

RR696 INTEGRATE AND OPERATE HIGH IMPACT LARGE LOAD COMMENT FORM

SUBMITTER INFORMATION

Date: 8/14/2025

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RR OBJECTIVES (FROM RR FORM)

What is the objective of this RR?

Implement a High Impact Large Load integration assessment framework that accelerates these load interconnections through integrated design, study, registration, and operations. This framework will maintain grid reliability and operational efficiency while balancing cost-effectiveness with expedited market deployment timelines.

Create a new Conditional High Impact Large Load (CHILL) Service that will allow High Impact Large Loads to interconnect with conditional transmission service.

How RR addresses the objectives:

This RR will incorporate language into SPP's governing documents that HILL requirements and CHILL Service while considering planning, market, and operation aspects.

Benefits RR will provide:

- **Market benefits:** This Revision Request improves market efficiency and transparency by enabling HILL and CHILL to interconnect with clear, consistent rules. It reduces uncertainty for developers, supports faster market entry, enhances price signals, and allows these loads to have a better cost certainty and speed to market. By aligning load interconnection with best practices and standards, it ensures fairness and helps integrate new demand into SPP's market reliably and economically.
- **Reliability benefits:** This Revision Request enhances SPP's reliability by ensuring all significant loads (HILL and CHILL) are properly studied before interconnection. It improves system stability, supports accurate modeling, and aligns with NERC standards. The process enables early detection of system constraints, improves coordination across entities, and prepares operators for real-time impacts. Overall, it reduces the risk of unplanned or destabilizing load additions to the grid.
- **Administrative benefits:** This Revision Request ensures regulatory compliance and transparency and supports future growth by setting a clear process for large load integration

- Other qualitative or quantitative benefits:
 - Reduction in planning reserve margin requirements due to improved load predictability
 - Avoidance of transmission upgrades or congestion costs
 - Quantified curtailment reduction from better forecast alignment
 - Cost savings from fewer emergency procedures or redispatch events
 - Increase in study efficiency (e.g., reduced rework due to last-minute load additions)

SUBMITTER COMMENTS

Itemize summary of changes here:

July 11, 2025 SPP Comments are highlighted in yellow:

- Attachment BB language was amended to include Energy Storage Resource Load Assessment language which is pending approval at the July 2025 MOPC
- Attachment BB language was modified to state that maximum injection limit will be based upon the projected capacity accreditation MW value rather than the generator nameplate value of the HILGA
- Use of shall updated as appropriate

July 28, 2025 SPP Comments are highlighted in Teal:

- Attachment BB Appendix 3 added to cover HILLGA GIA for use when Western Area Power Administration Division is a party to the GIA
- Attachment AE – Align Resource Day Ahead Must Offer with existing requirements for Resources
- Attachment BB - Capacity limits now based on accredited capacity
- Specifying HILL and CHILL metering requirements in the Protocols

August 15, 2025 SPP Comments are highlighted in green:

- Remove CHILL, CHILLS, and Deliverability Area path for generation based off stakeholder feedback
- Attachment BB Section 3.1.1 updated based off stakeholder feedback
- Attachment AE – Align Resource Day Ahead Must Offer with existing requirements for Resources
- Revised definition of High Impact Large Load in Part 1, Common Service Provisions
- Modified Attachment AE and Marketplace Protocols to make High Impact Large Load independent of Non-Conforming Load based off stakeholder feedback
- Modified Attachment AQ And AX to provide clarity on the HILL study process

SUBMITTER DOCUMENT REVISIONS

SPP OPEN ACCESS TRANSMISSION TARIFF PART 1, COMMON SERVICE PROVISIONS

1.1 Definitions

Conditional High Impact Large Load (CHILL)

The portion of a High Impact Large Load that is eligible to connect to the Transmission System and receive CHILLS as defined in Attachment BA and Part VII of this Tariff.

Conditional High Impact Large Load Service (CHILLS)

A type of transmission service available to High Impact Large Load as described in Part VII of this Tariff.

Conditional High Impact Large Load Service (CHILLS) Operating Agreement

An executed agreement that contains the terms and conditions under which the Transmission Customer and Network Customer will operate its facilities and the technical and operational matters associated with the implementation of CHILLS under Part IV of the Tariff.

Conditional High Impact Large Load Service (CHILLS) Reserved Capacity

The maximum amount of energy that the Transmission Provider agrees to transmit for the Transmission Customer or Network Customer over the Transmission Provider's Transmission System for CHILLS under Part VII of the Tariff.

Conditional High Impact Large Load Service (CHILLS) Service Year

A period of twelve (12) calendar months for which the Transmission Customer or the Network Customer has been granted CHILLS Reserved Capacity. CHILLS Reserved Capacity is expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

Delivering Party: The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

High Impact Large Load (HILL)

A new commercial or industrial load, or increase in commercial or industrial load, at a single site connected through one or more shared Points of Interconnection (POIs) or delivery points, where

such load is either (1) 10 MW or more if connected to the Transmission System at a voltage level less than or equal to 69 kV; or (2) 50 MW or more if connected to the Transmission System at a voltage level greater than 69 kV. An Electric Storage Resource is not considered a HILL. A load may be categorized as a HILL after the initial effective date of Attachment BA of the Tariff. High Impact Large Loads must register as such in accordance with Attachment AE and follow the processes specified in Attachment BA.

~~Any commercial or industrial individual load facility or aggregation of load facilities at a single site connected through one or more shared Points of Interconnection (POIs) or delivery points~~**Points of Delivery** that can pose reliability risks to the grid due to its demand, operational characteristics, or other factors. Examples include, but are not limited to, data centers, cryptocurrency mining facilities, hydrogen electrolyzers, manufacturing facilities, and arc furnaces. ~~Electric Storage Resources are not considered High Impact Large Loads. High Impact Large Loads are deemed Non-Conforming Loads and must register as such in accordance with Attachment AE, Section 2.12. A load may be considered a High Impact Large Load if the Point of Interconnection voltage~~**kV level is (1) less than or equal to 69 kV and the HILL peak demand is greater than or equal to 40 MWs or (2) greater than 69 kV and the HILL peak demand is greater than or equal to 50 MWs. New or modified loads meeting the above requirements to be a HILL, including the applicable MW threshold under (1) or (2) above, will be classified as a HILL if a request is submitted to the Transmission Provider pursuant to Attachment AQ, Attachment AX, or Attachment BA on or after the initial effective date of Attachment BA of the Tariff. Loads meeting that that meet the above requirements to be HILL that entered the Integrated Marketplace registration process prior to the effective date of Attachment BA of the Tariff may be considered a HILL if the Transmission Customer or Network Customer**Market Participant** representing the load requests load modification meeting the applicable MW threshold under (1) or (2) above.**

High Impact Large Load and Generation Assessment (HILLGA)

A planning assessment to evaluate the impact of new High Impact Large Load and supporting generation as described in Attachment BB.

Load Shedding: -The systematic reduction of system demand by temporarily decreasing load in response to Transmission System or area capacity shortages, system instability, or voltage control considerations under Part III ~~or Part VII~~ of the Tariff.

~~Part VII: Tariff Sections 44 through 52 pertaining to Conditional High Impact Large Load Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.~~

Point(s) of Delivery: Point(s) on the Transmission Provider's Transmission System where capacity and ~~or~~ energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II ~~and Part III and Part VII~~ of the Tariff. The Point(s) of Delivery will be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

Point(s) of Receipt: Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and ~~or~~ energy will be made available to the Transmission Provider by the Delivering Party under Part II ~~and Part III and Part VII~~ of the Tariff. The Point(s) of Receipt will be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

Transmission Customer: Any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This term is used in the Part I Common Service Provisions to include customers receiving transmission service under Part II, ~~and~~ Part III, ~~and~~ ~~Part VII~~ ~~Part VII~~ of this Tariff.

Transmission System: The facilities used by the Transmission Provider to provide transmission service under Part II, Part III, ~~and~~ Part IV ~~Part VII~~ of the Tariff.

34.1 Monthly Demand Charge:

For all Network Load served by the Transmission Provider, except as provided under Sections 34.2, 34.3, and 34.9, the Network Customer must pay a monthly Demand Charge, which will be determined by multiplying its Load Ratio Share times one twelfth (1/12) of the Zonal Annual Transmission Revenue Requirement (“Zonal ATRR”) specified in Attachment H less:

- 1) any amount reallocated in accordance with Section IV.A of Attachment J of this Tariff; and
- 2) any revenues for the previous calendar year (i) distributed to each Transmission Owner in the Zone under Attachment L resulting from charges under Schedules 7 ~~and 8~~ ~~and 15~~, and (ii) distributed to each Transmission Owner in the Zone under Section IV of Attachment AU and allocated in proportion to Schedule 7 ~~and 8~~ ~~and 15~~ revenues under Section V of Attachment AU, subject to the limitations in subsections a and b below. Any such adjustment made by the Transmission Provider will be set forth in the RRR File.

- a. For each Transmission Owner utilizing a formula rate, the Transmission Provider will not make an adjustment for Schedule 7 ~~and 8~~ ~~and 15~~ revenues and for revenues distributed and allocated under Attachment AU if the Schedule 7 ~~and 8~~ ~~and 15~~ revenues and revenues distributed and allocated under Attachment AU are credited and updated on an annual basis in the Transmission Owner formula rate in a manner that reduces the Zonal ATRR.

- b. For each Transmission Owner utilizing a stated rate or utilizing a formula rate without annual update of the revenue credits, the revenue adjustment described in this Section 34.1(2) will be *only the difference, whether positive or negative, between the previous calendar year Schedule 7 ~~and 8~~ ~~and 15~~ revenues and the amount of Schedule 7 ~~and 8~~ ~~and 15~~ revenues and revenues distributed and allocated under Attachment AU, if any, already credited in the calculation of the Zonal ATRR shown in Table 1, Section I of Attachment H. The amount of Schedule 7 ~~and 8~~ ~~and 15~~ revenues and revenues distributed and allocated under Attachment AU already credited in calculation of the Zonal ATRR shown in Table 1, Section I of Attachment H for such Transmission Owner is shown in Table 3, Section I of Attachment H.*

34.2 Monthly Demand Charge – Zone 1:

For Network Load located within Zone 1, the Network Customer must pay a monthly Demand Charge. The component of such Demand Charge for American Electric Power's revenue requirement shall be calculated in accordance with Addendum 1 to Attachment H. The components of such Demand Charge for other Transmission Owners' revenue requirements in Zone 1 shall be calculated in accordance with Section 34.1 of this Tariff. All components of the Demand Charge for Zone 1 shall be adjusted as provided in Section 34.1 for any amount reallocated in accordance with Section IV.A of Attachment J and for any Schedule 7 and 8 ~~and~~ ~~15~~ revenues distributed to each Transmission Owner in the Zone under Attachment L and for any revenues distributed and allocated in accordance with Attachment AU.

34.3 Monthly Demand Charge – Zone 11:

For Network Load located within Zone 11, the Network Customer must pay a monthly Demand Charge. The component of such Demand Charge for Southwestern Public Service's revenue requirement shall be calculated in accordance with Addendum 5 of Attachment H. The components of such Demand Charge for other Transmission Owners' revenue requirements in Zone 11 will be calculated in accordance with Section 34.1 of this Tariff. All components of the Demand Charge for Zone 11 will be adjusted as provided in Section 34.1 for any amount reallocated in accordance with Section IV.A of Attachment J and for any Schedule 7 and 8 and 15 revenues distributed to each Transmission Owner in the Zone under Attachment L and for any revenues distributed and allocated in accordance with Attachment AU.

~~PART VII. CONDITIONAL HIGH IMPACT LARGE LOAD TRANSMISSION SERVICE~~

~~Preamble~~

~~The Transmission Provider will provide Conditional High Impact Large Load Service (CHILLS) pursuant to the applicable terms and conditions of this Tariff. CHILLS is for the transfer of energy to designated Point(s) of Delivery to serve the Conditional High Impact Large Load (CHILL) of a Transmission Customer or a Network Customer.~~

44.1 ~~Term:~~

~~CHILLS will be available for yearly periods ranging from one (1) year to five (5) years.~~
~~The maximum service period is five (5) years without renewal rights.~~

44.2 — Reservation Priority:

~~CHILLS is available from transfer capability in excess of that needed for reliable service to Native Load Customers, Network Customers, other Transmission Customers taking Long Term and Short Term Firm Point-To-Point Transmission Service, and customers under other transmission tariffs or agreements taking network or firm point-to-point transmission service from the Transmission Owner(s). In the event the Transmission System is constrained or under Emergency Conditions, CHILLS is subject to curtailment on a non-discriminatory basis in consideration of Transmission System availability to serve CHILLS. Transmission Service for Transmission Customers, for Network Customers, and for Network customers under Grandfathered Agreements involving the affected Transmission Owner(s) from resources other than designated Network Resources will have a higher priority than any CHILLS. CHILLS will have equal priority to Monthly Non-Firm Point-To-Point Transmission Service.~~

~~44.3 — Service Agreements:~~

~~The Transmission Provider will offer a standard form Conditional High Impact Large Load Service Agreement (CHILLSA), Addendum 2 to Attachment BA, to an Eligible Customer when it first submits a Completed Application for CHILLS pursuant to the Tariff. Transactions under this CHILLSA will be arranged pursuant to Attachment BA. Executed Service Agreements that contain the information required under the Tariff will be filed with the Commission in compliance with applicable Commission regulations.~~

44.4 — Classification of Conditional High Impact Large Load Service:

~~CHILLS will be offered under terms and conditions contained in Part VII of the Tariff. The Transmission Provider and Transmission Owners undertake no obligation under the Tariff to plan the Transmission System in order to have sufficient capacity for CHILLS. Parties requesting CHILLS for the transmission of energy do so with the full realization that such service is subject to availability and to Curtailment or Interruption under the terms of the Tariff. The Transmission Customer or Network Customer will be billed for its CHILLS Reserved Capacity under the terms of Schedules 11 and 15. In the event that a Transmission Customer exceeds its CHILLS Reserved Capacity amount at any Point of Delivery, the Transmission Customer or Network Customer must pay the following penalty (in addition to the charges for all of the CHILLS capacity used): 100% of the Non Firm Point-to-Point Transmission Service charges under Schedules 8 and 11 for the duration of the period when the additional service was used as specified below during the month for the amount in excess of such capacity reservation. An excess of one hour or less will be billed at the charge for weekday deliveries. Repeated daily use of unreserved capacity within a seven-day period will increase the duration of the period to a weekly duration and multiple instances of unreserved use during more than one seven-day period during a calendar month will increase the duration of the period to a monthly duration. The Transmission Provider will compensate the Transmission Owners for 100% of the (i) CHILLS charge, (ii) Base Plan Zonal Charge, and (iii) Region-wide Charge for the period for which they have provided service. The penalty revenues in excess of the amount distributed to Transmission Owners will be used to reduce the Schedule 1-A1 charges collected by the Transmission Provider from the Transmission Customers and Network Customers. All Transmission Customers and Network Customers, except the penalized Transmission Customer or Network Customer, will receive a reduction of Schedule 1-A1 charges pursuant to this section. Such penalty revenues will be distributed by the Transmission Provider to Transmission Customers and Network Customers pro-rata based-on each entity's monthly Schedule 1-A1 charge, except for the penalized Transmission Customer or Network Customer, for the next billing period ending at least 15 calendar days after the date the Transmission Provider collects the penalty revenues from the penalized Transmission Customer or Network Customer. For the amounts exceeding the CHILLS capacity reservation, the Transmission Customer or Network Customer must purchase losses pursuant to Section 45.7.~~

~~44.5 — Changes in Service Specifications:~~

~~CHILLS is not available for resale, redirection, reassignment, or transfer of service under this Tariff.~~

45. Service Availability

45.1—General Conditions:

The Transmission Provider will provide CHILLS over, on, or across its Transmission System to any Transmission Customer or Network Customer that has met the requirements of Part VII and Attachment BA of this Tariff.

45.2 Annual Load and Resource Information Updates:

The Network Customer or Transmission Customer ~~must~~ provide the Transmission Provider with timely written notice of material changes in any information provided in its ~~Application~~ relating to the Network Customer's or Transmission Customer's CHILLS, its transmission system or other aspects of its facilities, or operations affecting the Transmission Provider's ability to provide reliable service.

~~45.3 — Adjustment of Service Level:~~

~~Once for each CHILLS Service Year, the Transmission Customer or Network Customer may adjust the CHILLS Reserved Capacity for each remaining month(s) of that CHILLS Service Year, provided the monthly CHILLS Reserved Capacity does not exceed the originally granted CHILLS Reserved Capacity for that CHILLS Service Year. Such notification of adjustment will be provided to the Transmission Provider at least one month prior to the month for which the adjustment will be effective. In absence of notification by the Transmission Customer or Network Customer of the adjustment of the CHILLS Reserved Capacity for that CHILLS Service Year, CHILLS Reserved Capacity will be set at the original CHILLS Reserved Capacity granted for the CHILLS Service Year.~~

~~A request for a temporary reduction of CHILLS Reserved Capacity must include the following for each amendment to the CHILLS Service Year:~~

- ~~(i) Effective date and time of temporary reduction;~~
- ~~(ii) Amount of temporary reduction; and~~
- ~~(iii) End date and time of temporary reduction.~~

~~45.4 Real Power Losses:~~

~~The Transmission Customer or Network Customer will be responsible for any real power losses. Delivery Loss Factors set forth in Appendix I to Attachment M of this Tariff will be applied to the CHHLS Reserved Capacity amount and any load exceeding the Curtailment amount.~~

46.1—Conditions Required of Transmission Customers and Network Customers Receiving

CHILLS:

CHILLS ~~will~~ be provided under this Tariff only if the following conditions are satisfied by the Transmission Customer or Network Customer:

- a. ~~The Transmission Customer or Network Customer has provided a Completed Application for service;~~
- b. ~~The Transmission Customer or Network Customer meets the creditworthiness criteria set forth in Section II;~~
- c. ~~The Transmission Customer or Network Customer provides the information required by the Transmission Provider's study process established in Attachment BA; and~~
- d. ~~The Transmission Customer has executed a CHILLSA;~~

47.1 Application:

In order for the Transmission Provider to evaluate the requested CHILLS, the Transmission Provider requires information regarding all existing loads served by the Transmission Customer's or Network Customer's existing resources. An Eligible Customer requesting service under Part VII of the Tariff must submit an Application, which includes all information required for SPP to complete any necessary Credit Assessment pursuant to its Credit Policy set out in Attachment X and satisfaction of all requirements set out therein. Applications should be submitted by entering the information listed below on the Transmission Provider's OASIS. A Completed Application must provide all of the information included in 18 CFR § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number, and facsimile number of the party requesting service;
- (ii) A statement that the party requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) A description of the existing load served by Long Term Service and requested CHILLS load at each delivery point. This description should separately identify and provide the Eligible Customer's best estimate of the total loads to be served at each transmission voltage level, and the loads to be served from each Transmission Provider substation at the same transmission voltage level. The description should include a ten (10) year forecast of summer and winter load and resource requirements beginning with the first year after the service is scheduled to commence;
- (iv) The amount and location of any interruptible loads included in the existing load served by Long Term Service and CHILLS load. This will include the summer and winter capacity requirements for each interruptible load (had such load not been interruptible), that portion of the load subject to interruption, the conditions under which an interruption can be implemented and any limitations on the amount and frequency of interruptions. An Eligible Customer should identify the amount of interruptible customer load (if any) included in the 10 year load forecast provided in response to (iii) above;

(v) A description of resources serving load under Long-Term Service (current and 10-year projection). For each on-system resource serving load under Long-Term Service, such description will include:

- Unit size and amount of capacity from that unit to be designated as Network Resource

- Regulation Qualified resource capability

- Spin Qualified resource capability

- Supplemental Qualified resource capability

- VAR capability (both leading and lagging) of all generators

- Operating restrictions

- Any periods of restricted operations through-out the year

- Maintenance schedules

- Minimum loading level of unit

- Normal operating level of unit

- Any must-run unit designations required for system reliability or contract reasons

- Arrangements governing sale and delivery of power to third parties from generating facilities located in the Transmission Provider Balancing Authority Area, where only a portion of unit output is designated as a Designated Resource;

For each off-system Designated Resource, such description will include:

- Identification of the Designated Resource as an off-system resource

- Amount of power to which the customer has rights

- Identification of the Balancing Authority Area from which the power will originate

- Delivery point(s) to the Transmission Provider's Transmission System

- Transmission arrangements on the external transmission system(s)

- Operating restrictions, if any

- Any periods of restricted operations throughout the year

- Maintenance schedules

- Minimum loading level of unit

~~Normal operating level of unit~~

~~Any must-run designations required for system reliability or contract reasons~~

~~(vi) Description of Eligible Customer's transmission system:~~

~~Load flow and stability data, such as real and reactive parts of the load, lines, transformers, reactive devices and load type, including normal and emergency ratings of all transmission equipment in a load flow format compatible with that used by the Transmission Provider~~

~~Operating restrictions needed for reliability~~

~~Operating guides employed by system operators~~

~~Contractual restrictions or committed uses of the Eligible Customer's transmission system, other than the Eligible Customer's Network Loads and Resources~~

~~Location of Designated Resources described in subsection (v) above~~

~~10-year projection of system expansions or upgrades~~

~~Transmission System maps that include any proposed expansions or upgrades~~

~~Thermal ratings of Eligible Customer's ties with Balancing Authority Areas other than the SPP Balancing Authority Area~~

~~(vii) Service Commencement Date and the term of the requested CHILLS. The minimum term for CHILLS is one year; and~~

~~(viii) Any additional information required of the Transmission Customer as specified in the Transmission Provider's planning process established in Attachment O.~~

~~Unless the Parties agree to a different time frame, the Transmission Provider must acknowledge receipt. The acknowledgment must include a date by which a response, including a CHILLSA, will be sent to the Eligible Customer. If an Application fails to meet the requirements of this section, the Transmission Provider **will** notify the Eligible Customer requesting service and specify the reasons for such failure. Wherever possible, the Transmission Provider will attempt to remedy deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, the Transmission Provider **will** return the Application without prejudice to the Eligible Customer filing a new or revised Application that fully complies with the requirements of~~

this section. The Eligible Customer will be assigned a new priority consistent with the date of the new or revised Application. The Transmission Provider ~~will~~ treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations. The Transmission Provider may, on a non-discriminatory basis, waive the requirements of subsections 47.1(iii), (iv), (v) and (vi), to the extent such information is not applicable.

