Procurement, & Construction
5.1	Options
5.1.1	Standard Option
5.1.2	Alternate Option



- 5.1.3 Option to Build
- 5.1.4 Negotiated Option
- 5.2 General Conditions Applicable to Option to Build
- 5.3 Liquidated Damages
- 5.4 Power System Stabilizers
- 5.5 Equipment Procurement
  - 5.5.1
  - 5.5.2
  - 5.5.3
- 5.6 Construction Commencement
  - 5.6.1
  - 5.6.2
  - 5.6.3
  - 5.6.4
- 5.7 Work Progress
- 5.8 Information Exchange
- 5.9 Other Interconnection Options
  - 5.9.1 Limited Operation
  - 5.9.2 Provisional Interconnection Service
- 5.10 Interconnection Customer's Interconnection Facilities ('ICIF')
  - 5.10.1 Interconnection Customer's Interconnection Facility Specifications
  - 5.10.2 Transmission Provider's Review
  - 5.10.3 ICIF Construction
- 5.11 Transmission Provider's Interconnection Facilities Construction
- 5.12 Access Rights
- 5.13 Lands of Other Property Owners
- 5.14 Permits
- 5.15 Early Construction of Base Case Facilities
- 5.16 Suspension
- 5.17 Taxes
  - 5.17.1 Interconnection Customer Payments Not Taxable
  - 5.17.2 Representations and Covenants
  - 5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider
  - 5.17.4 Tax Gross-Up Amount
  - 5.17.5 Private Letter Ruling or Change or Clarification of Law
  - 5.17.6 Subsequent Taxable Events
  - 5.17.7 Contests
  - 5.17.8 Refund
  - 5.17.9 Taxes Other Than Income Taxes
  - 5.17.10 Transmission Owners Who Are Not Transmission Providers

- 5.18 Tax Status
- 5.19 Modification
  - 5.19.1 General
  - 5.19.2 Standards
  - 5.19.3 Modification Costs
  
- Article 6. Testing and Inspection
  - 6.1 Pre-Commercial Operation Date Testing and Modifications
  - 6.2 Post-Commercial Operation Date Testing and Modifications
  - 6.3 Right to Observe Testing
  - 6.4 Right to Inspect
  
- Article 7. Metering
  - 7.1 General
  - 7.2 Check Meters
  - 7.3 Standards
  - 7.4 Testing of Metering Equipment
  - 7.5 Metering Data
  
- Article 8. Communications
  - 8.1 Interconnection Customer Obligations
  - 8.2 Remote Terminal Unit
  - 8.3 No Annexation
  - 8.4 Provision of Data from a Variable Energy Resource
  
- Article 9. Operations
  - 9.1 General
  - 9.2 Control Area Notification
  - 9.3 Transmission Provider Obligations
  - 9.4 Interconnection Customer Obligations
  - 9.5 Start-Up and Synchronization
  - 9.6 Reactive Power and Primary Frequency Response
    - 9.6.1 Power Factor Design Criteria
      - 9.6.1.1 Synchronous Generation
      - 9.6.1.2 Non-Synchronous Generation
    - 9.6.2 Voltage Schedules
      - 9.6.2.1 Voltage Regulators
    - 9.6.3 Payment for Reactive Power
    - 9.6.4 Primary Frequency Response
      - 9.6.4.1 Governor or Equivalent Controls
      - 9.6.4.2 Timely and Sustained Response
      - 9.6.4.3 Exemptions
      - 9.6.4.4 Electric Storage Resources
  - 9.7 Outages and Interruptions
    - 9.7.1 Outages

- 9.7.1.1 Outage Authority and Coordination
- 9.7.1.2 Outage Schedules
- 9.7.1.3 Outage Restoration
- 9.7.2 Interruption of Service
  - 9.7.2.1
  - 9.7.2.2
  - 9.7.2.3
  - 9.7.2.4
  - 9.7.2.5
  - 9.7.3 Under-Frequency and Over Frequency Conditions
- 9.7.4 System Protection and Other Control Requirements
  - 9.7.4.1 System Protection Facilities
  - 9.7.4.2
  - 9.7.4.3
  - 9.7.4.4
  - 9.7.4.5
  - 9.7.4.6
- 9.7.5 Requirements for Protection
- 9.7.6 Power Quality
- 9.8 Switching and Tagging Rules
- 9.9 Use of Interconnection Facilities by Third Parties
  - 9.9.1 Purpose of Interconnection Facilities
  - 9.9.2 Third Party Users
- 9.10 Disturbance Analysis Data Exchange

**Article 10. Maintenance**

- 10.1 Transmission Provider Obligations
- 10.2 Interconnection Customer Obligations
- 10.3 Coordination
- 10.4 Secondary Systems
- 10.5 Operating and Maintenance Expenses

**Article 11. Performance Obligation**

- 11.1 Interconnection Customer Interconnection Facilities
- 11.2 Transmission Provider's Interconnection Facilities
- 11.3 Network Upgrades and Distribution Upgrades
- 11.4 Transmission Credits
  - 11.4.1 Repayment of Amounts Advanced for Network Upgrades
  - 11.4.2 Special Provisions for Affected Systems
  - 11.4.3
- 11.5 Provision of Security
  - 11.5.1
  - 11.5.2
  - 11.5.3

- 11.6 Interconnection Customer Compensation
  - 11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition

Article 12. Invoice

- 12.1 General
- 12.2 Final Invoice
- 12.3 Payment
- 12.4 Disputes

Article 13. Emergencies

- 13.1 Definition
- 13.2 Obligations
- 13.3 Notice
- 13.4 Immediate Action
- 13.5 Transmission Provider Authority
  - 13.5.1 General
  - 13.5.2 Reduction and Disconnection
- 13.6 Interconnection Customer Authority
- 13.7 Limited Liability

Article 14. Regulatory Requirements and Governing Law

- 14.1 Regulatory Requirements
- 14.2 Governing Law
  - 14.2.1
  - 14.2.2
  - 14.2.3

Article 15. Notices

- 15.1 General
- 15.2 Billings and Payments
- 15.3 Alternative Forms of Notice
- 15.4 Operations and Maintenance Notice

Article 16. Force Majeure

- 16.1 Force Majeure
  - 16.1.1
  - 16.1.2

Article 17. Default

- 17.1 Default
  - 17.1.1 General
  - 17.1.2 Right to Terminate

Article 18. Indemnity, Consequential Damages and Insurance

- 18.1 Indemnity

- 18.1.1 Indemnified Person
- 18.1.2 Indemnifying Party
- 18.1.3 Indemnity Procedures
- 18.2 Consequential Damages
- 18.3 Insurance
  - 18.3.1
  - 18.3.2
  - 18.3.3
  - 18.3.4
  - 18.3.5
  - 18.3.6
  - 18.3.7
  - 18.3.8
  - 18.3.9
  - 18.3.10
  - 18.3.11

Article 19. Assignment  
19.1 Assignment

Article 20. Severability  
20.1 Severability

Article 21. Comparability  
21.1 Comparability

Article 22. Confidentiality  
22.1 Confidentiality

- 22.1.1 Term
- 22.1.2 Scope
- 22.1.3 Release of Confidential Information
- 22.1.4 Rights
- 22.1.5 No Warranties
- 22.1.6 Standard of Care
- 22.1.7 Order of Disclosure
- 22.1.8 Termination of Agreement
- 22.1.9 Remedies
- 22.1.10 Disclosure to FERC, its Staff, or a State
- 22.1.11

Article 23. Environmental Releases  
23.1

Article 24. Information Requirements

- 24.1 Information Acquisition
- 24.2 Information Submission by Transmission Provider
- 24.3 Updated Information Submission by Interconnection

- Customer
- 24.4 Information Supplementation
- Article 25. Information Access and Audit Rights
  - 25.1 Information Access
  - 25.2 Reporting of Non-Force Majeure Events
  - 25.3 Audit Rights
  - 25.4 Audit Rights Periods
    - 25.4.1 Audit Rights Period for Construction-Related Accounts and Records
    - 25.4.2 Audit Rights Period for All Other Accounts and Records
  - 25.5 Audit Results
- Article 26. Subcontractors
  - 26.1 General
  - 26.2 Responsibility of Principal
  - 26.3 No Limitation by Insurance
- Article 27. Disputes
  - 27.1 Submission
  - 27.2 External Arbitration Procedures
  - 27.3 Arbitration Decisions
  - 27.4 Costs
- Article 28. Representations, Warranties, and Covenants
  - 28.1 General
    - 28.1.1 Good Standing
    - 28.1.2 Authority
    - 28.1.3 No Conflict
    - 28.1.4 Consent and Approval
- Article 29. Joint Operating Committee
  - 29.1 Joint Operating Committee
    - 29.1.1
    - 29.1.2
    - 29.1.3
    - 29.1.4
    - 29.1.5
    - 29.1.6
- Article 30. Miscellaneous
  - 30.1 Binding Effect
  - 30.2 Conflicts
  - 30.3 Rules of Interpretation
  - 30.4 Entire Agreement

- 30.5 **No Third Party Beneficiaries**
- 30.6 **Waiver**
- 30.7 **Headings**
- 30.8 **Multiple Counterparts**
- 30.9 **Amendment**
- 30.10 **Modification by the Parties**
- 30.11 **Reservation of Rights**
- 30.12 **No Partnership**

Appendix A - Interconnection Facilities, Network Upgrades, Distribution Upgrades and Contingent Facilities

Appendix B - Milestones

Appendix C - Interconnection Details

Appendix D - Security Arrangements Details

Appendix E - Commercial Operation Date

Appendix F - Addresses for Delivery of Notices and Billings

Appendix G - Interconnection Requirements for a Wind Generating Plant

Appendix H - Operation of an Electric Storage Resource

## STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT

**THIS STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT** ("Agreement") is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ ("Interconnection Customer" with a Large Generating Facility), and \_\_\_\_\_ a \_\_\_\_\_ organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ ("Transmission Provider and/or Transmission Owner"). Interconnection Customer and Transmission Provider each may be referred to as a "Party" or collectively as the "Parties."

### Recitals

**WHEREAS**, Transmission Provider operates the Transmission System; and

**WHEREAS**, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this Agreement; and,

**WHEREAS**, Interconnection Customer and Transmission Provider have agreed to enter into this Agreement for the purpose of interconnecting the Large Generating Facility with the Transmission System;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Standard Large Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

### Article 1. Definitions

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.



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

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Ancillary Services** shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System to which the Generating Facility is directly interconnected.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider or Interconnection Customer.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of the Standard Large Generator Interconnection Agreement.

**Breaching Party** shall mean a Party that is in Breach of the Standard Large Generator Interconnection Agreement.

**Business Day** shall mean Monday through Friday, excluding Federal Holidays.

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

**Cluster** shall mean a group of Interconnection Requests (one or more) that are studied together for the purpose of conducting the Cluster Study.

**Cluster Area** shall mean the areas of the Transmission Provider's Transmission System that are included together in a Cluster, as described further in Section 42.4 of the LGIP.

**Cluster Request Window** shall have the meaning set forth in Section 39.2.1 of the LGIP.

**Cluster Re-Study** shall mean a restudy of a Cluster Study conducted pursuant to Section 42.4 of the LGIP.

**Cluster Re-Study Report** shall mean the report issued following completion of a Cluster Re-Study pursuant to Section 42.4 of the LGIP.

**Cluster Re-Study Meeting** shall mean the meeting held to discuss the results of a Cluster Re-Study pursuant to Section 42.4 of the LGIP.

**Cluster Study** shall mean an Interconnection Study evaluating one or more Interconnection Requests within a Cluster as described in more detail in Section 42.4 of the LGIP.

**Cluster Study Agreement** shall mean the form of agreement contained in Appendix 3 to the Standard Large Generator Interconnection Procedures for conducting the Cluster Study.

**Cluster Study Report** shall mean the report issued following completion of a Cluster Study pursuant to Section 42.4 of the LGIP.

**Cluster Study Report Meeting** shall mean the meeting held to discuss the results of a Cluster Study pursuant to Section 42.4 of the LGIP.

**Clustering** shall mean the process whereby a group of Interconnection Requests is studied together, instead of serially, as described in more detail in Section 42 of the LGIP.

**Commercial Operation** shall mean the status of a Generating Facility that has commenced generating electricity for sale,

excluding electricity generated during Trial Operation.

**Commercial Operation Date** of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the Standard Large Generator Interconnection Agreement.

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

**Control Area** shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by the Applicable Reliability Council.

**Customer Engagement Window** shall have the meaning set forth in Section 42.2 of the LGIP.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the Standard Large Generator Interconnection Agreement.

**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 System** shall mean the Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Transmission Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the transmission service necessary to effect Interconnection Customer's wholesale sale of electricity in interstate commerce.

Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which the Standard Large Generator Interconnection Agreement becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Storage Resource** shall mean a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by the Standard Large Generator Interconnection Agreement to possess black start capability.

**Energy Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or nonfirm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

**Engineering & Procurement (E&P) Agreement** shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**Environmental Law** shall mean Applicable Laws or Regulations

relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission (Commission) or its successor.

**Financial Security** shall mean any of the forms of collateral or security listed in Section 2 of the Creditworthiness Procedures included in Attachment L to this Tariff.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Informational Interconnection Study** shall mean an analysis based on assumptions specified by Interconnection Customer in the Informational Interconnection Study Agreement and conducted pursuant to Section 41 of the LGIP.

**Informational Interconnection Study Agreement** shall mean the form of agreement contained in Appendix 2A to the Standard Large Generator Interconnection Procedures for conducting the Informational Interconnection Study.

**Informational Interconnection Study Request** shall mean an Interconnection Customer's request in the form of Appendix 2 to the Standard Large Generator Interconnection Procedures.

**Initial Synchronization Date** shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

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

**Interconnection Customer** shall mean any entity, including the Transmission Provider, Transmission Owner or any of the Affiliates or subsidiaries of either, that proposes to interconnect its Generating Facility with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Customer" shall also mean any Small Generating Facility that is participating in a Cluster.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of the Standard Large Generator Interconnection Agreement, 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 Transmission Provider's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Transmission 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 Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Interconnection Facilities may be shared by more than one Generating Facility in a Cluster.

**Interconnection Facilities Study** shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider's Interconnection Facilities and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider's Transmission System. The scope of the study is defined in Section 43 of the Standard Large Generator Interconnection Procedures.

**Interconnection Facilities Study Agreement** shall mean the

form of agreement contained in Appendix 4 of the Standard Large Generator Interconnection Procedures for conducting the Interconnection Facilities Study.

**Interconnection Request** shall mean an Interconnection Customer's request, in the form of Appendix 1 to the Standard Large Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Request" shall also mean any interconnection request from a Small Generating Facility that is participating in a Cluster.

**Interconnection Service** shall mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Standard Large Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff.

**Interconnection Study** shall mean any of the following studies: the Informational Interconnection Study, the Cluster Study, Surplus Interconnection Service System Impact Study, and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

**IRS** shall mean the Internal Revenue Service.

**Joint Operating Committee** shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or



resulting from the other Party's performance, or non-performance of its obligations under the Standard Large Generator Interconnection Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed at the Generating Facility pursuant to the Standard Large Generator Interconnection Agreement at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

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

**Network Resource** shall mean any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

**Network Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to integrate its Large Generating Facility with the Transmission Provider's Transmission System (1) in a manner comparable to that in which the Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an RTO or ISO with market based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service in and of itself does not convey transmission service.

**Network Upgrades** shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System.

**Notice of Dispute** shall mean a written notice of a dispute or claim that arises out of or in connection with the Standard Large Generator Interconnection Agreement or its performance.

**Party or Parties** shall mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

**Provisional Interconnection Service** shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the Tariff.

**Provisional Large Generator Interconnection Agreement** shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Large Generator Interconnection Agreement, modified for provisional purposes.

**Queue Position** shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of Interconnection Customer satisfies all of the requirements of Sections 38, 39, and 42 of Transmission Provider's LGIP to enter the Cluster Study Process.

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

Large Generator Interconnection Agreement, 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.

**Readiness Milestone Options** shall mean those options set forth in Section 38.4.1(v) of the LGIP.

**Resource Plan** shall mean any process authorized or required by Applicable Laws and Regulations for, inter alia, the selection of Generating Facilities.

**Resource Solicitation Process** shall mean any process authorized or required by Applicable Laws and Regulations for the acquisition of Network Resources.

**Scoping Meeting** shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing the proposed interconnection request, alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to affect such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Site Control** shall mean the exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold interest in a site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of the Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. Site Control for any co-located project is demonstrated by a contract or other agreement demonstrating shared land use for all co-located projects that meet the aforementioned provisions of this Site Control definition.

**Small Generating Facility** shall mean a Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**Stand Alone Network Upgrades** shall mean Network Upgrades that are not part of an Affected System that an Interconnection

Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement. If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

**Standard Large Generator Interconnection Agreement (LGIA)** shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in the Transmission Provider's Tariff.

**Standard Large Generator Interconnection Procedures (LGIP)** shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that are included in the Transmission Provider's Tariff.

**Surplus Interconnection Service** shall mean any unneeded portion of Interconnection Service established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Surplus Interconnection Service System Impact Study** shall mean an engineering study that evaluates the impact of a proposed request for Surplus Interconnection Service on the safety and reliability of Transmission Provider's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**Surplus Interconnection Service System Impact Study Agreement** shall mean the form of agreement contained in Appendix XX of the Standard Large Generator Interconnection Procedures for conducting a system impact study for purposes of evaluating

a request for Surplus Interconnection Service pursuant to Section 38.3.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

**Tariff** shall mean the Transmission Provider's Tariff through which open access transmission service and Interconnection Service are offered, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Transmission Owner** shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Standard Large Generator Interconnection Agreement to the extent necessary.

**Transmission Provider** shall mean the public utility (or its designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

**Transmission Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Transmission Provider's Interconnection Facilities may be shared by more than one Generating Facility in a given Cluster Study.

**Transmission System** shall mean the facilities owned,

controlled or operated by the Transmission Provider or Transmission Owner that are used to provide transmission service under the Tariff.

**Trial Operation** shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Variable Energy Resource** shall mean a device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

**Withdrawal Penalty** shall have the meaning set forth in Section 38.7.1 of the LGIP.

## **Article 2. Effective Date, Term, and Termination**

- 2.1 Effective Date.** This LGIA shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. Transmission Provider shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.
- 2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ten (10) years from the Effective Date or such other longer period as Interconnection Customer may request (Term to be specified in individual agreements) and shall be automatically renewed for each successive one-year period thereafter.

## 2.3 Termination Procedures.

**2.3.1 Written Notice.** This LGIA may be terminated by Interconnection Customer after giving Transmission Provider ninety (90) Calendar Days advance written notice, or by Transmission Provider notifying FERC after the Generating Facility permanently ceases Commercial Operation. This LGIA shall be terminated by Transmission Provider if the Generating Facility or a portion of the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date established in accordance with Section 39.4.5 of the LGIP, including any extension provided thereunder, or, having previously achieved Commercial Operation, has ceased Commercial Operation for three (3) consecutive years, beginning with the last date of Commercial Operation for the Generating Facility, after giving Interconnection Customer ninety (90) Calendar Days advance written notice. When only a portion of the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date established in accordance with Section 39.4.5 of the LGIP, including any extension provided thereunder, Transmission Provider shall terminate only that portion of the LGIA. Notwithstanding the foregoing, in the limited circumstance that the Interconnection Request is served by a Contingent Facility with an in-service date that is later than the Commercial Operation Date permitted under Section 39.4.5 of the LGIP, Transmission Provider shall terminate this LGIA only for failure to achieve Commercial Operation by ninety (90) Calendar Days after that later in-service date of the Contingent Facility. The Generating Facility will not be deemed to have ceased Commercial Operation for purposes of this Article 2.3.1 if Interconnection Customer can document that it has taken other significant steps to maintain or restore operational readiness of the Generating Facility for the purpose of returning the Generating Facility to Commercial Operation as soon as possible.

**2.3.2 Default.** Either Party may terminate this LGIA in accordance with Article 17.

**2.3.3** Notwithstanding Articles 2.3.1 and 2.3.2, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA, which notice has been accepted for filing by FERC.

**2.4 Termination Costs.** If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party, as of the date of the other Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this LGIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this LGIA, unless otherwise ordered or approved by FERC:

**2.4.1** With respect to any portion of Transmission Provider's Interconnection Facilities that have not yet been constructed or installed, Transmission Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Transmission Provider for any or all such costs of materials or equipment not



taken by Interconnection Customer, Transmission Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Transmission Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this LGIA, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any Network Upgrades for which Transmission Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

**2.4.2** Transmission Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Transmission Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after

termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

### **Article 3. Regulatory Filings**

- 3.1 Filing.** Transmission Provider shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority, if required. Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If Interconnection Customer has executed this LGIA, or any amendment thereto, Interconnection Customer shall reasonably cooperate with Transmission Provider with respect to such filing and to provide any information reasonably requested by Transmission Provider needed to comply with applicable regulatory requirements.

### **Article 4. Scope of Service**

- 4.1 Interconnection Product Options.** Interconnection Customer has selected the following (checked) type of Interconnection Service:

**4.1.1 Energy Resource Interconnection Service.**

- 4.1.1.1 The Product.** Energy Resource Interconnection Service allows Interconnection Customer to connect the Large Generating Facility to the Transmission System and be eligible to deliver the Large Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. To the extent Interconnection Customer wants to receive Energy Resource Interconnection Service, Transmission Provider shall construct facilities

identified in Appendix A.

#### **4.1.1.2 Transmission Delivery Service**

**Implications.** Under Energy Resource Interconnection Service, Interconnection Customer will be eligible to inject power from the Large Generating Facility into and deliver power across the interconnecting Transmission Provider's Transmission System on an "as available" basis up to the amount of MWs identified in the applicable stability and steady state studies to the extent the upgrades initially required to qualify for Energy Resource Interconnection Service have been constructed. Where eligible to do so (e.g., PJM, ISO-NE, NYISO), Interconnection Customer may place a bid to sell into the market up to the maximum identified Large Generating Facility output, subject to any conditions specified in the interconnection service approval, and the Large Generating Facility will be dispatched to the extent Interconnection Customer's bid clears. In all other instances, no transmission delivery service from the Large Generating Facility is assured, but Interconnection Customer may obtain Point-to-Point Transmission Service, Network Integration Transmission Service, or be used for secondary network transmission service, pursuant to Transmission Provider's Tariff, up to the maximum output identified in the stability and steady state studies. In those instances, in order for Interconnection Customer to obtain the right to deliver or inject energy beyond the Large Generating Facility Point of Interconnection or to improve its ability to do so, transmission delivery service must be obtained

pursuant to the provisions of Transmission Provider's Tariff. The Interconnection Customer's ability to inject its Large Generating Facility output beyond the Point of Interconnection, therefore, will depend on the existing capacity of Transmission Provider's Transmission System at such time as a transmission service request is made that would accommodate such delivery. The provision of firm Point-to-Point Transmission Service or Network Integration Transmission Service may require the construction of additional Network Upgrades.