47.2 Time Requirements:

~~Attachment P lists the time requirements applicable to when the requests must be submitted, the evaluation of the requests, and the Transmission Customer and Network Customer responses.~~

47.3—Condition Precedent for Receiving CHILLS:

Subject to the terms and conditions of Part VII and Attachment BA of this Tariff, the Transmission Provider will provide CHILLS to any Eligible Customer, provided that (i) the Eligible Customer completes an Application for service as provided under Part VII of the Tariff, (ii) the Eligible Customer and the Transmission Provider in coordination with the affected Transmission Owner(s) complete(s) the technical arrangements set forth in Sections 47.4 and 47.5, and (iii) the Eligible Customer executes a CHILLSA pursuant to Attachment BA for service under Part VII of the Tariff.

47.4 Technical Arrangements to be Completed Prior to Commencement of CHILLS:

~~CHILLS ^{will} not commence until the Transmission Provider, the affected Transmission Owner(s), and the Network Customer or Transmission Customer, or a third party, have completed installation of all equipment specified under the CHILLS Operating Agreement consistent with Good Utility Practice and any additional requirements reasonably and consistently imposed to ensure the reliable operation of the Transmission System. The Transmission Provider and the affected Transmission Owner(s) ^{will} exercise reasonable efforts, in coordination with the Network Customer or Transmission Customer, to complete such arrangements as soon as practicable, taking into consideration the Service Commencement Date.~~

47.5 Network Customer or Transmission Customer Facilities:

~~The provision of CHILLS will be conditioned upon the Network Customer or Transmission Customer constructing, maintaining and operating the facilities on its side of each delivery point or interconnection necessary to reliably deliver energy from the Transmission Provider's Transmission System to the Network Customer or Transmission Customer. The Network Customer or Transmission Customer will be solely responsible for constructing or installing all facilities on the Network Customer's or Transmission Customer's side of each such delivery point or interconnection.~~

~~47.6—Response to a Completed Application:~~

~~The Transmission Provider will notify the Eligible Customer within the applicable times listed in Attachment P after the date of receipt of a Completed Application. Responses by the Transmission Provider must be made as soon as practicable to all Completed Applications (including Applications by the Transmission Owner(s)' own merchant function) and the timing of such responses must be made on a non-discriminatory basis.~~

47.7—Extensions for Commencement of Service:

~~The Transmission Customer or Network Customer can obtain, subject to availability, up to a one-year extension for the commencement of service. The Transmission Customer or Network Customer may postpone service by paying a non-refundable annual reservation fee equal to one month's charge for CHILLS, for the original CHILLS Reserved Capacity for the initial CHILLS Service Year, for the year or fraction thereof resulting from extension within 15 days of notifying the Transmission Provider it intends to extend the commencement of service. For such extensions, the Transmission Customer or Network Customer must submit their request no later than sixty (60) days before the CHILLS Service Commencement Date. If during any extension for the commencement of service an Eligible Customer submits a Completed Application for CHILLS, and such request can be satisfied only by releasing all or part of the Transmission Customer's or Network Customer's CHILLS Reserved Capacity, the original CHILLS Reserved Capacity will be released unless the following condition is satisfied. Within thirty (30) days, the original Transmission Customer or Network Customer agrees to pay the CHILLS transmission rate for its CHILLS Reserved Capacity concurrent with the new Service Commencement Date. In the event the Transmission Customer elects to release the CHILLS Reserved Capacity, the reservation fees or portions thereof previously paid will be forfeited.~~

~~47.8 Interconnection of Delivery Points~~

~~The addition, modification, or abandonment of any delivery point in conjunction with the provision of CHILLS will be governed by the applicable provisions of Section 31.2, Section 31.3, Attachment AQ, Attachment AX, and Attachment BA.~~

47.2 Assessment of Requested CHILLS Reserved Capacity:

If the Transmission Provider determines that there will not be adequate transfer capability to satisfy the full amount of requested CHILLS Reserved Capacity due to considerations on the Transmission System or any Third-Party System(s), pursuant to the processes outlined in Attachment BA, the Transmission Provider nonetheless ~~she~~ will be obligated to offer the portion of the requested CHILLS Reserved Capacity that can be accommodated without addition of any facilities.

~~48—Load Shedding and Curtailments~~

~~48.1—Availability of CHILL Service During Emergency Conditions or Other Unforeseen Conditions:~~

~~The Transmission Provider reserves the right to curtail (or cause to be curtailed), in whole or in part, CHILLS provided under the Tariff for reliability reasons when an Emergency Condition or other unforeseen condition threatens to impair or degrade the reliability of the Transmission System or the systems directly or indirectly interconnected with the Transmission Provider's Transmission System. Prior to the Service Commencement Date, the Transmission Provider, in coordination with the affected Transmission Owner(s) and the Network Customer or Transmission Customer, will establish Load Shedding and Curtailment processes pursuant to the CHILLS Operating Agreement and this Tariff with the objective of responding when an Emergency Condition or other unforeseen condition threatens to impair or degrade the reliability of the Transmission System and/or systems directly and indirectly interconnected with the Transmission System. The Parties, including the affected Transmission Owner(s), will implement such processes during any period when the Transmission Provider determines that such system conditions exist and actions are necessary to alleviate said condition. The Transmission Provider will notify all affected Network Customers or Transmission Customers and affected Transmission Owners in a timely manner of any scheduled Curtailment or as soon as practical in instances when it is impractical to provide advanced notifications.~~

48.2 Transmission Constraints:

~~During any period when the Transmission Provider determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of the Transmission System, the Transmission Provider will take whatever actions, consistent with Good Utility Practice and Attachment BA, that are reasonably necessary to maintain the reliability of the Transmission System. To the extent the Transmission Provider determines that the reliability of the Transmission System can be maintained by curtailing CHILL, the Transmission Provider will initiate procedures consistent with the CHILLS Operating Agreement to curtail CHILL as described in Attachment AE.~~

48.3 Cost Responsibility for Relieving Transmission Constraints:

Whenever the Transmission Provider implements least-cost redispatch procedures in response to a transmission constraint, all Transmission Customers and Network Customers must pay their share of redispatch costs as determined through the operation and settlement of the Energy and Operating Reserve Markets as described in Attachment AE.

48.4 Curtailments of Scheduled Deliveries:

If the Transmission Provider determines that it is necessary to curtail deliveries, the Parties and the affected Transmission Owner(s) must curtail such deliveries in accordance with the CHHLS Operating Agreement.

48.5 Load Shedding:

To the extent that a system contingency exists on the Transmission Provider's Transmission System and the Transmission Provider determines that it is necessary for the affected Transmission Owner(s) and CHILLS Transmission Customer or Network Customer to shed load, the Parties must shed load in accordance with previously established procedures under the CHILLS Operating Agreement.

48.6 System Reliability:

Notwithstanding any other provisions of this Tariff, the Transmission Provider reserves the right, consistent with Good Utility Practice and on a not unduly discriminatory basis, to curtail CHILLS without liability on the Transmission Provider's or Transmission Owner's part for the purpose of making necessary adjustments to, changes in, or repairs on the Transmission Owner's lines, substations and facilities, and in cases where the continuance of CHILLS would endanger persons or property. In the event of any adverse condition(s) or disturbance(s) on the Transmission System or on any other system(s) directly or indirectly interconnected with the Transmission System, the Transmission Provider, consistent with Good Utility Practice, also may curtail CHILLS in order to (i) limit the extent or damage of the adverse condition(s) or disturbance(s), (ii) prevent damage to generating or transmission facilities, or (iii) expedite restoration of service. The Transmission Provider will give the Transmission Customer as much advance notice as is practicable in the event of such Curtailment. In the event that the Transmission Customer fails to fully respond to established Load Shedding and Curtailment procedures or to cease or reduce service in response to a directive by the Transmission Provider, the Transmission Customer must pay any applicable charges and the penalty as described in Section 44.4. This penalty applies only to the portion of the service that the Transmission Customer fails to curtail in response to a Curtailment directive. The Transmission Provider will compensate the Transmission Owners for service and allocate penalty revenues in the same manner as described in Section 44.4.

49 — Provisions Relating to Transmission Construction and Services on the Systems of Other Utilities

49.1—Responsibility for Third-Party System Additions:

~~The Transmission Provider and the Transmission Owners will not be responsible for making arrangements for any necessary engineering, permitting, and construction of transmission or distribution facilities on the system(s) of any other entity or for obtaining any regulatory approval for such facilities. The Transmission Provider and the affected Transmission Owner(s) will undertake reasonable efforts to assist the Transmission Customer and Network Customer in obtaining such arrangements, including without limitation, providing any information or data required b such other electric system pursuant to Good Utility Practice.~~

~~b such other electric system pursuant to Good Utility Practice.~~

49.2 Construction and Cost Recovery:

~~The costs related to the construction, operation, maintenance and/or retirement of a Transmission Customer's or Network Customer's delivery point(s), other than any required Network Upgrades, will be charged to the Transmission Customer or Network Customer in accordance with these Tariff and Commission policies. In the event that Network Upgrades are required pursuant to the study results of Attachment AQ or Attachment AX to make changes in delivery point facilities to upgrade, retire, replace or establish a delivery point, such Network Upgrades will ensure the reliability of the Transmission System and be funded pursuant to the provisions of Section III of Attachment J. The Transmission Provider together with the affected Transmission Owner(s) will use due diligence to install any transmission facilities required to interconnect a new or additional CHILLS load.~~

49.3 Facilities Study Modifications:

Any change in design arising from inability to site or construct facilities as proposed will require development of a revised good faith estimate. New good faith estimates also will be required in the event of new statutory or regulatory requirements that are effective before the completion of construction or other circumstances beyond the control of the Transmission Provider or the affected Transmission Owner(s) that significantly affect the final cost of new facilities or upgrades to be charged to the E

ligible Customer pursuant to the provisions of Part VII of the Tariff.

50.1—Transmission Customer and Network Customer Obligations:

~~Unless otherwise agreed, the Transmission Customer or Network Customer will be responsible for the cost of installing and maintaining compatible metering and communications equipment to accurately account for the energy being transmitted under Part VII of the Tariff and to communicate the information to the Transmission Provider. Unless otherwise specified in an agreement for the construction of facilities, such equipment installed on the Transmission Customer's or Network Customer's system will remain the property of the Transmission Customer or Network Customer. Unless otherwise specified in an agreement for the construction of facilities, such equipment installed on the Transmission Owner's(s') system will remain the property of the Transmission Owner(s).~~

50.2—Transmission Provider Access to Metering Data:

The Transmission Provider or its agent must have access to metering data which may be required to facilitate measurements and billing under the CHILSA.

~~50.3 Power Factor:~~

~~Unless otherwise agreed, the Transmission Customer or Network Customer is required to maintain a power factor within the range specified by the Transmission Provider, in consultation with the appropriate Transmission Owners, pursuant to Good Utility Practices. The power factor requirements are specified in the CHILLS Operating Agreement where applicable.~~

51 Compensation for CHILLS

Rates for CHILLS are provided in Schedule 15 of the Tariff. In addition, the Transmission Customer or Network Customer **must** pay any applicable Ancillary Service costs, Wholesale Distribution Service charges (Schedule 10), Base Plan Zonal Charges (Schedule 11), and Region-wide Charges (Schedule 11).

SCHEDULE 1-A TARIFF ADMINISTRATION SERVICES

The Transmission Provider shall provide administration services described in this Schedule 1-A to carry out its responsibilities under this Tariff. Transmission Customers and Market Participants must purchase these services from the Transmission Provider. Unless otherwise collected under this Tariff, the Transmission Provider will recover 100% of its budgeted costs for the fiscal year in which services are provided, including an adjustment for over or under recovery for prior fiscal years (“Schedule 1-A Recoverable Costs”). Schedule 1-A Recoverable Costs divided by the total billing determinants of Schedule 1-A1, shall not exceed \$0.515.

1. Schedule 1-A1 Transmission Administration Service

Transmission administrative service is provided by the Transmission Provider to all Transmission Customers under this Tariff and includes the provision of: (1) reliability coordination; (2) transmission scheduling; (3) system control; and (4) transmission planning services (“Schedule 1-A1 Service”).

a. Schedule 1-A1 Service Rate Calculation

The Schedule 1-A1 Service charge provides for the recovery of any costs incurred by the Transmission Provider in providing this Schedule 1-A1 Service.

i. Costs

The costs associated with providing Schedule 1-A1 Service will be recovered under this Schedule 1-A1, as identified in the formula rate template in Addendum 1 of this Schedule 1-A (“Schedule 1-A1 Costs”).

ii. Billing Determinants

For Network Integration Transmission Service, the billing determinants in each Zone where the load is located are the sum of the prior calendar year’s average of the twelve (12) monthly coincident peak demands multiplied by the number of all hours of the applicable month for the following:

(1) Network Customer’s total Network Load;

- (2) bundled retail load for which Transmission Owners are not taking Network Integration Transmission Service or Firm Point-To-Point Transmission Service under the Tariff; and
- (3) load being served under Grandfathered Agreements for which Transmission Owners are not taking Network Integration Transmission Service or Firm Point-To-Point Transmission Service under the Tariff. Load being served under Grandfathered Agreements shall be included only in the Zone of the Point of Delivery or the point of exit from the SPP Region, as applicable, and shall not be included if its continuous transmission path includes one or more segments with Firm Point-To-Point Transmission Service under this Tariff.

For Point-to-Point Transmission Service, the billing determinants are the MW hours reserved. ~~For Conditional High Impact Large Load Service, the billing determinants are as provided in Section 1 of Schedule 15.~~

iii. Rate Formula

Annually, the Transmission Provider will determine the Schedule 1-A1 Service rate for each calendar year as described in Addendum 1 of this Schedule 1-A.

iv. Charges to Transmission Customers

The Schedule 1-A1 charge is the product of the Schedule 1-A1 rate and the Transmission Customer's billing determinants.

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SCHEDULE 1

SCHEDULING, SYSTEM CONTROL AND DISPATCH SERVICE

Scheduling, System Control and Dispatch Service is required to operate a Transmission Owner's Tariff facilities and schedule movement of power through, out of, within or into the Transmission Provider's Balancing Authority Area and certain parts of the Transmission System not located within the Transmission Provider's Balancing Authority Area.

A. Through and Out Transactions

- 1) For Transmission Customers taking Firm or Non-Firm Point-To-Point Transmission Service, for through and out transactions, the Schedule 1 charge shall be the product of the capacity reserved, expressed in MW and the appropriate rate set forth in the Revenue Requirements and Rates File ("RRR File"), Schedule 1 tab, posted on the SPP website. The yearly rate for such transactions is computed as the ratio of the sum of the accepted or approved revenue requirements most recently determined for each Transmission Owner having a Schedule 1 charge and the prior calendar year's average of the -12 monthly peaks of the total Resident Load (expressed in MW) in the SPP Region.

On-Peak:

Monthly Rate/MW:- the yearly rate divided by 12
Weekly Rate/MW:- the yearly rate divided by 52
Daily Rate/MW:- the yearly rate divided by 260
Hourly Rate/MW:- the yearly rate divided by 4160

Off-Peak:

Daily Rate/MW:- the yearly rate divided by 365
Hourly Rate/MW: -the yearly rate divided by 8760

On-Peak and Off-Peak Periods

Off-Peak days shall be Saturdays and Sundays and all NERC holidays. All other days shall be On-Peak. All hours during Off-Peak days shall be Off-Peak. On-Peak hours during On-Peak days shall be all hours from HE 0700 through HE 2200 Central Prevailing Time. All other hours during On-Peak days shall be Off-Peak.

- 2) For Network Customers taking Network Integration Transmission Service for Load not physically interconnected with the Transmission System, designated as Network Load

pursuant to Section 31.4, the Network Customer's Schedule 1 charge shall be the charge computed pursuant to the approved rate of the Zone to which the Network Load is located or assigned in accordance with Section 31.4.

B. Transactions Sinking within the Transmission System

- 1) For Transmission Customers taking Firm or Non-Firm Point-To-Point Transmission Service, ~~or Conditional High Impact Large Load Service (CHILLS)~~ for transactions into and ~~for~~ within the Transmission System, the Schedule 1 charge shall be the charge computed pursuant to the approved rate of the Zone that is the Point of Delivery.
- 2) For Network Customers taking Network Integration Transmission Service ~~or CHILLS~~, the Schedule 1 charge shall be the charge computed pursuant to the approved rate of the Zone in which the load is located.

C. Multi-owner Zones

For those Zones with more than one Transmission Owner with approved or accepted Schedule 1 rates, the Transmission Provider shall calculate a Schedule 1 rate for that Zone by summing the rates set forth in the Zonal Sch 1 tab of the RRR file of each Transmission Owner in that Zone.

D. Adjustments to the Schedule 1 Revenue Requirements

The revenue requirements listed in Table 1 ("Schedule 1 RR") shall be adjusted for any Schedule 1 revenue received by the Transmission Owner for Point-to-Point ~~or CHILLS~~ transactions. Any such adjustment made by the Transmission Provider shall be set forth in the RRR File.

- 1) The Transmission Provider shall not adjust a Transmission Owner's Schedule 1 RR if that Transmission Owner has a formula rate calculation which updates its Schedule 1 RR annually and reduces: (i) its Schedule 1 RR or (ii) its other gross revenue requirement for any Schedule 1 Point-to-Point ~~or CHILLS~~ revenues received by that Transmission Owner.
- 2) For each Transmission Owner utilizing a stated rate or utilizing a formula rate calculation without an annual update of the Schedule 1 revenue credits, the Transmission Provider shall reduce the Schedule 1 RR by the difference between the previous calendar year Schedule 1 Point-to-Point ~~and CHILLS~~ revenues and the amount of Schedule 1 Point-to-

Point ~~and CHILLS revenue~~ already credited in the calculation of the Schedule 1 RR. The amount of Point-to-Point ~~and CHILLS~~ revenues already credited in each Transmission Owner's Schedule 1 RR shall be posted in Table 2 of Schedule 1 of this Tariff.

TABLE 1	
Revenue Requirements for the Allocation of Through And Out Transactions	
Transmission Owner	Revenue Requirement
AEP West Transmission Companies- (AEP Oklahoma Transmission Company, Inc and AEP Southwestern Transmission Company, Inc)	See RRR File
American Electric Power (Public Service Company of Oklahoma and Southwestern Electric Power Company) See Section II.3	See RRR File
Arkansas Electric Cooperative Corporation-1	See RRR File
Arkansas Electric Cooperative Corporation-7	See RRR File
City Utilities of Springfield	See RRR File
Corn Belt Power Cooperative	See RRR File
Empire District Electric Company	See RRR File
Evergy Kansas Central, Inc. (Evergy Kansas Central, Inc. and Evergy Kansas South, Inc.)	See RRR File
Evergy Metro, Inc.	See RRR File
Evergy Missouri West, Inc.	See RRR File
Grand River Dam Authority	See RRR File
Kansas City Board of Public Utilities	See RRR File
Lincoln Electric System	See RRR File
Midwest Energy, Inc	See RRR File
Missouri Joint Municipal Electric Utility Commission	See RRR File
Nebraska Public Power District	See RRR File
Oklahoma Gas and Electric	See RRR File
Omaha Public Power District	See RRR File
Southwestern Power Administration Zonal ATRR (Non-Federal Transmission Service ATRR)	See RRR File
Southwestern Public Service Company	See RRR File
Sunflower Electric Power Corporation	See RRR File
Tri-State G&T Association	See RRR File
Western Farmers Electric Cooperative	See RRR File
Western-UGP	See RRR File
TOTAL	See RRR File

TABLE 2	
Schedule 1 Point-to-Point (“PTP”) and Conditional High-Impact Large Load (“CHILL”) Revenue Credit	
Transmission Owner	Schedule 1 PTP Revenue Credit
AEP West Transmission Companies (AEP Oklahoma Transmission Company, Inc and AEP Southwestern Transmission Company, Inc)	N/A
American Electric Power (Public Service Company of Oklahoma and Southwestern Electric Power Company) See Section II.3	N/A
Arkansas Electric Cooperative Corporation-1	\$0
Arkansas Electric Cooperative Corporation-7	\$0
City Utilities of Springfield	N/A
Corn Belt Power Cooperative	N/A
Empire District Electric Company	\$0
Evergy Kansas Central, Inc. (Evergy Kansas Central, Inc. and Evergy Kansas South, Inc.)	\$0
Evergy Metro, Inc.	N/A
Evergy Missouri West, Inc.	N/A
Grand River Dam Authority	\$0
Kansas City Board of Public Utilities	N/A
Lincoln Electric System	N/A
Midwest Energy, Inc	N/A
Missouri Joint Municipal Electric Utility Commission	N/A
Nebraska Public Power District	N/A
Oklahoma Gas and Electric	N/A
Omaha Public Power District	N/A
Southwestern Power Administration Zonal ATRR (Non-Federal Transmission Service ATRR)	\$0
Southwestern Public Service Company	N/A
Sunflower Electric Power Corporation	N/A
Tri-State G&T Association	\$0
Western Farmers Electric Cooperative	N/A
Western-UGP	N/A

SCHEDULE 2
REACTIVE SUPPLY AND VOLTAGE CONTROL FROM GENERATION OR OTHER
SOURCES SERVICE

...

III. RATES, CHARGES, AND REVENUE DISTRIBUTION

The following sets forth the rates, charges and revenue distribution pursuant to this Schedule 2. All QGs shall be treated the same.

A. Reactive Compensation Rate

The RCR shall be based on the cost of reactive power production from recently constructed generators so as to reflect the upper end of such costs. The RCR shall be \$2.26 per MVarh. The Transmission Provider may periodically review the RCR to determine whether it remains at or near the upper end of a reasonable range of cost of producing reactive power by generators recently connected to the Transmission System.

B. Qualified Generator Compensation

The compensation paid to QGs each month will be based on the calculations as set forth below.

- 1. Determine the integrated hourly values for real and reactive power** generated by each Qualifying Generator for each month.
2. Calculate the Reactive Power Outside the Dead Band (RPOD). For each hour of each month, calculate the amount of Reactive Power inside the Dead Band (in MVarh) that the QG would have had to produce or absorb to maintain a PF of 0.95 at its actual real power output level (RPID). Then subtract the absolute value of the RPID from the absolute value of the actual reactive power output from the QG for that hour (in MVarh). If the absolute value of RPID is greater than the absolute value of the actual reactive power output of the QG, then the RPOD for that hour is zero. The monthly RPOD is the sum of the hourly RPOD calculations for each QG for each month.

3. Calculate the total compensation that the owner of each QG will receive for each month (RC) by multiplying the QG's monthly RPOD, times the RCR.

$$RC_{\text{monthly}} = RCR * RPOD_{\text{monthly}}$$

C. Calculation of Rates

The rates paid by Transmission Customers and Network Customers will be based on the calculations set forth below. All of the amounts calculated below shall be actuals for each month with no true-ups.

1. Calculate the amount of T&O Reactive Revenue allocated to each Zone by taking the total amount of revenue generated by this Schedule 2 from Through and Out transactions for each month and allocate it on a pro-rata share based on the ZRC for the same month.

2. Calculate the total amount of revenue to be collected for each month by Zone, by summing the RC for each QG by Zone less the T&O Reactive Revenue.

$$ZRC = \sum_{n=1}^x (RC) - \text{T\&O Reactive Revenue}; \text{ where: } x = \text{Total number of QGs in the Zone}$$

3. Calculate the Schedule 2 Rates, for each Zone, as shown below.
 - a. Monthly Rate (\$/MW/Mo) = $ZRC / \text{Zonal Peak Demand}$
 - b. Weekly Rate (\$/MW/Wk) = Monthly Rate times 12 / 52
 - c. Daily Off-Peak Rate (\$/MW/Day) = Weekly Rate / 7
 - d. Daily On-Peak Rate (\$/MW/Day) = Weekly Rate / 5
 - e. Hourly Off-Peak Rate (\$/MW/Hr) = Daily Off-Peak Rate / 24
 - f. Hourly On-Peak Rate (\$/MW/Hr) = Daily On-Peak Rate / 16

The total charge in any day, pursuant to an hourly service reservation, shall not exceed the applicable rate for daily service specified above for the applicable Zone, times the highest amount of hourly service reserved in any hour during such day. In addition, the total charge in any week pursuant to a reservation for hourly or daily service shall not exceed the rate for weekly service specified above for the applicable Zone, times the highest amount of hourly or daily service reserved in any hour or day during such week.

On-Peak and Off Peak

Off-Peak days shall be Saturdays and Sundays and all NERC holidays. All other days shall be On-Peak. All hours during Off-Peak days shall be Off-Peak. On-Peak hours during On-Peak days shall be all hours from HE 0700 through HE 2200 Central Prevailing Time. All other hours during On-Peak days shall be Off-Peak.

4. For the purposes of determining the charge applicable to transactions under this Tariff, the transaction will be charged based on the applicable zonal rate where the load is physically located.
5. If the service is a Through and Out transaction, the transaction will be charged based on the simple average of all zonal rates for the applicable period of service.
6. The data used in the calculations under this Section III. C. shall be from the same month as the monthly RPOD used to calculate the RC in Section III. B.

D. Collection of Charges and Distribution of Revenues

1. All load shall pay the Transmission Provider a charge for Reactive Supply determined by multiplying the applicable rate as calculated in Section III.C by the Reserved Capacity for the Transmission Customer taking Point-To-Point Transmission Service during that month or the Network Customer's and non-rate terms and conditions customer's coincident peak during the month. ~~Transmission Customers and Network Customers taking Conditional High Impact Large Load Service ("CHILLS") will be assessed these Schedule 2 charges for each kilowatt of service in manner consistent with Section 4 of Schedule 15.~~ The billing units used herein will be for the same month as the month used to determine the RPOD. After it has sufficient data to calculate the monthly RPOD, SPP shall bill customers for monthly charges under this Schedule 2 in the next billing cycle. SPP also will post the applicable monthly Schedule 2 charges promptly after it possesses the data necessary to calculate such charges.

2. In the event that the monthly revenue collected for a Zone does not match the ZRC in a month, the revenues distributed that month to each QG in the affected Zone shall be based upon its RC for that month divided by the applicable ZRC for that month multiplied by total zonal revenues collected pursuant to this Schedule 2 for that month.

E. Joint Owned Units

The Transmission Provider will compensate the entity designated in II.B.1 for a jointly owned QG. The Transmission Provider is not responsible for disbursing revenue to other owners.

F. Multiple Generators Behind a Common Meter

If more than one generator exists behind a single meter, the Transmission Provider must individually certify all the generators behind the meter as QGs. Compensation will be handled in the same way as an owner with multiple units in the same Zone.

SCHEDULE 11
BASE PLAN ZONAL CHARGE AND REGION-WIDE CHARGE

I. Introduction

Except as provided herein, pursuant to Part V of this Tariff, Base Plan Zonal Charges and Region-wide Charges shall be assessed to Network Customers and, where applicable, Transmission Owners based on Resident Load. Likewise, Base Plan Zonal Charges and the Region-wide Charge shall be assessed to each Transmission Customer taking Point-To-Point Transmission Service under the Tariff based on Reserved Capacity.

~~Transmission Customers and Network Customers taking Conditional High Impact Large Load Service ("CHILLS") will be assessed Base Plan Zonal Charges and Region-wide Charges for each kilowatt of service in manner consistent with Section 1 of Schedule 13.~~

These charges will be applied only to service taken in whole or in part within the Eastern Interconnection. Western-UGP shall be exempt from the Region-wide Charge under this Schedule 11 in accordance with Section 39.3(e) of this Tariff. For the purpose of determining the Region-wide Load Ratio Shares for application of Schedule 11, transmission of Federal Power-Western-UGP to the Statutory Load Obligations served by Western-UGP shall be excluded from the Transmission Provider's monthly Zone transmission load for Zone 19 used as a component of the divisor for all Zones and from the numerator used for Zone 19. The charges stated in Schedule 11 shall not be changed absent a filing with the Commission.

II. Base Plan Zonal Charges and Region-wide Charge to Resident Load

A. Calculation of Annual Transmission Revenue Requirement

In calculating the Base Plan Zonal Annual Transmission Revenue Requirements and Region-wide Annual Transmission Revenue Requirement, the Transmission Provider shall sum the applicable, Commission-approved annual transmission revenue requirements for upgrades eligible for cost recovery under this Schedule 11, as allocated in accordance with Attachment J of this Tariff. Subject to the limitations in subsections 1 and 2 below, such annual transmission revenue requirements shall be reduced by the previous calendar year's amount of (i) point-to-point revenue received by each Transmission Owner resulting from charges under Section III of this Schedule 11, (ii) revenue distributed to each

Transmission Owner under Section IV of Attachment AU and allocated in proportion to Point-To-Point Transmission Service Schedule 11 revenue under Section V of Attachment AU, ~~and (iii) revenue received by each Transmission Owner for dispatches into the Energy and Operating Reserve Markets from a SATOA whose ATRR is recovered through charges under Schedule 11 and (iv) Conditional High Impact Large Load Service ("CHILLS") revenue received by each Transmission Owner resulting from charges under Section IV of this Schedule 11.~~ Any such adjustment for the previous calendar year point-to-point revenue shall be set forth in the RRR File.

1. For each Transmission Owner utilizing a formula rate, the Transmission Provider shall not make an adjustment of the Transmission Owner's annual transmission revenue requirements under this Section II.A if point-to-point revenue resulting from charges under Section III of this Schedule 11, revenue distributed and allocated under Attachment AU, ~~and~~ revenue distributed for dispatches into the Energy and Operating Reserve Markets from a SATOA whose ATRR is recovered through charges under Schedule 11 ~~and CHILLS revenue received by each Transmission Owner resulting from charges under Section IV of this Schedule 11~~ is credited and updated on an annual basis in the Transmission Owner's formula rate in a manner that reduces the annual transmission revenue requirements for upgrades eligible for cost recovery under this Schedule 11.
2. For each Transmission Owner utilizing a stated rate or utilizing a formula rate without annual update of the Schedule 11 revenue credits, the revenue adjustment described in this Section II.A shall be only the difference, whether positive or negative, between the previous calendar year Point-To-Point Transmission Service Schedule 11 revenue and the amount of point-to-point revenue and revenue distributed and allocated under Attachment AU, ~~and~~ revenue distributed for dispatches into the Energy and Operating Reserve Markets from a SATOA whose ATRR is recovered through charges under Schedule 11, ~~and CHILLS revenue received by each Transmission Owner resulting from charges under Section IV of this Schedule 11~~ -if any, already credited in the calculation of the Transmission

Owner's annual transmission revenue requirements included in the Base Plan Zonal Annual Transmission Revenue Requirements and Region-wide Annual Transmission Revenue Requirement. The amount of revenue resulting from charges under Section III of this Schedule 11, revenue distributed and allocated under Attachment AU, and revenue distributed for dispatches into the Energy and Operating Reserve Markets from a SATOA whose ATRR is recovered through charges under Schedule 11, ~~and CHHLS revenue received by each Transmission Owner resulting from charges under Section IV of this Schedule 11~~ that is already credited in the calculation of the Transmission Owner's annual transmission revenue requirements included in the Base Plan Zonal Annual Transmission Revenue Requirements and Region-wide Annual Transmission Revenue Requirement is shown in Table 3, Section 1 of Attachment H.

B. Base Plan Zonal Charge to Resident Load

The Network Customer and the Transmission Owner shall pay a monthly Base Plan Zonal Charge, which shall be determined by multiplying its Base Plan Zonal Load Ratio Share by one twelfth (1/12) of the Base Plan Zonal Annual Transmission Revenue Requirement specified in Attachment H less any amount reallocated in accordance with Section IV.A of Attachment J for each Zone in which the Network Customer's or Transmission Owner's Resident Load is physically located. Where a Network Customer has designated Network Load not physically interconnected with the Transmission System under Section 31.3, Network Customer shall pay a monthly Zonal Base Plan Charge, which shall be determined by multiplying its Base Plan Zonal Load Ratio Share by one twelfth (1/12) of the Base Plan Zonal Annual Transmission Revenue Requirement specified in Attachment H less any amount reallocated in accordance with Section IV.A of Attachment J for the Zone that is the basis for charges under Schedule 11.

1. Determination of Network Customer's and Transmission Owner's Monthly Zonal Resident Load

The Network Customer's or Transmission Owner's monthly zonal Resident Load is its integrated hourly load coincident with the monthly peak of the Zone where the Resident Load is physically located. Where a Network Customer or

Transmission Owner has Resident Load in more than one Zone, the monthly Resident Load will be determined separately for each Zone. Where a Network Customer has designated Network Load not physically interconnected with the Transmission System under Section 31.3, the Network Customer's monthly Resident Load will be its hourly load coincident with the monthly peak of the Zone that is the basis for charges under Schedule 11.

2. Determination of Network Customer's and Transmission Owner's Monthly Zonal Resident Load for Zone 10

The Network Customer's or Transmission Owner's monthly zonal Resident Load shall be calculated in accordance with Section B.1 of this Schedule 11; except that the Network Customer's monthly zonal Resident Load shall be reduced by the Federal-Power Southwestern as identified in Section 34.9 of this Tariff.

3. Determination of Transmission Provider's Monthly Zone Transmission Load

The Transmission Provider's monthly Transmission System load shall be determined in accordance with Section 34.5 of this Tariff.

C. Region-wide Charge to Resident Load

Network Customers and Transmission Owners shall pay a monthly Region-wide Charge, which shall be determined as (i) the product of its Region-wide Load Ratio Share applicable to Section I, Table 2-A of Attachment H and one twelfth (1/12) of the Region-wide Annual Transmission Revenue Requirement specified in Section I, Table 2-A of Attachment H, plus (ii) the product of its Region-wide Load Ratio Share applicable to Section I, Table 2-B of Attachment H and one twelfth (1/12) of the Region-wide Annual Transmission Revenue Requirement specified in Section I, Table 2-B of Attachment H.

1. Determination of Network Customer's and Transmission Owner's Monthly Regional Resident Load in Zones 1 through 9 and 11 through 18

For Zones 1 through 9 and 11 through 18, the Network Customer's or Transmission Owner's monthly regional Resident Load is the sum of its monthly zonal Resident Load for each Zone, where the monthly zonal Resident Load is determined separately for each Zone coincident with the monthly peak of the Zone in accordance with Section II.B.1.

2. Determination of Network Customer's and Transmission Owner's Monthly Regional Load in Zone 19

For application of the Region-wide Charge under this Schedule 11, the Network Customer's or Transmission Owner's load for Zone 19 shall be the integrated hourly load coincident with the monthly peak of Zone 19 calculated in accordance with Section II.B.1 less: (i) load in the Western Interconnection to the extent that such load is served only by resources in the Western Interconnection, and (ii) service provided under the Western-UGP Federal Service Exemption.

3. Determination of Network Customer's and Transmission Owner's Monthly Regional Load in Zone 10

For application of the Region-wide Charge under this Schedule 11, the Network Customer's or Transmission Owner's load for Zone 10 shall be the integrated hourly load coincident with the monthly peak of Zone 10 calculated in accordance with Section II.B.2.

4. Determination of Transmission Provider's Monthly Regional Transmission System Load

The Transmission Provider's monthly regional Transmission System load is the sum of the monthly Zone transmission load for each Zone, where the monthly zone transmission load for each Zone is determined on a non-coincident basis in accordance with Section II.B.2, but with (a) Zone 19 load modified in accordance with Section II.C.2 and (b) Zone 10 load modified in accordance with Section II.C.3.

D. Special Provision for Non-Federal Service Exemption service to Western-UGP's Statutory Load Obligations

Western-UGP's Statutory Load Obligations ordinarily served by Federal Power Western-UGP, may be served on occasion from resources where the Western-UGP Federal Service Exemption from Schedule 11 Region-wide Charges is not applicable. In any such instance, Region-wide Charges will be applied as calculated pursuant to Sections III.C.1.a and III.C.3 of this Schedule 11.

III. Base Plan Zonal Charge and Region-wide Charge for Point-To-Point Transmission Service

...

IV. Base Plan Zonal Charge and Region-wide Charge for Conditional High Impact Large Load Service ("CHILLS")

A. Base Plan Zonal Charge for CHILLS

The Transmission Customer and Network Customer ~~shall~~^{must} pay the zonal rate (per kilowatt) based upon the Zone where the load is located for the CHILLS. The hourly zonal rate ~~shall~~^{will} be the applicable base plan zonal rate for Non-Firm Point-To-Point Transmission Service specified under Section III.D.3 of Schedule 11 for the specific on-peak or off-peak hour of the CHILLS usage. For each hour without Curtailment, the hourly charge ~~shall~~^{will} be calculated using kilowatts of the CHILLS Reserved Capacity. For each hour with Curtailment, the Curtailment kilowatt limit specified by the Transmission Provider will be charged. CHILLS load exceeding the Curtailment limit specified by the Transmission Provider or the CHILLS Reserved Capacity is subject to additional charges and penalties pursuant to Section 44.4 of this Tariff.

B. Region-wide Charge for Point-To-Point Transmission Service

The Transmission Customer and Network Customer ~~shall~~^{must} pay the applicable region-wide rate (per kilowatt) based upon the Zone where the load is located for the CHILLS. The hourly region-wide rate ~~shall~~^{will} be the applicable base plan region-wide rate for Non-Firm Point-To-Point Transmission Service specified under Section III.C.3 of Schedule 11 for the specific on-peak or off-peak hour of the CHILLS usage. For each hour without Curtailment, the hourly charge ~~shall~~^{will} be calculated using kilowatts of the CHILLS Reserved Capacity. For each hour with Curtailment, the Curtailment kilowatt limit specified by the Transmission Provider will be charged. CHILLS load exceeding the Curtailment limit specified by the Transmission Provider or the CHILLS Reserved Capacity is subject to additional charges and penalties pursuant to Section 44.4 of this Tariff.

SCHEDULE 12 FERC ASSESSMENT CHARGE

1. INTRODUCTION

As a public utility, the Transmission Provider is subject to annual charges assessed by the Commission, pursuant to Part 382 of its regulations (the “FERC Assessment”). For each public utility, such assessment is based on the actual megawatt-hours of energy transmitted in interstate commerce during a calendar year, as reported on FERC Form 582. This Schedule 12 provides for recovery of the estimated amount to be assessed by the Commission in the next year for transmission service, with subsequent true-up to actual cost, when such cost is known.

2. APPLICABILITY

This charge shall apply to all energy delivered under Point-To-Point Transmission Service and Network Integration Transmission Service ~~all Conditional High Impact Large Load Service (“CHILLS”)~~ and to all energy delivered to Bundled Retail and Grandfathered Loads to which Section 39.2 of this Tariff applies.

3. RATE CHARGED

Prior to March 1 of each year the Transmission Provider shall calculate the FERC Assessment Charge Rate (FACR) and post the results on the SPP website, based on the following formula:

$$\text{FACR}_y = \frac{\text{FEC}_{y+1} + (\text{FEC}_y - \text{Balance}_y)}{\text{EMWh}_y}$$

Where:

y Year in which charge is calculated.

FACR FERC Assessment Charge Rate.

FEC FERC Estimated Charge is the amount expected to be assessed by the Commission in a calendar year.

Balance Amount in the Schedule 12 account at the end of the calendar year net of all payments to the Commission, collections from customers, and interest earned for the year prior for which the FACR is calculated.

EMWh Estimated MWh in the calendar year for the categories of energy set forth in Section 2 of this Schedule 12. The estimated amount will be based on previous year amount and adjusted for any known or expected change in energy quantity for the current year.