#### **4.1.2 Network Resource Interconnection Service.**

**4.1.2.1 The Product.** Transmission Provider must conduct the necessary studies and construct the Network Upgrades needed to integrate the Large Generating Facility (1) in a manner comparable to that in which Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an ISO or RTO with market based congestion management, in the same manner as all Network Resources. To the extent Interconnection Customer wants to receive Network Resource Interconnection Service, Transmission Provider shall construct the facilities identified in Appendix A to this LGIA.

**4.1.2.2 Transmission Delivery Service Implications.** Network Resource Interconnection Service allows Interconnection Customer's Large Generating Facility to be designated by any Network Customer under the Tariff on Transmission Provider's Transmission System as a Network Resource, up to the Large Generating Facility's full output, on the same

basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur. Although Network Resource Interconnection Service does not convey a reservation of transmission service, any Network Customer under the Tariff can utilize its network service under the Tariff to obtain delivery of energy from the interconnected Interconnection Customer's Large Generating Facility in the same manner as it accesses Network Resources. A Large Generating Facility receiving Network Resource Interconnection Service may also be used to provide Ancillary Services after technical studies and/or periodic analyses are performed with respect to the Large Generating Facility's ability to provide any applicable Ancillary Services, provided that such studies and analyses have been or would be required in connection with the provision of such Ancillary Services by any existing Network Resource. However, if an Interconnection Customer's Large Generating Facility has not been designated as a Network Resource by any load, it cannot be required to provide Ancillary Services except to the extent such requirements extend to all generating facilities that are similarly situated. The provision of Network Integration Transmission Service or firm Point-to-Point Transmission Service may require additional studies and the construction of additional upgrades. Because such studies and upgrades would be associated with a request for delivery service under the Tariff, cost responsibility for the studies and upgrades would be in accordance

with FERC's policy for pricing transmission delivery services.

Network Resource Interconnection Service does not necessarily provide Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on Transmission Provider's Transmission System without incurring congestion costs. In the event of transmission constraints on Transmission Provider's Transmission System, Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in Transmission Provider's Transmission System in the same manner as Network Resources.

There is no requirement either at the time of study or interconnection, or at any point in the future, that Interconnection Customer's Large Generating Facility be designated as a Network Resource by a Network Service Customer under the Tariff or that Interconnection Customer identify a specific buyer (or sink). To the extent a Network Customer does designate the Large Generating Facility as a Network Resource, it must do so pursuant to Transmission Provider's Tariff.

Once an Interconnection Customer satisfies the requirements for obtaining Network Resource Interconnection Service, any future transmission service request for delivery from the Large Generating Facility within Transmission Provider's Transmission System of any amount of capacity and/or energy, up to the amount initially studied, will not require that any additional

studies be performed or that any further upgrades associated with such Large Generating Facility be undertaken, regardless of whether or not such Large Generating Facility is ever designated by a Network Customer as a Network Resource and regardless of changes in ownership of the Large Generating Facility. However, the reduction or elimination of congestion or redispatch costs may require additional studies and the construction of additional upgrades.

To the extent Interconnection Customer enters into an arrangement for long term transmission service for deliveries from the Large Generating Facility outside Transmission Provider's Transmission System, such request may require additional studies and upgrades in order for Transmission Provider to grant such request.

- 4.2 Provision of Service.** Transmission Provider shall provide Interconnection Service for the Large Generating Facility at the Point of Interconnection.
- 4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is a Transmission Provider or Transmission Owner, then that Party shall amend the LGIA and submit the amendment to FERC for approval.
- 4.4 No Transmission Delivery Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1.

Interconnection Customer shall be paid for such services in accordance with Article 11.6.

**Article 5. Interconnection Facilities Engineering, Procurement, and Construction**

**5.1 Options.** Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option or Alternate Option set forth below, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, Interconnection Customer shall indicate whether it elects to exercise the Option to Build set forth in Article 5.1.3 below. If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days. Upon receipt of the notification that Interconnection Customer's designated dates are not acceptable to Transmission Provider, the Interconnection Customer shall notify Transmission Provider within thirty (30) Calendar Days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

**5.1.1 Standard Option.** Transmission Provider shall design, procure, and construct Transmission Provider's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the dates set forth in Appendix B, Milestones. Transmission Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Transmission Provider reasonably expects that it will not be able to complete Transmission Provider's Interconnection



Facilities and Network Upgrades by the specified dates, Transmission Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by Interconnection Customer are acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities by the designated dates.

If Transmission Provider subsequently fails to complete Transmission Provider's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; Transmission Provider shall pay Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by Interconnection Customer shall be extended day for day for each day that the applicable RTO or ISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.2. Transmission Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such

Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the dates designated by interconnection Customer are not acceptable to Transmission Provider, the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3. If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), Transmission Provider shall assume responsibility for the design, procurement and construction of all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build.

**5.2 General Conditions Applicable to Option to Build.** If Interconnection Customer assumes responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades,

- (1) Interconnection Customer shall engineer, procure equipment, and construct Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Transmission Provider;
- (2) Interconnection Customer's engineering, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which Transmission

Provider would be subject in the engineering, procurement or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;

- (3) Transmission Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) prior to commencement of construction, Interconnection Customer shall provide to Transmission Provider a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from Transmission Provider;
- (5) at any time during construction, Transmission Provider shall have the right to gain unrestricted access to Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;
- (6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Transmission Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (7) Interconnection Customer shall indemnify Transmission Provider for claims arising from Interconnection Customer's construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

- (8) Interconnection Customer shall transfer control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;
- (9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Transmission Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Transmission Provider;
- (10) Transmission Provider shall approve and accept for operation and maintenance Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and
- (11) Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information, and any other documents that are reasonably required by Transmission Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Transmission Provider.
- (12) If Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, Interconnection Customer shall pay Transmission Provider the agreed upon amount of [\$PLACEHOLDER] for Transmission Provider to execute the responsibilities enumerated to Transmission Provider under Article 5.2. Transmission Provider shall invoice Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

**5.3 Liquidated Damages.** The actual damages to Interconnection Customer, in the event Transmission Provider's Interconnection Facilities or Network Upgrades are not completed by the dates designated by Interconnection Customer and accepted by Transmission Provider pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are

uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by Transmission Provider to Interconnection Customer in the event that Transmission Provider does not complete any portion of Transmission Provider's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to  $\frac{1}{2}$  of 1 percent per day of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades, in the aggregate, for which Transmission Provider has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades for which Transmission Provider has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Transmission Provider to Interconnection Customer as just compensation for the damages caused to Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Transmission Provider's failure to meet its schedule.

No liquidated damages shall be paid to Interconnection Customer if: (1) Interconnection Customer is not ready to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for the Large Generating Facility's Trial Operation or to export power from the Large Generating Facility on the specified dates, unless Interconnection Customer would have been able to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for Large Generating Facility's Trial Operation or to export power from the Large Generating Facility, but for Transmission Provider's delay; (2) Transmission Provider's failure to meet the specified dates is the result of the action or inaction of Interconnection Customer or any other Interconnection Customer who has entered into an LGIA with Transmission Provider or any cause beyond Transmission Provider's reasonable control or reasonable ability to cure; (3) the interconnection Customer has assumed responsibility for the design, procurement and construction of Transmission

Provider's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council. Transmission Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators.

**5.5 Equipment Procurement.** If responsibility for construction of Transmission Provider's Interconnection Facilities or Network Upgrades is to be borne by Transmission Provider, then Transmission Provider shall commence design of Transmission Provider's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** Transmission Provider has completed the Facilities Study pursuant to the Facilities Study Agreement;

**5.5.2** Transmission Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** Transmission Provider shall commence construction of Transmission Provider's Interconnection Facilities and Network Upgrades for which

it is responsible as soon as practicable after the following additional conditions are satisfied:

- 5.6.1 Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;
- 5.6.2 Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Transmission Provider's Interconnection Facilities and Network Upgrades;
- 5.6.3 Transmission Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.6.4 Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Transmission Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Transmission Provider of such later date upon which the completion of Transmission Provider's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Transmission Provider's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Other Interconnection Options.**

**5.9.1 Limited Operation.** If any of Transmission

Provider's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Large Generating Facility, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Large Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Provider's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. Transmission Provider shall permit Interconnection Customer to operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.9.2 Provisional Interconnection Service.** Upon the request of Interconnection Customer, and prior to completion of requisite Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities Transmission Provider may execute a Provisional Large Generator Interconnection Agreement or Interconnection Customer may request the filing of an unexecuted Provisional Large Generator Interconnection Agreement with the Interconnection Customer for limited Interconnection Service at the discretion of Transmission Provider based upon an evaluation that will consider the results of available studies. Transmission Provider shall determine, through available studies or additional studies as necessary, whether stability, short circuit, thermal, and/or voltage issues would arise if Interconnection Customer interconnects without modifications to the Generating Facility or Transmission System. Transmission Provider shall determine whether any Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities that are necessary to meet the requirements of NERC, or any applicable Regional Entity for the



interconnection of a new, modified and/or expanded Generating Facility are in place prior to the commencement of Interconnection Service from the Generating Facility. Where available studies indicate that such, Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities that are required for the interconnection of a new, modified and/or expanded Generating Facility are not currently in place, Transmission Provider will perform a study, at the Interconnection Customer's expense, to confirm the facilities that are required for Provisional Interconnection Service. The maximum permissible output of the Generating Facility in the Provisional Large Generator Interconnection Agreement shall be studied and updated no more frequently than annually unless a relevant change to the Transmission System occurs. Interconnection Customer assumes all risk and liabilities with respect to changes between the Provisional Large Generator Interconnection Agreement and the Large Generator Interconnection Agreement, including changes in output limits and Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities cost responsibilities.

**5.10 Interconnection Customer's Interconnection Facilities ('ICIF').** Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.10.1 Interconnection Customer's Interconnection Facility Specifications.** Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Provider at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. Transmission Provider shall review such specifications to ensure that the ICIF are compatible with the technical

specifications, operational control, and safety requirements of Transmission Provider and comment on such specifications within thirty (30) Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Transmission Provider's Review.** Transmission Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Transmission Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider.

**5.10.3 ICIF Construction.** The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Large Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Large Generating Facility. The Interconnection Customer shall provide Transmission Provider specifications for the excitation system,

automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

**5.11 Transmission Provider's Interconnection Facilities**

**Construction.** Transmission Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Transmission Provider shall deliver to Interconnection Customer the following "as-built" drawings, information and documents for Transmission Provider's Interconnection Facilities [include appropriate drawings and relay diagrams].

Transmission Provider will obtain control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities.

**5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners.** If any part of

Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Transmission Provider or Transmission Owner, Transmission Provider or Transmission Owner shall at Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Transmission Provider or Transmission Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, Transmission Provider or Transmission Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Transmission Provider's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** Interconnection Customer may request Transmission Provider to construct, and Transmission Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** Interconnection Customer reserves the right, upon written notice to Transmission Provider, to suspend at any time all work by Transmission Provider associated with the construction and installation of Transmission Provider's Interconnection Facilities and/or Network

Upgrades required under this LGIA with the condition that Transmission System shall be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Provider's safety and reliability criteria. In such event, Interconnection Customer shall be responsible for all reasonable and necessary costs which Transmission Provider (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Transmission System during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which Transmission Provider cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Provider shall obtain Interconnection Customer's authorization to do so. Interconnection Customer shall also be obligated to pay any applicable penalties associated with the suspension, pursuant to Section 38.7 of Transmission Provider's OATT. Transmission Provider shall invoice Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs.

Except as provided in Article 5.16.2 below, in the event Interconnection Customer suspends work by Transmission Provider required under this LGIA pursuant to this Article 5.16, and has not requested Transmission Provider to recommence the work required under this LGIA on or before the expiration of three (3) years following commencement of such suspension, this LGIA shall be deemed terminated. The three-year period shall begin on the date the suspension is requested, or the date of the written notice to Transmission Provider, if no effective date is specified.

**5.16.1 Effect of Missed Interconnection Customer LGIA Milestones.**

If Interconnection Customer fails to provide notice of suspension pursuant to Article 5.16, and Interconnection Customer fails to fulfill or complete any Interconnection Customer LGIA Milestone provided in Appendix B ("LGIA Milestone"), this constitutes a Breach under this LGIA. Depending upon the consequences of the Breach and effectiveness of the cure pursuant to Article 17, Transmission Provider's LGIA Milestones may be revised,

following consultation with Interconnection Customer, consistent with Reasonable Efforts, and in consideration of all relevant circumstances. Parties shall employ Reasonable Efforts to maintain their remaining respective LGIA Milestones.

**5.16.2 Effect of Suspension; Parties Obligations.** In the event that Interconnection Customer suspends work pursuant to this Article 5.16, the applicable construction duration, timelines and schedules set forth in Appendix B shall be suspended during the period of suspension. Should Interconnection Customer thereafter request that work be recommenced, Appendix A and Appendix B may be revised to account for construction sequencing and modified milestones. If the Commercial Operation Date is extended beyond three (3) cumulative years described in Section 39.4.5 of the LGIP and Article 2.3.1 of this LGIA, such an extension may be considered a Material Modification and result in the termination of the LGIA under Article 2.3.1. Interconnection Customer is required to maintain Site Control while this LGIA is in effect, including during suspension.

## **5.17 Taxes.**

### **5.17.1 Interconnection Customer Payments Not Taxable.**

The Parties intend that all payments or property transfers made by Interconnection Customer to Transmission Provider for the installation of Transmission Provider's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as an advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations and Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the Transmission System,

(ii) for income tax purposes, the amount of any payments and the cost of any property transferred to Transmission Provider for Transmission Provider's Interconnection Facilities will be capitalized by Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of Transmission Provider's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At Transmission Provider's request, Interconnection Customer shall provide Transmission Provider with a report from an independent engineer confirming its representation in clause (iii), above. Transmission Provider represents and covenants that the cost of Transmission Provider's Interconnection Facilities paid for by Interconnection Customer will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider.** Notwithstanding Article 5.17.1, Interconnection Customer shall protect, indemnify and hold harmless Transmission Provider from the cost consequences of any current tax liability imposed against Transmission Provider as the result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest

and penalties attributable to any delay caused by Transmission Provider.

Transmission Provider shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges Interconnection Customer under this LGIA unless (i) Transmission Provider has determined, in good faith, that the payments or property transfers made by Interconnection Customer to Transmission Provider should be reported as income subject to taxation or (ii) any Governmental Authority directs Transmission Provider to report payments or property as income subject to taxation; provided, however, that Transmission Provider may require Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Transmission Provider (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. Interconnection Customer shall reimburse Transmission Provider for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from Transmission Provider of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by Transmission Provider upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by



the parties, this means that Interconnection Customer will pay Transmission Provider, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on Transmission Provider ("Current Taxes") on the excess of (a) the gross income realized by Transmission Provider as a result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit Transmission Provider to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on Transmission Provider's composite federal and state tax rates at the time the payments or property transfers are received and Transmission Provider will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting Transmission Provider's anticipated tax depreciation deductions as a result of such payments or property transfers by Transmission Provider's current weighted average cost of capital. Thus, the formula for calculating Interconnection Customer's liability to Transmission Owner pursuant to this Article 5.17.4 can be expressed as follows:  $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$ . Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

#### 5.17.5

##### **Private Letter Ruling or Change or Clarification of Law.**

At Interconnection Customer's request and expense, Transmission Provider shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Interconnection Customer to Transmission Provider under this LGIA are subject to federal income taxation. Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Interconnection Customer's knowledge. Transmission Provider and Interconnection Customer shall cooperate in good faith with respect to the submission of such request.

Transmission Provider shall keep Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. Transmission Provider shall allow Interconnection Customer to attend all meetings with IRS officials about the request and shall permit Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

#### 5.17.6

**Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Transmission Provider's Interconnection Facilities are placed in service, (i) Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and Transmission Provider retains ownership of the Interconnection Facilities and Network Upgrades,

Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on Transmission Provider, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7**

**Contests.** In the event any Governmental Authority determines that Transmission Provider's receipt of payments or property constitutes income that is subject to taxation, Transmission Provider shall notify Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by Interconnection Customer and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon Interconnection Customer's written request and sole expense, Transmission Provider may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. Transmission Provider reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but Transmission Provider shall keep Interconnection Customer informed, shall consider in good faith suggestions from Interconnection Customer about the conduct of the contest, and shall reasonably permit Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Transmission Provider may agree to a settlement either with Interconnection Customer's consent

or after obtaining written advice from nationally-recognized tax counsel, selected by Transmission Provider, but reasonably acceptable to Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding sentence. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without Interconnection Customer's consent or such written advice will relieve Interconnection Customer from any obligation to indemnify Transmission Provider for the tax at issue in the contest.

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to Transmission Provider which holds that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to Transmission Provider in good faith that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not taxable to Transmission Provider, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by Interconnection Customer to Transmission Provider are not subject to federal income tax, or (d) if Transmission Provider receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by Interconnection Customer to Transmission Provider pursuant to this LGIA, Transmission Provider shall promptly refund to

Interconnection Customer the following:

- (i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,
- (ii) interest on any amounts paid by Interconnection Customer to Transmission Provider for such taxes which Transmission Provider did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 CFR §35.19a(a)(2)(iii) from the date payment was made by Interconnection Customer to the date Transmission Provider refunds such payment to Interconnection Customer, and
- (iii) with respect to any such taxes paid by Transmission Provider, any refund or credit Transmission Provider receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to Transmission Provider for such overpayment of taxes (including any reduction in interest otherwise payable by Transmission Provider to any Governmental Authority resulting from an offset or credit); provided, however, that Transmission Provider will remit such amount promptly to Interconnection Customer only after and to the extent that Transmission Provider has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Transmission Provider's Interconnection Facilities.

The intent of this provision is to leave the

Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Transmission Provider for which Interconnection Customer may be required to reimburse Transmission Provider under the terms of this LGIA. Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and Transmission Provider shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to Transmission Provider for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Transmission Provider.

**5.17.10 Transmission Owners Who Are Not Transmission Providers.** If Transmission Provider is not the same entity as the Transmission Owner, then (i) all references in this Article 5.17 to Transmission Provider shall be deemed also to refer to and to include the Transmission Owner, as appropriate, and (ii) this LGIA shall not become effective until such Transmission Owner shall have agreed in writing to assume all of

the duties and obligations of Transmission Provider under this Article 5.17 of this LGIA.

**5.18 Tax Status.** Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this LGIA is intended to adversely affect any Transmission Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Large Generating Facility modifications that do not require Interconnection Customer to submit an Interconnection Request, Transmission Provider shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Transmission System, Transmission Provider's Interconnection Facilities or Network Upgrades necessitated by such Interconnection Customer modification and a

good faith estimate of the costs thereof.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Provider makes to Transmission Provider's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Provider's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

## **Article 6. Testing and Inspection**

**6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, Transmission Provider shall test Transmission Provider's Interconnection Facilities and Network Upgrades and Interconnection Customer shall test the Large Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.



**6.2 Post-Commercial Operation Date Testing and Modifications.**

Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3 Right to Observe Testing.** Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right, at its own expense, to observe such testing.

**6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

**Article 7. Metering**

**7.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Provider shall install Metering Equipment at the Point of Interconnection prior to any operation of the Large Generating Facility and

shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at Transmission Provider's option, compensated to, the Point of Interconnection. Transmission Provider shall provide metering quantities, in analog and/or digital form, to Interconnection Customer upon request. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2 Check Meters.** Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check Transmission Provider's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except as provided in Article 7.4 below. The check meters shall be subject at all reasonable times to inspection and examination by Transmission Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.

**7.3 Standards.** Transmission Provider shall install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.

**7.4 Testing of Metering Equipment.** Transmission Provider shall inspect and test all Transmission Provider-owned Metering Equipment upon installation and at least once every two (2) years thereafter. If requested to do so by Interconnection Customer, Transmission Provider shall, at Interconnection Customer's expense, inspect or test Metering Equipment more frequently than every two (2) years. Transmission Provider shall give reasonable notice of the time when any inspection or test shall take place, and Interconnection Customer may have representatives present at the test or inspection. If at any time Metering Equipment is found to be inaccurate or defective, it shall be adjusted, repaired or replaced at Interconnection Customer's expense, in order to provide accurate metering, unless the inaccuracy or defect is due to Transmission Provider's failure to maintain, then Transmission Provider shall pay. If Metering Equipment fails to register, or if the measurement made by Metering

Equipment during a test varies by more than two percent from the measurement made by the standard meter used in the test, Transmission Provider shall adjust the measurements by correcting all measurements for the period during which Metering Equipment was in error by using Interconnection Customer's check meters, if installed. If no such check meters are installed or if the period cannot be reasonably ascertained, the adjustment shall be for the period immediately preceding the test of the Metering Equipment equal to one-half the time from the date of the last previous test of the Metering Equipment.

- 7.5 Metering Data.** At Interconnection Customer's expense, the metered data shall be telemetered to one or more locations designated by Transmission Provider and one or more locations designated by Interconnection Customer. Such telemetered data shall be used, under normal operating conditions, as the official measurement of the amount of energy delivered from the Large Generating Facility to the Point of Interconnection.

## **Article 8. Communications**

- 8.1 Interconnection Customer Obligations.** Interconnection Customer shall maintain satisfactory operating communications with Transmission Provider's Transmission System dispatcher or representative designated by Transmission Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Transmission Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by Transmission Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of the Large Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Transmission Provider at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Provider through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1. The communication protocol for the data circuit(s) shall be specified by Transmission Provider. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Provider.

Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

**8.4 Provision of Data from a Variable Energy Resource.** The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the Transmission Provider to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The Transmission Provider and Interconnection Customer whose Generating

Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this LGIA, as they may change from time to time.

## **Article 9. Operations**

- 9.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.
- 9.2 Control Area Notification.** At least three months before Initial Synchronization Date, Interconnection Customer shall notify Transmission Provider in writing of the Control Area in which the Large Generating Facility will be located. If Interconnection Customer elects to locate the Large Generating Facility in a Control Area other than the Control Area in which the Large Generating Facility is physically located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be

executed and implemented prior to the placement of the Large Generating Facility in the other Control Area.

**9.3 Transmission Provider Obligations.** Transmission Provider shall cause the Transmission System and Transmission Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. Transmission Provider may provide operating instructions to Interconnection Customer consistent with this LGIA and Transmission Provider's operating protocols and procedures as they may change from time to time. Transmission Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.