4. BILLING

The Transmission Provider shall bill Transmission Customers and Transmission Owners covered by Section 39.2 the charges specified under this Schedule 12 in accordance with the procedures in Section 7 of this Tariff. The FERC Assessment Charge Rate shall be effective March 1 of each year.

SCHEDULE 15
CONDITIONAL HIGH IMPACT LARGE LOAD SERVICE

I

For each Point of Delivery of the Conditional High Impact Large Load Service ("CHILLS"), the Transmission Customer and Network Customer ~~shall~~must compensate the Transmission Provider for the CHILLS up to the monthly sum of the applicable charges set forth below in addition to other applicable charges specified in the Tariff. All effective rates under this schedule ~~will~~will be posted in the Revenue Requirements and Rates ("RRR") file on ~~spp.org~~spp.org; ~~the SPP OASIS~~.

1. Zonal Rates per Kilowatt: The Transmission Customer and Network Customer ~~must~~must pay the zonal rate (per kilowatt) based upon the Zone where the load is located for the CHILLS. The zonal rate ~~will~~will be the hourly rate applicable to Non-Firm Point-To-Point Transmission Service for the specific on-peak or off-peak hour of the CHILLS usage. For each hour without Curtailment, the hourly charge ~~will~~will be calculated using kilowatts of the CHILLS Reserved Capacity. For each hour with Curtailment, the Curtailment kilowatt limit specified by the Transmission Provider will be charged. CHILLS load exceeding the Curtailment limit specified by the Transmission Provider or the CHILLS Reserved Capacity is subject to additional charges and penalties pursuant to Section 44.4 of this Tariff.

The Zones are as follows:

- Zone 1: American Electric Power—West
- Zone 2: Kansas City Board of Public Utilities
- Zone 3: City Utilities of Springfield, Missouri
- Zone 4: Empire District Electric Company
- Zone 5: Grand River Dam Authority
- Zone 6: Evergy Metro, Inc.
- Zone 7: Oklahoma Gas & Electric Company
- Zone 8: Midwest Energy, Inc.
- Zone 9: Evergy Missouri West, Inc.
- Zone 10: Southwestern Power Administration
- Zone 11: Southwestern Public Service
- Zone 12: Sunflower Electric Power Corporation
- Zone 13: Western Farmers Electric Cooperative

Zone 14: Evergy Kansas Central, Inc. (Evergy Kansas Central, Inc. and Evergy Kansas South, Inc.)

Zone 15: Reserved for Future Use

Zone 16: Lincoln Electric System

Zone 17: Nebraska Public Power District

Zone 18: Omaha Public Power District

Zone 19: Upper Missouri Zone

No changes in Zones will be made without submitting a filing to the Commission.

2. Caps: The total demand charge in any month will not exceed the monthly rate times the amount in kilowatts of CHILLS Reserved Capacity in such month.

3. Redispatch Costs: The redispatch costs will be calculated in accordance with the formula and protocols shown on Attachment K.

4. Discounts: The Transmission Provider may offer discounts under this Schedule. Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service to a Point(s) of Delivery, the Transmission Provider must offer the same discounted CHILLS rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same Point(s) of Delivery on the Transmission System. In offering discounts, the Transmission Provider's goal will be to maximize transmission revenues.

4. Real Power Losses: The Transmission Customer and Network Customer will be responsible for real power losses determined in accordance with Attachment M and Section 45.7 of this Tariff.

5. Wholesale Distribution Service: Where Wholesale Distribution Service is provided to effectuate CHILLS, the Transmission Customer and Network Customer must pay all charges levied pursuant to the Wholesale Distribution Service Agreement and Schedule 10.

6. Base Plan Zonal Charges and Region-wide Charges: The Transmission Customer and Network Customer must pay the applicable Schedule 11 zonal rate (per kilowatt) based upon the Zone where the load is located and the applicable Schedule 11 region-wide rate for CHILLS. The rates will be the applicable point to point hourly rates for the specific on-peak or off peak hour of CHILLS usage. The hourly charges will be calculated using hourly kilowatts as stated in Section 1 of Schedule 15.

7. Resales: Resales are not permissible for CHILLS.

ATTACHMENT H
ANNUAL TRANSMISSION REVENUE REQUIREMENT FOR NETWORK
INTEGRATION TRANSMISSION SERVICE

SECTION I: General Requirements

1. The Zonal Annual Transmission Revenue Requirement (“Zonal ATRR”) for each Transmission Owner for purposes of determining the charges under Schedule 9, Network Integration Transmission Service, is specified in Column (3) Section I, of Table 1. The Base Plan Zonal Annual Transmission Revenue Requirement (“Base Plan Zonal ATRR”) used to determine the zonal charges under Schedule 11 for Base Plan Upgrades issued a Notification to Construct (“NTC”) prior to June 19, 2010 is specified in Column (4) Section I, of Table 1. The Base Plan Zonal ATRR used to determine the zonal charges under Schedule 11 for Base Plan Upgrades issued an NTC on or after June 19, 2010 is specified in Column (5) of Section I, Table 1. The amount of Zonal ATRR and Base Plan Zonal ATRR that is included in Columns (3), (4), (5), and (7) and reallocated to the Region-wide Annual Transmission Revenue Requirement (“Region-wide ATRR”), in accordance with Attachment J, is specified in Column (6) of Section I, Table 1. The Base Plan Zonal ATRR to pay Upgrade Sponsors in accordance with Attachment Z2 is specified in Column (7) of Section I, Table 1.

Table 1
(See Note A below)

(1) Zone	(2)	(3) Zonal ATRR	(4) Base Plan Zonal ATRR	(5) Base Plan Zonal ATRR after June 19, 2010	(6) ATRR Reallocated to Balanced Portfolio Region- wide ATRR	(7) Base Plan Zonal ATRR to pay Upgrade Sponsors
1	American Electric Power –West (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
1a	American Electric Power (Public Service Company of Oklahoma and Southwestern Electric Power Company) See Section II.2	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File			
1b	East Texas Electric Cooperative, Inc.	\$14,567,983				
1c	Reserved for Future Use					
1d	Deep East Texas Electric Cooperative, Inc.	\$2,576,698				

1e	Oklahoma Municipal Power Authority	\$768,624				
1f	AEP West Transmission Companies (AEP Oklahoma Transmission Company, Inc and AEP Southwestern Transmission Company, Inc)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
1g	Coffeyville Municipal Light and Power (CMLP)	\$391,790	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
1h	Arkansas Electric Cooperative Corporation (AECC)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
1i	Transource Oklahoma, LLC	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
2	Kansas City Board of Public Utilities	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
3	City Utilities of Springfield, Missouri	See Att. H tab, posted RRR File	See Att. H tab, posted	See Att. H tab, posted	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

			RRR File	RRR File		
4	Empire District Electric Company	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
5	Grand River Dam Authority	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
6	Evergy Metro, Inc. (TOTAL)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
6a	Evergy Metro, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
6b	City of Independence, Missouri	\$7,043,930	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
7	Oklahoma Gas and Electric (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

7a	Oklahoma Gas and Electric	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
7b	Oklahoma Municipal Power Authority	\$368,501	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
7c	Arkansas Electric Cooperative Corporation	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
7d	People's Electric Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
7e	NextEra Energy Transmission Southwest, LLC	See Att. H tab, Posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
8	Midwest Energy, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
9	Evergy Missouri West, Inc. (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted	See Att. H tab, posted	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

			RRR File	RRR File		
9a	Evergy Missouri West, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
9b	Transource Missouri, LLC	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
10	Southwestern Power Administration (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
10a	Southwestern Power Administration Zonal ATRR (Non-Federal Transmission Service ATRR)	\$15,533,800	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
10a(i)	NITS ATRR	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

10b	South Central MCN LLC	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
10c	Missouri Joint Municipal Electric Utility Commission	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
10d	People's Electric Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
11	Southwestern Public Service Company (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
11a	Southwestern Public Service Company	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
11b	Reserved for Future Use					
11c	Lea County Electric Cooperative, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

12	Sunflower Electric Power Corporation (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
12a	Sunflower Electric Power Corporation	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
12b	ITC Great Plains, LLC	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
12c	Prairie Wind Transmission, LLC	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
13	Western Farmers Electric Cooperative (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
13a	Western Farmers Electric Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
13b	People's Electric Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

			RRR File	RRR File		
14	Evergy Kansas Central, Inc. (Evergy Kansas South, Inc. and Evergy Kansas Central, Inc.) (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
14a	Evergy Kansas Central, Inc. (Evergy Kansas South, Inc. and Evergy Kansas Central, Inc.)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
14b	Prairie Wind Transmission, LLC.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
14c	Kansas Power Pool	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
14d	South Central MCN LLC	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
14e	NextEra Energy Transmission Southwest, LLC	See Att. H tab, Posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

15	Reserved for Future Use					
16	Lincoln Electric System	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
17	Nebraska Public Power District (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
17a	Nebraska Public Power District	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
17b	Central Nebraska Public Power and Irrigation District	\$327,891	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
17c	Tri-State G&T Association	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
18	Omaha Public Power District	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

19	Upper Missouri Zone – Total	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19a	Western-UGP	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19b	Basin Electric Power Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19c	Heartland Consumers Power District	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d	Missouri River Energy Services (Total)	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d (i)	Missouri River Energy Services	See Att. H tab, posted RRR File	See Att. H tab, posted	See Att. H tab, posted	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

			RRR File	RRR File		
19d (ii)	Moorhead Public Service	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d (iii)	Orange City Municipal Utilities	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d (iv)	City of Pierre, South Dakota	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d (v)	City of Sioux Center, Iowa	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d (vi)	Watertown Municipal Utility Department	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19d (vii)	Denison Municipal Utilities	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

19d (viii)	Vermillion Light & Power	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19e	East River Electric Power Cooperative, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19f	Corn Belt Power Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19g	NorthWestern Energy Public Service Corporation	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19h	Northwest Iowa Power Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19i	Harlan Municipal Utilities	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

19j	Central Power Electric Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19k	Mountrail-Williams Electric Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19l	Mor-Gran-Sou Electric Cooperative, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19m	Roughrider Electric Cooperative, Inc.	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
19n	L and O Power Cooperative	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File	See Att. H tab, posted RRR File
20	Total				See Att. H tab, posted RRR File	See Att. H tab, posted RRR File

Note A: The Annual Transmission Revenue Requirements (“ATRR”) for each Zone are set forth in the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

2. Table 2-A specifies the Region-wide ATRR for Network Upgrades needed prior to October 1, 2015 and Table 2-B specifies the Region-wide ATRR for Network Upgrades needed on or after October 1, 2015. The Region-wide ATRR, shown in Line 8 of Section I, Table 2-A, shall be the sum of (i) the Base Plan Region-wide Annual Transmission Revenue Requirements (“Base Plan Region-wide ATRR”) (reflected in Line 1 and Line 2), (ii) the total Balanced Portfolio Region-wide Annual Transmission Revenue Requirements (“Balanced Portfolio Region-wide ATRR”) (reflected in Line 3 and Line 4), (iii) for transmission service beginning prior to October 1, 2015, the Base Plan Region-wide ATRR to pay Upgrade Sponsors as determined in accordance with Attachment Z2 of this Tariff (reflected in Line 5), and (iv) the Interregional Planning Region Annual Transmission Revenue Requirements (“Interregional Planning Region ATRR”) allocable to customers receiving transmission service under this Tariff for any Interregional Project(s) constructed within the SPP Region (Line 6) and/or within other Interregional Planning Regions (Line 7).

The Region-wide ATRR shown in Line 10 of Section I, Table 2-B, shall be the sum of (i) the Base Plan Region-wide ATRR (reflected in Line 1 and Line 2), (ii) the total Balanced Portfolio Region-wide ATRR (reflected in Line 3 and Line 4) and (iii) for transmission service beginning on or after October 1, 2015, the Base Plan Region-wide ATRR to pay Upgrade Sponsors as determined in accordance with Attachment Z2 of this Tariff (reflected in Line 5), (iv) the Interregional Planning Region Annual Transmission Revenue Requirements (“Interregional Planning Region ATRR”) allocable to customers receiving transmission service under this Tariff for any Interregional Project(s) constructed within the SPP Region (Line 6) and/or within other Interregional Planning Regions (Line 7a), (v) the Annual Transmission Revenue Requirements approved for inclusion in the Region-wide ATRR (Line 7b) and associated with any transmission upgrade approved pursuant to the coordination agreements listed in Addendum 1 to Attachment O, and (vi) the positive or negative amount included in the Region-wide ATRR as a result of JTIQ Upgrades constructed on the Transmission System (Line 9).

As described in Schedule 11, the Region-wide Charges for Zones 1 through 18 shall be based upon Line 8 of Table 2-A and Line 10 of Table 2-B. The Region-wide Charges for Zone 19 shall be based upon Line 10 of Table 2-B.

Table 2-A

(See Note B below)

1	Base Plan Region-wide ATRR (NTC prior to June 19, 2010)	See Att. H tab, posted RRR File
2	Base Plan Region-wide ATRR (NTC on or after June 19, 2010)	See Att. H tab, posted RRR File
3	Total ATRR reallocated to Balanced Portfolio Region-wide ATRR from Column (6), Section I, Table 1	See Att. H tab, posted RRR File
4	Balanced Portfolio Region-wide ATRR	See Att. H tab, posted RRR File
5	Base Plan Region-wide ATRR to pay Upgrade Sponsors	See Att. H tab, posted RRR File
6	SPP Interregional Planning Region ATRR	See Att. H tab, posted RRR File
7	Other Interregional Planning Region ATRR	See Att. H tab, posted RRR File
8	Region-wide ATRR (Sum of Lines 1 through 7)	See Att. H tab, posted RRR File

Table 2-B

(See Notes B, C, and D below)

1	Base Plan Region-wide ATRR (NTC prior to June 19, 2010)	See Att. H tab, posted RRR File
2	Base Plan Region-wide ATRR (NTC on or after June 19, 2010)	See Att. H tab, posted RRR File
3	Total ATRR reallocated to Balanced Portfolio Region-wide ATRR from Column (6), Section I, Table 1	See Att. H tab, posted RRR File
4	Balanced Portfolio Region-wide ATRR	See Att. H tab, posted RRR File
5	Base Plan Region-wide ATRR to pay Upgrade Sponsors	See Att. H tab, posted RRR File
6	SPP Interregional Planning Region ATRR	See Att. H tab, posted RRR File
7a	Other Interregional Planning Region ATRR	See Att. H tab, posted RRR File
7b	Other transmission provider ATRR	See Att. H tab, posted RRR File
8	Subtotal of Lines 1 through 7b	See Att. H tab, posted RRR File
9	JTIQ ATRR Balance	See Att. H tab, posted RRR File
10	Region-wide ATRR (Sum of Lines 8 and 9)	See Att. H tab, posted RRR File

Note B: The Region-wide ATRRs are set forth in the RRR File posted on the SPP website.

Note C: The Region-wide ATRR provided in Line 7b of Table 2-B includes the revenue requirements for the Morgan Transformer Project, as set forth in the Cost Sharing and Usage Agreement Between Southwest Power Pool, Inc. and Associated Electric Cooperative, Inc.; and for the Blackberry Substation Upgrade, as set forth in the Cost and Usage Agreement Between Southwest Power Pool, Inc. and Associated Electric Cooperative, Inc. Such revenue requirements are posted in the RRR File on the SPP website.

Note D: The JTIQ ATRR Balance is defined in Part I, Section 1 of the Tariff. The current value of the JTIQ ATRR Balance and the JTIQ Upgrade-specific components of that value shall be set forth in the RRR File posted on the SPP website.

3. A Transmission Owner's revenue requirement referenced or stated in this Attachment H shall not be changed absent a filing with the Commission, accompanied by all necessary cost support, unless such Transmission Owner utilizes Commission-approved formula rate processes contained in this Tariff to determine its revenue requirements.
4. A new or amended revenue requirement referenced or stated in this Attachment H shall not be filed with the Commission by the Transmission Provider unless such revenue requirements have been provided by or for a Transmission Owner. Such revenue requirements shall have been accepted or approved by the applicable regulatory or governing authority except in the event of a simultaneous filing with the Commission by the Transmission Owner and Transmission Provider.
5. If a Transmission Owner has a Commission-approved formula rate, the successful completion of its approved annual formula rate update procedures shall constitute regulatory acceptance sufficient to authorize the Transmission Provider to update that Transmission Owner's revenue requirements posted on the SPP website. Such update by the Transmission Provider shall not require a filing with the Commission, provided that the Transmission Owner posts the populated formula rate for public review and comment as required under the applicable protocols and/or procedures contained in this Attachment H. The Transmission Provider shall follow any special procedures related to updating a Transmission Owner's revenue requirements as outlined in Section II of this Attachment.
6. The Transmission Provider shall allocate the accepted or approved revenue requirement associated with a Base Plan Upgrade, in accordance with Attachment J to this

Tariff, to the Base Plan Region-wide ATRRs in Section I, Table 2-A and Table 2-B above and to the appropriate Base Plan Zonal ATRR in Column (4) or (5) in Section I, Table 1.

7. For each Transmission Owner not using a formula rate, the amount of (i) Schedule 7 and 8 revenue received under this Tariff, (ii) revenue distributed to the Transmission Owner under Section IV of Attachment AU and allocated in proportion to Schedule 7 and 8 revenues under Section V of Attachment AU, ~~and~~ (iii) revenue received by a Transmission Owner for dispatches into the Energy and Operating Reserve Markets from a SATOA whose ATRR is recovered through charges under Schedule 9, ~~and (iv) Schedule 15 revenue received under this Tariff,~~ that is credited in the determination of the Transmission Owner's Commission approved Zonal Annual Transmission Revenue Requirement is specified in Column (3) of Table 3. For each Transmission Owner not using a formula rate, the amount of (i) Point-To-Point Transmission Service Schedule 11 revenue received under this Tariff, (ii) revenue distributed to the Transmission Owner under Section IV of Attachment AU and allocated in proportion to Point-To-Point Transmission Service Schedule 11 revenue under Section V of Attachment AU, and (iii) revenue received by a Transmission Owner for dispatches into the Energy and Operating Reserve Markets from a SATOA whose ATRR is recovered through charges under Schedule 11, that is credited in the determination of the Transmission Owner's Commission approved annual transmission revenue requirement for upgrades eligible for cost recovery under Schedule 11 is specified in Column (4) of Table 3. For a Transmission Owner using a formula rate that does not annually update the amount of point-to-point revenues received under this Tariff and revenues distributed, allocated under Attachment AU, revenues received for dispatches into the Energy and Operating Reserve Markets from a SATOA, ~~and Schedule 15 revenues,~~ Column (3) and Column (4) of Table 3 shall reflect any amount of such revenue embedded in its formula rate. For a Transmission Owner using a formula rate and where Schedule 7 and 8 revenues, revenues distributed and allocated under Attachment AU, ~~and~~ revenues received for dispatches into the Energy and Operating Reserve Markets from a SATOA ~~and Schedule 15 revenues~~ are credited and annually updated to adjust the Transmission Owner's Commission approved Zonal Annual Transmission Revenue Requirement, the entry in Column (3) of Table 3 shall be Not Applicable (N/A). For a Transmission Owner using a formula rate and where Point-To-Point Transmission Service Schedule 11 revenue received under this Tariff, revenue distributed and allocated under Attachment AU, and revenues

received for dispatches into the Energy and Operating Reserve Markets from a SATOA, are credited and annually updated to adjust the Transmission Owner's Commission approved annual revenue requirement for upgrades eligible for cost recovery under Schedule 11, the entry in Column (4) of Table 3 shall be Not Applicable (N/A).

Table 3

(1) Zone	(2) Zone Name / Transmission Owner	(3) Zonal ATRR Credit Included	(4) Schedule 11 Credit Included
1	American Electric Power –West		
1a	American Electric Power (Public Service Company of Oklahoma and Southwestern Electric Power Company) See Section II.3	N/A	N/A
1b	East Texas Electric Cooperative, Inc.	\$0	\$0
1c	Reserved for Future Use		
1d	Deep East Texas Electric Cooperative, Inc.	\$0	\$0
1e	Oklahoma Municipal Power Authority	\$0	\$0
1f	AEP West Transmission Companies (AEP Oklahoma Transmission Company, Inc. and AEP Southwestern Transmission Company, Inc.)	N/A	N/A
1g	Coffeyville Municipal Light and Power (CMLP)	\$0	\$0
1h	Arkansas Electric Cooperative Corporation (AECC)	N/A	N/A
1i	Transource Oklahoma, LLC	N/A	N/A
2	Kansas City Board of Public Utilities	N/A	N/A
3	City Utilities of Springfield, Missouri	N/A	N/A
4	Empire District Electric Company	N/A	\$0
5	Grand River Dam Authority	N/A	N/A
6	Evergy Metro, Inc.		
6a	Evergy Metro, Inc.	N/A	N/A

(1) Zone	(2) Zone Name / Transmission Owner	(3) Zonal ATRR Credit Included	(4) Schedule 11 Credit Included
6b	City of Independence, Missouri	\$0	\$0
7	Oklahoma Gas and Electric		
7a	Oklahoma Gas and Electric	N/A	N/A
7b	Oklahoma Municipal Power Authority	\$0	\$0
7c	Arkansas Electric Cooperative Corporation	N/A	N/A
7d	People's Electric Cooperative	N/A	N/A
7e	NextEra Energy Transmission Southwest, LLC	N/A	N/A
8	Midwest Energy, Inc.	N/A	N/A
9	Evergy Missouri West, Inc.		
9a	Evergy Missouri West, Inc.	N/A	N/A
9b	Transource Missouri, LLC	N/A	\$0
10	Southwestern Power Administration	\$0	\$0
10a	Southwestern Power Administration	\$0	\$0
10a (i)	NITS ATRR	\$0	\$0
10b	South Central MCN LLC	N/A	N/A
10c	Missouri Joint Municipal Electric Utility Commission	N/A	N/A
10d	People's Electric Cooperative	N/A	N/A
11	Southwestern Public Service Company		
11a	Southwestern Public Service Company	N/A	N/A
11b	Reserved for Future Use		
11c	Lea County Electric Cooperative, Inc.	N/A	N/A
12	Sunflower Electric Power Corporation		
12a	Sunflower Electric Power Corporation	N/A	N/A
12b	ITC Great Plains, LLC	N/A	N/A
12c	Prairie Wind Transmission, LLC	N/A	N/A
13	Western Farmers Electric Cooperative		
13a	Western Farmers Electric Cooperative	N/A	N/A
13b	People's Electric Cooperative	N/A	N/A
14	Evergy Kansas Central, Inc. (Evergy Kansas South, Inc. and Evergy Kansas Central, Inc.)		
14a	Evergy Kansas Central, Inc. (Evergy Kansas South, Inc. and Evergy Kansas Central, Inc.)	N/A	N/A
14b	Prairie Wind Transmission, LLC	N/A	N/A

(1) Zone	(2) Zone Name / Transmission Owner	(3) Zonal ATRR Credit Included	(4) Schedule 11 Credit Included
14c	Kansas Power Pool	N/A	N/A
14d	South Central MCN LLC	N/A	N/A
14e	NextEra Energy Transmission Southwest, LLC	N/A	N/A
15	Reserved for Future Use		
16	Lincoln Electric System	N/A	N/A
17	Nebraska Public Power District		
17a	Nebraska Public Power District	N/A	N/A
17b	Central Nebraska Public Power and Irrigation District	\$0	\$0
17c	Tri-State G&T Association	N/A	N/A
18	Omaha Public Power District	N/A	N/A
19	Upper Missouri Zone		
19a	Western-UGP	N/A	N/A
19b	Basin Electric Power Cooperative	\$0	\$0
19c	Heartland Consumers Power District	N/A	N/A
19d	Missouri River Energy Services (Total)		
19d (i)	Missouri River Energy Services	N/A	N/A
19d (ii)	Moorhead Public Service	N/A	N/A
19d (iii)	Orange City Municipal Utilities	N/A	N/A
19d (iv)	City of Pierre, South Dakota	N/A	N/A
19d (v)	City of Sioux Center, Iowa	N/A	N/A
19d (vi)	Watertown Municipal Utility Department	N/A	N/A
19d (vii)	Denison Municipal Utilities	N/A	N/A
19d (viii)	Vermillion Light & Power	N/A	N/A
19e	East River Electric Power Cooperative, Inc.	N/A	N/A
19f	Corn Belt Power Cooperative	N/A	N/A
19g	NorthWestern Energy Public Service Corporation	N/A	\$0

(1) Zone	(2) Zone Name / Transmission Owner	(3) Zonal ATRR Credit Included	(4) Schedule 11 Credit Included
19h	Northwest Iowa Power Cooperative	N/A	N/A
19i	Harlan Municipal Utilities	N/A	N/A
19j	Central Power Electric Cooperative	N/A	N/A
19k	Mountrail-Williams Electric Cooperative	N/A	N/A
19l	Mor-Gran-Sou Electric Cooperative, Inc.	N/A	N/A
19m	Roughrider Electric Cooperative, Inc.	N/A	N/A
19n	L and O Power Cooperative	N/A	N/A

SECTION II: Transmission Owner-Specific Requirements

1. Southwestern Public Service Company

For Southwestern Public Service Company (“SPS”), the Existing Zonal ATRR for Zone 11 in Column (3), of Section I, Table 1 of this Attachment H shall be calculated using: (1) the formula rate as specified in Attachment O – SPS of the Xcel Energy Operating Companies Joint Open Access Transmission Tariff (“Xcel Energy OATT”), (2) will be equal to the Current Year Revenue Requirement with True Up as specified on line 6, page 1 of Attachment O – SPS of the Xcel Energy OATT, (3) and subject to the Implementation Procedures in Appendix 1 of Attachment O – SPS of the Xcel Energy OATT. The results of the formula calculation shall be posted on the SPP website and in an accessible location on SPS’s OASIS website by October 1 of each calendar year and shall be effective on January 1 of the following year. The Existing Zonal ATRR for Zone 11, in Column (3), Section I, Table 1 of this Attachment H shall not be subject to adjustment pursuant to section 34.1 for the previous calendar year’s total firm Point-to-Point transmission revenue allocated to SPS under Attachment L when determining the monthly zonal Demand Charge for Zone 11.

2. American Electric Power

The American Electric Power ATRR for purposes of the Network Integrated Transmission Service shall be (i) calculated using the formula rate set forth in Addendum 1 to this Attachment H, (ii) posted on the SPP website by October 31 of each calendar year, and (iii) effective on January 1 of the following calendar year.

In accordance with Section VIII of Attachment J, commencing April 1, 2018, the American Electric Power ATRR shall include \$3,264,402.55, which consists of \$3,068,489.38 associated with the canceled Multi - Shipe Road - East Rogers - Kings River 345 kV project (Network Upgrades 10656, 10659, and 10660) and \$195,913.17 associated with the canceled Line - Georgia Pacific - Keatchie 138 kV Ckt 1 project (Network Upgrade 10616). This amount, which shall be recovered over the following twelve-month period in equal monthly installments with interest for the twelve-month recovery period calculated at the interest rate set forth in the Commission's regulations (18 C.F.R. § 35.19a(a)(2)(iii)), shall be allocated pursuant to Attachment J and recovered pursuant to Schedule 11. Upon full recovery following the end of the twelve-month period, the American Electric Power ATRR shall no longer include the \$3,264,402.55 associated with these canceled projects. The \$3,264,402.55 shall be reflected in the RRR File until it is fully recovered, at which time it will be replaced with \$0 in the RRR File and SPP and AEP shall make a joint informational filing notifying the Commission of the final total amount that AEP has recovered, including the costs incurred associated with the canceled Multi - Shipe Road - East Rogers - Kings River 345 kV project (Network Upgrades 10656, 10659, and 10660) and the canceled Line - Georgia Pacific - Keatchie 138 kV Ckt 1 project (Network Upgrade 10616), plus all interest recovered. In the event that property, the costs of which are included in the American Electric Power ATRR pursuant to this paragraph, is sold or otherwise disposed of during the twelve-month recovery period or thereafter, the revenues associated with such sale or disposition shall be credited against the American Electric Power ATRR. Such a credit shall be reflected in the RRR File and SPP and AEP shall make a joint informational filing notifying the Commission of the sale or distribution of the property and the amount that the American Electric Power ATRR will be credited due to such sale or disposition.

In accordance with Section VIII of Attachment J, commencing March 1, 2019, the American Electric Power ATRR shall include \$414,465, which consists of the costs associated with the canceled Line – Chapel Hill REC – Welsh Reserve 138 kV Ckt 1 (Network Upgrade 50697) project and Line – Welsh Reserve - Wilkes 138 kV Ckt 1 (Network Upgrade 11423) project. This amount, which shall be recovered over the following twelve-month period in equal monthly installments, shall be allocated pursuant to Attachment J and recovered pursuant to Schedule 11. Upon

full recovery following the end of the twelve-month period, the American Electric Power ATRR shall no longer include the \$414,465 associated with these canceled projects. The \$414,465 shall be reflected in the RRR File until it is fully recovered, at which time it will be replaced with \$0 in the RRR File and SPP and AEP shall make a joint informational filing notifying the Commission of the final total amount that AEP has recovered, including the costs incurred associated with the canceled Line – Chapel Hill REC – Welsh Reserve 138 kV Ckt 1 (Network Upgrade 50697) project and Line – Welsh Reserve - Wilkes 138 kV Ckt 1 (Network Upgrade 11423) project, plus all interest recovered. In the event that property, the costs of which are included in the American Electric Power ATRR pursuant to this paragraph, is sold or otherwise disposed of during the twelve-month recovery period or thereafter, the revenues associated with such sale or disposition shall be credited against the American Electric Power ATRR. Such a credit shall be reflected in the RRR File and SPP and AEP shall make a joint informational filing notifying the Commission of the sale or distribution of the property and the amount that the American Electric Power ATRR will be credited due to such sale or disposition.

3. Sunflower Electric Power Corporation

No changes to the ratios used to establish rates pursuant to Addendum 20 of this Attachment H will take effect unless accepted for approval by the FERC pursuant to the Federal Power Act.

In accordance with Section VIII of Attachment J, commencing January 1, 2024, the Sunflower Electric Power Corporation ATRR shall include \$718,359 which consists of the costs associated with the canceled Device – Russell 115 kV (Network Upgrade 122803). This amount, which shall be recovered over the following twelve-month period in equal monthly installments, shall be allocated pursuant to Attachment J and recovered pursuant to Schedule 11. Upon full recovery following the end of the twelve-month period, Sunflower Electric Power Corporation shall no longer include the \$718,359 associated with this canceled project. The \$718,359 shall be reflected in the RRR File until it is fully recovered, at which time it will be replaced with \$0 in the RRR File and SPP and Sunflower Electric Power Corporation shall make a joint informational filing notifying the Commission of the final total amount that Sunflower Electric Power Corporation has recovered, including the costs incurred associated with the canceled Device –

Russell 115 kV (Network Upgrade 122803), plus all interest recovered. In the event that property, the costs of which are included in the Sunflower Electric Power Corporation ATRR pursuant to this paragraph, is sold or otherwise disposed of during the twelve-month recovery period or thereafter, the revenues associated with such sale or disposition shall be credited against the Sunflower Electric Power Corporation ATRR . Such a credit shall be reflected in the RRR File and SPP and Sunflower Electric Power Corporation shall make a joint informational filing notifying the Commission of the sale or distribution of the property and the amount that the Sunflower Electric Power Corporation ATRR will be credited due to such sale or disposition.

4. Southwestern Power Administration

The NITS ATRR component shown in 10a(i) of Column (3) in Table 1 of Attachment H associated with the Southwestern Power Administration Zonal ATRR stated in 10a of Column (3) of Table 1 of Attachment H shall be calculated as follows:

- A. Southwestern Power Administration shall determine the ratio of: (i) the capacity on Southwestern Power Administration's transmission system utilized for Network Integration Transmission Service which shall be based on Southwestern Power Administration's Power Repayment Study filed before the Commission and employed in the Commission's final confirmation of Southwestern Power Administration's Zonal ATRR to (ii) the total capacity on the transmission system of Southwestern Power Administration available for Network Integration Transmission Service which is as stated in Section 2.3.3 of Southwestern Power Administration's Rate Schedule NPTS-13A and is 872,000 kilowatts.
- B. Southwestern Power Administration shall apply this ratio to Southwestern Power Administration's Zonal ATRR stated in 10a of Column (3) of Table 1 of this Attachment H.

Southwestern Power Administration shall provide the Transmission Provider with supporting documentation when the calculation of the NITS ATRR is revised pursuant to this section, which shall be posted on the SPP website. Southwestern

Power Administration will provide electronic notice of the revised NITS ATRR to all interested parties through the Formula Rate Posting Information Notification List. As used in this section “Formula Rate Posting Information Notification List” means the email exploder maintained by the Transmission Provider of interested parties, provided that such interested parties request to be added to the Formula Rate Posting Information Notification List through the “Exploder List” link on the SPP website. As of April 2017, the Exploder List was titled “Formula Rate Posting Information Notification” and could be accessed at <http://www.spp.org/stakeholder-center/exploder-lists/>.

ATTACHMENT J

RECOVERY OF COSTS ASSOCIATED WITH NEW FACILITIES

...V. Other Network Upgrades

A. Sponsored Upgrades

The Directly Assigned Upgrade Cost of a Sponsored Upgrade shall be borne voluntarily by the Project Sponsor. The Project Sponsor shall execute an Agreement for Sponsored Upgrade in which it agrees to bear these Directly Assigned Upgrade Costs. In the Agreement, the Project Sponsor shall elect to pay for the Sponsored Upgrade by (1) a lump sum payment or (2) periodic charges calculated in accordance with Commission policy (both hereafter referred to as “Project Sponsor’s Payment”). The lump sum payment option is the only eligible option for a Sponsored Upgrade to be constructed by Western-UGP. Such periodic charges shall be paid on a monthly basis over a twenty year period unless a different frequency and/or shorter term is established in the Agreement for Sponsored Upgrade. The present value of the Project Sponsor’s Payment shall equal the present value of the annual revenue requirements of the Sponsored Upgrade over a twenty year plant life. The annual revenue requirements of the Sponsored Upgrade shall be calculated by multiplying the levelized fixed charge rate of the Transmission Owner, based on full depreciation over a 20 year plant life and including operating and maintenance expenses

and any applicable tax consequences, by the nondepreciated actual cost of the Sponsored Upgrade.

The Transmission Provider shall file the Agreement initially utilizing good faith estimates of the construction costs for the assigned upgrade. Upon completion of the Sponsored Upgrade, the Transmission Provider shall true up the Directly Assigned Upgrade Costs to the actual construction costs as appropriate and calculate the Project Sponsor's Payment.

In addition, the Directly Assigned Upgrade Cost of the Sponsored Upgrade shall be reduced as provided in Section VII of this Attachment J and by any revenue credits granted to a Transmission Owner for the use of the Sponsored Upgrade.

For the Directly Assigned Upgrade Costs assigned to the Project Sponsor for the Sponsored Upgrade, the Project Sponsor shall be eligible for compensation through candidate ILTCRs in accordance with Attachment Z2 of this Tariff. If the Project Sponsor is to receive candidate ILTCRs pursuant to Section IV of Attachment Z2 of this Tariff, then the candidate ILTCR MW and source to sink paths related to the candidate ILTCRs shall be included in the Sponsored Upgrade Agreement described under Schedule 1 of this Attachment J. The term of such ILTCR shall be specified in the agreement and shall be at least ten years and not more than twenty years. In addition, if the Project Sponsor is to receive candidate ILTCRs, the Project Sponsor must also execute Attachment AH of this Tariff if the Project Sponsor is not already a Market Participant.

B. Service Upgrades

The cost of a Service Upgrade shall be allocated in accordance with Attachment Z1 to this Tariff. For any Directly Assigned Upgrade Costs assigned to a Transmission Customer for a Creditable Upgrade, the Transmission Customer shall be eligible to receive transmission revenue credits in accordance with Attachment Z2 of this Tariff unless the Transmission Customer qualifies for, and elects to receive, candidate

ILTCRs in accordance with Attachment Z2 of this Tariff. If the Transmission Customer receives revenue credits pursuant to Sections I and II of Attachment Z2 of this Tariff then the Transmission Customer shall not be eligible for candidate ILTCRs for the Directly Assigned Upgrade Costs. For any Directly Assigned Upgrade Costs assigned to a Transmission Customer for a Service Upgrade that is not a Creditable Upgrade, the Transmission Customer shall be eligible for compensation through candidate ILTCRs in accordance with Attachment Z2 of this Tariff. If the Transmission Customer is to receive candidate ILTCRs pursuant to Section IV of Attachment Z2 of this Tariff, then the candidate ILTCR MW and source to sink paths related to the candidate ILTCRs shall be included in the Transmission Service Agreement or Network Integration Transmission Service agreement. The term of such ILTCR shall be specified in the agreement and shall be at least ten years and not more than twenty years.

C. Generation Interconnection Related Network Upgrades

The cost of a generation interconnection related Network Upgrade shall be allocated in accordance with Attachment V [and Attachment BB](#) to this Tariff. For any Directly Assigned Upgrade Costs assigned to an Interconnection Customer for a Network Upgrade required in its generator [Interconnection](#) agreement and for JTIQ Generator Charges assessed to a JTIQ Generation Interconnection Customer, the Interconnection Customer shall be eligible for compensation through candidate ILTCRs in accordance with Attachment Z2 of this Tariff. If the Interconnection Customer is to receive candidate ILTCRs in accordance with Section IV of Attachment Z2 of this Tariff, then the candidate ILTCR MW and source to sink paths related to the candidate ILTCRs shall be included in the Interconnection Customer's generator interconnection agreement. The term of such ILTCR shall be specified in the agreement and shall be at least ten years and not more than twenty years.

D. Zonal Reliability Upgrades

1. The cost of Zonal Reliability Upgrades (i) included in the 2005 SPP Transmission Expansion Plan and (ii) placed in service prior to January 1, 2008 shall be allocated in accordance with Section III to this Attachment.
2. The cost of all other Zonal Reliability Upgrades shall be includable in the applicable Zonal Annual Transmission Revenue Requirement.

E. JTIQ Upgrades. The JTIQ ATRR Balance is to be included in the Region-wide Charge and calculated in accordance with Attachments L and AV of this Tariff.

ATTACHMENT L

Treatment of Revenues

II. Distribution Of Transmission Service Revenues Associated With The Zonal Annual Transmission Revenue Requirement

Transmission service revenues associated with the Zonal Annual Transmission Revenue Requirement shall be distributed in accordance with the following:

A. Grandfathered Agreements

Except by mutual agreement of the Parties to Grandfathered Agreements, the Transmission Provider shall have no claim to the revenues collected under such agreements, and shall not collect or allocate any revenues for transmission service related to such transactions. The Transmission Owner providing the transmission service under the Grandfathered Agreements, therefore, will continue to receive payment directly from the customer under the Grandfathered Agreement. Nothing herein is intended to supersede or otherwise affect rights that any party to a Grandfathered Agreement may have with respect to termination of the Grandfathered Agreement. In the event that a Grandfathered Agreement remains in effect between or among two or more Transmission Owners in a multi-owner Zone other than Zone 1, the associated charges and revenues will be treated as set forth in Section II.B.2(b) below for purposes of determining the appropriate distribution of revenues among the Transmission Owners in that Zone.

B. Revenue Distribution – Network Integration Transmission Service

1. Single-Owner Zones

Where there is only one Transmission Owner in a Zone, revenues associated with facilities with a Zonal Annual Transmission Revenue Requirement shall be distributed as follows:

(a) Except to the extent required under paragraph II.B.1(b) of this Attachment L, revenues collected by the Transmission Provider under Schedule 9 in connection with the provision of Network Integration Transmission Service shall be distributed to the Transmission Owner in the Zone where the Network Load is located.

(b) When a Network Customer has designated Network Load not physically interconnected with the Transmission System under Section 31.4 of the Tariff, revenues collected by the Transmission Provider for Network Integration Transmission Service for that portion of the Network Customer's Network Load shall be distributed to the Transmission Owner of the transmission Zone from which the Schedule 9 rate was derived and where the Network Load not physically connected with the Transmission System is included in the denominator when calculating Load Ratio Shares for that Zone in accordance with Section 34.4 of this Tariff. If the Network Load outside the Transmission Provider's Transmission System is not included in the calculation of the transmission Zone's load ratio share allocation then the revenue shall be distributed among Transmission Owners on the same basis as the revenues collected in connection with the provision of Point-To-Point Transmission Service.

2. Multi-Owner Zones

When more than one Transmission Owner within a single Zone has established its owner-specific zonal annual revenue requirement ("OZRR"), the Transmission Provider shall distribute revenues owed to the Transmission Owners in the Zone as described below.

(a) Except to the extent required under paragraph II.B.2(e) of this Attachment L, the Transmission Provider shall distribute revenues it collects under Schedule 9 to each Transmission Owner in the Zone where the load is located in proportion to its respective share of the Zonal Annual Transmission Revenue Requirements ("ZRR") shown in Attachment H for that Zone, as adjusted in accordance with paragraph II.B.2(b) below. The resulting adjusted OZRRs of the Transmission Owners in the Zone as

calculated in paragraph II.B.2(b) below will be combined to provide the basis for distribution of revenues from Schedule 9 charges.