**9.4 Interconnection Customer Obligations.** Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. Interconnection Customer shall operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, Interconnection Customer is responsible for the proper synchronization of the Large Generating Facility to Transmission Provider's Transmission System.

**9.6 Reactive Power and Primary Frequency Response.**

**9.6.1 Power Factor Design Criteria.** Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless Transmission Provider has established different

requirements that apply to all generators in the Control Area on a comparable basis. The requirements of this paragraph shall not apply to wind generators.

**9.6.1.1 Synchronous Generation.**

Interconnection Customer shall design the Large Generating Facility to maintain a composite power deliver at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless the Transmission Provider has established different requirements that apply to all synchronous generators in the Control Area on a comparable basis.

**9.6.1.2 Non-Synchronous Generation.**

Interconnection Customer shall design the Large Generating Facility to maintain composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the Transmission Provider has established a different power factor range that applies to all non-synchronous generators in the Control Area on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. This requirement shall only apply to newly interconnecting non-synchronous generators that have not yet executed a Facilities Study Agreement as of the effective date of the Final Rule establishing this requirement (Order No. 827).

## 9.6.2

**Voltage Schedules.** Once Interconnection Customer has synchronized the Large Generating Facility with the Transmission System, Transmission Provider shall require Interconnection Customer to operate the Large Generating Facility to produce or absorb reactive power within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Provider's voltage schedules shall treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Provider shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Transmission System. Interconnection Customer shall operate the Large Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the System Operator.

**9.6.2.1 Voltage Regulators.** Whenever the Large Generating Facility is operated in parallel with the Transmission System and voltage regulators are capable of operation, Interconnection Customer shall operate the Large Generating Facility with its voltage regulators in automatic operation. If the Large Generating Facility's voltage regulators are not capable of such automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative, and ensure that such Large Generating Facility's reactive power production or absorption (measured in MVARs) are



within the design capability of the Large Generating Facility's generating unit(s) and steady state stability limits. Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Control Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** Transmission Provider is required to pay Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Large Generating Facility when Transmission Provider requests Interconnection Customer to operate its Large Generating Facility outside the range specified in Article 9.6.1, provided that if Transmission Provider pays its own or affiliated generators for reactive power service within the specified range, it must also pay Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the Parties have otherwise agreed.

**9.6.4 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Large Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Large Generating Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency

deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and  $\pm 0.036$  Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from an approved NERC Reliability Standard providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Large Generating Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Large Generating Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Large Generating Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. Interconnection Customer shall notify Transmission Provider that the primary frequency response capability of the Large Generating Facility has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Large Generating Facility with the Transmission System, Interconnection Customer shall operate the Large Generating Facility consistent with the provisions specified in Sections 9.6.4.1 and 9.6.4.2 of this Agreement. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Large Generating Facilities.

#### **9.6.4.1 Governor or Equivalent Controls.**

Whenever the Large Generating Facility is operated in parallel with the Transmission System, Interconnection Customer shall operate the Large Generating Facility with its governor or equivalent controls in service and responsive to frequency.

Interconnection Customer shall: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of  $\pm 0.036$  Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from an approved NERC Reliability Standard that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to Transmission Provider and/or the relevant balancing authority upon request. If Interconnection Customer needs to operate the Large Generating Facility with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify Transmission Provider and the relevant balancing authority, and provide both with the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service.

Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable.

Interconnection Customer shall make

Reasonable Efforts to keep outages of the Large Generating Facility's governor or equivalent controls to a minimum whenever the Large Generating Facility is operated in parallel with the Transmission System.

**9.6.4.2 Timely and Sustained Response.**

Interconnection Customer shall ensure that the Large Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Large Generating Facility has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Large Generating Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A Commission-approved Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**9.6.4.3 Exemptions.** Large Generating Facilities that are regulated by the United States Nuclear Regulatory Commission shall be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this Agreement. Large Generating Facilities that are behind the meter

generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but shall be otherwise exempt from the operating requirements in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this Agreement.

**9.6.4.4 Electric Storage Resources.**

Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Appendix C of its LGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.3 of this Agreement. Appendix C shall specify whether the operating range is static or dynamic, and shall consider (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6)

any other relevant factors agreed to by Transmission Provider and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 9.6.4.2 of this Agreement when it is online and dispatched to inject electricity to the Transmission System and/or receive electricity from the Transmission System. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the Transmission System and/or dispatched to receive electricity from the Transmission System. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter.

Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

## **9.7 Outages and Interruptions.**

### **9.7.1 Outages.**

**9.7.1.1 Outage Authority and Coordination.**

Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

**9.7.1.2 Outage Schedules.**

Transmission Provider shall post scheduled outages of its transmission facilities on the OASIS. Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Transmission Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply shall not be a criterion in determining Transmission System reliability. Transmission Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to

reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Transmission Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, Transmission Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The



following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

- 9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;
- 9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Transmission System;
- 9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, Transmission Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;
- 9.7.2.4** Except during the existence of an Emergency Condition, when the interruption or reduction can be scheduled without advance notice, Transmission Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Transmission Provider;
- 9.7.2.5** The Parties shall cooperate and coordinate with each other to the

extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, and the Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions.**

The Transmission System is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under-frequency system disturbance. Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Large Generating Facility as required by the Applicable Reliability Council to ensure "ride through" capability of the Transmission System. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.**

Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Transmission Provider's Interconnection Facilities or the

Transmission System as a result of the interconnection of the Large Generating Facility and Interconnection Customer's Interconnection Facilities.

- 9.7.4.2** Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Good Utility Practice.
- 9.7.4.3** Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.
- 9.7.4.4** Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.
- 9.7.4.5** Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice.
- 9.7.4.6** Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests

do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Transmission System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Large Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Large Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and Interconnection Customer's other equipment if conditions on the Transmission System could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard. In the event of a conflict between ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, ANSI Standard C84.1-1989, or the applicable superseding

electric industry standard, shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Party a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Transmission Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some

other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

- 9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or Transmission Provider's Transmission System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## **Article 10. Maintenance**

- 10.1 Transmission Provider Obligations.** Transmission Provider shall maintain the Transmission System and Transmission Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.
- 10.2 Interconnection Customer Obligations.** Interconnection Customer shall maintain the Large Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.
- 10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.
- 10.4 Secondary Systems.** Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Provider's Interconnection Facilities.

## **Article 11. Performance Obligation**

- 11.1 Interconnection Customer Interconnection Facilities.** Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.
- 11.2 Transmission Provider's Interconnection Facilities.** Transmission Provider or Transmission Owner shall design, procure, construct, install, own and/or control the Transmission Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.
- 11.3 Network Upgrades and Distribution Upgrades.** Transmission Provider or Transmission Owner shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless Transmission Provider or Transmission Owner elects to fund the capital for the Network Upgrades, they shall be solely funded by Interconnection Customer. In the event that Transmission Provider must change the voltage levels of a discrete portion of the Transmission System to which the Interconnection Customer is connected, Transmission Provider shall give reasonable notice of such change and the Interconnection Customer shall be solely

responsible for all costs related to upgrades or modifications to Interconnection Customer's Interconnection Facilities resulting from Transmission Provider's increase in the voltage levels of the Transmission System, in order to remain interconnected with the Transmission System at the new operating voltage. To the extent that the modifications necessary to upgrade Interconnection Facilities qualify as Network Upgrades, Transmission Provider shall be solely responsible for the expense of such modifications or upgrades.

#### **11.4 Transmission Credits.**

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.** Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Transmission Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Transmission Provider's Tariff and Affected System's Tariff for transmission services with respect to the Large Generating Facility. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any person.

Notwithstanding the foregoing, Interconnection Customer, Transmission Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Transmission Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to



Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Transmission Provider or Affected System Operator will continue to provide payments to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond twenty (20) years from the Commercial Operation Date.

If the Large Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, Transmission Provider and Affected System Operator shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

**11.4.2 Special Provisions for Affected Systems.**

Unless Transmission Provider provides, under the LGIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, Interconnection Customer and Affected System Operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by Interconnection Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that Interconnection Customer, shall be

entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Security.** At least thirty (30) Calendar Days prior to the commencement of the first of the following to occur: design, procurement, installation, or construction of a discrete portion of a Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, Interconnection Customer shall provide Transmission Provider, at Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to Transmission Provider for these purposes.

In addition:

**11.5.1** The guarantee must be made by an entity that meets the creditworthiness requirements of Transmission Provider, and contain terms and conditions that guarantee payment of any amount that may be due from Interconnection Customer, up to an agreed-to maximum amount.

**11.5.2** The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must indicate that it would only expire upon final payment made to Transmission Provider to cover all relevant costs for designing, procuring, installing, and constructing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades for which the letter of credit was provided.

**11.5.3** The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must indicate that it would only expire upon final payment made to Transmission Provider to cover all relevant costs for designing, procuring, installing, and constructing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades for which the surety bond was provided.

**11.6 Interconnection Customer Compensation.** If Transmission Provider requests or directs Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this LGIA, Transmission Provider shall compensate Interconnection Customer in accordance with Interconnection Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to an RTO or ISO FERC-approved rate schedule. Interconnection Customer shall serve Transmission Provider or RTO or ISO with any filing of a proposed rate schedule at the time of such filing with FERC. To the extent that no rate schedule is in effect at the time the Interconnection Customer is required to provide or absorb any Reactive Power under this LGIA, Transmission Provider agrees to compensate Interconnection Customer in such amount as would have been due Interconnection Customer had the rate schedule been in effect at the time service commenced; provided, however, that such rate schedule must be filed at FERC or other appropriate Governmental Authority within sixty (60) Calendar Days of the commencement of service.

**11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.** Transmission Provider or RTO or ISO shall compensate Interconnection Customer for its provision of real and reactive power and other Emergency Condition services that Interconnection Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.6.

## **Article 12. Invoice**

**12.1 General.** Each Party shall submit to the other Party, on a

monthly basis, invoices of amounts due for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party.

**12.2 Final Invoice.** Within six months after completion of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades, Transmission Provider shall provide an invoice of the final cost of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Transmission Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.

**12.3 Payment.** Invoices shall be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice shall pay the invoice within thirty (30) Calendar Days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by either Party will not constitute a waiver of any rights or claims either Party may have under this LGIA.

**12.4 Disputes.** In the event of a billing dispute between Transmission Provider and Interconnection Customer, Transmission Provider shall continue to provide Interconnection Service under this LGIA as long as Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then

Transmission Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with the methodology set forth in FERC's regulations at 18 CFR § 35.19a(a)(2)(iii).

### **Article 13. Emergencies**

- 13.1 Definition.** "Emergency Condition" shall mean a condition or situation: (i) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (ii) that, in the case of Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Transmission System, Transmission Provider's Interconnection Facilities or the Transmission Systems of others to which the Transmission System is directly connected; or (iii) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Large Generating Facility or Interconnection Customer's Interconnection Facilities' System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.
- 13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the applicable ISO/RTO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.
- 13.3 Notice.** Transmission Provider shall notify Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Provider's Interconnection Facilities or the Transmission System that may reasonably be expected to affect Interconnection Customer's operation of the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection Customer shall notify Transmission Provider promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected

to affect the Transmission System or Transmission Provider's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection Customer's or Transmission Provider's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice.

**13.4 Immediate Action.** Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Transmission Provider, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or otherwise regarding the Transmission System.

**13.5 Transmission Provider Authority.**

**13.5.1 General.** Transmission Provider may take whatever actions or inactions with regard to the Transmission System or Transmission Provider's Interconnection Facilities it deems necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Transmission System or Transmission Provider's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing Interconnection Customer to shut-down, start-up, increase or decrease the real or

reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing Interconnection Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of Transmission Provider's operating instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** Transmission Provider may reduce Interconnection Service or disconnect the Large Generating Facility or Interconnection Customer's Interconnection Facilities, when such, reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of Transmission Provider pursuant to Transmission Provider's Tariff. When Transmission Provider can schedule the reduction or disconnection in advance, Transmission Provider shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer and Transmission Provider. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the Transmission System to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good

Utility Practice and the LGIA and the LGIP, Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Provider's Interconnection Facilities. Transmission Provider shall use Reasonable Efforts to assist Interconnection Customer in such actions.

- 13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, neither Party shall be liable to the other for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

#### **Article 14. Regulatory Requirements and Governing Law**

- 14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.



## **14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## **Article 15. Notices.**

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

Either Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Party in writing of the identity of the

person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## **Article 16. Force Majeure**

### **16.1 Force Majeure.**

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## **Article 17. Default**

### **17.1 Default**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act of omission of the other Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching

Party. Except as provided in Article 17.1.2, the breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this LGIA, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this LGIA.

## **Article 18. Indemnity, Consequential Damages and Insurance**

**18.1 Indemnity.** The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this LGIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Person.** If an Indemnified Person is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the indemnifying Party fails, after

notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Person shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or

Indemnified Persons having such differing or additional legal defenses.

The Indemnified Person shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Person, or there exists a conflict or adversity of interest between the Indemnified Person and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Person, which shall not be reasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the Liquidated Damages heretofore described, in no event shall either Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** Each party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

- 18.3.1** Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.
- 18.3.2** Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.
- 18.3.3** Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.
- 18.3.4** Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.
- 18.3.5** The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and

employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.

- 18.3.6** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.
- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this LGIA.
- 18.3.9** Within ten (10) days following execution of this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall

provide certification of all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this LGIA.

## **Article 19. Assignment**

**19.1 Assignment.** This LGIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this LGIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that Interconnection Customer shall have the right to assign this LGIA, without the consent of Transmission Provider, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that Interconnection Customer will



promptly notify Transmission Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured Party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Transmission Provider of the date and particulars of any such exercise of assignment right(s), including providing the Transmission Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

#### **Article 20. Severability**

**20.1 Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Transmission Provider) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of these provisions shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

#### **Article 21. Comparability**

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

#### **Article 22. Confidentiality**

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by either of the

Parties to the other prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of the LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is

otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

**22.1.3 Release of Confidential Information.** Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties.** By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further

agreements or proceed with any other relationship or joint venture.

**22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this LGIA.

Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the LGIA when it is notified by

FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this LGIA ("Confidential Information") shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

**Article 23. Environmental Releases**

**23.1** Each Party shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

#### **Article 24. Information Requirements**

**24.1 Information Acquisition.** Transmission Provider and Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Transmission Provider.** The initial information submission by Transmission Provider shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include Transmission System information necessary to allow Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Parties. On a monthly basis Transmission Provider shall provide Interconnection Customer a status report on the construction and installation of Transmission Provider's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. Interconnection Customer shall submit a completed copy of the Large Generating Facility data requirements contained

in Appendix 1 to the LGIP. It shall also include any additional information provided to Transmission Provider for the Cluster Study and Facilities Study. Information in this submission shall be the most current Large Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Transmission Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the Interconnection Study Agreement between Transmission Provider and Interconnection Customer, then Transmission Provider will conduct appropriate studies to determine the impact on Transmission Provider Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

**24.4 Information Supplementation.** Prior to the Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Large Generating Facility information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Large Generating Facility as required by Good Utility Practice such as an open circuit "step voltage" test on the Large Generating Facility to verify proper operation of the Large Generating Facility's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Large Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Large Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage.

Interconnection Customer shall provide validated test recordings showing the responses of Large Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Large Generating Facility's terminal or



field voltage are acceptable if information necessary to translate these alternate quantities to actual Large Generating Facility terminal or field voltages is provided. Large Generating Facility testing shall be conducted and results provided to Transmission Provider for each individual generating unit in a station.

Subsequent to the Operation Date, Interconnection Customer shall provide Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Provider-owned substation that may affect Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

## **Article 25. Information Access and Audit Rights**

- 25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA.
- 25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of

this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either Party's performance or either Party's satisfaction of obligations under this LGIA. Such audit rights shall include audits of the other Party's costs, calculation of invoiced amounts, Transmission Provider's efforts to allocate responsibility for the provision of reactive support to the Transmission System, Transmission Provider's efforts to allocate responsibility for interruption or reduction of generation on the Transmission System, and each Party's actions in an Emergency Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this LGIA. Each Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Transmission Provider's Interconnection Facilities and Network Upgrades shall be subject to audit for a period of twenty-four months following Transmission Provider's issuance of a final invoice in accordance with Article 12.2.

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to either Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations;

and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

**25.5 Audit Results.** If an audit by a Party determines that an overpayment or an underpayment has occurred, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which support such determination.

## **Article 26. Subcontractors**

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Transmission Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## **Article 27. Disputes**

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such 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 designated 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 designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual 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 LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall

have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

- 27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## **Article 28. Representations, Warranties, and Covenants**

- 28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and

binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3 No Conflict.** The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## **Article 29. Joint Operating Committee**

**29.1 Joint Operating Committee.** Except in the case of ISOs and RTOs, Transmission Provider shall constitute a Joint Operating Committee to coordinate operating and technical considerations of Interconnection Service. At least six (6) months prior to the expected Initial Synchronization Date, Interconnection Customer and Transmission Provider shall each appoint one representative and one alternate to the Joint Operating Committee. Each Interconnection Customer shall notify Transmission Provider of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee shall meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee shall hold a meeting at the request of either Party, at a time and

place agreed upon by the representatives. The Joint Operating Committee shall perform all of its duties consistent with the provisions of this LGIA. Each Party shall cooperate in providing to the Joint Operating Committee all information required in the performance of the Joint Operating Committee's duties. All decisions and agreements, if any, made by the Joint Operating Committee, shall be evidenced in writing. The duties of the Joint Operating Committee shall include the following:

- 29.1.1 Establish data requirements and operating record requirements.
- 29.1.2 Review the requirements, standards, and procedures for data acquisition equipment, protective equipment, and any other equipment or software.
- 29.1.3 Annually review the one (1) year forecast of maintenance and planned outage schedules of Transmission Provider's and Interconnection Customer's facilities at the Point of Interconnection.
- 29.1.4 Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Large Generating Facility and other facilities that impact the normal operation of the interconnection of the Large Generating Facility to the Transmission System.
- 29.1.5 Ensure that information is being provided by each Party regarding equipment availability.
- 29.1.6 Perform such other duties as may be conferred upon it by mutual agreement of the Parties.

### **Article 30. Miscellaneous**

- 30.1 **Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.
- 30.2 **Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA

shall prevail and be deemed the final intent of the Parties.

**30.3 Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**30.4 Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this LGIA.



- 30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.
- 30.6 Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer's legal rights to obtain an interconnection from Transmission Provider. Any waiver of this LGIA shall, if requested, be provided in writing.
- 30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.
- 30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
- 30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by the Parties.
- 30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.
- 30.11 Reservation of Rights.** Transmission Provider shall have the right to make a unilateral filing with FERC to modify this LGIA with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the

Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**IN WITNESS WHEREOF**, the Parties have executed this LGIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Appendix A to LGIA

Interconnection Facilities, Network Upgrades, Distribution  
Upgrades, and Contingent Facilities

1. Interconnection Facilities:

(a) [insert Interconnection Customer's Interconnection  
Facilities]:

(b) [insert Transmission Provider's Interconnection  
Facilities]:

2. Network Upgrades:

(a) [insert Stand Alone Network Upgrades]:

(b) [insert Other Network Upgrades]:

3. Distribution Upgrades:

4. Contingent Facilities

**Appendix B To LGIA**

**Milestones**

**Appendix C To LGIA**  
**Interconnection Details**

## **Appendix D To LGIA**

### **Security Arrangements Details**

Infrastructure security of Transmission System equipment and operations and control hardware and software is essential to ensure day-to-day Transmission System reliability and operational security. FERC will expect all Transmission Providers, market participants, and Interconnection Customers interconnected to the Transmission System to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

**Appendix E To LGIA**

**Commercial Operation Date**

This Appendix E is a part of the LGIA between Transmission Provider and Interconnection Customer.

**[Date]**

**[Transmission Provider Address]**

Re: \_\_\_\_\_ Large Generating Facility

Dear \_\_\_\_\_:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No. \_\_\_\_\_. This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No. \_ at the Large Generating Facility, effective as of **[Date plus one day]**.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

**Appendix F to LGIA**

**Addresses for Delivery of Notices and Billings**

**Notices, Billings and Payments:**

Transmission Provider:

US Mail Deliveries: PacifiCorp Transmission Services  
Attn: Central Cashiers Office  
PO Box 2757  
Portland, OR 97208-2757

Other Deliveries: Central Cashiers Office  
Attn: PacifiCorp Transmission Services  
825 NE Multnomah Street, Suite 550  
Portland OR 97232

Phone Number: [Add Central Cashiers Phone Number]

Interconnection Customer:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or email):**

Transmission Provider:

Director, Transmission Services	[Add phone number]
Manager, Transmission Scheduling	[Add phone number]
Manager, Interconnection Services	[Add phone number]
Manager, Transmission Services	[Add phone number]
Transmission Business Facsimile	[Add facsimile number]

OASIS Address:

<<http://www.oasis.pacificorp.com/oasis/ppw/main.htmlx>>

Interconnection Customer:

[To be supplied.]



## Appendix G to LGIA

### INTERCONNECTION REQUIREMENTS FOR A WIND GENERATING PLANT

Appendix G sets forth requirements and provisions specific to a wind generating plant. All other requirements of this LGIA continue to apply to wind generating plant interconnections.

#### A. Technical Standards Applicable to a Wind Generating Plant

##### i. Low Voltage Ride-Through (LVRT) Capability

A wind generating plant shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the standard below. The LVRT standard provides for a transition period standard and a post-transition period standard.

#### Transition Period LVRT Standard

The transition period standard applies to wind generating plants subject to FERC Order 661 that have either: (i) interconnection agreements signed and filed with the Commission, filed with the Commission in unexecuted form, or filed with the Commission as non-conforming agreements between January 1, 2006 and December 31, 2006, with a scheduled in-service date no later than December 31, 2007, or (ii) wind generating turbines subject to a wind turbine procurement contract executed prior to December 31, 2005, for delivery through 2007.

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 - 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles at a voltage as low as 0.15 p.u., as measured at the high side of the wind generating plant step-up transformer (i.e. the transformer that steps the voltage up to the transmission

interconnection voltage or "GSU"), after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU or to faults that would result in a voltage lower than 0.15 per unit on the high side of the GSU serving the facility.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR Compensator, etc.) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

#### **Post-transition Period LVRT Standard**

All wind generating plants subject to FERC Order No. 661 and not covered by the transition period described above must meet the following requirements:

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 - 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to pre-fault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand

for a three-phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system. A wind generating plant shall remain interconnected during such a fault on the transmission system for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

**ii. Power Factor Design Criteria (Reactive Power)**

The following reactive power requirements apply only to a newly interconnecting wind generating plant that has executed a Facilities Study Agreement as of the effective date of the Final Rule establishing the reactive power requirements for non-synchronous generators in section 9.6.1 of this LGIA (Order No. 827). A wind generating plant to which this provision applies shall maintain a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA, if the Transmission Provider's System Impact Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account

any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors if agreed to by the Transmission Provider, or a combination of the two. The Interconnection Customer shall not disable power factor equipment while the wind plant is in operation. Wind plants shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the System Impact Study shows this to be required for system safety or reliability.

**iii. Supervisory Control and Data Acquisition (SCADA) Capability**

The wind plant shall provide SCADA capability to transmit data and receive instructions from the Transmission Provider to protect system reliability. The Transmission Provider and the wind plant Interconnection Customer shall determine what SCADA information is essential for the proposed wind plant, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability in its area.

## **Appendix H to LGIA**

### **OPERATION OF AN ELECTRIC STORAGE RESOURCE**

Interconnection Customer selected Energy Resource Interconnection Service pursuant to Article 4.1. Interconnection Customer also elected, and Transmission Provider agreed, to study Interconnection Customer's Electric Storage Resource under certain operating assumptions. Those operating assumptions are:

**[List agreed upon operating assumptions]**

Interconnection Customer agrees to operate its Electric Storage Resource in conformity with the operating assumptions listed above. Failure to adhere to the operating assumptions constitutes a Breach under this LGIA and Transmission Provider may pursue termination pursuant to Article 17.

Notwithstanding the above, Transmission Provider reserves the right to direct the Electric Storage Resource to operate outside of the agreed upon operating assumptions if it is necessary to maintain the safety and reliability of the electric system, is required by Applicable Reliability Standards, or is otherwise necessitated by Good Utility Practice.

## **Appendix 7 to LGIP**

### **INTERCONNECTION PROCEDURES FOR A**

#### **WIND GENERATING PLANT**

Appendix 7 sets forth procedures specific to a wind generating plant. All other requirements of this LGIP continue to apply to wind generating plant interconnections.

#### **A. Special Procedures Applicable to Wind Generators**

The wind plant Interconnection Customer, in completing the Interconnection Request required by section 3.3 of this LGIP, may provide to the Transmission Provider a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator. Upon satisfying these and other applicable Interconnection Request conditions, the wind plant may enter the queue and receive the base case data as provided for in this LGIP.

No later than six months after submitting an Interconnection Request completed in this manner, the wind plant Interconnection Customer must submit completed detailed electrical design specifications and other data (including collector system layout data) needed to allow the Transmission Provider to complete the System Impact Study.

**APPENDIX 8 TO THE LGIP  
TECHNOLOGICAL ADVANCEMENT STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_\_ by and between [Customer Name (Project Name, QXXXX)], a [Type of company] organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and PacifiCorp a Corporation existing under the laws of the State of Oregon ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, the Interconnection Customer submitted a generation interconnection request dated \_\_\_\_\_ requesting Interconnection Customer's Large Generating Facility to be connected to Transmission Provider's electrical system;

**WHEREAS**, Interconnection Customer is proposing to modify its generation interconnection request, as described in the Interconnection Customer's Technological Advancement Request submitted by Interconnection Customer dated \_\_\_\_\_;

**WHEREAS**, Transmission Provider is required to perform an initial analysis of the Technological Advancement Request pursuant to Section 39.4.6.2 of Transmission Provider's Large Generator Interconnection Procedures ("LGIP");

**WHEREAS**, Transmission Provider may determine, pursuant to Section 39.4.6.2, that further study is required to conclude whether the Technological Advancement Request is a Permissible Technological Advancement;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP;
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an initial analysis of the Technological Advancement Request pursuant to Section 39.4.6.2, and, if Transmission Provider determines pursuant to Section 39.4.6.2 that additional study is necessary, a study consistent with Section 39.4.6.4 of the LGIP ("Technological Advancement Study").
- 3.0 The scope and performance of the initial analysis shall be pursuant to Section 39.4.6.2. The scope of the Technological Advancement study, if any, shall be subject to the assumptions set forth in Attachment A

to this Agreement.

- 4.0 If Transmission Provider determines pursuant to Section 39.4.6.2 that additional study is necessary, the Technological Advancement Study will be based on the assumptions set forth in Attachment A to this Agreement, the results of the technical information provided by Interconnection Customer, applicable requirements in Transmission Provider's LGIP, and current Policy 138 or Policy 139, as applicable.
- 5.0 If Transmission Provider determines pursuant to Section 39.4.6.2 that additional study is necessary, Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Technological Advancement Study.
- 6.0 The Technological Advancement Study report shall provide the following information:
  - Summary of study conclusions; and
  - Either a determination of whether the Interconnection Customer's Technological Advancement Request constitutes a Permissible Technological Advancement; or
  - Determination and explanation of whether the Interconnection Customer's Technological Advancement Request is a Material Modification, requiring a new application to be submitted;
- 7.0 Transmission Provider's good faith estimate for the time of completion of both the initial analysis and, if applicable, any Technological Advancement Study is 30 Calendar Days from receipt of the Technological Advancement Request.

Upon completion of all analysis and study obligations under Section 39.4.6, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the initial analysis and, if applicable, Technological Advancement Study. Any difference between the deposit provided pursuant to Section 39.4.6.1(b) and the actual cost of the initial assessment and, if applicable, Technological Advancement Study shall be paid by or refunded to Interconnection Customer, as appropriate, upon completion of all analysis and study obligations under Section 39.4.6.
- 8.0 Miscellaneous. The Technological Advancement Study Agreement shall include standard miscellaneous terms



including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Customer Name (Project Name, QXXXX)]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **Attachment A**

### **ASSUMPTIONS USED IN CONDUCTING THE TECHNOLOGICAL ADVANCEMENT STUDY**

The Technological Advancement Study will be based upon the following assumptions:

Designation of changes to the configuration or technical details of the generating facility.

Transmission Provider's good faith estimate for the cost of completion of the initial analysis and, if applicable, Technological Advancement Study is \$10,000. Transmission Provider's actual cost shall include all direct costs plus applicable overheads.

## Marked Tariff

**ATTACHMENT N**

**APPENDICES TO LARGE GENERATOR INTERCONNECTION PROCEDURES  
(Refer to Part IV of the Tariff)**

APPENDIX 1 INTERCONNECTION REQUEST FOR A LARGE GENERATING FACILITY

APPENDIX 2 INFORMATIONAL INTERCONNECTION STUDY REQUEST

APPENDIX 2A INFORMATIONAL INTERCONNECTION STUDY AGREEMENT

APPENDIX 3 CLUSTER STUDY AGREEMENT

APPENDIX 4 INTERCONNECTION FACILITIES STUDY AGREEMENT

APPENDIX 5 SURPLUS INTERCONNECTION SERVICE SYSTEM IMPACT STUDY AGREEMENT

APPENDIX 6 STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT

APPENDIX 7 INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

APPENDIX 8 TECHNOLOGICAL ADVANCEMENT STUDY AGREEMENT

**APPENDIX 1 to LGIP**

**INTERCONNECTION REQUEST FOR A  
LARGE GENERATING FACILITY**

1. The undersigned Interconnection Customer submits this request to interconnect its Large Generating Facility with Transmission Provider's Transmission System pursuant to a Tariff.
2. This Interconnection Request is for (check one):  
 A proposed new Large Generating Facility.  
 An increase in the generating capacity or a Material Modification of an existing Generating Facility.  
 Surplus Interconnection Service.

3. The type of interconnection service requested (check one):  
 Energy Resource Interconnection Service  
 Network Resource Interconnection Service

(Note: For Surplus Interconnection Service requests, the type of Interconnection Service requested cannot exceed the type of interconnection service already provided by the original Interconnection Customer's LGIA)

4.  Check here only if Interconnection Customer requesting Network Resource Interconnection Service also seeks to have its Generating Facility studied for Energy Resource Interconnection Service, subject to the requirements of Section 38.2 of the Tariff.

5. Readiness Milestone Option selected, as specified in the LGIP, along with any supporting documentation:

---

(Note that if the Readiness Milestone Option in Section 38.4.1(v)d. is selected at this stage, pursuant to the LGIP, Interconnection Customer will also need to satisfy the requirements of Section 43.1 to proceed to a Facilities Study)

6. Interconnection Customer provides the following information:
  - a. Address or location of the proposed new Large Generating Facility site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility;

- b. Maximum summer at \_\_\_\_\_ degrees C and winter at \_\_\_\_\_ degrees C megawatt electrical output of the proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
  - c. General description of the equipment configuration;
  - d. Commercial Operation Date (Day, Month, and Year);
  - e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person;
  - f. Approximate location of the proposed Point of Interconnection;
  - g. Interconnection Customer Data (set forth in Attachment A);
  - h. Primary frequency response operating range for electric storage resources; and
  - i. Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity).
  - j. For Surplus Interconnection Service: Completed Attachment B to this LGIP Appendix 1.
7. Applicable deposit amount as specified in the LGIP.
8. Site Control as specified in the LGIP (check one)  
\_\_\_\_ Evidence is attached to this Interconnection Request  
\_\_\_\_ Site Control deposit provided in accordance with this LGIP

~~9.~~

9. For Electric Storage Resources selecting Energy Resource Interconnection Service: (1) the operating assumptions reflecting the proposed operation of the Electric Storage Resource, such as charge and discharge parameters, that are provided by Transmission Provider on its OASIS for use in the Cluster Study process, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Electric Storage Resource to its intended operation.

10. This Interconnection Request shall be submitted to the representative indicated below:  
[To be completed by Transmission Provider]

| ~~10~~11. Representative of Interconnection Customer to contact:  
[To be completed by Interconnection Customer]

| ~~11~~12. This Interconnection Request is submitted by:

Name of Interconnection Customer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A to Appendix 1  
Interconnection Request**

**LARGE GENERATING FACILITY DATA**

**UNIT RATINGS**

kVA \_\_\_\_\_ °F \_\_\_\_\_ Voltage \_\_\_\_\_  
 Power Factor \_\_\_\_\_  
 Speed (RPM) \_\_\_\_\_ Connection (e.g. Wye) \_\_\_\_\_  
 Short Circuit Ratio \_\_\_\_\_ Frequency, Hertz \_\_\_\_\_  
 Stator Amperes at Rated kVA \_\_\_\_\_ Field Volts \_\_\_\_\_  
 Max Turbine MW \_\_\_\_\_ °F \_\_\_\_\_

Primary frequency response operating range for electric storage resources:

Minimum State of Charge: \_\_\_\_\_  
 Maximum State of Charge: \_\_\_\_\_

**COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA**

Inertia Constant, H = \_\_\_\_\_ kW sec/kVA  
 Moment-of-Inertia, WR<sup>2</sup> = \_\_\_\_\_ lb. ft.<sup>2</sup>

**REACTANCE DATA (PER UNIT-RATED KVA)**

		<b>DIRECT AXIS</b>	<b>AXIS</b>	<b>QUADRATURE</b>
Synchronous - saturated	X <sub>dv</sub>	_____	X <sub>qv</sub>	_____
Synchronous - unsaturated	X <sub>di</sub>	_____	X <sub>qi</sub>	_____
Transient - saturated	X' <sub>dv</sub>	_____	X' <sub>qv</sub>	_____
Transient - unsaturated	X' <sub>di</sub>	_____	X' <sub>qi</sub>	_____
Subtransient - saturated	X'' <sub>dv</sub>	_____	X'' <sub>qv</sub>	_____
Subtransient - unsaturated	X'' <sub>di</sub>	_____	X'' <sub>qi</sub>	_____
Negative Sequence - saturated	X <sub>2v</sub>	_____		
Negative Sequence - unsaturated	X <sub>2i</sub>	_____		
Zero Sequence - saturated	X <sub>0v</sub>	_____		
Zero Sequence - unsaturated	X <sub>0i</sub>	_____		
Leakage Reactance	X <sub>1m</sub>	_____		

**FIELD TIME CONSTANT DATA (SEC)**

Open Circuit	T' <sub>do</sub>	_____	T' <sub>qo</sub>	_____
Three-Phase Short Circuit Transient	T' <sub>d3</sub>	_____	T' <sub>q</sub>	_____
Line to Line Short Circuit Transient	T' <sub>d2</sub>	_____		
Line to Neutral Short Circuit Transient	T' <sub>d1</sub>	_____		
Short Circuit Subtransient	T'' <sub>d</sub>	_____	T'' <sub>q</sub>	_____
Open Circuit Subtransient	T'' <sub>do</sub>	_____	T'' <sub>qo</sub>	_____



**ARMATURE TIME CONSTANT DATA (SEC)**

Three Phase Short Circuit                     $T_{a3}$  \_\_\_\_\_  
Line to Line Short Circuit                    $T_{a2}$  \_\_\_\_\_  
Line to Neutral Short Circuit                $T_{a1}$  \_\_\_\_\_

NOTE: If requested information is not applicable, indicate by marking "N/A."

**MW CAPABILITY AND PLANT CONFIGURATION  
LARGE GENERATING FACILITY DATA**

**ARMATURE WINDING RESISTANCE DATA (PER UNIT)**

Positive                     $R_1$  \_\_\_\_\_  
Negative                     $R_2$  \_\_\_\_\_  
Zero                          $R_0$  \_\_\_\_\_

Rotor Short Time Thermal Capacity  $I_2^2t =$  \_\_\_\_\_  
Field Current at Rated kVA, Armature Voltage and PF = \_\_\_\_\_ amps  
Field Current at Rated kVA and Armature Voltage, 0 PF = \_\_\_\_\_ amps  
Three Phase Armature Winding Capacitance = \_\_\_\_\_ microfarad  
Field Winding Resistance = \_\_\_\_\_ ohms \_\_\_\_\_ °C  
Armature Winding Resistance (Per Phase) = \_\_\_\_\_ ohms \_\_\_\_\_ °C

**CURVES**

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

**GENERATOR STEP-UP TRANSFORMER DATA RATINGS**

Capacity                    Self-cooled/  
                                  Maximum Nameplate  
\_\_\_\_\_/\_\_\_\_\_ kVA

Voltage Ratio (Generator Side/System side/Tertiary)  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ kV

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Fixed Taps Available  
\_\_\_\_\_

Present Tap Setting

---

**IMPEDANCE**

Positive     $Z_1$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R  
Zero         $Z_0$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

**EXCITATION SYSTEM DATA**

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

**GOVERNOR SYSTEM DATA**

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

**WIND GENERATORS**

Number of generators to be interconnected pursuant to this Interconnection Request: \_\_\_\_\_

Elevation: \_\_\_\_\_      \_\_\_\_\_ Single Phase      \_\_\_\_\_ Three Phase

Inverter manufacturer, model name, number, and version:

---

List of adjustable set-points for the protective equipment or software:

---

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

**INDUCTION GENERATORS**

(\*) Field Volts: \_\_\_\_\_  
(\*) Field Amperes: \_\_\_\_\_

- (\*) Motoring Power (kW): \_\_\_\_\_
- (\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_
- (\*)  $I_2^2t$  or K (Heating Time Constant): \_\_\_\_\_
- (\*) Rotor Resistance: \_\_\_\_\_
- (\*) Stator Resistance: \_\_\_\_\_
- (\*) Stator Reactance: \_\_\_\_\_
- (\*) Rotor Reactance: \_\_\_\_\_
- (\*) Magnetizing Reactance: \_\_\_\_\_
- (\*) Short Circuit Reactance: \_\_\_\_\_
- (\*) Exciting Current: \_\_\_\_\_
- (\*) Temperature Rise: \_\_\_\_\_
- (\*) Frame Size: \_\_\_\_\_
- (\*) Design Letter: \_\_\_\_\_
- (\*) Reactive Power Required In Vars (No Load): \_\_\_\_\_
- (\*) Reactive Power Required In Vars (Full Load): \_\_\_\_\_
- (\*) Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on KVA Base

Note: Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (\*) is required

**Attachment B to Appendix 1  
Interconnection Request**

**Supplemental Information for Surplus Interconnection Service  
Requests**

Consistent with Transmission Provider's Open Access Transmission Tariff ("OATT") Section 38.3 and implementing business practices, Surplus Interconnection Service may be requested.

**I. SUBMITTING A SURPLUS INTERCONNECTION SERVICE REQUEST**

Interconnection Customers shall request Surplus Interconnection Service by submitting this completed LGIP Appendix 1 (including Attachments) to the person or department noted in the Transmission Provider's currently-effective Surplus Interconnection Business Practice posted on OASIS along with any other additional technical information that may be required to process the Surplus Interconnection Service request.

**II. ONE-LINE DIAGRAMS, DYNAMIC STUDY MODELS**

An Interconnection Customer requesting Surplus Interconnection Service shall include the following information with a completed LGIP Appendix 1:

- A. A detailed one line diagram demonstrating the interaction between the existing and new generators and containing:
  - o Maximum Nameplate MW
  - o Generator make, model and specifications
  - o Power Factor
  - o Number of transformers
  - o Transformer sizes, impedances and winding configurations
  - o Collector system lengths and impedances
  
- B. Dynamic Stability Study Model - A WECC approved PSSE standard model in version 33 and above as well as a detailed user written model if the generating facility is renewable generation

Transmission Provider will notify the original interconnection customer of any technical information it will require for the existing generator in order to perform the Surplus Interconnection Service analysis.

**III. Information about Parties to the Surplus Interconnection Service Utilization or Transfer**

<b>Section 1: About Original Interconnection Customer</b>		
a	Original Interconnection Customer Queue number	
b	Company name	
c	Customer Contact Name	
d	Project Name	
e	Customer Mailing Address	
F	Customer Phone Number and Email	
<b>Section 2: About Surplus Interconnection Customer</b>		
b	Company name	
c	Contact Name	
d	Project Name	
e	Mailing Address	
f	Phone Number and Email	
g	Affiliate of Original Interconnection Customer? (if No, see Sec.3(d))	
h	Expected Commercial Operation Date	
<b>Section 3: Description of Surplus Service Request</b>		
a	Describe request for Surplus Interconnection Service. Description of availability and plans for surplus; explain why surplus capacity is not being used by Original Interconnection Customer	
b	Amount of Surplus requested (MW)	
c	Date of Surplus request	
d	If Answer to Sec. 2(g) is No, confirmation by Original Interconnection Customer that neither it nor Affiliates seek this Surplus service	
e	When Surplus is available for use	
f	Describe any conditions under which Surplus may be used (Excludes other conditions/requirements from Transmission Provider)	

#### **IV. Verifications and Other Conditions**

Regardless of the submitting entity, this request for Surplus Interconnection Service is supported by both Original Interconnection Customer (as defined in Part III to this LGIP Appendix 1, Attachment B) and Surplus Interconnection Customer (as defined in Part III to this LGIP Appendix 1, Attachment B), and both customers agree to cooperate with and provide additional information to enable Transmission Provider to evaluate and, if necessary study, the Surplus Interconnection Service request.

Any and all terms of surplus service will be subject to a later Surplus Interconnection Agreement to be executed by the Original Interconnection Customer, Surplus Interconnection Customer, and Transmission Provider, to be filed at the Commission.

Both Original Interconnection Customer and Surplus Interconnection Customer acknowledge that, pursuant to Commission requirements, this is an expedited process and that this Surplus Interconnection Service request may be deemed withdrawn if certain action is not timely taken pursuant to Transmission Provider's OATT Section 38.3.

#### **Original Interconnection Customer**

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

#### **Surplus Interconnection Customer**

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX 2 to LGIP  
INFORMATIONAL INTERCONNECTION STUDY REQUEST**

1. The undersigned Interconnection Customer submits this request for an Informational Interconnection Study pursuant to Transmission Provider's Tariff.
2. The type of interconnection service to be evaluated (check one):  
\_\_\_\_\_ Energy Resource Interconnection Service  
\_\_\_\_\_ Network Resource Interconnection Service
3. Check here \_\_\_\_\_ only if Network Resource Interconnection Service was selected above and Interconnection Customer also requests to have its proposed Generating Facility studied for Energy Resource Interconnection Service, for informational purposes.
4. Interconnection Customer provides the following information:
  - a. Address or location of the proposed new Large Generating Facility site to be studied (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility;
  - b. Maximum summer at \_\_\_\_\_ degrees C and winter at \_\_\_\_\_ degrees C megawatt electrical output of the proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
  - c. General description of the equipment configuration;
  - d. Commercial Operation Date to be studied (Day, Month, and Year);
  - e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person;
  - f. Approximate location of the proposed Point of Interconnection;
  - g. Interconnection Customer Data (set forth in Attachment A);
  - h. Primary frequency response operating range for electric storage resources; and
  - i. Requested capacity (in MW) of Interconnection Service to be studied (if lower than the Generating Facility Capacity).

5. \$10,000 study deposit amount as specified in the LGIP.

6. For an Electric Storage Resources selecting Energy Resource Interconnection Service: requested operating assumptions to be studied, such as charge and discharge parameters, that reflect the proposed operation of the Electric Storage Resource.