(b) For any year in which a Transmission Owner is a seller of transmission service to another Transmission Owner within the same Zone under one or more Grandfathered Agreements, the selling Transmission Owner's OZRR used to allocate revenue from Schedule 9 charges shall be reduced by the revenues associated with these Grandfathered Agreements in that year, but only to the extent that such costs have not already been credited against the selling Transmission Owner's OZRR. For any year in which a Transmission Owner is a purchaser of transmission service from a Transmission Owner within the same Zone under one or more Grandfathered Agreements, the purchasing Transmission Owner's OZRR shall be increased by the charges payable under these Grandfathered Agreements in that year, but only to the extent those charges are not already included in the purchasing Transmission Owner's OZRR.

(c) For each Transmission Owner in the Zone that has elected not to take Network Integration Transmission Service for its Native Load Customers or that has elected not to make payments to the Transmission Provider for its OZRR in taking Network Integration Transmission Service for its Native Load Customers and/or that provides long term transmission service under Grandfathered Agreements (other than those addressed in paragraph II.B.2(b) above), the Transmission Provider shall compute hypothetical NITS payments equal to the cost to serve its Native Load Customers and to serve long-term customers served under Grandfathered Agreements (other than those addressed in paragraph II.B.2(b) above) as if those customers were paying for service under Schedule 9.

(d) For each Transmission Owner, the Transmission Provider shall calculate an amount equal to the sum of hypothetical NITS payments determined in accordance with paragraph II.B.2(c) above, if any, plus distributed Schedule 9 charges in accordance with paragraph II.B.2(a) above, less its OZRR as adjusted pursuant to paragraph II.B.2(b) above. If the resulting amount is positive, the Transmission Owner shall pay the Transmission Provider this amount. If the resulting amount is negative, the Transmission Provider shall pay the Transmission Owner this amount.

(e) The treatment described in paragraphs II.B.2(b)-(d) above is premised on the assumption that the annual transmission revenue requirement of the Transmission Owner that is the seller under a Grandfathered Agreement has not been reduced by the amount of the charges associated with the Grandfathered Agreement. In such circumstances, the parties to the Grandfathered Agreement will attempt to reach agreement on a treatment of the Grandfathered Agreement that results in appropriate compensation to the Transmission Owners in the Zone while preventing the imposition of excessive costs on others. If the Transmission Owners in the Zone are unable to reach agreement, either Transmission Owner may invoke the dispute resolution procedures of the Tariff or seek a determination from FERC as to the appropriate treatment of the Grandfathered Agreement charges.

(f) When a Network Customer has designated Network Load outside the Transmission Provider's Transmission System under Section 31.4 of the Tariff, revenues collected by the Transmission Provider for Network Integration Transmission Service for that portion of the Network Customer's Network Load shall be distributed to the Transmission Owners of the transmission Zone from which the Schedule 9 rate was derived and where the Network Load not physically connected with the Transmission System is included in the denominator when calculating Load Ratio Shares for that Zone in accordance with Section 34.4 of this Tariff. If the Network Load not physically connected with the Transmission System is not included in the calculation of the transmission Zone's load ratio share allocation, then the revenue shall be distributed among Transmission Owners on the same basis as the revenues collected in connection with the provision of Point-To-Point Transmission Service.

(g) Sections II.B.2(a) through II.B.2.(e) above do not apply to Zone 1. In the event a Transmission Owner within Zone 1 other than American Electric Power establishes its owner-specific zonal annual revenue requirement ("OZRR") as stated in Attachment H, that subsequent Transmission Owner will be entitled to receive revenue, collected by the Transmission Provider from other Transmission Customers within Zone 1 including any Transmission Owner within Zone 1 taking service under Section 39, in an amount equal to one minus that Transmission Owner's Load Ratio Share of the Zone 1 total Network Load multiplied by that Transmission Owner's OZRR.

(h) Section II.B.2(f) above does not apply to revenues from a Network Customer having Network Load in Zone 19 which has designated Network Load outside the Transmission Provider's Transmission System under Section 31.4 of this Tariff designated prior to October 1, 2015. For such load, revenues collected by the Transmission Provider for Network Integration Transmission Service for such portion of the Network Customer's Network Load shall be distributed among Transmission Owners of Zone 19.

(i) Nothing herein is intended to supersede or otherwise affect rights that any Transmission Owner in a multi-owner Zone may have to seek designation of its facilities as a separate Zone under the Tariff.

3. Revenue Credits – Tariff Attachment Z2

Network Integration Transmission Service revenue collected by the Transmission Provider attributed to the use of Creditable Upgrades pursuant to the provisions of Attachment Z2 of this Tariff shall be paid to Upgrade Sponsors in accordance with Attachment Z2.

C. Revenue Distribution -- Point-To-Point Transmission Service~~and~~ Conditional High Impact Large Load Service

Irrespective of the number of Transmission Owners in a Zone, and except to the extent required under Section IV of this Attachment L, revenues collected by the Transmission Provider under Schedules 7 and 8 –and revenues allocated pursuant to paragraphs II.B.1(b) and II.B 2(f). shall be distributed as follows:

1. If a Point-To-Point Transmission Service reservation could not be granted but for the use of one or more Creditable Upgrades, pursuant to the provisions of Attachment Z2, the revenue from that reservation will first be distributed to the Upgrade Sponsors of such Creditable Upgrades in accordance with the provisions of Attachment Z2. Any remaining revenue shall be distributed in accordance with all other provisions of this Section C.

2. If the generation source(s) and load(s) are located within a single Zone, 50% of the revenues shall be distributed to the Transmission Owner(s) in that Zone in proportion to their respective OZRR(s), as adjusted in accordance with Section 34.1(2) of this Tariff; and 50% of the revenues shall be distributed to the Transmission Owner(s) in that Zone in proportion to the MW-mile impacts incurred by each such Transmission

Owner. ~~For revenues collected under Schedule 15 of this Tariff, 100% of the revenues will be distributed to the Transmission Owner(s) in the Zone where the Point of Delivery is located. Such distribution will be in proportion to each Transmission Owner's respective OZRR.~~

3. In all instances other than that described in the preceding paragraph: 50% of the revenues shall be distributed to all Transmission Owners in proportion to their respective OZRRs, as adjusted in accordance with Section 34.1(2) of this Tariff; and 50% of the revenues shall be distributed to the Transmission Owners whose facilities incur MW-mile impacts due to the transaction, in proportion to the MW-mile impacts incurred by each such Transmission Owner. A Transmission Owner's OZRR used for this purpose shall be that stated in Attachment H and where applicable, such OZRR shall be adjusted in accordance with Section 34.1(2) of this Tariff. The MW-mile impacts shall be determined by use of the procedures in Attachment S.

III. Distribution of Revenues From Base Plan Zonal Charges and Region-wide Charges and Interregional Projects

A. Distribution of Revenues Based on Annual Transmission Revenue Requirements (“ATRR”)

Revenues associated with the Base Plan Zonal Annual Transmission Revenue Requirements and with the Region-wide Annual Transmission Revenue Requirement, specified in Attachment H and collected by the Transmission Provider under Schedule 11 of the Tariff but excluding revenues collected pursuant to Sections III.B, III.C, and III.F of this Attachment L, shall be distributed to Transmission Owners owning Base Plan Upgrades, upgrades within approved Balanced Portfolios, an approved Interregional Project and to Transmission Owners with facilities in Zones from which any amount has been reallocated from the Zonal Annual Transmission Revenue Requirements in accordance with Section IV.A of Attachment J. Such revenue distribution shall be in proportion to the Transmission Owners' respective (i) annual transmission revenue requirements for Base Plan Upgrades as reduced for Schedule 11 point-to-point ~~and Conditional High Impact Large Load Service~~ revenue and revenue distributed and allocated under Attachment AU in accordance with Section II.A of Schedule 11 under this Tariff, (ii) annual transmission revenue requirements for upgrades within approved Balanced Portfolios as reduced for Schedule 11 point-to-point revenue and revenue distributed and allocated under Attachment AU in accordance with Section II.A of Schedule 11 under this Tariff, (iii) annual transmission revenue requirements for approved Interregional Projects as reduced for Schedule 11 point-to-point revenue and revenue distributed and allocated under Attachment AU in accordance with Section II.A of Schedule 11 under this Tariff, and (iv) amounts reallocated from the Zonal Annual Transmission Revenue Requirements in accordance with Section IV.A of Attachment J.

B. Distribution of Point-To-Point Revenues under Zonal ATRR Reallocation

Revenues derived from the component of the Region-wide Charge for Point-To-Point Transmission Service that is associated with any amount reallocated from the Zonal Annual Transmission Revenue Requirements, in accordance with Section IV.A of Attachment J, shall be distributed to Transmission Owners proportionately to the

distribution of revenues collected under Schedules 7 and 8 as provided in Section II.C of this Attachment L.

C. Distribution of Revenues for Creditable Upgrades Included in Schedule 11 Rates

Revenue collected by the Transmission Provider under Schedule 11 attributed to use of Creditable Upgrades shall be distributed to the Upgrade Sponsors to which such revenues are due in accordance with Section II.D and III.C.2 of Attachment Z2.

D. Distribution of Revenues to Interregional Planning Region

Revenues associated with approved Interregional Projects collected by the Transmission Provider under Schedule 11 of the Tariff to compensate an Interregional Planning Region in accordance with the interregional cost allocation pursuant to the Addendum(s) to Attachment O will be distributed by the Transmission Provider to the applicable Interregional Planning Region.

E. Distribution of Revenues to Other Transmission Providers

Revenues associated with transmission upgrades approved pursuant to the coordination agreements under Addendum 1 to Attachment O and approved to be collected by the Transmission Provider under Schedule 11 of the Tariff to compensate other transmission providers will be distributed by the Transmission Provider to the applicable other transmission provider.

F. Distribution of Revenues associated with JTIQ Upgrades

1. For each month, one twelfth of the portion of the JTIQ ATRR Balance applicable to each JTIQ Upgrade on the Transmission System shall be either: (a) charged to Resident Load through the Region-wide Charge and credited to the Transmission Owner for that JTIQ Upgrade if the balance for the JTIQ Upgrade is positive, or (b) credited to Resident Load through the Region-wide Charge and charged to the Transmission Owner for that JTIQ Upgrade if the balance for the JTIQ Upgrade is negative.

2. The JTIQ ATRR Balance is the sum of the net revenue requirement amounts for all JTIQ Upgrades on the Transmission System, where the net revenue requirement amount for each such upgrade is the difference between the JTIQ ATRR for Generators and the total of the JTIQ Generator Charges applicable to that upgrade expressed on an annualized basis. Applicable JTIQ Generator Charges are those authorized under approved

JTIQ Generator Interconnection Agreements for this JTIQ Portfolio. For each JTIQ Upgrade on the Transmission System, the JTIQ ATRR Balance shall be calculated in accordance with Attachment AV and the JTIQ Formula Rate template contained in Appendix 2 of Attachment AV to this Tariff.

3. The portion of the JTIQ ATRR Balance applicable to each JTIQ Upgrade on the Transmission System shall be set forth in the RRR File posted on the SPP website.

4. The JTIQ ATRR Balance and its JTIQ Upgrade-specific components shall not be included in the annual transmission revenue requirements utilized as the basis for distributing revenues pursuant to Section III.A of this Attachment L.

ATTACHMENT M

Loss Compensation Procedure

I. PURPOSE

This loss compensation procedure will be used to quantify real power losses for which the Transmission Customer or Network Customer is responsible when taking service under this Tariff. The Transmission Provider shall maintain a schedule showing the real power loss factors for the provision of transmission service across each Zone on the Transmission System. The injection loss factor (“ILF”) and delivery loss factor (“DLF”) for each Zone are stated in Appendix 1 to this Attachment M.

II. TRANSMISSION LOSS DETERMINATION - NETWORK INTEGRATION TRANSMISSION SERVICE

(a) The Network Customer shall be responsible for real power losses associated with Network Integration Transmission Service to its Network Load for each Zone in which its Network Load is located for the purposes of determining charges under Schedule 9 and Schedule 11 to this Tariff. The Network Customer’s loss responsibility is the product of the Zone DLF, shown in Column D of Appendix 1 to this Attachment M and the hourly metered Network Load for the hour that is coincident with the applicable Zone monthly peak load hour and such loss responsibility shall be included when calculating that Network Customer’s Load Ratio Share, Base Plan Zonal Load Ratio Share and Region-wide Load Ratio Share.

(b) Loss energy associated with hourly energy settlement under the Integrated Marketplace shall be accounted for under the settlement procedures for the Energy and Operating Reserve Markets specified in Attachment AE. Loss energy associated with the transmission of Federal Power-Western-UGP to the Statutory Load Obligations served by Western-UGP shall be the product of the amount of Federal Power-Western-UGP delivered to the Statutory Load Obligations and the Zone 19 DLF, shown in Column D of Appendix 1 to this Attachment M in accordance with Section 39.3(e)(ii) of this Tariff.

III. TRANSMISSION LOSS DETERMINATION - POINT-TO-POINT TRANSMISSION SERVICE

The Transmission Customer shall be responsible for real power losses associated with Transmission Service under Schedule 7 and Schedule 8 to this Tariff. For purposes of calculating a Transmission Customer's loss responsibility, such Transmission Customer's Transmission Service reservation capacity shall not be adjusted by the demand zonal loss factors stated in Appendix 1 to this Attachment M. Real power losses associated with settlement of Transmission Service schedules in the Integrated Marketplace shall be accounted for under the settlement procedures for the Energy and Operating Reserve Markets specified in Attachment AE.

IV. OTHER LOSSES

Additional compensation will be required for real power losses when the meter used to measure the energy taken at a delivery point is located on facilities not on the Transmission System. The Transmission Customer shall be responsible for any real power losses incurred on facilities not on the Transmission System.

V. TRANSMISSION LOSS DETERMINATION - CONDITIONAL HIGH IMPACT LARGE LOAD SERVICE

The Transmission Customer or Network Customer ~~shall~~ will be responsible for real power losses associated with Conditional High Impact Large Load Service pursuant to Schedule 15 of this Tariff.

ATTACHMENT O
TRANSMISSION PLANNING PROCESS

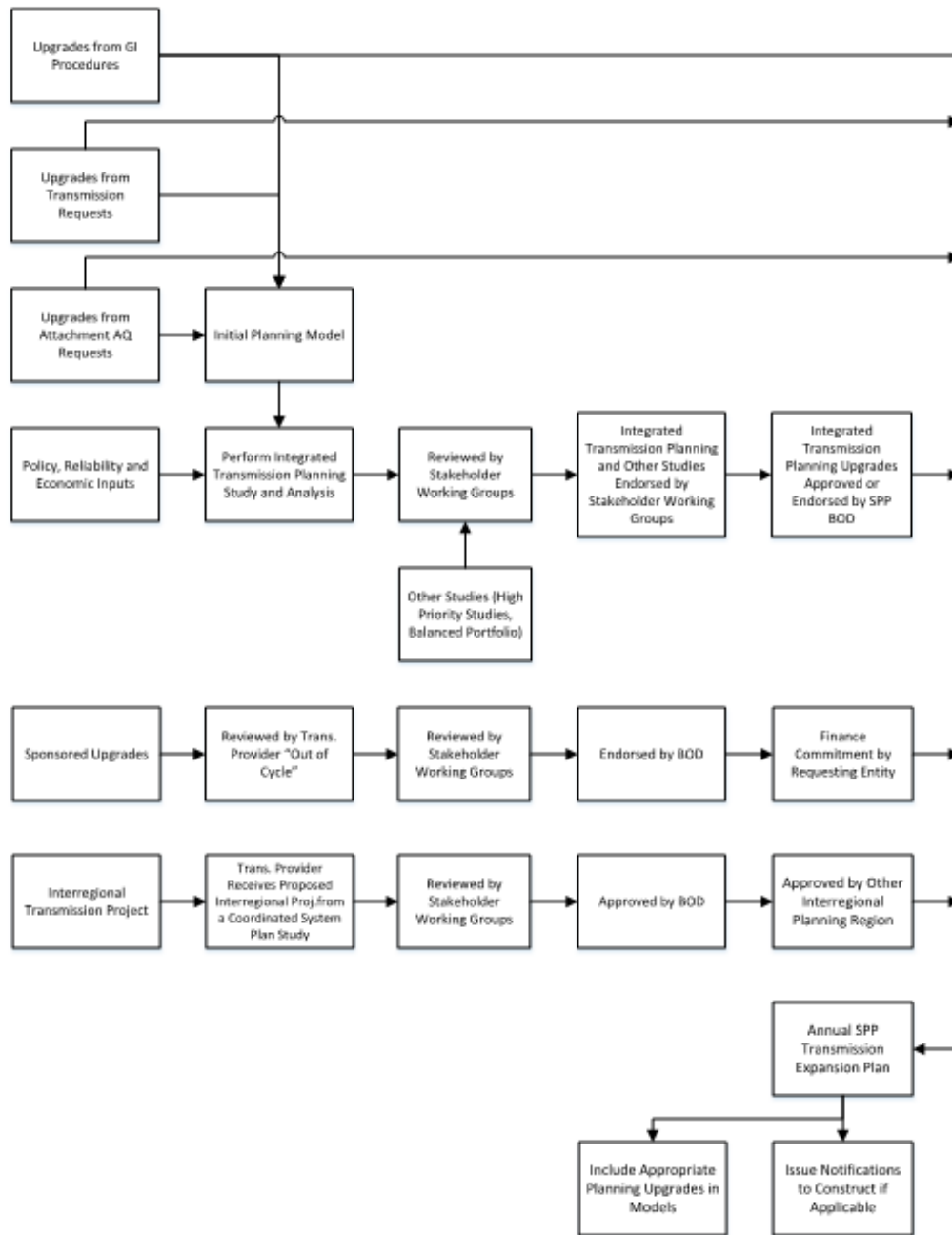
I. Overview of Planning Process

The Transmission Provider's transmission planning process is an open process. New and proposed transmission facilities can come from the following processes in this Tariff: 1) transmission service requests; 2) Generator Interconnection Requests; 3) requests pursuant to Attachment AQ *and Attachment AX* of this Tariff; 4) the Integrated Transmission Planning Assessment; 5) the Balanced Portfolio process; 6) the high priority study process; 7) requests for Sponsored Upgrades; 8) the 20-Year Assessment; 9) the evaluation of proposed Interregional Projects; ~~and~~ 10) the Generator Retirement Process; and 11) [High Impact Large Load Generator Requests](#). Figure 1 illustrates the planning processes within SPP and how these processes result in a comprehensive regional plan called the SPP Transmission Expansion Plan (STEP).

Each of these sources of potential upgrades has its own evaluation and approval process. Transmission service requests are evaluated in accordance with Attachment Z1 of this Tariff. Generator Interconnection Requests are assessed under the provisions of Attachment V of this Tariff. In addition, the process for making changes in delivery point facilities to upgrade, retire, replace, or establish delivery points is described in Attachment AQ of this Tariff. The study processes for the Integrated Transmission Planning Assessment, Sponsored Upgrades, Balanced Portfolios, high priority upgrades, 20-Year Assessment, and proposed Interregional Projects are described in this Attachment O of this Tariff.

The results from all these sources are collected and reported in the annual SPP Transmission Expansion Plan which gives a projection of transmission changes in the SPP Region in accordance with this Attachment O.

Figure 1 – SPP Transmission Planning Process



V. The SPP Transmission Expansion Plan Report

The SPP Transmission Expansion Plan shall be a comprehensive listing of all transmission projects in the SPP for the planning horizon. Projects included in the SPP Transmission Expansion Plan are: 1) upgrades required to satisfy requests for transmission service; 2) upgrades required to satisfy requests for generator interconnection; 3) Network Upgrades required pursuant to the study results under Attachment AQ of this Tariff; 4) approved projects from the Integrated Transmission Planning Assessment; 5) upgrades within approved Balanced Portfolios; 6) approved high priority upgrades; 7) endorsed Sponsored Upgrades; 8) approved Interregional Projects; 9) approved projects from the 20-Year Assessment; 10) approved projects from the Generator Retirement Process; and 11) approved JTIQ Upgrades. To be included in the SPP Transmission Expansion Plan, each project must have been endorsed or approved through its proper process. This Section V describes the process used to approve or endorse the specific upgrades identified in the Integrated Transmission Planning Assessment, the 20-Year Assessment, high priority upgrades, and Balanced Portfolios. The SPP Transmission Expansion Plan shall also identify whether any approved Competitive Upgrades, as that term is defined in Attachment Y of this Tariff, cause reliability violations on an adjacent neighboring transmission system, in Section V.7 of this Attachment O.

1) Development of the Recommended Set of Upgrades from Planning Studies

- a) Upon completion of the analysis, studies and stakeholder review and comment on the results in accordance with Sections III and IV of this Attachment O, the Transmission Provider shall prepare a draft list of all projects for review by the stakeholders. The Transmission Provider shall post the draft project list on the SPP website and shall identify the assessment process with which they are associated.

- b) Upon posting of the draft project list, the Transmission Provider shall invite written comments to be submitted to the Transmission Provider.
- c) The Transmission Provider shall review the draft project list with the stakeholder working groups and the Regional State Committee.
- d) Considering the input from the stakeholders through this review process, the Transmission Provider shall prepare a recommended list of proposed ITP Upgrades based upon the analysis as described in Section III, upgrades within proposed Balanced Portfolios, proposed high priority upgrades, and proposed 20-Year Assessment upgrades for review and approval.

2) Disclosure of the Recommended Set of Upgrades and Supporting Information from Planning Studies

- a) The Transmission Provider shall disclose planning information, which includes the recommended list of proposed upgrades and the underlying studies, by providing:
 - i) All stakeholders equal access, notice and opportunity to participate in planning summits, the stakeholder working group meetings and the sub-regional planning meetings as well as any associated web conferences or teleconferences as set forth in Section II of this Attachment O; and
 - ii) For the contemporaneous availability of such meeting handouts on the SPP website.

- b) The related study results, criteria, assumptions, analysis results, and data underlying the studies used to develop the proposed ITP Upgrades, the list of upgrades within proposed Balanced Portfolios, proposed high priority upgrades, and proposed 20-Year Assessment upgrades shall be posted on the SPP website, with password protected access if required to preserve the confidentiality of information in accordance with the provisions of the Tariff and the SPP Membership Agreement and to address CEII requirements. Additionally, Transmission Owner specific local plans and criteria shall be accessible via an electronic link on the SPP website in accordance with Section VII of this Attachment O. The CEII compliant redacted version of the SPP Transmission Expansion Plan and individual Transmission Owner specific local plans shall be posted on the SPP website. Redacted versions shall include instructions for acquiring the complete version of the SPP Transmission Expansion Plan and individual Transmission Owner specific local plans. An electronic link shall be provided on the SPP website by which stakeholders may send written comments on the SPP Transmission Expansion Plan and Transmission Owner specific local plans and criteria.

3) Approval and Endorsement Process

- a) The Markets and Operations Policy Committee shall make a recommendation regarding the approval of ITP Upgrades. Approval by the SPP Board of Directors is required for the inclusion of ITP Upgrades in the SPP Transmission Expansion Plan.

- b) The Markets and Operations Policy Committee shall make a recommendation regarding the inclusion of a proposed Balanced Portfolio in the SPP Transmission Expansion Plan. Approval by the SPP Board of Directors is required for inclusion of a Balanced Portfolio in the SPP Transmission Expansion Plan. SPP is not required to have a Balanced Portfolio each year.
- c) If the SPP Board of Directors approves a list of ITP Upgrades, upgrades within Balanced Portfolios, or high priority upgrades other than those recommended by the Markets and Operations Policy Committee, the explanation for the deviation shall be included in the SPP Transmission Expansion Plan.
- d) The Markets and Operations Policy Committee shall make a recommendation regarding the approval of a high priority upgrade recommended by the Transmission Provider. Approval by the SPP Board of Directors is required for the inclusion of a high priority upgrade in the SPP Transmission Expansion Plan.
- e) The Markets and Operations Policy Committee shall make a recommendation regarding the approval of a 20-Year Assessment upgrade recommended by the Transmission Provider. Approval by the SPP Board of Directors is required for the inclusion of a 20-Year Assessment upgrade in the SPP Transmission Expansion Plan.
- f) The Markets and Operations Policy Committee shall make a recommendation regarding endorsement of a proposed Sponsored Upgrade. Endorsement by the SPP Board of Directors is required for the inclusion of a Sponsored Upgrade in the SPP Transmission Expansion Plan.

- g) The Transmission Provider shall post the list of projects the SPP Board of Directors is expected to take action on to the SPP website. The Transmission Provider shall, in addition to the posting, e-mail notice of such posting to the stakeholders at least ten days prior to a meeting at which the SPP Board of Directors is expected to take action on accepting or modifying the list.
- h) The list of approved ITP Upgrades, upgrades within approved Balanced Portfolios, approved high priority upgrades, and endorsed Sponsored Upgrades may be modified throughout the year by the SPP Board of Directors provided that such action shall be posted and noticed pursuant to this section.
- i) The list of upgrades for transmission service are approved in accordance with the provisions of Attachment Z1 of this Tariff and included in the STEP accordingly.
- j) The list of interconnection facilities and other transmission upgrades related to requests for Generator Interconnection Service are approved in accordance with the provisions of Attachment V [and Attachment BB](#) of this Tariff and included in the STEP accordingly.
- k) The list of Interregional Projects is approved in accordance with Section IV.7 of this Attachment O and included in the STEP accordingly.

- l) Any recommendation for approval of a Generator Retirement Upgrade shall be made by the Transmission Provider in accordance with Attachment AB of this Tariff. Approval by the SPP Board of Directors is required for the inclusion of a Generator Retirement Upgrade in the SPP Transmission Expansion Plan.
 - m) Any JTIQ Upgrades approved by the SPP Board of Directors will be included in the STEP accordingly.
 - n) The SPP Transmission Expansion Plan shall be presented to the SPP Board of Directors at least once a year. Approval of the ITP Upgrades, Balanced Portfolios, and high priority upgrades, and the endorsement of the other projects contained in the SPP Transmission Expansion Plan by the SPP Board of Directors shall certify a regional plan for meeting the transmission needs of the SPP Region.
- 4) Updates to the SPP Transmission Expansion Plan
 - a) Modifications to the SPP Transmission Expansion Plan may be made between the annual approvals as required to maintain system reliability and to meet new business opportunities as they are identified.
 - b) The Transmission Provider shall work with the stakeholders on an on-going basis throughout the year analyzing any newly identified issues and incorporating any necessary adjustments to the SPP Transmission Expansion Plan on an out-of-cycle basis.

- c) On a quarterly basis, the Transmission Provider shall post any modifications to the SPP Transmission Expansion Plan on the SPP website.
- d) The modifications shall be reviewed by the stakeholders and the Regional State Committee, endorsed by the stakeholder working groups, and approved or endorsed by the SPP Board of Directors, in accordance with Section V of this Attachment O.

5) Removal of an Upgrade from the SPP Transmission Expansion Plan

The Transmission Provider, in consultation with the stakeholders in accordance with Section V of this Attachment O, may remove an upgrade from an approved SPP Transmission Expansion Plan. A Transmission Owner that has incurred costs related to the removed upgrade shall be reimbursed for any expenditure pursuant to Section VIII of Attachment J to the Tariff.

6) Status of Upgrades Identified in the SPP Transmission Expansion Plan

- a) The Transmission Provider shall track the status of planned system upgrades to ensure that the projects are built in time or that acceptable mitigation plans are in place to meet customer and system needs.
- b) On a quarterly basis, at a minimum, the Transmission Provider shall:

- i) Report to the Markets and Operations Policy Committee, the Regional State Committee and the SPP Board of Directors on the status of the upgrades identified in the SPP Transmission Expansion Plan; and
- ii) Post the status of the upgrades on the SPP website.

7) Impacts on Adjacent Systems

As part of the evaluation of any Competitive Upgrade, the Transmission Provider will determine, based on its planning model, whether a proposed Competitive Upgrade causes any reliability violations on the transmission system of an adjacent transmission planning region. The Transmission Provider shall identify any such violations as part of the transmission planning process that identified the Competitive Upgrade. Except as otherwise provided in this Tariff or as otherwise provided in an agreement between the Transmission Provider and an adjacent transmission system, the Transmission Provider shall not pay any cost for any upgrade or system modification necessary to mitigate or resolve any such violation on an adjacent transmission system, and listing of such violations in the SPP Transmission Expansion Plan does not constitute any agreement on the part of the Transmission Provider or its stakeholders to pay any such cost.

ATTACHMENT P
Transmission Service Timing Requirements

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Service Study Process	Customer Response ^{1/}	Energy Scheduling 2/	
		No Later Than	No Earlier Than 8/				No Later Than	Changes No Later Than
Long Term Firm	1 Year or More	In accordance with the open season specified in Section II of Attachment Z1		At the close of the open season specified in Section II of Attachment Z1	Aggregate Transmission Service Study performed following close of open season as specified in Attachment Z1 in accordance with schedule specified in Sections 19.4 or 32.4 as appropriate	In accordance with the schedule specified in Sections 19.4 or 32.4 as appropriate	12:00 day prior	20 mins prior to start of schedule

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Service Study Process	Customer Response ^{1/}	Energy Scheduling 2/	
		No Later Than	No Earlier Than 8/				No Later Than	Changes No Later Than
Long Term Firm	1 Year or More	No later than 90 days prior		10 days	Expedited designation process performed as specified in Section 30.2.2. if requirements in Section 30.2.2 are met	3 days	12:00 day prior	20 mins prior to start of schedule

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Service Study Process	Customer Response ^{1/}	Energy Scheduling 2/	
		No Later Than	No Earlier Than 8/				No Later Than	Changes No Later Than
Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Determine Capacity Available or System Impact Study (From Date of Customer Commitment)	Customer Response ^{1/}	Energy Scheduling 2/	
		No Later Than	No Earlier Than 8/				No Later Than	Changes No Later Than

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Service Study Process		Customer Response ^{1/}	Energy Scheduling 2/	
		No Later Than	No Earlier Than 8/					No Later Than	Changes No Later Than
Short-Term Firm	More than 1 month (monthly)	31 days prior	120 days prior	24 hrs	30 days	60 days	4 days	12:00 day prior	20 mins prior to start of schedule
Short-Term Firm	1 mo (monthly)	8 days prior	90 days prior	24 hrs	30 days	60 days	4 days	12:00 day prior	20 mins prior to start of schedule
Short-Term Firm	More than 1 wk up to 1 month (weekly)	8 days prior	60 days prior	24 hrs	30 days	60 days	48 hrs	12:00 day prior	20 mins prior to start of schedule

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Determine Capacity Available or System Impact Study (From Date of Customer Commitment)		Customer Response ^{1/}	Energy Scheduling 2/ Changes	
		No Later Than	No Earlier Than 8/					No Later Than	No Later Than
Short-Term Firm	1 wk (weekly)	2 days prior	30 days prior	24 hrs	30 days	60 days	48 hrs	12:00 day prior	20 mins prior to start of schedule
Short-Term Firm	More than 1 day up to 1 wk (daily)	2 days prior	14 days prior	24 hrs	30 days	60 days	24 hrs	12:00 day prior	20 mins prior to start of schedule
Short-Term Firm	1 Day (daily)	10:00 day prior	3 days prior 4/	24 hrs	queued > 24 hrs to start: 30 days	60 days	queued > 24 hrs to start: 24 hrs	12:00 day prior	20 mins prior to start of schedule
					queued < 24 hrs to start: best effort		queued < 24 hrs to start: 2 hrs		
Non-Firm	1 month or greater (monthly)	3 days prior	60 days prior	N/A	2 days	N/A	24 hrs	15:00 day prior	20 mins prior to start of schedule

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Determine Capacity Available or System Impact Study		Customer Response 1/	Energy Scheduling 2/	
		No Later Than 8/	No Earlier Than		(From Date of Customer Commitment)			No Later Than	Changes No Later Than
Non-Firm	1 wk up to 1 mo (weekly)	2 days prior	14 days prior	N/A	4 hrs	N/A	24 hrs	15:00 day prior	20 mins prior to start of schedule

Transmission Service Type	Term	Transmission Requests 2/		Transmission Provider Response to Application	Determine Capacity Available or System Impact Study (From Date of Customer Commitment)		Customer Response 1/	Energy Scheduling 2/	
		No Later Than 8/	No Earlier Than					No Later Than	Changes No Later Than
Non-Firm	1 day up to 1 wk (daily)	10:00 day prior	2 days prior 4/	N/A	30 mins	N/A	2 hrs	15:00 day prior	20 mins prior to start of schedule
Non-Firm On-Peak Hours 9/	16 hours (06:00 – 22:00) (daily)	10:00 day prior	2 days prior 4/	N/A	30 mins	N/A	30 mins	20 mins prior to hour	20 mins prior to start of schedule
Non-Firm Off-Peak Hours 9/	8 hours (00:00 – 06:00 & 22:00 – 24:00) (daily)	10:00 day prior	2 days prior 4/	N/A	30 mins	N/A	30 mins	20 mins prior to hour	20 mins prior to start of schedule
Non-Firm 7/	1 hour up to 1 day (hourly)	30 mins. prior	10:00 day prior	N/A	Queued > 1 hr prior to start: 30 mins	N/A	Queued day prior: 30 mins	20 mins prior to hour	20 mins prior to start of schedule
					Queued < 1 hr prior to start best effort		Queued current day: 5 min 5/		

Next Hour Market	next-hour (hourly)	20 mins prior 3/	1 hour prior 3/	N/A	Best Effort	N/A	N/A 3/	20 mins prior to hour 3/	20 mins. prior to hour 3/
Transmission Service Type	Term	Transmission Requests 3/ No _____ No _____ Later _____ Earlier _____ Than _____ Than _____ 3/	Transmission Provider Response to Application		Determine _____ System Capacity _____ Impact Available _____ or _____ Study _____ From Date of Customer Commitment		Customer Response 1	Energy Scheduling 2/ _____ Changes _____ No _____ No _____ Later _____ Later _____ Than _____ Than _____	
Conditional High Impact Large Load	1 year to 5 years	Pursuant to the Requirements of Attachment RA and Part VII of the Tariff	At the Completion of Studies Outlined in Attachment RA		Pursuant to the Study Requirements of Attachment RA and Part VII of the Tariff		Pursuant to Attachment RA	N/A	

- 1/ For transactions not covered by an umbrella service agreement, the customer response must be execution of a service agreement or a request that an unexecuted service agreement be filed with the Commission pursuant to Section 15.3 of the Tariff. For transactions under an umbrella service agreement, the above times are the deadlines by which time the customer must notify the Transmission Provider of its acceptance of the offer to provide transmission.
- 2/ The Transmission Provider, in its discretion exercised on a non-discriminatory basis, may waive any of these requirements.
- 3/ All Next-Hour Market requests are submitted on schedule request and are deemed to be pre-confirmed.
- 4/ Excluding Sundays and NERC Holidays.
- 5/ Or 23:00 of previous day if for first hour of day.
- 6/ Non-firm schedules will be accepted after 15:00 day prior if there are no new reliability risks identified since the reservation was accepted. This includes but is not limited to NERC TLR in effect.
- 7/ With regard to non-firm hourly for next day transmission involving the DC ties under this Tariff, the following rule applies to limit abuse of the Transmission Provider's scheduling process: If more than three (3) requests are submitted by the same Transmission Customer or group of affiliated Transmission Customers per DC tie, per direction between 09:55:00 a.m. and 10:05:00 a.m. CPT, then all such requests shall be considered invalid.
- 8/ All transmission service requests received within the first five minutes after the specified deadline shall be deemed as having been received simultaneously. Transmission Provider shall not make such requests publicly available via the OASIS or otherwise until the close of the five minute period. Subject to the preceding sentences, a lottery system conducted by the Transmission Provider shall be used to assign priorities for reservation requests received simultaneously. Allocations of capacity shall be based on the priority established by such lottery in conjunction with the duration of transmission service requested consistent with the principles set forth in Sections 13.2 and 14.2 of the SPP OATT.
- 9/ For displaced and superseded purposes, Daily Non-Firm On-Peak hours and Daily Non-Firm Off-Peak hours services will have a NERC priority (3-ND) greater than Hourly Non-Firm (2-NH) service. A Daily Non-Firm request that is 24 hours in duration will have priority over a Daily Non-Firm request for either the On-Peak hours only or the Off-Peak hours only. For curtailment purposes, a tagged transaction utilizing Daily Non-Firm On-Peak hours or Daily Non-Firm Off-Peak hours transmission service will be assigned a priority of 3-ND to be curtailed with

other transactions with a priority of 3-ND on a pro rata basis. The Customer taking Daily Non-Firm On-Peak hours or Daily Non-Firm Off-Peak hours transmission service will be charged the applicable Attachment T rate for daily service determined by the day for which the service is being reserved. Unless otherwise explicitly stated in Attachment T, Off-Peak days are defined as Saturdays, Sundays, and NERC Holidays. All other days are considered On-Peak for the purposes of transmission service charges.

Transmission Service Increments Offered Under the Tariff

Point-To-Point Transmission Service and Network Integration Transmission Service are further characterized by service increments and windows, consistent with the version of NAESB Wholesale Electric Quadrant (WEQ-001) Business Practice Standards incorporated pursuant to Attachment R-1 of this Tariff. The Transmission Provider offers only the following service increment and window combinations:

Fixed Hourly – The service starts at the beginning of a clock hour and stops at the end of a clock hour.

Fixed Daily – The service starts at 00:00 and stops exactly 24:00 of the same calendar day (same as 00:00 of the next consecutive calendar date).

Extended Weekly – The service starts at 00:00 of any date and stops at 00:00 more than one week later, but less than four weeks later.

Extended Monthly – The service starts at 00:00 of any date and stops at 00:00 more than one month later, but less than twelve months later.

Extended Yearly – The service starts at 00:00 of any date and stops at 00:00 more than one year later.

Transmission service products are offered and processed only in Central Prevailing Time, as defined in Attachment X of the Tariff. Transmission Provider utilizes the 24-hour clock convention of time keeping.

ATTACHMENT T

Rate Sheets For Point-To-Point Transmission Service

American Electric Power - West
Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the American Electric Power – West (“AEPW”) rate zone are set forth in the “AEP-West PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website. Transmission Owners that have Commission approved rate(s) in the AEPW rate zone are: American Electric Power (“AEP”); East Texas Electric Cooperative, Inc. and Deep East Electric Cooperative, Inc., (hereinafter referred to collectively as “Texas Electric Cooperatives”); Oklahoma Municipal Power Authority (“OMPA”); AEP West Transmission Companies (“AEP-West Transco”); Coffeyville Municipal Light and Power (“CMLP”); Arkansas Electric Cooperative Corporation (“AECC”); and Transource Oklahoma (“TROK”).

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges based upon the rates set forth in the RRR File, calculated pursuant to the AEP rate formula and protocols (“AEP Formula Rate”); the AEP-West Transco rate formula and protocols (“AEP-West Transco Formula Rate”); the AECC rate formula and protocols (“AECC Formula Rate”); and the Transource Oklahoma rate formula and protocols (“TROC Formula Rate”) set forth in Attachment H, Addendums 4, 12, 38, and 48 respectively, of the Tariff, and as described below:

1. Yearly delivery: the sum of (a) \$2,053.993/MW for the Texas Electric Cooperatives, (b) \$91.51/MW for OMPA, (c) \$47.32/MW for CMLP and (d) the sum of the firm yearly delivery rates set forth in the AEP Formula Rate, the AEP-West Transco Formula Rate, the AECC Formula Rate, and the TROC Formula Rate.
2. Monthly delivery: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROC yearly delivery rates divided by 12 months.
3. Weekly delivery: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROC yearly delivery rates divided by 52 weeks.
4. Daily delivery:
 - On-Peak: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROC yearly delivery rates divided by 260 days.
 - Off-Peak: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROC yearly delivery rates divided by 365 days .

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges based upon the rates set forth in the RRR File, calculated pursuant to the AEP Formula

Rate, the AEP-West Transco Formula Rate, the AECC formula rate, and the TROK formula rate and as described below:

1. Monthly delivery: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROK firm yearly delivery rates divided by 12 months.
2. Weekly delivery: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROK firm yearly delivery rates divided by 52 weeks.
3. Daily delivery:
 - On-Peak: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROK firm yearly delivery rates divided by 260 days.
 - Off-Peak the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROK firm yearly delivery rates divided by 365 days.
4. Hourly delivery:
 - On-Peak: the sum of the AEP, Texas Electric Cooperatives, OMPA, CMLP, AEP-West Transco, AECC, and TROK firm yearly delivery rates divided by 4,160 hours.
 - Off-Peak: the sum of the AEP, Texas Electric Cooperatives OMPA, CMLP, AEP-West Transco, AECC, and TROK firm yearly delivery rates divided by 8,760 hours.

For the purpose of the rate specified for Daily delivery the Off-Peak Period shall be Saturdays, Sundays, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day and the On-Peak Period shall be all days that are not in the Off-Peak Period.