7. This Interconnection Request shall be submitted to the representative indicated below:

[To be completed by Transmission Provider]

~~7~~8. Representative of Interconnection Customer to contact:  
[To be completed by Interconnection Customer]

~~8~~9. This Informational Interconnection Request is submitted by:

Name of Interconnection Customer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**Attachment A to Appendix 2  
Informational Interconnection Study Request**

**LARGE GENERATING FACILITY DATA**

**UNIT RATINGS**

kVA \_\_\_\_\_ °F \_\_\_\_\_ Voltage \_\_\_\_\_  
 Power Factor \_\_\_\_\_  
 Speed (RPM) \_\_\_\_\_ Connection (e.g. Wye) \_\_\_\_\_  
 Short Circuit Ratio \_\_\_\_\_ Frequency, Hertz \_\_\_\_\_  
 Stator Amperes at Rated kVA \_\_\_\_\_ Field Volts \_\_\_\_\_  
 Max Turbine MW \_\_\_\_\_ °F \_\_\_\_\_

Primary frequency response operating range for electric storage resources:

Minimum State of Charge: \_\_\_\_\_  
 Maximum State of Charge: \_\_\_\_\_

**COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA**

Inertia Constant, H = \_\_\_\_\_ kW sec/kVA  
 Moment-of-Inertia, WR<sup>2</sup> = \_\_\_\_\_ lb. ft.<sup>2</sup>

**REACTANCE DATA (PER UNIT-RATED KVA)**

		DIRECT AXIS	AXIS	QUADRATURE
Synchronous - saturated	X <sub>dv</sub>	_____	X <sub>qv</sub>	_____
Synchronous - unsaturated	X <sub>di</sub>	_____	X <sub>qi</sub>	_____
Transient - saturated		X' <sub>dv</sub>	X' <sub>qv</sub>	_____
Transient - unsaturated		X' <sub>di</sub>	X' <sub>qi</sub>	_____
Subtransient - saturated		X'' <sub>dv</sub>	X'' <sub>qv</sub>	_____
Subtransient - unsaturated		X'' <sub>di</sub>	X'' <sub>qi</sub>	_____
Negative Sequence - saturated		X <sub>2v</sub>		_____
Negative Sequence - unsaturated		X <sub>2i</sub>		_____
Zero Sequence - saturated		X <sub>0v</sub>		_____
Zero Sequence - unsaturated		X <sub>0i</sub>		_____
Leakage Reactance		X <sub>1m</sub>		_____

**FIELD TIME CONSTANT DATA (SEC)**

Open Circuit	T' <sub>do</sub>	_____	T' <sub>qo</sub>	_____
Three-Phase Short Circuit Transient	T' <sub>d3</sub>	_____	T' <sub>q</sub>	_____
Line to Line Short Circuit Transient	T' <sub>d2</sub>	_____		
Line to Neutral Short Circuit Transient	T' <sub>d1</sub>	_____		
Short Circuit Subtransient	T'' <sub>d</sub>	_____	T'' <sub>q</sub>	_____
Open Circuit Subtransient	T'' <sub>do</sub>	_____	T'' <sub>qo</sub>	_____

**ARMATURE TIME CONSTANT DATA (SEC)**

Three Phase Short Circuit  $T_{a3}$  \_\_\_\_\_  
Line to Line Short Circuit  $T_{a2}$  \_\_\_\_\_  
Line to Neutral Short Circuit  $T_{a1}$  \_\_\_\_\_

NOTE: If requested information is not applicable, indicate by marking "N/A."

**MW CAPABILITY AND PLANT CONFIGURATION  
LARGE GENERATING FACILITY DATA**

**ARMATURE WINDING RESISTANCE DATA (PER UNIT)**

Positive  $R_1$  \_\_\_\_\_  
Negative  $R_2$  \_\_\_\_\_  
Zero  $R_0$  \_\_\_\_\_

Rotor Short Time Thermal Capacity  $I_2^2t =$  \_\_\_\_\_  
Field Current at Rated kVA, Armature Voltage and PF = \_\_\_\_\_ amps  
Field Current at Rated kVA and Armature Voltage, 0 PF = \_\_\_\_\_ amps  
Three Phase Armature Winding Capacitance = \_\_\_\_\_ microfarad  
Field Winding Resistance = \_\_\_\_\_ ohms \_\_\_\_\_ °C  
Armature Winding Resistance (Per Phase) = \_\_\_\_\_ ohms \_\_\_\_\_ °C

**CURVES**

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

**GENERATOR STEP-UP TRANSFORMER DATA RATINGS**

Capacity Self-cooled/  
Maximum Nameplate  
\_\_\_\_\_ / \_\_\_\_\_ kVA

Voltage Ratio (Generator Side/System side/Tertiary)  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ kV

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Fixed Taps Available  
\_\_\_\_\_

Present Tap Setting

---

**IMPEDANCE**

Positive     $Z_1$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R  
Zero         $Z_0$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

**EXCITATION SYSTEM DATA**

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

**GOVERNOR SYSTEM DATA**

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

**WIND GENERATORS**

Number of generators to be interconnected pursuant to this Interconnection Request: \_\_\_\_\_

Elevation: \_\_\_\_\_      \_\_\_\_\_ Single Phase      \_\_\_\_\_ Three Phase

Inverter manufacturer, model name, number, and version:

---

List of adjustable set-points for the protective equipment or software:

---

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

**INDUCTION GENERATORS**

(\*) Field Volts: \_\_\_\_\_  
(\*) Field Amperes: \_\_\_\_\_

- (\*) Motoring Power (kW): \_\_\_\_\_
- (\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_
- (\*)  $I_2^2t$  or K (Heating Time Constant): \_\_\_\_\_
- (\*) Rotor Resistance: \_\_\_\_\_
- (\*) Stator Resistance: \_\_\_\_\_
- (\*) Stator Reactance: \_\_\_\_\_
- (\*) Rotor Reactance: \_\_\_\_\_
- (\*) Magnetizing Reactance: \_\_\_\_\_
- (\*) Short Circuit Reactance: \_\_\_\_\_
- (\*) Exciting Current: \_\_\_\_\_
- (\*) Temperature Rise: \_\_\_\_\_
- (\*) Frame Size: \_\_\_\_\_
- (\*) Design Letter: \_\_\_\_\_
- (\*) Reactive Power Required In Vars (No Load): \_\_\_\_\_
- (\*) Reactive Power Required In Vars (Full Load): \_\_\_\_\_
- (\*) Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on KVA Base

Note: Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (\*) is required

**APPENDIX 2A TO LGIP  
INFORMATIONAL INTERCONNECTION STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is developing a Large Generating Facility or generating capacity addition to an existing Generating Facility; and

**WHEREAS**, Interconnection Customer is proposing to evaluate an interconnection with the Transmission System; and

**WHEREAS**, Interconnection Customer has submitted to Transmission Provider an Informational Interconnection Study Request; and

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an Informational Interconnection Study consistent with Section 41 of the Tariff.
- 3.0 The scope of the Informational Interconnection Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Informational Interconnection Study shall be performed solely for informational purposes and is not binding on either Party.
- 5.0 The Informational Interconnection Study shall be based on the technical information provided by Interconnection Customer in the Informational Interconnection Study Request, as may be modified as the result of the optional scoping meeting. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the

Informational Interconnection Study. If Interconnection Customer modifies its Informational Interconnection Study Request, the time to complete the Informational Interconnection Study may be extended.

6.0 The Informational Interconnection Study Report shall provide the following information:

- preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and
- preliminary description and non-bonding estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit and power flow issues.

7.0 Interconnection Customer shall provide a deposit of \$10,000 for the performance of the Informational Interconnection Study.

Upon receipt of the Informational Interconnection Study Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Informational Interconnection Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

8.0 Miscellaneous. The Informational Interconnection Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A to Appendix 2A  
Informational Interconnection  
Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
INFORMATIONAL INTERCONNECTION STUDY**

The Informational Interconnection Study will be based upon the information set forth in the Informational Interconnection Study Request and agreed upon in the optional scoping meeting held on \_\_\_\_\_:

Designation of Point of Interconnection and configuration to be studied.

Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by the Interconnection Customer and other assumptions to be provided by the Interconnection Customer and Transmission Provider]



**APPENDIX 3 TO LGIP  
CLUSTER STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is proposing to develop a [*CHOOSE: Large Generating Facility or Small Generating Facility*] or generating capacity addition (or modification) to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated \_\_\_\_\_; and

**WHEREAS**, Interconnection Customer desires to interconnect the [*CHOOSE: Large Generating Facility or Small Generating Facility*] or generating capacity addition (or modification) to an existing Generating Facility with the Transmission System; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform a Cluster Study to assess the impact of interconnecting the [*CHOOSE: Large Generating Facility or Small Generating Facility*] or generating capacity addition (or modification) to an existing Generating Facility to the Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP and, if applicable, SGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed a Cluster Study consistent with, as applicable, Section 42 of the LGIP or Section 51 of the SGIP in accordance with the Tariff and any associated Business Practices as posted by Transmission provider on its OASIS page.
- 3.0 The scope of the Cluster Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

- 4.0 The Cluster Study will be based upon the information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with, as applicable, Section 39.4 of the LGIP or Section 51 of the SGIP. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Cluster Study. If Interconnection Customer modifies its Interconnection Request or the technical information provided therein, the time to complete the Cluster Study may be extended.
- 5.0 The Cluster Study report shall provide the following information:
- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
  - description and non-binding, good faith estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6.0 Interconnection Customer's deposit, paid pursuant to, as applicable, Section 38.1, or Tariff Attachment O, Appendix 2, or, Attachment W, as may be applicable, shall be used to pay Interconnection Customer's share of Cluster Study costs allocated pursuant to, as applicable, Section 39.2.2 or Section 51.4.2. Transmission Provider's good faith estimate for the time of completion of the Cluster Study is [insert date].

Upon receipt of the Cluster Study, Transmission Provider shall charge and Interconnection Customer shall pay its actual allocable costs of the Cluster Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to

Interconnection Customer, as appropriate. As provided in Section 48.3 of the LGIP, Interconnection Customer has thirty (30) Calendar Days of receipt of an invoice from Transmission Provider to pay any undisputed costs. If invoices are not paid within thirty (30) Calendar Days of receipt of an invoice, Transmission Provider shall draw upon the security and deposits provided to settle all accounts, which shall include any offsets of amounts due and owing by Transmission Provider. After the final invoice is paid and all accounts are settled, Transmission Provider shall refund all remaining security and deposits.

- 7.0 Miscellaneous. [The Cluster Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.]

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A To Appendix 3  
Cluster Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
CLUSTER STUDY**

The Cluster Study will be based upon the results of the information set forth in the Interconnection Request and results of applicable prior Interconnection Studies, subject to any modifications in accordance with Section 39.4 of the LGIP and Section 49.4 of the SGIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

**APPENDIX 4 TO LGIP  
INTERCONNECTION FACILITIES STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated \_\_\_\_\_; and

**WHEREAS**, Interconnection Customer desires to interconnect the Large Generating Facility with the Transmission System;

**WHEREAS**, Transmission Provider has completed a Cluster Study and provided the results of said study to Interconnection Customer; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Large Generating Facility to the Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause an Interconnection Facilities Study consistent with Section 43.0 of this LGIP to be performed in accordance with the Tariff.
  - 2.1 Interconnection Customer shall provide (a) a demonstration of Site Control and (b) a Readiness Milestone Option or additional financial security

payment in accordance with Section 43.1 of the Tariff.

- 3.0 The scope of the Interconnection Facilities Study shall be subject to the assumptions set forth in Attachment A and the data provided in Attachment B to this Agreement.
- 4.0 The Interconnection Facilities Study report (i) shall provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the Large Generating Facility to the Transmission System and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
- 5.0 Interconnection Customer shall pay the actual costs of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment A.

Transmission Provider shall invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within thirty (30) Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.

- 6.0 Miscellaneous. The Interconnection Facility Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A To Appendix 4  
Interconnection Facilities  
Study Agreement**

**INTERCONNECTION CUSTOMER SCHEDULE ELECTION FOR CONDUCTING THE  
INTERCONNECTION FACILITIES STUDY**

Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after of receipt of an executed copy of this Interconnection Facilities Study Agreement:

- \_\_\_\_\_ ninety (90) Calendar Days with no more than a +/- 20 percent cost estimate contained in the report, or
- \_\_\_\_\_ one hundred eighty (180) Calendar Days with no more than a +/- 10 percent cost estimate contained in the report.



**Attachment B to Appendix 4  
Interconnection Facilities  
Study Agreement**

**DATA FORM TO BE PROVIDED BY INTERCONNECTION CUSTOMER WITH THE  
INTERCONNECTION FACILITIES STUDY AGREEMENT**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station.  
Number of generation connections:

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No                      (Please indicate on one line diagram).

What type of control system or PLC will be located at Interconnection Customer's Large Generating Facility?  
\_\_\_\_\_

What protocol does the control system or PLC use?  
\_\_\_\_\_

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:  
\_\_\_\_\_

Bus length from generation to interconnection station:  
\_\_\_\_\_

Line length from interconnection station to Transmission Provider's transmission line.  
\_\_\_\_\_

Tower number observed in the field. (Painted on tower leg)\*  
\_\_\_\_\_



## APPENDIX 5 TO LGIP

### SURPLUS INTERCONNECTION SERVICE SYSTEM IMPACT STUDY AGREEMENT

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and \_\_\_\_\_ a \_\_\_\_\_ existing under the laws of the State of \_\_\_\_\_, ("Transmission Provider "). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

#### RECITALS

**WHEREAS**, in accordance with a request submitted to the Transmission Provider on \_\_\_\_\_ Interconnection Customer is proposing to utilize Surplus Interconnection Service associated with a Large Generating Facility operating under an LGIA between \_\_\_\_\_ ("Original Interconnection Customer") and Transmission Provider dated \_\_\_\_\_;

**WHEREAS**, Interconnection Customer desires to utilize Surplus Interconnection Service of an existing Generating Facility interconnected with the Transmission System; and

**WHEREAS**, Interconnection Customer has requested Transmission Provider to perform a Surplus Interconnection Service System Impact Study to assess the impact of utilization of Surplus Interconnection Service on the Transmission System, and any Affected Systems.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed a Surplus Interconnection Service System Impact Study consistent with Section 38.3 of the Tariff and any associated Business Practices as posted by Transmission provider on its OASIS page.
- 3.0 The scope of the Surplus Interconnection Service System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

4.0 The Surplus Interconnection Service System Impact Study will be performed based on the requirements of Section 38.3 of the Tariff and the technical information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 39.4 of the Tariff. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Surplus Interconnection Service System Impact Study. If Interconnection Customer modifies its Interconnection Request, or the technical information provided therein is modified, the time to complete the Surplus Interconnection Service System Impact Study may be extended.

5.0 The Surplus Interconnection Service System Impact Study report shall provide the following information:

- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- identification of any thermal overload or voltage limit violations resulting from the interconnection;
- identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
- description and non-binding, good faith estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.

6.0 Transmission Provider's good faith estimate for the time of completion of the Surplus Interconnection Service System Impact Study is [insert date]. Interconnection Customer's deposit for the Surplus Interconnection Service System Impact Study shall be the same \$10,000 provided by the Interconnection Customer as part of the Surplus Interconnection Service Request.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Surplus Interconnection Service System Impact Study.

Any difference between the deposit and the actual cost

of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 7.0 Miscellaneous. [The Interconnection System Impact Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.]

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Attachment A To Appendix 5  
Surplus Interconnection Service System Impact  
Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE  
SURPLUS INTERCONNECTION SERVICE SYSTEM IMPACT STUDY**

The Surplus Interconnection Service System Impact Study will be based upon the results of the Original Interconnection Customer's system impact study (if any) or Cluster Study, and the following assumptions:

Existing Point of Interconnection of Original Interconnection Customer:

Note: For Surplus Interconnection Service requests, the request cannot exceed the type of Interconnection Service already provided by the Original Interconnection Customer's LGIA.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

Appendix 6 to the Standard Large  
Generator Interconnection Procedures

STANDARD LARGE GENERATOR

INTERCONNECTION AGREEMENT (LGIA) TABLE OF CONTENTS

RECITALS

- Article 1. Definitions
- Article 2. Effective Date, Term, and Termination
  - 2.1 Effective Date
  - 2.2 Term of Agreement
  - 2.3 Termination Procedures
    - 2.3.1 Written Notice
    - 2.3.2 Default
    - 2.3.3
  - 2.4 Termination Costs
    - 2.4.1
    - 2.4.2
    - 2.4.3
  - 2.5 Disconnection
  - 2.6 Survival
- Article 3. Regulatory Filings
  - 3.1 Filing
- Article 4. Scope of Service
  - 4.1 Interconnection Product Options
    - 4.1.1 Energy Resource Interconnection Service
      - 4.1.1.1 The Product
      - 4.1.1.2 Transmission Delivery Service Implications
    - 4.1.2 Network Resource Interconnection Service
      - 4.1.2.1 The Product
      - 4.1.2.2 Transmission Delivery Service Implications
  - 4.2 Provision of Service
  - 4.3 Performance Standards
  - 4.4 No Transmission Delivery Service
  - 4.5 Interconnection Customer Provided Services
- Article 5. Interconnection Facilities Engineering, Procurement,  
& Construction
  - 5.1 Options
    - 5.1.1 Standard Option
    - 5.1.2 Alternate Option
    - 5.1.3 Option to Build
    - 5.1.4 Negotiated Option
  - 5.2 General Conditions Applicable to Option to Build
  - 5.3 Liquidated Damages

- 5.4 Power System Stabilizers
  - 5.5 Equipment Procurement
    - 5.5.1
    - 5.5.2
    - 5.5.3
  - 5.6 Construction Commencement
    - 5.6.1
    - 5.6.2
    - 5.6.3
    - 5.6.4
  - 5.7 Work Progress
  - 5.8 Information Exchange
  - 5.9 Other Interconnection Options
    - 5.9.1 Limited Operation
    - 5.9.2 Provisional Interconnection Service
  - 5.10 Interconnection Customer's Interconnection Facilities ('ICIF')
    - 5.10.1 Interconnection Customer's Interconnection Facility Specifications
    - 5.10.2 Transmission Provider's Review
    - 5.10.3 ICIF Construction
  - 5.11 Transmission Provider's Interconnection Facilities Construction
  - 5.12 Access Rights
  - 5.13 Lands of Other Property Owners
  - 5.14 Permits
  - 5.15 Early Construction of Base Case Facilities
  - 5.16 Suspension
  - 5.17 Taxes
    - 5.17.1 Interconnection Customer Payments Not Taxable
    - 5.17.2 Representations and Covenants
    - 5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider
    - 5.17.4 Tax Gross-Up Amount
    - 5.17.5 Private Letter Ruling or Change or Clarification of Law
    - 5.17.6 Subsequent Taxable Events
    - 5.17.7 Contests
    - 5.17.8 Refund
    - 5.17.9 Taxes Other Than Income Taxes
    - 5.17.10 Transmission Owners Who Are Not Transmission Providers
  - 5.18 Tax Status
  - 5.19 Modification
    - 5.19.1 General
    - 5.19.2 Standards
    - 5.19.3 Modification Costs
- Article 6. Testing and Inspection
- 6.1 Pre-Commercial Operation Date Testing and Modifications



- 6.2 Post-Commercial Operation Date Testing and Modifications
- 6.3 Right to Observe Testing
- 6.4 Right to Inspect
  
- Article 7. Metering
  - 7.1 General
  - 7.2 Check Meters
  - 7.3 Standards
  - 7.4 Testing of Metering Equipment
  - 7.5 Metering Data
  
- Article 8. Communications
  - 8.1 Interconnection Customer Obligations
  - 8.2 Remote Terminal Unit
  - 8.3 No Annexation
  - 8.4 Provision of Data from a Variable Energy Resource
  
- Article 9. Operations
  - 9.1 General
  - 9.2 Control Area Notification
  - 9.3 Transmission Provider Obligations
  - 9.4 Interconnection Customer Obligations
  - 9.5 Start-Up and Synchronization
  - 9.6 Reactive Power and Primary Frequency Response
    - 9.6.1 Power Factor Design Criteria
      - 9.6.1.1 Synchronous Generation
      - 9.6.1.2 Non-Synchronous Generation
    - 9.6.2 Voltage Schedules
      - 9.6.2.1 Voltage Regulators
    - 9.6.3 Payment for Reactive Power
    - 9.6.4 Primary Frequency Response
      - 9.6.4.1 Governor or Equivalent Controls
      - 9.6.4.2 Timely and Sustained Response
      - 9.6.4.3 Exemptions
      - 9.6.4.4 Electric Storage Resources
  - 9.7 Outages and Interruptions
    - 9.7.1 Outages
      - 9.7.1.1 Outage Authority and Coordination
      - 9.7.1.2 Outage Schedules
      - 9.7.1.3 Outage Restoration
    - 9.7.2 Interruption of Service
      - 9.7.2.1
      - 9.7.2.2
      - 9.7.2.3
      - 9.7.2.4
      - 9.7.2.5
      - 9.7.3 Under-Frequency and Over Frequency Conditions
    - 9.7.4 System Protection and Other Control Requirements
      - 9.7.4.1 System Protection Facilities

- 9.7.4.2
- 9.7.4.3
- 9.7.4.4
- 9.7.4.5
- 9.7.4.6
- 9.7.5 Requirements for Protection
- 9.7.6 Power Quality
- 9.8 Switching and Tagging Rules
- 9.9 Use of Interconnection Facilities by Third Parties
  - 9.9.1 Purpose of Interconnection Facilities
  - 9.9.2 Third Party Users
- 9.10 Disturbance Analysis Data Exchange

Article 10. Maintenance

- 10.1 Transmission Provider Obligations
- 10.2 Interconnection Customer Obligations
- 10.3 Coordination
- 10.4 Secondary Systems
- 10.5 Operating and Maintenance Expenses

Article 11. Performance Obligation

- 11.1 Interconnection Customer Interconnection Facilities
- 11.2 Transmission Provider's Interconnection Facilities
- 11.3 Network Upgrades and Distribution Upgrades
- 11.4 Transmission Credits
  - 11.4.1 Repayment of Amounts Advanced for Network Upgrades
  - 11.4.2 Special Provisions for Affected Systems
  - 11.4.3
- 11.5 Provision of Security
  - 11.5.1
  - 11.5.2
  - 11.5.3
- 11.6 Interconnection Customer Compensation
  - 11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition

Article 12. Invoice

- 12.1 General
- 12.2 Final Invoice
- 12.3 Payment
- 12.4 Disputes

Article 13. Emergencies

- 13.1 Definition
- 13.2 Obligations
- 13.3 Notice
- 13.4 Immediate Action
- 13.5 Transmission Provider Authority
  - 13.5.1 General
  - 13.5.2 Reduction and Disconnection
- 13.6 Interconnection Customer Authority

13.7	Limited Liability
Article 14.	Regulatory Requirements and Governing Law
14.1	Regulatory Requirements
14.2	Governing Law
14.2.1	
14.2.2	
14.2.3	
Article 15.	Notices
15.1	General
15.2	Billings and Payments
15.3	Alternative Forms of Notice
15.4	Operations and Maintenance Notice
Article 16.	Force Majeure
16.1	Force Majeure
16.1.1	
16.1.2	
Article 17.	Default
17.1	Default
17.1.1	General
17.1.2	Right to Terminate
Article 18.	Indemnity, Consequential Damages and Insurance
18.1	Indemnity
18.1.1	Indemnified Person
18.1.2	Indemnifying Party
18.1.3	Indemnity Procedures
18.2	Consequential Damages
18.3	Insurance
18.3.1	
18.3.2	
18.3.3	
18.3.4	
18.3.5	
18.3.6	
18.3.7	
18.3.8	
18.3.9	
18.3.10	
18.3.11	
Article 19.	Assignment
19.1	Assignment
Article 20.	Severability
20.1	Severability
Article 21.	Comparability

## 21.1 Comparability

### Article 22. Confidentiality

#### 22.1 Confidentiality

- 22.1.1 Term
- 22.1.2 Scope
- 22.1.3 Release of Confidential Information
- 22.1.4 Rights
- 22.1.5 No Warranties
- 22.1.6 Standard of Care
- 22.1.7 Order of Disclosure
- 22.1.8 Termination of Agreement
- 22.1.9 Remedies
- 22.1.10 Disclosure to FERC, its Staff, or a State
- 22.1.11

### Article 23. Environmental Releases

#### 23.1

### Article 24. Information Requirements

- 24.1 Information Acquisition
- 24.2 Information Submission by Transmission Provider
- 24.3 Updated Information Submission by Interconnection Customer
- 24.4 Information Supplementation

### Article 25. Information Access and Audit Rights

- 25.1 Information Access
- 25.2 Reporting of Non-Force Majeure Events
- 25.3 Audit Rights
- 25.4 Audit Rights Periods
  - 25.4.1 Audit Rights Period for Construction-Related Accounts and Records
  - 25.4.2 Audit Rights Period for All Other Accounts and Records
- 25.5 Audit Results

### Article 26. Subcontractors

- 26.1 General
- 26.2 Responsibility of Principal
- 26.3 No Limitation by Insurance

### Article 27. Disputes

- 27.1 Submission
- 27.2 External Arbitration Procedures
- 27.3 Arbitration Decisions
- 27.4 Costs

### Article 28. Representations, Warranties, and Covenants

- 28.1 General
  - 28.1.1 Good Standing
  - 28.1.2 Authority

- 28.1.3 No Conflict
- 28.1.4 Consent and Approval

**Article 29. Joint Operating Committee**

- 29.1 Joint Operating Committee
  - 29.1.1
  - 29.1.2
  - 29.1.3
  - 29.1.4
  - 29.1.5
  - 29.1.6

**Article 30. Miscellaneous**

- 30.1 Binding Effect
- 30.2 Conflicts
- 30.3 Rules of Interpretation
- 30.4 Entire Agreement
- 30.5 No Third Party Beneficiaries
- 30.6 Waiver
- 30.7 Headings
- 30.8 Multiple Counterparts
- 30.9 Amendment
- 30.10 Modification by the Parties
- 30.11 Reservation of Rights
- 30.12 No Partnership

Appendix A - Interconnection Facilities, Network Upgrades, Distribution Upgrades and Contingent Facilities

Appendix B - Milestones

Appendix C - Interconnection Details

Appendix D - Security Arrangements Details

Appendix E - Commercial Operation Date

Appendix F - Addresses for Delivery of Notices and Billings

Appendix G - Interconnection Requirements for a Wind Generating Plant

| [Appendix H - Operation of an Electric Storage Resource](#)

## STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT

**THIS STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT** ("Agreement") is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ ("Interconnection Customer" with a Large Generating Facility), and \_\_\_\_\_ a \_\_\_\_\_ organized and existing under the laws of the State/Commonwealth of \_\_\_\_\_ ("Transmission Provider and/or Transmission Owner"). Interconnection Customer and Transmission Provider each may be referred to as a "Party" or collectively as the "Parties."

### Recitals

**WHEREAS**, Transmission Provider operates the Transmission System; and

**WHEREAS**, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this Agreement; and,

**WHEREAS**, Interconnection Customer and Transmission Provider have agreed to enter into this Agreement for the purpose of interconnecting the Large Generating Facility with the Transmission System;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Standard Large Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

### Article 1. Definitions

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

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

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation,

partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Ancillary Services** shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System to which the Generating Facility is directly interconnected.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider or Interconnection Customer.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of the Standard Large Generator Interconnection Agreement.

**Breaching Party** shall mean a Party that is in Breach of the Standard Large Generator Interconnection Agreement.

**Business Day** shall mean Monday through Friday, excluding Federal Holidays.

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

**Cluster** shall mean a group of Interconnection Requests (one or more) that are studied together for the purpose of conducting the Cluster Study.

**Cluster Area** shall mean the areas of the Transmission Provider's Transmission System that are included together in a Cluster, as described further in Section 42.4 of the LGIP.

**Cluster Request Window** shall have the meaning set forth in

Section 39.2.1 of the LGIP.

**Cluster Re-Study** shall mean a restudy of a Cluster Study conducted pursuant to Section 42.4 of the LGIP.

**Cluster Re-Study Report** shall mean the report issued following completion of a Cluster Re-Study pursuant to Section 42.4 of the LGIP.

**Cluster Re-Study Meeting** shall mean the meeting held to discuss the results of a Cluster Re-Study pursuant to Section 42.4 of the LGIP.

**Cluster Study** shall mean an Interconnection Study evaluating one or more Interconnection Requests within a Cluster as described in more detail in Section 42.4 of the LGIP.

**Cluster Study Agreement** shall mean the form of agreement contained in Appendix 3 to the Standard Large Generator Interconnection Procedures for conducting the Cluster Study.

**Cluster Study Report** shall mean the report issued following completion of a Cluster Study pursuant to Section 42.4 of the LGIP.

**Cluster Study Report Meeting** shall mean the meeting held to discuss the results of a Cluster Study pursuant to Section 42.4 of the LGIP.

**Clustering** shall mean the process whereby a group of Interconnection Requests is studied together, instead of serially, as described in more detail in Section 42 of the LGIP.

**Commercial Operation** shall mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the Standard Large Generator Interconnection Agreement.

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

**Control Area** shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of



controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by the Applicable Reliability Council.

**Customer Engagement Window** shall have the meaning set forth in Section 42.2 of the LGIP.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the Standard Large Generator Interconnection Agreement.

**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 System** shall mean the Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.

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

**Effective Date** shall mean the date on which the Standard Large Generator Interconnection Agreement becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Storage Resource** shall mean a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory

manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by the Standard Large Generator Interconnection Agreement to possess black start capability.

**Energy Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or nonfirm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

**Engineering & Procurement (E&P) Agreement** shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission (Commission) or its successor.

**Financial Security** shall mean any of the forms of collateral or security listed in Section 2 of the Creditworthiness Procedures included in Attachment L to this Tariff.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Informational Interconnection Study** shall mean an analysis based on assumptions specified by Interconnection Customer in the Informational Interconnection Study Agreement and conducted pursuant to Section 41 of the LGIP.

**Informational Interconnection Study Agreement** shall mean the form of agreement contained in Appendix 2A to the Standard Large Generator Interconnection Procedures for conducting the Informational Interconnection Study.

**Informational Interconnection Study Request** shall mean an Interconnection Customer's request in the form of Appendix 2 to

the Standard Large Generator Interconnection Procedures.

**Initial Synchronization Date** shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

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

**Interconnection Customer** shall mean any entity, including the Transmission Provider, Transmission Owner or any of the Affiliates or subsidiaries of either, that proposes to interconnect its Generating Facility with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Customer" shall also mean any Small Generating Facility that is participating in a Cluster.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of the Standard Large Generator Interconnection Agreement, 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 Transmission Provider's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Transmission 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 Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Interconnection Facilities may be shared by more than one Generating Facility in a Cluster.

**Interconnection Facilities Study** shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider's Interconnection Facilities and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider's Transmission System.

The scope of the study is defined in Section 43 of the Standard Large Generator Interconnection Procedures.

**Interconnection Facilities Study Agreement** shall mean the form of agreement contained in Appendix 4 of the Standard Large Generator Interconnection Procedures for conducting the Interconnection Facilities Study.

**Interconnection Request** shall mean an Interconnection Customer's request, in the form of Appendix 1 to the Standard Large Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider's Transmission System. For purposes of the Transmission Provider's Cluster Study process conducted pursuant to Section 42, and except as modified by Section 51 of Transmission Provider's OATT, "Interconnection Request" shall also mean any interconnection request from a Small Generating Facility that is participating in a Cluster.

**Interconnection Service** shall mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Standard Large Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff.

**Interconnection Study** shall mean any of the following studies: the Informational Interconnection Study, the Cluster Study, Surplus Interconnection Service System Impact Study, and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

**IRS** shall mean the Internal Revenue Service.

**Joint Operating Committee** shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's performance, or non-performance

of its obligations under the Standard Large Generator Interconnection Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed at the Generating Facility pursuant to the Standard Large Generator Interconnection Agreement at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

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

**Network Resource** shall mean any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

**Network Resource Interconnection Service** shall mean an Interconnection Service that allows the Interconnection Customer to integrate its Large Generating Facility with the Transmission Provider's Transmission System (1) in a manner comparable to that in which the Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an RTO or ISO with market based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service in and of itself does not convey transmission service.

**Network Upgrades** shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Large Generating Facility to the Transmission Provider's Transmission System.

**Notice of Dispute** shall mean a written notice of a dispute or claim that arises out of or in connection with the Standard Large Generator Interconnection Agreement or its performance.

**Party or Parties** shall mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to the Standard Large Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

**Provisional Interconnection Service** shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the Tariff.

**Provisional Large Generator Interconnection Agreement** shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Large Generator Interconnection Agreement, modified for provisional purposes.

**Queue Position** shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of Interconnection Customer satisfies all of the requirements of Sections 38, 39, and 42 of Transmission Provider's LGIP to enter the Cluster Study Process.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Large Generator Interconnection Agreement, 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.

**Readiness Milestone Options** shall mean those options set forth in Section 38.4.1(v) of the LGIP.

**Resource Plan** shall mean any process authorized or required by Applicable Laws and Regulations for, inter alia, the selection of Generating Facilities.

**Resource Solicitation Process** shall mean any process authorized or required by Applicable Laws and Regulations for the

acquisition of Network Resources.

**Scoping Meeting** shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing the proposed interconnection request, alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to affect such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Site Control** shall mean the exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold interest in a site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of the Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. Site Control for any co-located project is demonstrated by a contract or other agreement demonstrating shared land use for all co-located projects that meet the aforementioned provisions of this Site Control definition.

**Small Generating Facility** shall mean a Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**Stand Alone Network Upgrades** shall mean Network Upgrades that are not part of an Affected System that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement. If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

**Standard Large Generator Interconnection Agreement (LGIA)** shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in the Transmission Provider's Tariff.

**Standard Large Generator Interconnection Procedures (LGIP)**



shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that are included in the Transmission Provider's Tariff.

**Surplus Interconnection Service** shall mean any unneeded portion of Interconnection Service established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Surplus Interconnection Service System Impact Study** shall mean an engineering study that evaluates the impact of a proposed request for Surplus Interconnection Service on the safety and reliability of Transmission Provider's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**Surplus Interconnection Service System Impact Study Agreement** shall mean the form of agreement contained in Appendix XX of the Standard Large Generator Interconnection Procedures for conducting a system impact study for purposes of evaluating a request for Surplus Interconnection Service pursuant to Section 38.3.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

**Tariff** shall mean the Transmission Provider's Tariff through which open access transmission service and Interconnection Service are offered, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Transmission Owner** shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Standard Large Generator Interconnection Agreement to the extent necessary.

**Transmission Provider** shall mean the public utility (or its

designated agent) that owns, controls, or operates transmission or distribution facilities used for the transmission of electricity in interstate commerce and provides transmission service under the Tariff. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

**Transmission Provider's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades. Transmission Provider's Interconnection Facilities may be shared by more than one Generating Facility in a given Cluster Study.

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

**Trial Operation** shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

**Variable Energy Resource** shall mean a device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

**Withdrawal Penalty** shall have the meaning set forth in Section 38.7.1 of the LGIP.

## **Article 2. Effective Date, Term, and Termination**

**2.1 Effective Date.** This LGIA shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. Transmission Provider shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ten (10) years from the Effective Date or such other longer period as Interconnection Customer may request (Term to be

specified in individual agreements) and shall be automatically renewed for each successive one-year period thereafter.

## **2.3 Termination Procedures.**

**2.3.1 Written Notice.** This LGIA may be terminated by Interconnection Customer after giving Transmission Provider ninety (90) Calendar Days advance written notice, or by Transmission Provider notifying FERC after the Generating Facility permanently ceases Commercial Operation. This LGIA shall be terminated by Transmission Provider if the Generating Facility or a portion of the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date established in accordance with Section 39.4.5 of the LGIP, including any extension provided thereunder, or, having previously achieved Commercial Operation, has ceased Commercial Operation for three (3) consecutive years, beginning with the last date of Commercial Operation for the Generating Facility, after giving Interconnection Customer ninety (90) Calendar Days advance written notice. When only a portion of the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date established in accordance with Section 39.4.5 of the LGIP, including any extension provided thereunder, Transmission Provider shall terminate only that portion of the LGIA. Notwithstanding the foregoing, in the limited circumstance that the Interconnection Request is served by a Contingent Facility with an in-service date that is later than the Commercial Operation Date permitted under Section 39.4.5 of the LGIP, Transmission Provider shall terminate this LGIA only for failure to achieve Commercial Operation by ninety (90) Calendar Days after that later in-service date of the Contingent Facility. The Generating Facility will not be deemed to have ceased Commercial Operation for purposes of this Article 2.3.1 if Interconnection Customer can document that it has taken other significant steps to maintain or restore operational readiness of the Generating Facility for the purpose of returning the Generating Facility to Commercial Operation as soon as possible.

**2.3.2 Default.** Either Party may terminate this LGIA in accordance with Article 17.

**2.3.3** Notwithstanding Articles 2.3.1 and 2.3.2, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA, which notice has been accepted for filing by FERC.

**2.4 Termination Costs.** If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party, as of the date of the other Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this LGIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this LGIA, unless otherwise ordered or approved by FERC:

**2.4.1** With respect to any portion of Transmission Provider's Interconnection Facilities that have not yet been constructed or installed, Transmission Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Transmission Provider for any or all such costs of materials or equipment not taken by Interconnection Customer, Transmission Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Transmission Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this LGIA, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any Network Upgrades for which Transmission Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

**2.4.2** Transmission Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Transmission Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

### **Article 3. Regulatory Filings**

- 3.1 Filing.** Transmission Provider shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority, if required. Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If Interconnection Customer has executed this LGIA, or any amendment thereto, Interconnection Customer shall reasonably cooperate with Transmission Provider with respect to such filing and to provide any information reasonably requested by Transmission Provider needed to comply with applicable regulatory requirements.

### **Article 4. Scope of Service**

- 4.1 Interconnection Product Options.** Interconnection Customer has selected the following (checked) type of Interconnection Service:

**4.1.1 Energy Resource Interconnection Service.**

**4.1.1.1 The Product.** Energy Resource Interconnection Service allows Interconnection Customer to connect the Large Generating Facility to the Transmission System and be eligible to deliver the Large Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. To the extent Interconnection Customer wants to receive Energy Resource Interconnection Service, Transmission Provider shall construct facilities identified in Appendix A.

**4.1.1.2 Transmission Delivery Service Implications.** Under Energy Resource Interconnection Service, Interconnection Customer will be eligible to inject power from the Large Generating Facility into and deliver power across the interconnecting Transmission Provider's Transmission System on an "as available" basis up to the amount of MWs identified in the applicable stability and steady state studies to the extent the upgrades initially required to qualify for Energy

Resource Interconnection Service have been constructed. Where eligible to do so (e.g., PJM, ISO-NE, NYISO), Interconnection Customer may place a bid to sell into the market up to the maximum identified Large Generating Facility output, subject to any conditions specified in the interconnection service approval, and the Large Generating Facility will be dispatched to the extent Interconnection Customer's bid clears. In all other instances, no transmission delivery service from the Large Generating Facility is assured, but Interconnection Customer may obtain Point-to-Point Transmission Service, Network Integration Transmission Service, or be used for secondary network transmission service, pursuant to Transmission Provider's Tariff, up to the maximum output identified in the stability and steady state studies. In those instances, in order for Interconnection Customer to obtain the right to deliver or inject energy beyond the Large Generating Facility Point of Interconnection or to improve its ability to do so, transmission delivery service must be obtained pursuant to the provisions of Transmission Provider's Tariff. The Interconnection Customer's ability to inject its Large Generating Facility output beyond the Point of Interconnection, therefore, will depend on the existing capacity of Transmission Provider's Transmission System at such time as a transmission service request is made that would accommodate such delivery. The provision of firm Point-to-Point Transmission Service or Network Integration Transmission Service may require the construction of additional Network Upgrades.

#### **4.1.2 Network Resource Interconnection Service.**

**4.1.2.1 The Product.** Transmission Provider must conduct the necessary studies and

construct the Network Upgrades needed to integrate the Large Generating Facility (1) in a manner comparable to that in which Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an ISO or RTO with market based congestion management, in the same manner as all Network Resources. To the extent Interconnection Customer wants to receive Network Resource Interconnection Service, Transmission Provider shall construct the facilities identified in Appendix A to this LGIA.

**4.1.2.2 Transmission Delivery Service Implications.** Network Resource Interconnection Service allows Interconnection Customer's Large Generating Facility to be designated by any Network Customer under the Tariff on Transmission Provider's Transmission System as a Network Resource, up to the Large Generating Facility's full output, on the same basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur. Although Network Resource Interconnection Service does not convey a reservation of transmission service, any Network Customer under the Tariff can utilize its network service under the Tariff to obtain delivery of energy from the interconnected Interconnection Customer's Large Generating Facility in the same manner as it accesses Network Resources. A Large Generating Facility receiving Network Resource Interconnection Service may also be used to provide Ancillary Services after technical studies and/or periodic analyses are performed with respect to the Large Generating Facility's ability to provide any applicable Ancillary Services, provided that such studies and analyses have been or would be



required in connection with the provision of such Ancillary Services by any existing Network Resource. However, if an Interconnection Customer's Large Generating Facility has not been designated as a Network Resource by any load, it cannot be required to provide Ancillary Services except to the extent such requirements extend to all generating facilities that are similarly situated. The provision of Network Integration Transmission Service or firm Point-to-Point Transmission Service may require additional studies and the construction of additional upgrades. Because such studies and upgrades would be associated with a request for delivery service under the Tariff, cost responsibility for the studies and upgrades would be in accordance with FERC's policy for pricing transmission delivery services.

Network Resource Interconnection Service does not necessarily provide Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on Transmission Provider's Transmission System without incurring congestion costs. In the event of transmission constraints on Transmission Provider's Transmission System, Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in Transmission Provider's Transmission System in the same manner as Network Resources.

There is no requirement either at the time of study or interconnection, or at any point in the future, that Interconnection Customer's Large Generating Facility be designated as a Network Resource by a Network Service Customer under the Tariff or that Interconnection Customer identify a specific buyer (or sink). To the extent a Network Customer does

designate the Large Generating Facility as a Network Resource, it must do so pursuant to Transmission Provider's Tariff.

Once an Interconnection Customer satisfies the requirements for obtaining Network Resource Interconnection Service, any future transmission service request for delivery from the Large Generating Facility within Transmission Provider's Transmission System of any amount of capacity and/or energy, up to the amount initially studied, will not require that any additional studies be performed or that any further upgrades associated with such Large Generating Facility be undertaken, regardless of whether or not such Large Generating Facility is ever designated by a Network Customer as a Network Resource and regardless of changes in ownership of the Large Generating Facility. However, the reduction or elimination of congestion or redispatch costs may require additional studies and the construction of additional upgrades.

To the extent Interconnection Customer enters into an arrangement for long term transmission service for deliveries from the Large Generating Facility outside Transmission Provider's Transmission System, such request may require additional studies and upgrades in order for Transmission Provider to grant such request.

**4.2 Provision of Service.** Transmission Provider shall provide Interconnection Service for the Large Generating Facility at the Point of Interconnection.

**4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is a Transmission

Provider or Transmission Owner, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4 No Transmission Delivery Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1.

Interconnection Customer shall be paid for such services in accordance with Article 11.6.

**Article 5. Interconnection Facilities Engineering, Procurement, and Construction**

**5.1 Options.** Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option or Alternate Option set forth below, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, Interconnection Customer shall indicate whether it elects to exercise the Option to Build set forth in Article 5.1.3 below. If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days. Upon receipt of the notification that Interconnection Customer's designated dates are not acceptable to Transmission Provider, the Interconnection Customer shall notify Transmission Provider within thirty (30) Calendar Days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

**5.1.1 Standard Option.** Transmission Provider shall design, procure, and construct Transmission Provider's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the dates set forth in Appendix B, Milestones. Transmission Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment

specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Transmission Provider reasonably expects that it will not be able to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the specified dates, Transmission Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by Interconnection Customer are acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities by the designated dates.

If Transmission Provider subsequently fails to complete Transmission Provider's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; Transmission Provider shall pay Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by Interconnection Customer shall be extended day for day for each day that the applicable RTO or ISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.2. Transmission Provider and Interconnection Customer must agree as to what constitutes

Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the dates designated by interconnection Customer are not acceptable to Transmission Provider, the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3. If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), Transmission Provider shall assume responsibility for the design, procurement and construction of all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build.

**5.2 General Conditions Applicable to Option to Build.** If Interconnection Customer assumes responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades,

- (1) Interconnection Customer shall engineer, procure equipment, and construct Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Transmission Provider;
- (2) Interconnection Customer's engineering, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which Transmission Provider would be subject in the engineering, procurement or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;

- (3) Transmission Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) prior to commencement of construction, Interconnection Customer shall provide to Transmission Provider a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from Transmission Provider;
- (5) at any time during construction, Transmission Provider shall have the right to gain unrestricted access to Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;
- (6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Transmission Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (7) Interconnection Customer shall indemnify Transmission Provider for claims arising from Interconnection Customer's construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;
- (8) Interconnection Customer shall transfer control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;
- (9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Transmission Provider's Interconnection Facilities and Stand-Alone Network Upgrades to

Transmission Provider;

- (10) Transmission Provider shall approve and accept for operation and maintenance Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and
- (11) Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information, and any other documents that are reasonably required by Transmission Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Transmission Provider.
- (12) If Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, Interconnection Customer shall pay Transmission Provider the agreed upon amount of [\$PLACEHOLDER] for Transmission Provider to execute the responsibilities enumerated to Transmission Provider under Article 5.2. Transmission Provider shall invoice Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

**5.3 Liquidated Damages.** The actual damages to Interconnection Customer, in the event Transmission Provider's Interconnection Facilities or Network Upgrades are not completed by the dates designated by Interconnection Customer and accepted by Transmission Provider pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by Transmission Provider to Interconnection Customer in the event that Transmission Provider does not complete any portion of Transmission Provider's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades, in the aggregate, for which Transmission Provider has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of Transmission

Provider's Interconnection Facilities and Network Upgrades for which Transmission Provider has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Transmission Provider to Interconnection Customer as just compensation for the damages caused to Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Transmission Provider's failure to meet its schedule.

No liquidated damages shall be paid to Interconnection Customer if: (1) Interconnection Customer is not ready to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for the Large Generating Facility's Trial Operation or to export power from the Large Generating Facility on the specified dates, unless Interconnection Customer would have been able to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for Large Generating Facility's Trial Operation or to export power from the Large Generating Facility, but for Transmission Provider's delay; (2) Transmission Provider's failure to meet the specified dates is the result of the action or inaction of Interconnection Customer or any other Interconnection Customer who has entered into an LGIA with Transmission Provider or any cause beyond Transmission Provider's reasonable control or reasonable ability to cure; (3) the interconnection Customer has assumed responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council. Transmission Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators.



**5.5 Equipment Procurement.** If responsibility for construction of Transmission Provider's Interconnection Facilities or Network Upgrades is to be borne by Transmission Provider, then Transmission Provider shall commence design of Transmission Provider's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

- 5.5.1** Transmission Provider has completed the Facilities Study pursuant to the Facilities Study Agreement;
- 5.5.2** Transmission Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.5.3** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** Transmission Provider shall commence construction of Transmission Provider's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

- 5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;
- 5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Transmission Provider's Interconnection Facilities and Network Upgrades;
- 5.6.3** Transmission Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.6.4** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Transmission Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Transmission Provider of such later date upon which the completion of Transmission Provider's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Transmission Provider's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Other Interconnection Options.**

**5.9.1 Limited Operation.** If any of Transmission Provider's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Large Generating Facility, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Large Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Provider's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. Transmission Provider shall permit Interconnection Customer to operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.9.2 Provisional Interconnection Service.** Upon the request of Interconnection Customer, and prior to completion of requisite Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities Transmission Provider may execute a Provisional Large Generator Interconnection Agreement or

Interconnection Customer may request the filing of an unexecuted Provisional Large Generator Interconnection Agreement with the Interconnection Customer for limited Interconnection Service at the discretion of Transmission Provider based upon an evaluation that will consider the results of available studies. Transmission Provider shall determine, through available studies or additional studies as necessary, whether stability, short circuit, thermal, and/or voltage issues would arise if Interconnection Customer interconnects without modifications to the Generating Facility or Transmission System. Transmission Provider shall determine whether any Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities that are necessary to meet the requirements of NERC, or any applicable Regional Entity for the interconnection of a new, modified and/or expanded Generating Facility are in place prior to the commencement of Interconnection Service from the Generating Facility. Where available studies indicate that such, Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities that are required for the interconnection of a new, modified and/or expanded Generating Facility are not currently in place, Transmission Provider will perform a study, at the Interconnection Customer's expense, to confirm the facilities that are required for Provisional Interconnection Service. The maximum permissible output of the Generating Facility in the Provisional Large Generator Interconnection Agreement shall be studied and updated no more frequently than annually unless a relevant change to the Transmission System occurs. Interconnection Customer assumes all risk and liabilities with respect to changes between the Provisional Large Generator Interconnection Agreement and the Large Generator Interconnection Agreement, including changes in output limits and Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities cost responsibilities.

**5.10 Interconnection Customer's Interconnection Facilities ('ICIF').** Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities,

Network Upgrades and Distribution Upgrades.

- 5.10.1 Interconnection Customer's Interconnection Facility Specifications.** Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Provider at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. Transmission Provider shall review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider and comment on such specifications within thirty (30) Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.
- 5.10.2 Transmission Provider's Review.** Transmission Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Transmission Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider.
- 5.10.3 ICIF Construction.** The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Large Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with

Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Large Generating Facility. The Interconnection Customer shall provide Transmission Provider specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

- 5.11 Transmission Provider's Interconnection Facilities Construction.** Transmission Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Transmission Provider shall deliver to Interconnection Customer the following "as-built" drawings, information and documents for Transmission Provider's Interconnection Facilities [include appropriate drawings and relay diagrams].

Transmission Provider will obtain control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities.

- 5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from

time to time, by the Granting Party and provided to the Access Party.

- 5.13 Lands of Other Property Owners.** If any part of Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Transmission Provider or Transmission Owner, Transmission Provider or Transmission Owner shall at Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades upon such property.
- 5.14 Permits.** Transmission Provider or Transmission Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, Transmission Provider or Transmission Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Transmission Provider's own, or an Affiliate's generation.
- 5.15 Early Construction of Base Case Facilities.** Interconnection Customer may request Transmission Provider to construct, and Transmission Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.
- 5.16 Suspension.** Interconnection Customer reserves the right, upon written notice to Transmission Provider, to suspend at any time all work by Transmission Provider associated with the construction and installation of Transmission Provider's Interconnection Facilities and/or Network Upgrades required under this LGIA with the condition that

Transmission System shall be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Provider's safety and reliability criteria. In such event, Interconnection Customer shall be responsible for all reasonable and necessary costs which Transmission Provider (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Transmission System during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which Transmission Provider cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Provider shall obtain Interconnection Customer's authorization to do so. Interconnection Customer shall also be obligated to pay any applicable penalties associated with the suspension, pursuant to Section 38.7 of Transmission Provider's OATT. Transmission Provider shall invoice Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs.

Except as provided in Article 5.16.2 below, in the event Interconnection Customer suspends work by Transmission Provider required under this LGIA pursuant to this Article 5.16, and has not requested Transmission Provider to recommence the work required under this LGIA on or before the expiration of three (3) years following commencement of such suspension, this LGIA shall be deemed terminated. The three-year period shall begin on the date the suspension is requested, or the date of the written notice to Transmission Provider, if no effective date is specified.

**5.16.1 Effect of Missed Interconnection Customer LGIA Milestones.**

If Interconnection Customer fails to provide notice of suspension pursuant to Article 5.16, and Interconnection Customer fails to fulfill or complete any Interconnection Customer LGIA Milestone provided in Appendix B ("LGIA Milestone"), this constitutes a Breach under this LGIA. Depending upon the consequences of the Breach and effectiveness of the cure pursuant to Article 17, Transmission Provider's LGIA Milestones may be revised, following consultation with Interconnection Customer, consistent with Reasonable Efforts, and in consideration of all relevant circumstances. Parties shall employ Reasonable Efforts to maintain their remaining respective LGIA Milestones.

**5.16.2 Effect of Suspension; Parties Obligations.** In the event that Interconnection Customer suspends work pursuant to this Article 5.16, the applicable construction duration, timelines and schedules set forth in Appendix B shall be suspended during the period of suspension. Should Interconnection Customer thereafter request that work be recommenced, Appendix A and Appendix B may be revised to account for construction sequencing and modified milestones. If the Commercial Operation Date is extended beyond three (3) cumulative years described in Section 39.4.5 of the LGIP and Article 2.3.1 of this LGIA, such an extension may be considered a Material Modification and result in the termination of the LGIA under Article 2.3.1. Interconnection Customer is required to maintain Site Control while this LGIA is in effect, including during suspension.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.**

The Parties intend that all payments or property transfers made by Interconnection Customer to Transmission Provider for the installation of Transmission Provider's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as an advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations and Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the Transmission System, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to Transmission Provider for Transmission Provider's Interconnection Facilities will be capitalized by Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of Transmission Provider's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice



88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At Transmission Provider's request, Interconnection Customer shall provide Transmission Provider with a report from an independent engineer confirming its representation in clause (iii), above. Transmission Provider represents and covenants that the cost of Transmission Provider's Interconnection Facilities paid for by Interconnection Customer will have no net effect on the base upon which rates are determined.

### 5.17.3

**Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider.** Notwithstanding Article 5.17.1, Interconnection Customer shall protect, indemnify and hold harmless Transmission Provider from the cost consequences of any current tax liability imposed against Transmission Provider as the result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Transmission Provider.

Transmission Provider shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges Interconnection Customer under this LGIA unless (i) Transmission Provider has determined, in good faith, that the payments or property transfers made by Interconnection Customer to Transmission Provider should be reported as income subject to taxation or (ii) any Governmental Authority directs Transmission Provider to report payments or property as income subject to taxation; provided, however, that Transmission Provider may require

Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Transmission Provider (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. Interconnection Customer shall reimburse Transmission Provider for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from Transmission Provider of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by Transmission Provider upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that Interconnection Customer will pay Transmission Provider, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on Transmission Provider ("Current Taxes") on the excess of (a) the gross income realized by Transmission Provider as a result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit Transmission Provider to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in

clause (1).

For this purpose, (i) Current Taxes shall be computed based on Transmission Provider's composite federal and state tax rates at the time the payments or property transfers are received and Transmission Provider will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting Transmission Provider's anticipated tax depreciation deductions as a result of such payments or property transfers by Transmission Provider's current weighted average cost of capital. Thus, the formula for calculating Interconnection Customer's liability to Transmission Owner pursuant to this Article 5.17.4 can be expressed as follows:  $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$ . Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

#### 5.17.5

**Private Letter Ruling or Change or Clarification of Law.** At Interconnection Customer's request and expense, Transmission Provider shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Interconnection Customer to Transmission Provider under this LGIA are subject to federal income taxation. Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Interconnection Customer's knowledge. Transmission Provider and Interconnection Customer shall cooperate in good faith with respect to the submission of such request.

Transmission Provider shall keep Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes

Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. Transmission Provider shall allow Interconnection Customer to attend all meetings with IRS officials about the request and shall permit Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Transmission Provider's Interconnection Facilities are placed in service, (i) Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and Transmission Provider retains ownership of the Interconnection Facilities and Network Upgrades, Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on Transmission Provider, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that Transmission Provider's receipt of payments or property constitutes income that is subject to taxation, Transmission Provider shall notify Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by Interconnection Customer and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon Interconnection Customer's written request and sole expense, Transmission Provider may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. Transmission Provider reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but Transmission

Provider shall keep Interconnection Customer informed, shall consider in good faith suggestions from Interconnection Customer about the conduct of the contest, and shall reasonably permit Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Transmission Provider may agree to a settlement either with Interconnection Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Transmission Provider, but reasonably acceptable to Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding sentence. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without Interconnection Customer's consent or such written advice will relieve Interconnection Customer from any obligation to indemnify Transmission Provider for the tax at issue in the contest.

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to Transmission Provider which holds that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to Transmission Provider in good faith that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not taxable to Transmission Provider,

(c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by Interconnection Customer to Transmission Provider are not subject to federal income tax, or (d) if Transmission Provider receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by Interconnection Customer to Transmission Provider pursuant to this LGIA, Transmission Provider shall promptly refund to Interconnection Customer the following:

- (i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,
- (ii) interest on any amounts paid by Interconnection Customer to Transmission Provider for such taxes which Transmission Provider did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 CFR §35.19a(a)(2)(iii) from the date payment was made by Interconnection Customer to the date Transmission Provider refunds such payment to Interconnection Customer, and
- (iii) with respect to any such taxes paid by Transmission Provider, any refund or credit Transmission Provider receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to Transmission Provider for such overpayment of taxes (including any reduction in interest otherwise payable by Transmission Provider to any Governmental Authority resulting from an offset or credit); provided, however, that Transmission Provider will remit such amount promptly to Interconnection Customer only after and to the extent that Transmission Provider has received a tax refund, credit or offset from any

Governmental Authority for any applicable overpayment of income tax related to Transmission Provider's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Transmission Provider for which Interconnection Customer may be required to reimburse Transmission Provider under the terms of this LGIA. Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and Transmission Provider shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to Transmission Provider for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Transmission Provider.

**5.17.10 Transmission Owners Who Are Not Transmission Providers.** If Transmission Provider is not the same entity as the Transmission Owner, then (i) all references in this Article 5.17 to Transmission Provider shall be deemed also to refer to and to include the Transmission Owner, as appropriate, and (ii) this LGIA shall not become effective until such Transmission Owner

shall have agreed in writing to assume all of the duties and obligations of Transmission Provider under this Article 5.17 of this LGIA.

**5.18 Tax Status.** Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this LGIA is intended to adversely affect any Transmission Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Large Generating Facility modifications that do not require Interconnection Customer to submit an Interconnection Request, Transmission Provider shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Transmission System, Transmission Provider's Interconnection Facilities or Network Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall



be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Provider makes to Transmission Provider's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Provider's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

## **Article 6. Testing and Inspection**

### **6.1 Pre-Commercial Operation Date Testing and Modifications.**

Prior to the Commercial Operation Date, Transmission Provider shall test Transmission Provider's Interconnection Facilities and Network Upgrades and Interconnection Customer shall test the Large Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

### **6.2 Post-Commercial Operation Date Testing and Modifications.**

Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the

requesting Party's expense, as may be in accordance with Good Utility Practice.

- 6.3 Right to Observe Testing.** Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right, at its own expense, to observe such testing.
- 6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## **Article 7. Metering**

- 7.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Provider shall install Metering Equipment at the Point of Interconnection prior to any operation of the Large Generating Facility and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at Transmission Provider's option, compensated to, the Point of Interconnection. Transmission Provider shall provide metering quantities, in analog and/or digital form, to Interconnection Customer upon request. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.
- 7.2 Check Meters.** Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more

check meters to check Transmission Provider's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except as provided in Article 7.4 below. The check meters shall be subject at all reasonable times to inspection and examination by Transmission Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.

- 7.3 Standards.** Transmission Provider shall install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.
- 7.4 Testing of Metering Equipment.** Transmission Provider shall inspect and test all Transmission Provider-owned Metering Equipment upon installation and at least once every two (2) years thereafter. If requested to do so by Interconnection Customer, Transmission Provider shall, at Interconnection Customer's expense, inspect or test Metering Equipment more frequently than every two (2) years. Transmission Provider shall give reasonable notice of the time when any inspection or test shall take place, and Interconnection Customer may have representatives present at the test or inspection. If at any time Metering Equipment is found to be inaccurate or defective, it shall be adjusted, repaired or replaced at Interconnection Customer's expense, in order to provide accurate metering, unless the inaccuracy or defect is due to Transmission Provider's failure to maintain, then Transmission Provider shall pay. If Metering Equipment fails to register, or if the measurement made by Metering Equipment during a test varies by more than two percent from the measurement made by the standard meter used in the test, Transmission Provider shall adjust the measurements by correcting all measurements for the period during which Metering Equipment was in error by using Interconnection Customer's check meters, if installed. If no such check meters are installed or if the period cannot be reasonably ascertained, the adjustment shall be for the period immediately preceding the test of the Metering Equipment equal to one-half the time from the date of the last previous test of the Metering Equipment.
- 7.5 Metering Data.** At Interconnection Customer's expense, the metered data shall be telemetered to one or more locations designated by Transmission Provider and one or more locations designated by Interconnection Customer. Such telemetered data shall be used, under normal operating conditions, as the official measurement of the amount of energy delivered from the Large Generating Facility to the

Point of Interconnection.

## **Article 8. Communications**

**8.1 Interconnection Customer Obligations.** Interconnection Customer shall maintain satisfactory operating communications with Transmission Provider's Transmission System dispatcher or representative designated by Transmission Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Transmission Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by Transmission Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of the Large Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Transmission Provider at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Provider through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1. The communication protocol for the data circuit(s) shall be specified by Transmission Provider. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Provider.

Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the

premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

**8.4 Provision of Data from a Variable Energy Resource.** The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the Transmission Provider to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The Transmission Provider and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this LGIA, as they may change from time to time.

## **Article 9. Operations**

**9.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall

provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

- 9.2 Control Area Notification.** At least three months before Initial Synchronization Date, Interconnection Customer shall notify Transmission Provider in writing of the Control Area in which the Large Generating Facility will be located. If Interconnection Customer elects to locate the Large Generating Facility in a Control Area other than the Control Area in which the Large Generating Facility is physically located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Control Area.
- 9.3 Transmission Provider Obligations.** Transmission Provider shall cause the Transmission System and Transmission Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. Transmission Provider may provide operating instructions to Interconnection Customer consistent with this LGIA and Transmission Provider's operating protocols and procedures as they may change from time to time. Transmission Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.
- 9.4 Interconnection Customer Obligations.** Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. Interconnection Customer shall operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA.
- 9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, Interconnection

Customer is responsible for the proper synchronization of the Large Generating Facility to Transmission Provider's Transmission System.

## **9.6 Reactive Power and Primary Frequency Response.**

**9.6.1 Power Factor Design Criteria.** Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless Transmission Provider has established different requirements that apply to all generators in the Control Area on a comparable basis. The requirements of this paragraph shall not apply to wind generators.

### **9.6.1.1 Synchronous Generation.**

Interconnection Customer shall design the Large Generating Facility to maintain a composite power deliver at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless the Transmission Provider has established different requirements that apply to all synchronous generators in the Control Area on a comparable basis.

### **9.6.1.2 Non-Synchronous Generation.**

Interconnection Customer shall design the Large Generating Facility to maintain composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the Transmission Provider has established a different power factor range that applies to all non-synchronous generators in the Control Area on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched

capacitors, or a combination of the two. This requirement shall only apply to newly interconnecting non-synchronous generators that have not yet executed a Facilities Study Agreement as of the effective date of the Final Rule establishing this requirement (Order No. 827).

### 9.6.2

**Voltage Schedules.** Once Interconnection Customer has synchronized the Large Generating Facility with the Transmission System, Transmission Provider shall require Interconnection Customer to operate the Large Generating Facility to produce or absorb reactive power within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Provider's voltage schedules shall treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Provider shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Transmission System. Interconnection Customer shall operate the Large Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the System Operator.

**9.6.2.1 Voltage Regulators.** Whenever the Large Generating Facility is operated in parallel with the Transmission System and voltage regulators are capable of operation, Interconnection Customer shall operate the Large Generating Facility with its voltage regulators in automatic operation. If the Large Generating Facility's voltage regulators are not capable of such automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its



designated representative, and ensure that such Large Generating Facility's reactive power production or absorption (measured in MVARs) are within the design capability of the Large Generating Facility's generating unit(s) and steady state stability limits. Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Control Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** Transmission Provider is required to pay Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Large Generating Facility when Transmission Provider requests Interconnection Customer to operate its Large Generating Facility outside the range specified in Article 9.6.1, provided that if Transmission Provider pays its own or affiliated generators for reactive power service within the specified range, it must also pay Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the Parties have otherwise agreed.

**9.6.4 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Large Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Large Generating Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent

controls with the capability of operating: (1) with a maximum 5 percent droop and  $\pm 0.036$  Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from an approved NERC Reliability Standard providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Large Generating Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Large Generating Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Large Generating Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. Interconnection Customer shall notify Transmission Provider that the primary frequency response capability of the Large Generating Facility has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Large Generating Facility with the Transmission System, Interconnection Customer shall operate the Large Generating Facility consistent with the provisions specified in Sections 9.6.4.1 and 9.6.4.2 of this Agreement. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Large Generating Facilities.

**9.6.4.1 Governor or Equivalent Controls.**

Whenever the Large Generating Facility is operated in parallel with the Transmission System, Interconnection Customer shall operate the Large Generating Facility with its governor or equivalent controls in service and

responsive to frequency. Interconnection Customer shall: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of  $\pm 0.036$  Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from an approved NERC Reliability Standard that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to Transmission Provider and/or the relevant balancing authority upon request. If Interconnection Customer needs to operate the Large Generating Facility with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify Transmission Provider and the relevant balancing authority, and provide both with the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Large Generating Facility's governor or equivalent controls to a minimum whenever the Large Generating Facility is operated in parallel with the Transmission System.

#### **9.6.4.2 Timely and Sustained Response.**

Interconnection Customer shall ensure that the Large Generating Facility's real power response to sustained frequency deviations outside of the

deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Large Generating Facility has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Large Generating Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A Commission-approved Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**9.6.4.3 Exemptions.** Large Generating Facilities that are regulated by the United States Nuclear Regulatory Commission shall be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this Agreement. Large Generating Facilities that are behind the meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but shall be otherwise exempt from the operating requirements in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this Agreement.

#### **9.6.4.4 Electric Storage Resources.**

Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Appendix C of its LGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.3 of this Agreement. Appendix C shall specify whether the operating range is static or dynamic, and shall consider (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by Transmission Provider and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 9.6.4.2 of this Agreement when it is online and dispatched to inject electricity to the Transmission System and/or receive electricity from the Transmission System. This excludes circumstances when the electric

storage resource is not dispatched to inject electricity to the Transmission System and/or dispatched to receive electricity from the Transmission System. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

## **9.7 Outages and Interruptions.**

### **9.7.1 Outages.**

#### **9.7.1.1 Outage Authority and Coordination.**

Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

#### **9.7.1.2 Outage Schedules.** Transmission Provider shall post scheduled outages of its transmission facilities on the OASIS. Interconnection Customer shall

submit its planned maintenance schedules for the Large Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Transmission Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply shall not be a criterion in determining Transmission System reliability. Transmission Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Transmission Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency Condition, an estimated time of restoration, and any

corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

**9.7.2** **Interruption of Service.** If required by Good Utility Practice to do so, Transmission Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

- 9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;
- 9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Transmission System;
- 9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, Transmission Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;
- 9.7.2.4** Except during the existence of an Emergency Condition, when the interruption or reduction can be scheduled without advance notice, Transmission Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Transmission



Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Transmission Provider;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, and the Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions.**  
The Transmission System is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under-frequency system disturbance. Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Large Generating Facility as required by the Applicable Reliability Council to ensure "ride through" capability of the Transmission System. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.**  
Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or Interconnection Customer's Interconnection Facilities.

Transmission Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Transmission Provider's Interconnection Facilities or the Transmission System as a result of the interconnection of the Large Generating Facility and Interconnection Customer's Interconnection Facilities.

- 9.7.4.2** Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Good Utility Practice.
- 9.7.4.3** Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.
- 9.7.4.4** Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.
- 9.7.4.5** Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice.
- 9.7.4.6** Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These

tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Transmission System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Large Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Large Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and Interconnection Customer's other equipment if conditions on the Transmission System could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard. In the event of a conflict between ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, ANSI Standard C84.1-1989, or the applicable superseding electric industry standard, shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Party a copy of its switching and tagging rules that

are applicable to the other Party's activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

## **9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Transmission Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or Transmission Provider's Transmission System by gathering and providing

access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## **Article 10. Maintenance**

- 10.1 Transmission Provider Obligations.** Transmission Provider shall maintain the Transmission System and Transmission Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.
- 10.2 Interconnection Customer Obligations.** Interconnection Customer shall maintain the Large Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.
- 10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.
- 10.4 Secondary Systems.** Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.
- 10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Provider's Interconnection Facilities.

## **Article 11. Performance Obligation**

### **11.1 Interconnection Customer Interconnection Facilities.**

Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

### **11.2 Transmission Provider's Interconnection Facilities.**

Transmission Provider or Transmission Owner shall design, procure, construct, install, own and/or control the Transmission Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.

### **11.3 Network Upgrades and Distribution Upgrades.**

Transmission Provider or Transmission Owner shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless Transmission Provider or Transmission Owner elects to fund the capital for the Network Upgrades, they shall be solely funded by Interconnection Customer. In the event that Transmission Provider must change the voltage levels of a discrete portion of the Transmission System to which the Interconnection Customer is connected, Transmission Provider shall give reasonable notice of such change and the Interconnection Customer shall be solely responsible for all costs related to upgrades or modifications to Interconnection Customer's Interconnection Facilities resulting from Transmission Provider's increase in the voltage levels of the Transmission System, in order to remain interconnected with the Transmission System at the new operating voltage. To the extent that the modifications necessary to upgrade Interconnection Facilities qualify as Network Upgrades, Transmission Provider shall be solely responsible for the expense of such modifications or upgrades.

### **11.4 Transmission Credits.**

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.** Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Transmission Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or

other tax-related payments associated with Network Upgrades, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Transmission Provider's Tariff and Affected System's Tariff for transmission services with respect to the Large Generating Facility. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any person.

Notwithstanding the foregoing, Interconnection Customer, Transmission Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Transmission Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Transmission Provider or Affected System Operator will continue to provide payments to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond twenty (20) years from the Commercial Operation Date.

If the Large Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, Transmission Provider and Affected System Operator shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the

Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

**11.4.2 Special Provisions for Affected Systems.**

Unless Transmission Provider provides, under the LGIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, Interconnection Customer and Affected System Operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by Interconnection Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

**11.4.3**

Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that Interconnection Customer, shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Security.** At least thirty (30) Calendar Days prior to the commencement of the first of the following to occur: design, procurement, installation, or construction of a discrete portion of a Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, Interconnection Customer shall provide Transmission Provider, at Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to Transmission Provider for these purposes.

In addition:



- 11.5.1** The guarantee must be made by an entity that meets the creditworthiness requirements of Transmission Provider, and contain terms and conditions that guarantee payment of any amount that may be due from Interconnection Customer, up to an agreed-to maximum amount.
- 11.5.2** The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must indicate that it would only expire upon final payment made to Transmission Provider to cover all relevant costs for designing, procuring, installing, and constructing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades for which the letter of credit was provided.
- 11.5.3** The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must indicate that it would only expire upon final payment made to Transmission Provider to cover all relevant costs for designing, procuring, installing, and constructing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades for which the surety bond was provided.

**11.6 Interconnection Customer Compensation.** If Transmission Provider requests or directs Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this LGIA, Transmission Provider shall compensate Interconnection Customer in accordance with Interconnection Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to an RTO or ISO FERC-approved rate schedule. Interconnection Customer shall serve Transmission Provider or RTO or ISO with any filing of a proposed rate schedule at the time of such filing with FERC. To the extent that no rate schedule is in effect at the time the Interconnection Customer is required to provide or absorb any Reactive Power under this LGIA, Transmission Provider agrees to compensate Interconnection Customer in such amount as would have been due Interconnection Customer had the rate schedule been in effect at the time service commenced; provided, however, that such rate schedule must be filed at FERC or other appropriate Governmental Authority within sixty (60) Calendar Days of the commencement of service.

**11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.**

Transmission Provider or RTO or ISO shall compensate Interconnection Customer for its provision of real and reactive power and other Emergency Condition services that Interconnection Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.6.

**Article 12. Invoice**

- 12.1 General.** Each Party shall submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party.
- 12.2 Final Invoice.** Within six months after completion of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades, Transmission Provider shall provide an invoice of the final cost of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Transmission Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.
- 12.3 Payment.** Invoices shall be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice shall pay the invoice within thirty (30) Calendar Days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by either Party will not constitute a waiver of any rights or claims either Party may have under this LGIA.
- 12.4 Disputes.** In the event of a billing dispute between Transmission Provider and Interconnection Customer,

Transmission Provider shall continue to provide Interconnection Service under this LGIA as long as Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Transmission Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with the methodology set forth in FERC's regulations at 18 CFR § 35.19a(a)(2)(iii).

### **Article 13. Emergencies**

- 13.1 Definition.** "Emergency Condition" shall mean a condition or situation: (i) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (ii) that, in the case of Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Transmission System, Transmission Provider's Interconnection Facilities or the Transmission Systems of others to which the Transmission System is directly connected; or (iii) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Large Generating Facility or Interconnection Customer's Interconnection Facilities' System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.
- 13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the applicable ISO/RTO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.
- 13.3 Notice.** Transmission Provider shall notify Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Provider's Interconnection Facilities or the Transmission System that may reasonably be expected to affect Interconnection Customer's operation of the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection Customer

shall notify Transmission Provider promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Transmission System or Transmission Provider's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection Customer's or Transmission Provider's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice.

**13.4 Immediate Action.** Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Transmission Provider, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or otherwise regarding the Transmission System.

**13.5 Transmission Provider Authority.**

**13.5.1 General.** Transmission Provider may take whatever actions or inactions with regard to the Transmission System or Transmission Provider's Interconnection Facilities it deems necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Transmission System or Transmission Provider's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility;

implementing a reduction or disconnection pursuant to Article 13.5.2; directing Interconnection Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of Transmission Provider's operating instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** Transmission Provider may reduce Interconnection Service or disconnect the Large Generating Facility or Interconnection Customer's Interconnection Facilities, when such, reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of Transmission Provider pursuant to Transmission Provider's Tariff. When Transmission Provider can schedule the reduction or disconnection in advance, Transmission Provider shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer and Transmission Provider. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the Transmission System to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good Utility Practice and the LGIA and the LGIP, Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or Interconnection

Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Provider's Interconnection Facilities. Transmission Provider shall use Reasonable Efforts to assist Interconnection Customer in such actions.

- 13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, neither Party shall be liable to the other for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

**Article 14. Regulatory Requirements and Governing Law**

- 14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.

**14.2 Governing Law.**

- 14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.
- 14.2.2** This LGIA is subject to all Applicable Laws and Regulations.
- 14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

**Article 15. Notices.**

- 15.1 General.** Unless otherwise provided in this LGIA, any

notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

Either Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change.

- 15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.
- 15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.
- 15.4 Operations and Maintenance Notice.** Each Party shall notify the other Party in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## **Article 16. Force Majeure**

### **16.1 Force Majeure.**

- 16.1.1** Economic hardship is not considered a Force Majeure event.
- 16.1.2** Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in

writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## **Article 17. Default**

### **17.1 Default**

#### **17.1.1**

**General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act of omission of the other Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

#### **17.1.2**

**Right to Terminate.** If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this LGIA, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this LGIA.



**Article 18. Indemnity, Consequential Damages and Insurance**

**18.1 Indemnity.** The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this LGIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Person.** If an Indemnified Person is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Person shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the

Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or Indemnified Persons having such differing or additional legal defenses.

The Indemnified Person shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Person, or there exists a conflict or adversity of interest between the Indemnified Person and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Person, which shall not be reasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the Liquidated Damages heretofore described, in no event shall either Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or

consequential damages hereunder.

**18.3 Insurance.** Each party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

**18.3.1** Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.

**18.3.2** Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

**18.3.3** Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.

**18.3.4** Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.

**18.3.5** The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name

the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.

- 18.3.6** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.
- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this LGIA.
- 18.3.9** Within ten (10) days following execution of this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this LGIA, executed by each insurer or by an

authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this LGIA.

## **Article 19. Assignment**

**19.1 Assignment.** This LGIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this LGIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that Interconnection Customer shall have the right to assign this LGIA, without the consent of Transmission Provider, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that Interconnection Customer will promptly notify Transmission Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured Party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the

trustee or mortgagee will notify Transmission Provider of the date and particulars of any such exercise of assignment right(s), including providing the Transmission Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

#### **Article 20. Severability**

- 20.1 Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Transmission Provider) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of these provisions shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

#### **Article 21. Comparability**

- 21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

#### **Article 22. Confidentiality**

- 22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by either of the Parties to the other prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the

information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of the LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

**22.1.3 Release of Confidential Information.** Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants, or to parties who may be or

considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

- 22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.
- 22.1.5 No Warranties.** By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.
- 22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this LGIA or its regulatory requirements.
- 22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other



Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this LGIA.

Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10**

**Disclosure to FERC, its Staff, or a State.**

Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11**

Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this LGIA ("Confidential Information") shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The

Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

### **Article 23. Environmental Releases**

- 23.1** Each Party shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

### **Article 24. Information Requirements**

- 24.1 Information Acquisition.** Transmission Provider and Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.
- 24.2 Information Submission by Transmission Provider.** The initial information submission by Transmission Provider shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include Transmission System information necessary to allow Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Parties. On a monthly basis Transmission Provider shall provide Interconnection Customer a status report on the construction and installation of Transmission Provider's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to

date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection**

**Customer.** The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. Interconnection Customer shall submit a completed copy of the Large Generating Facility data requirements contained in Appendix 1 to the LGIP. It shall also include any additional information provided to Transmission Provider for the Cluster Study and Facilities Study. Information in this submission shall be the most current Large Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Transmission Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the Interconnection Study Agreement between Transmission Provider and Interconnection Customer, then Transmission Provider will conduct appropriate studies to determine the impact on Transmission Provider Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

**24.4 Information Supplementation.** Prior to the Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Large Generating Facility information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Large Generating Facility as required by Good Utility Practice such as an open circuit "step voltage" test on the Large Generating Facility to verify proper operation of the Large Generating Facility's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Large Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Large Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage.

Interconnection Customer shall provide validated test recordings showing the responses of Large Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Large Generating Facility's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Large Generating Facility terminal or field voltages is provided. Large Generating Facility testing shall be conducted and results provided to Transmission Provider for each individual generating unit in a station.

Subsequent to the Operation Date, Interconnection Customer shall provide Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Provider-owned substation that may affect Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

## **Article 25. Information Access and Audit Rights**

- 25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA.
- 25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such

notification to allege a cause for anticipatory breach of this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either Party's performance or either Party's satisfaction of obligations under this LGIA. Such audit rights shall include audits of the other Party's costs, calculation of invoiced amounts, Transmission Provider's efforts to allocate responsibility for the provision of reactive support to the Transmission System, Transmission Provider's efforts to allocate responsibility for interruption or reduction of generation on the Transmission System, and each Party's actions in an Emergency Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this LGIA. Each Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Transmission Provider's Interconnection Facilities and Network Upgrades shall be subject to audit for a period of twenty-four months following Transmission Provider's issuance of a final invoice in accordance with Article 12.2.

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to either Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

**25.5 Audit Results.** If an audit by a Party determines that an overpayment or an underpayment has occurred, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which support such determination.

## **Article 26. Subcontractors**

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Transmission Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## **Article 27. Disputes**

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such 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 designated 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 designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute

may, upon mutual 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 LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs



incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

**Article 28. Representations, Warranties, and Covenants**

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3 No Conflict.** The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## **Article 29. Joint Operating Committee**

**29.1 Joint Operating Committee.** Except in the case of ISOs and RTOs, Transmission Provider shall constitute a Joint Operating Committee to coordinate operating and technical considerations of Interconnection Service. At least six (6) months prior to the expected Initial Synchronization Date, Interconnection Customer and Transmission Provider shall each appoint one representative and one alternate to the Joint Operating Committee. Each Interconnection Customer shall notify Transmission Provider of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee shall meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee shall hold a meeting at the request of either Party, at a time and place agreed upon by the representatives. The Joint Operating Committee shall perform all of its duties consistent with the provisions of this LGIA. Each Party shall cooperate in providing to the Joint Operating Committee all information required in the performance of the Joint Operating Committee's duties. All decisions and agreements, if any, made by the Joint Operating Committee, shall be evidenced in writing. The duties of the Joint Operating Committee shall include the following:

- 29.1.1** Establish data requirements and operating record requirements.
- 29.1.2** Review the requirements, standards, and procedures for data acquisition equipment, protective equipment, and any other equipment or software.
- 29.1.3** Annually review the one (1) year forecast of maintenance and planned outage schedules of Transmission Provider's and Interconnection Customer's facilities at the Point of Interconnection.

- 29.1.4** Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Large Generating Facility and other facilities that impact the normal operation of the interconnection of the Large Generating Facility to the Transmission System.
- 29.1.5** Ensure that information is being provided by each Party regarding equipment availability.
- 29.1.6** Perform such other duties as may be conferred upon it by mutual agreement of the Parties.

### **Article 30. Miscellaneous**

- 30.1 Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.
- 30.2 Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.
- 30.3 Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof;

(7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

- 30.4 Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this LGIA.
- 30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.
- 30.6 Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer's legal rights to obtain an interconnection from Transmission Provider. Any waiver of this LGIA shall, if requested, be provided in writing.
- 30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.
- 30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
- 30.9 Amendment.** The Parties may by mutual agreement amend this

LGIA by a written instrument duly executed by the Parties.

- 30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.
- 30.11 Reservation of Rights.** Transmission Provider shall have the right to make a unilateral filing with FERC to modify this LGIA with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.
- 30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**IN WITNESS WHEREOF**, the Parties have executed this LGIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

**[Insert name of Transmission Provider or Transmission Owner, if applicable]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Insert name of Interconnection Customer]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Appendix A to LGIA

Interconnection Facilities, Network Upgrades, Distribution  
Upgrades, and Contingent Facilities

1. Interconnection Facilities:

(a) [insert Interconnection Customer's Interconnection  
Facilities]:

(b) [insert Transmission Provider's Interconnection  
Facilities]:

2. Network Upgrades:

(a) [insert Stand Alone Network Upgrades]:

(b) [insert Other Network Upgrades]:

3. Distribution Upgrades:

4. Contingent Facilities

**Appendix B To LGIA**

**Milestones**



**Appendix C To LGIA**  
**Interconnection Details**

## **Appendix D To LGIA**

### **Security Arrangements Details**

Infrastructure security of Transmission System equipment and operations and control hardware and software is essential to ensure day-to-day Transmission System reliability and operational security. FERC will expect all Transmission Providers, market participants, and Interconnection Customers interconnected to the Transmission System to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

**Appendix E To LGIA**

**Commercial Operation Date**

This Appendix E is a part of the LGIA between Transmission Provider and Interconnection Customer.

**[Date]**

**[Transmission Provider Address]**

Re: \_\_\_\_\_ Large Generating Facility

Dear \_\_\_\_\_:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No. \_\_\_\_\_. This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No. \_ at the Large Generating Facility, effective as of **[Date plus one day]**.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

**Appendix F to LGIA**

**Addresses for Delivery of Notices and Billings**

**Notices, Billings and Payments:**

Transmission Provider:

US Mail Deliveries: PacifiCorp Transmission Services  
Attn: Central Cashiers Office  
PO Box 2757  
Portland, OR 97208-2757

Other Deliveries: Central Cashiers Office  
Attn: PacifiCorp Transmission Services  
825 NE Multnomah Street, Suite 550  
Portland OR 97232

Phone Number: [Add Central Cashiers Phone Number]

Interconnection Customer:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or email):**

Transmission Provider:

Director, Transmission Services	[Add phone number]
Manager, Transmission Scheduling	[Add phone number]
Manager, Interconnection Services	[Add phone number]
Manager, Transmission Services	[Add phone number]
Transmission Business Facsimile	[Add facsimile number]

OASIS Address:

~~<<http://www.oasis.pacificorp.com/oasis/ppw/main.html>>~~<http://www.oasis.pacificorp.com/oasis/ppw/main.html>>

Interconnection Customer:

[To be supplied.]

## Appendix G to LGIA

### INTERCONNECTION REQUIREMENTS FOR A WIND GENERATING PLANT

Appendix G sets forth requirements and provisions specific to a wind generating plant. All other requirements of this LGIA continue to apply to wind generating plant interconnections.

#### **A. Technical Standards Applicable to a Wind Generating Plant**

##### **i. Low Voltage Ride-Through (LVRT) Capability**

A wind generating plant shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the standard below. The LVRT standard provides for a transition period standard and a post-transition period standard.

#### **Transition Period LVRT Standard**

The transition period standard applies to wind generating plants subject to FERC Order 661 that have either: (i) interconnection agreements signed and filed with the Commission, filed with the Commission in unexecuted form, or filed with the Commission as non-conforming agreements between January 1, 2006 and December 31, 2006, with a scheduled in-service date no later than December 31, 2007, or (ii) wind generating turbines subject to a wind turbine procurement contract executed prior to December 31, 2005, for delivery through 2007.

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 - 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles at a voltage as low as 0.15 p.u., as measured at the high side of the wind generating plant step-up transformer (i.e. the transformer that steps the voltage up to the transmission interconnection voltage or "GSU"), after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU or to faults that would result in a voltage lower than 0.15 per unit on the high side of the GSU serving the facility.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR Compensator, etc.) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

#### **Post-transition Period LVRT Standard**

All wind generating plants subject to FERC Order No. 661 and not covered by the transition period described above must meet the following requirements:

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 - 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system. A wind generating plant shall remain interconnected during such a fault on the transmission system for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.
2. This requirement does not apply to faults that would occur

between the wind generator terminals and the high side of the GSU.

3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

**ii. Power Factor Design Criteria (Reactive Power)**

The following reactive power requirements apply only to a newly interconnecting wind generating plant that has executed a Facilities Study Agreement as of the effective date of the Final Rule establishing the reactive power requirements for non-synchronous generators in section 9.6.1 of this LGIA (Order No. 827). A wind generating plant to which this provision applies shall maintain a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA, if the Transmission Provider's System Impact Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors if agreed to by the Transmission Provider, or a combination of the two. The Interconnection Customer shall not disable power factor equipment while the wind plant is in operation. Wind plants shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the System Impact Study shows this to be required for system safety or reliability.

**iii. Supervisory Control and Data Acquisition (SCADA) Capability**

The wind plant shall provide SCADA capability to transmit data and receive instructions from the Transmission Provider to

protect system reliability. The Transmission Provider and the wind plant Interconnection Customer shall determine what SCADA information is essential for the proposed wind plant, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability in its area.

#### Appendix H to LGIA

##### OPERATION OF AN ELECTRIC STORAGE RESOURCE

Interconnection Customer selected Energy Resource Interconnection Service pursuant to Article 4.1. Interconnection Customer also elected, and Transmission Provider agreed, to study Interconnection Customer's Electric Storage Resource under certain operating assumptions. Those operating assumptions are:

[List agreed upon operating assumptions]

Interconnection Customer agrees to operate its Electric Storage Resource in conformity with the operating assumptions listed above. Failure to adhere to the operating assumptions constitutes a Breach under this LGIA and Transmission Provider may pursue termination pursuant to Article 17.

Notwithstanding the above, Transmission Provider reserves the right to direct the Electric Storage Resource to operate outside



of the agreed upon operating assumptions if it is necessary to maintain the safety and reliability of the electric system, is required by Applicable Reliability Standards, or is otherwise necessitated by Good Utility Practice.

## Appendix 7 to LGIP

### INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

Appendix 7 sets forth procedures specific to a wind generating plant. All other requirements of this LGIP continue to apply to wind generating plant interconnections.

#### **A. Special Procedures Applicable to Wind Generators**

The wind plant Interconnection Customer, in completing the Interconnection Request required by section 3.3 of this LGIP, may provide to the Transmission Provider a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator. Upon satisfying these and other applicable Interconnection Request conditions, the wind plant may enter the queue and receive the base case data as provided for in this LGIP.

No later than six months after submitting an Interconnection Request completed in this manner, the wind plant Interconnection Customer must submit completed detailed electrical design specifications and other data (including collector system layout data) needed to allow the Transmission Provider to complete the System Impact Study.

**APPENDIX 8 TO THE LGIP  
TECHNOLOGICAL ADVANCEMENT STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between [Customer Name (Project Name, QXXXX)], a [Type of company] organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and PacifiCorp a Corporation existing under the laws of the State of Oregon ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, the Interconnection Customer submitted a generation interconnection request dated \_\_\_\_\_ requesting Interconnection Customer's Large Generating Facility to be connected to Transmission Provider's electrical system;

**WHEREAS**, Interconnection Customer is proposing to modify its generation interconnection request, as described in the Interconnection Customer's Technological Advancement Request submitted by Interconnection Customer dated \_\_\_\_\_;

**WHEREAS**, Transmission Provider is required to perform an initial analysis of the Technological Advancement Request pursuant to Section 39.4.6.2 of Transmission Provider's Large Generator Interconnection Procedures ("LGIP");

**WHEREAS**, Transmission Provider may determine, pursuant to Section 39.4.6.2, that further study is required to conclude whether the Technological Advancement Request is a Permissible Technological Advancement;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERC-approved LGIP;
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an initial analysis of the Technological Advancement Request pursuant to Section 39.4.6.2, and, if Transmission Provider determines pursuant to Section 39.4.6.2 that additional study is necessary, a study consistent with Section 39.4.6.4 of the LGIP ("Technological Advancement Study").
- 3.0 The scope and performance of the initial analysis shall be pursuant to Section 39.4.6.2. The scope of the Technological Advancement study, if any, shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 If Transmission Provider determines pursuant to Section 39.4.6.2 that additional study is necessary, the Technological Advancement Study will be based on the

assumptions set forth in Attachment A to this Agreement, the results of the technical information provided by Interconnection Customer, applicable requirements in Transmission Provider's LGIP, and current Policy 138 or Policy 139, as applicable.

- 5.0 If Transmission Provider determines pursuant to Section 39.4.6.2 that additional study is necessary, Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Technological Advancement Study.
- 6.0 The Technological Advancement Study report shall provide the following information:
- Summary of study conclusions; and
  - Either a determination of whether the Interconnection Customer's Technological Advancement Request constitutes a Permissible Technological Advancement; or
  - Determination and explanation of whether the Interconnection Customer's Technological Advancement Request is a Material Modification, requiring a new application to be submitted;
- 7.0 Transmission Provider's good faith estimate for the time of completion of both the initial analysis and, if applicable, any Technological Advancement Study is 30 Calendar Days from receipt of the Technological Advancement Request.
- Upon completion of all analysis and study obligations under Section 39.4.6, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the initial analysis and, if applicable, Technological Advancement Study. Any difference between the deposit provided pursuant to Section 39.4.6.1(b) and the actual cost of the initial assessment and, if applicable, Technological Advancement Study shall be paid by or refunded to Interconnection Customer, as appropriate, upon completion of all analysis and study obligations under Section 39.4.6.
- 8.0 Miscellaneous. The Technological Advancement Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the

LGIA.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[Customer Name (Project Name, QXXXX)]**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **Attachment A**

### **ASSUMPTIONS USED IN CONDUCTING THE TECHNOLOGICAL ADVANCEMENT STUDY**

The Technological Advancement Study will be based upon the following assumptions:

Designation of changes to the configuration or technical details of the generating facility.

Transmission Provider's good faith estimate for the cost of completion of the initial analysis and, if applicable, Technological Advancement Study is \$10,000. Transmission Provider's actual cost shall include all direct costs plus applicable overheads.