For the purpose of the rate specified for Hourly delivery On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone, excluding Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Off-Peak is all hours not designated as On-Peak.

Discounts for Certain Through and Out Service Transactions via AEP Pricing Zone:

For the purpose of this Section, the following definitions shall apply:

AEP: American Electric Power, Inc. including its operating company affiliates located in the SPP region (Public Service Company of Oklahoma and Southwestern Electric Power Company).

AEP Operating Companies' Tariff: The open access transmission service tariff on file with the Commission under which the AEP Operating Companies offer, among other services, ERCOT Regional Transmission Service.

ERCOT: The Electric Reliability Council of Texas.

ERCOT Power Supplier: An electric utility that sells electricity for resale into ERCOT and takes transmission service under Part IV of the AEP Operating Companies' Tariff for such sales.

Load Serving Entity: Any electric utility operating in ERCOT that serves Native Load Customers within ERCOT.

Native Load Customer: The wholesale and/or retail power customers of TCC and TNC on whose behalf TCC and TNC, by statute, franchise, regulatory requirement, or contract, have undertaken an obligation to construct and operate the TCC and TNC systems to meet the reliable electric needs of such customers or the wholesale and retail power customers of a Load Serving Entity who, by statute, franchise, regulatory requirement, or contract has undertaken an obligation to plan, construct and operate the Load Serving Entity's system to meet the reliable electric needs of such customers. Native Load Customers do not include load served outside of ERCOT.

Planned Resource: Any generation resource owned, controlled, or purchased by an ERCOT Power Supplier or Load Serving Entity and designated as a Planned Resource for the purpose of serving load located in ERCOT.

TCC: AEP Texas Central Company.

TNC: AEP Texas North Company.

Unplanned Resource: Any generation resource owned or purchased by an ERCOT Power Supplier or Load Serving Entity, used to serve loads within ERCOT and not designated as a Planned Resource.

Discount Provision: A Load Serving Entity that takes ERCOT Regional Transmission Service under Part IV of the AEP Operating Companies' Tariff and also takes transmission service under Part II of this Tariff to import into ERCOT Planned Resources or Unplanned Resources to serve its Native Load Customers in ERCOT shall have its zonal rates under Schedules 7 and 8 reduced by 45.27% in instances when AEP is the applicable pricing zone under the SPP Tariff. This discount applies only to charges under Schedules 7 and 8 of the SPP Tariff.

City Utilities of Springfield, Missouri
Rate Sheet for Point-To-Point Transmission Service

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service Revenue ~~and Conditional High Impact Large Load Service~~ Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the City Utilities of Springfield, MO formula rate shown in Attachment H, Addendum 17, and described below:

1. Annual Deliveries: one-twelfth of the rate per kW of Reserved Capacity per year.
2. Monthly delivery: rate per kW of Reserved Capacity per month.
3. Weekly delivery: rate per kW of Reserved Capacity per week.
4. Daily delivery: rate per kW of Reserved Capacity per day.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below:

1. Monthly delivery: rate per kW of Reserved Capacity per month.
2. Weekly delivery: rate per kW of Reserved Capacity per week.
3. Daily delivery: rate per kW of Reserved Capacity per day.
4. Hourly Deliveries: rate per kW of Reserved Capacity per day divided by 16.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the on-peak rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

The Empire District Electric Company
Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in The Empire District Electric Company Zone are set forth in the “Empire PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service Revenue ~~and Conditional High Impact Large Load Service~~ Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to The Empire District Electric Company formula rate shown in Attachment H, Addendum 18, and described below:

1. Yearly delivery: one-twelfth of the rate per MW of Reserved Capacity per year.

2. Monthly delivery: rate per MW of Reserved Capacity per month.
3. Weekly Delivery: rate per MW of Reserved Capacity per week.
4. Daily delivery:
 - On-Peak: rate per MW of Reserved Capacity per day.
 - Off-Peak: rate per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to The Empire District Electric Company formula rate shown in Attachment H, Addendum 18, and described below:

1. For Monthly delivery: rate per MW of Reserved Capacity per month.
2. For Weekly delivery: rate per MW of Reserved Capacity per week.
3. For Daily delivery:
 - On-Peak: rate per MW of Reserved Capacity per day.
 - Off-Peak: rate per MW of Reserved Capacity per day.
4. Hourly delivery:
 - On-Peak: rate per MWh of Reserved Capacity per hour.
 - Off-Peak: rate per MWh of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

Evergy Kansas Central, Inc. (Evergy Kansas South, Inc. and Evergy Kansas Central, Inc.)

Rate Sheet for Point-To-Point Transmission Service

These Point-To-Point charges shall be calculated using the Existing Zonal Annual Transmission Revenue Requirement (“Zonal ATRR”) for the Evergy Kansas Central, Inc. rate zone as specified in Attachment H, Section I, Table 1, Line 14, Column (3), which is the sum of Existing Zonal ATRRs referenced in Attachment H, Section I, Table 1, Column (3) as being in the Evergy Kansas Central, Inc. rate zone. As a result of the rate formula and associated protocols set forth in Attachment H, Addendum 3 of this Tariff (“Evergy Kansas Central, Inc. Formula Rate”), the Existing Zonal ATRR referenced in Attachment H, Section I, Table 1, Line 14a, Column (3) shall be posted on the SPP website by October 15 of each calendar year and shall be effective on January 1 of the following year. The Prairie Wind Transmission LLC rate formula and associated protocols (“Prairie Wind Formula Rate”) set forth in Attachment H, Addendum 15 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 14b, Column (3) shall be posted on the SPP website by September 1 of each calendar year and shall be effective on January 1 of the following year. The South Central MCN LLC rate formula and associated protocols (“South Central MCN Formula Rate”) set forth in Attachment H, Addendum 43 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 14d, Column (3) shall be posted on the SPP website by October 1 of each calendar year and shall be effective on January 1 of the following year. The Kansas Power Pool rate formula and associated protocols (“Kansas Power Pool Formula Rate”) set forth in Attachment H, Addendum 16 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 14c, Column (3) shall be posted on the SPP website by October 1 of each calendar year and shall be effective on January 1 of the following year. The NextEra Energy Transmission Southwest, LLC rate formula and associated protocols (“NEET Southwest Formula Rate”) set forth in Attachment H, Addendum 44 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 14e, Column (3) shall be posted on the SPP website by October 1 of each calendar year and shall be effective on January 1 of the following year. The results for the Point-To-Point rates described herein shall be specifically set forth in the “Evergy Kansas

Central, Inc. PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Evergy Kansas Central, Inc. Formula Rate, Prairie Wind Formula Rate, Kansas Power Pool Formula Rate, South Central MCN Formula Rate and the NEET Southwest Formula Rate set forth in Attachment H, Addendums 3, 15, 16, 43, and 44 respectively, of the Tariff, and as described below:

1. Yearly delivery charge: the sum of the firm yearly delivery rates set forth in the Evergy Kansas Central, Inc. Formula Rate, the Prairie Wind Formula Rate, Kansas Power Pool Formula Rate, South Central MCN Formula Rate and the NEET Southwest Formula Rate.
2. Monthly delivery charge: the yearly delivery charge divided by 12 months (\$/kW/Mo).

3. Weekly delivery charge: the yearly delivery charge divided by 52 weeks (\$/kW/Wk).
4. Daily delivery charge: Peak: the weekly delivery charge divided by 5 days (\$/kW/Day).
Off Peak: the weekly delivery charge divided by 7 days (\$/kW/Day).

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the Peak Rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Evergy Kansas Central, Inc. Formula Rate, the Prairie Wind Formula Rate, Kansas Power Pool Formula Rate, South Central MCN Formula Rate and the NEET Southwest Formula Rate set forth in Attachment H, Addendums 3, 15, 16, 43, and 44 respectively, of the Tariff, and as described below:

1. Monthly delivery charge: the yearly delivery charge for Firm Point-To-Point service specified divided by 12 months (\$/kW/Mo).
2. Weekly delivery charge: the yearly delivery charge for Firm Point-To-Point service specified divided by 52 weeks (\$/kW/Week).
3. Daily delivery charge: Peak: the weekly delivery charge divided by 5 days (\$/kW/Day).
Off Peak: the weekly delivery charge divided by 7 days (\$/kW/Day).
4. Hourly delivery charge: Peak: the daily delivery charge divided by 16 hours (\$/kW/Hr).
Off Peak: the daily delivery charge divided by 24 hours (\$/kW/Hr).

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed

the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Evergy Metro, Inc.

Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Evergy Metro, Inc. Zone are set forth in the “EMe PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website. Transmission Owners that have Commission approved rate(s) in the Evergy Metro, Inc. Zone are: Evergy Metro, Inc. (“EMe”) and City of Independence, Missouri (“INDP”).

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the EMe formula rate shown in Attachment H, Addendum 10, Parts 1 and 2, and as described below:

1. Yearly delivery: one-twelfth of the sum of (a) the rate per MW of Reserved Capacity per year as set forth in the EMe formula rate and (b) \$2,442.048 for INDP.
2. Monthly delivery: the sum of the EMe and INDP yearly rates divided by 12 per MW of Reserved Capacity per month.
3. Weekly delivery: the sum of the EMe and INDP yearly rates divided by 52 per MW of Reserved Capacity per week.
4. Daily on-peak delivery: the sum of the EMe and INDP yearly delivery rates divided by 260 per MW of Reserved Capacity per day.
5. Daily off-peak delivery: the sum of the EMe and INDP yearly delivery rates divided by 365 per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the EMe formula rate shown in Attachment H, Addendum 10, Parts 1 and 2, and as described below:

1. Monthly delivery: the sum of the EMe and INDP yearly rates divided by 12 per MW of Reserved Capacity per month.
2. Weekly delivery: the sum of the EMe and INDP yearly rates divided by 52 per MW of Reserved Capacity per week.
3. Daily on-peak delivery: the sum of the EMe and INDP yearly delivery rates divided by 260 per MW of Reserved Capacity per day.
4. Daily off-peak delivery: the sum of the EMe and INDP yearly delivery rates divided by 365 per MW of Reserved Capacity per day.
5. Hourly on-peak delivery: the sum of the EMe and INDP yearly delivery rates divided by 4,160 per MW of Reserved Capacity per hour.
6. Hourly off-peak delivery: the sum of the EMe and INDP yearly delivery rates divided by 8,760 per MW of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily on-peak delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

Evergy Missouri West, Inc.

Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Evergy Missouri West, Inc. Zone are set forth in the “EMW PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website. Transmission Owners that have Commission approved rate(s) in the Evergy Missouri West, Inc. rate zone are: Evergy Missouri West, Inc. and Transource Missouri, LLC.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Evergy Missouri West, Inc. formula rate shown in Attachment H, Addendum 11, Parts 1 and 2, and Transource Missouri, LLC rate formula and protocols shown in Attachment H, Addendum 21 of this Tariff and as described below:

1. Yearly delivery: one-twelfth of the rate per MW of Reserved Capacity per year.
2. Monthly delivery: rate per MW of Reserved Capacity per month.
3. Weekly delivery: rate per MW of Reserved Capacity per week.
4. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
5. Daily off-peak delivery: rate per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Evergy Missouri West, Inc. formula rate shown in Attachment H, Addendum 11, Parts 1 and 2, and Transource Missouri, LLC rate formula and protocols shown in Attachment H, Addendum 21 of this Tariff and as described below:

1. Monthly delivery: rate per MW of Reserved Capacity per month.
2. Weekly delivery: rate per MW of Reserved Capacity per week.
3. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
4. Daily off-peak delivery: rate per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

5. Hourly delivery: The rate per MW of Reserved Capacity per hour for on-peak service and the rate per MW of Reserved Capacity per hour for off-peak service are stated in the RRR File. The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily on-peak delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

Grand River Dam Authority
Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Grand River Dam Authority Zone are set forth in the “GRDA PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Grand River Dam Authority formula rate shown in Attachment H, Addendum 13, and described below:

1. Yearly delivery: one-twelfth of the rate per kW of Reserved Capacity per year.
2. Monthly delivery: rate per kW of Reserved Capacity per month.
3. Weekly Delivery: rate per kW of Reserved Capacity per week.

4. Daily delivery:

On-Peak: rate per kW of Reserved Capacity per day.

Off-Peak: rate per kW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Grand River Dam Authority formula rate shown in Attachment H, Addendum 13, and described below:

1. For Monthly delivery: rate per kW of Reserved Capacity per month.

2. For Weekly delivery: rate per kW of Reserved Capacity per week.

3. For Daily delivery:

On-Peak: rate per kW of Reserved Capacity per day.

Off-Peak: rate per kW of Reserved Capacity per day.

4. Hourly delivery:

On-Peak: rate per kWh of Reserved Capacity per hour.

Off-Peak: rate per kWh of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Kansas City Board of Public Utilities
Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Kansas Board of Public Utilities rate Zone are set forth in the “BPU PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Kansas City Board of Public Utilities formula rate shown in Attachment H, Addendum 46 and described below:

1. Yearly delivery: one-twelfth of the rate per MW of Reserved Capacity per year.
2. Monthly delivery: rate per MW of Reserved Capacity per month.
3. Weekly delivery: rate per MW of Reserved Capacity per week.

4. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
5. Daily off-peak delivery: rate per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Kansas City, Kansas Board of Public Utilities formula rate shown in Attachment H, Addendum 46 and described below:

1. Monthly delivery: rate per MW of Reserved Capacity per month.
2. Weekly delivery: rate per MW of Reserved Capacity per week.
3. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
4. Daily off-peak delivery: rate per MW of Reserved Capacity per day.
5. Hourly on-peak delivery: rate per MW of Reserved Capacity per hour.
6. Hourly off-peak delivery: rate per MW of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily on-peak delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

Lincoln Electric System
Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Lincoln Electric System Zone are set forth in the “LES PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Lincoln Electric System formula rate shown in Attachment H, Addendum 6, and described below:

1. Yearly delivery: one-twelfth of the rate per MW of Reserved Capacity per year.
2. Monthly delivery: rate per MW of Reserved Capacity per month.
3. Weekly delivery: rate per MW of Reserved Capacity per week.

4. Daily delivery:

On-Peak: rate per MW of Reserved Capacity per day.

Off-Peak: rate per MW of Reserved Capacity per day.

On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone, excluding Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Off-Peak is all hours not designated as On-Peak.

The total demand charged in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Lincoln Electric System formula rate shown in Attachment H, Addendum 6, and described below:

1. Monthly delivery: rate per MW of Reserved Capacity per month.

2. Weekly delivery: rate per MW of Reserved Capacity per week.

3. Daily delivery:

On-Peak: rate per MW of Reserved Capacity per day.

Off-Peak: rate per /MW of Reserved Capacity per day.

4. Hourly delivery:

On-Peak: rate per MWh of Reserved Capacity per hour.

Off-Peak: rate per MWh of Reserved Capacity per week.

On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone excluding Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Off-Peak is all hours not designated as On-Peak.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

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Midwest Energy, Inc.

Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Midwest Energy, Inc. Zone are set forth in the “Midwest PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Midwest Energy, Inc. formula rate shown in Attachment H, Addendum 14, and described below:

1. Yearly delivery: one-twelfth of the rate per kW of Reserved Capacity per year.
2. Monthly delivery: rate per kW of Reserved Capacity per month.
3. Weekly delivery: rate per kW of Reserved Capacity per week.
4. Daily delivery: rate per kW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Midwest Energy, Inc. formula rate shown in Attachment H, Addendum 14, and described below:

1. Monthly delivery: rate per kW of Reserved Capacity per month.
2. Weekly delivery: rate per kW of Reserved Capacity per week.
3. Daily delivery: rate per kW of Reserved Capacity per day.
4. Hourly delivery: rate per MWh of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Nebraska Public Power District (“NPPD”)
Rate Sheet for Point-To-Point Transmission Service

These Point-To-Point charges in the Nebraska Public Power District rate zone (“NPPD Zone”) shall be calculated using the rate formula set forth in Addendum 7 of Attachment H of the SPP Tariff (“NPPD Formula Rate”), the formula rate set forth in Addendum 36 of Attachment H of the SPP Tariff (“Tri-State Formula Rate”) plus the Point-to-Point Transmission Service rate for The Central Nebraska Public Power and Irrigation District (“CNPPID”) set forth below. The results of the NPPD formula calculation shall be posted on the SPP website and in an accessible location on the NPPD website by December 15 of each calendar year and shall be effective on January 1 of the following year. The results of the Tri-State formula calculation shall be posted on the SPP website and in an accessible location on the Tri-State website by June 15 of each calendar year and shall be effective on July 1 of that year. The results for the Point-To-Point rates described herein shall be specifically set forth in the “NPPD PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Firm Point-To-Point Transmission Service at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the NPPD Formula Rate shown in Attachment H, Addendum 7, to the Tri-State Formula Rate shown in Attachment H, Addendum 36 plus the Point-to-Point Transmission Service rate for CNPPID and described below:

1. Annual delivery: Shall be the rate for Reserved Capacity per year specified in line 13 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus revenue requirement per year in the Tri-State Formula Rate divided by the applicable average of the 12 coincident system peaks (the rate per MW of Reserved Capacity) plus an annual Point-to-Point Transmission Service rate of \$128.961 per MW for CNPPID.

2. Monthly delivery: Shall be the rate for Reserved Capacity per month specified in line 14 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 12 months in the Tri-State Formula Rate plus a monthly Point-to-Point Transmission Service rate of \$10.747 per MW for CNPPID.

3. Weekly delivery: Shall be the rate for Reserved Capacity per week specified in line 15 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 52 weeks in the Tri-State Formula Rate plus a weekly Point-to-Point Transmission Service rate of \$2.480 per MW for CNPPID.

4. Daily delivery:

On-Peak: Shall be the rate for Reserved Capacity per day specified in line 16 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 260 days in the Tri-State Formula Rate plus a daily on-peak Point-to-Point Transmission Service rate of \$0.496 per MW for CNPPID.

Off-Peak: Shall be the rate for Reserved Capacity per day specified in line 17 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 365 days in the Tri-State Formula Rate plus a daily off-peak Point-to-Point Transmission Service rate of \$0.353 per MW for CNPPID.

Service in the opposite direction of the original schedule shall be considered a new and separate service under this Tariff requiring payment of a separate charge.

On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone, excluding Saturdays, Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Off-Peak is all hours not designated On-Peak.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the NPPD Formula Rate shown in Attachment H, Addendum 7 plus the Point-to-Point Transmission Service rate for CNPPID, and described below. Service in the opposite direction of the original schedule

shall be considered a new and separate service under this Tariff requiring payment of a separate charge.

1. Monthly delivery: Shall be the rate for Reserved Capacity per month specified in line 14 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 12 months in the Tri-State Formula Rate plus a monthly Point-to-Point Transmission Service rate of \$10.747 per MW for CNPPID.
2. Weekly delivery: Shall be the rate for Reserved Capacity per week specified in line 15 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 52 weeks in the Tri-State Formula Rate plus a weekly Point-to-Point Transmission Service rate of \$2.480 per MW for CNPPID.
3. Daily delivery:
 - On-Peak: Shall be the rate for Reserved Capacity per day specified in line 16 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 260 days in the Tri-State Formula Rate plus a daily on-peak Point-to-Point Transmission Service rate of \$0.496 per MW for CNPPID.
 - Off-Peak: Shall be the rate for Reserved Capacity per day specified in line 17 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 365 days in the Tri-State Formula Rate plus a daily off-peak Point-to-Point Transmission Service rate of \$0.353 per MW for CNPPID.

4. Hourly delivery:

On-Peak: Shall be the rate for Reserved Capacity per hour specified in line 18 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 4160 hours in the Tri-State Formula Rate plus an hourly on-peak Point-to-Point Transmission Service rate of \$0.031 per MW for CNPPID.

Off-Peak: Shall be the rate for Reserved Capacity per hour specified in line 19 of Page 1 of the Formula Rate Template for NPPD set forth in Addendum 7 of Attachment H of this Tariff plus annual rate divided by 8760 hours in the Tri-State Formula Rate plus an hourly off-peak Point-to-Point Transmission Service rate of \$0.015 per MW for CNPPID.

On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone, excluding Saturdays, Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Off-Peak is all hours not designated as On-Peak.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the On-peak rate specified for Daily delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

Capacity designations at the Point(s) of Receipt will be inclusive of losses.

Oklahoma Gas and Electric Company
Rate Sheet for Point-To-Point Transmission Service

These Point-To-Point charges shall be calculated using the Existing Zonal Annual Transmission Revenue Requirement (“Zonal ATRR”) for the Oklahoma Gas and Electric Company rate zone as specified in Attachment H, Section I, Table 1, Line 7, Column (3), which is the sum of Existing Zonal ATRRs referenced in Attachment H, Section I, Table 1, Column (3) as being in the Oklahoma Gas and Electric Company rate zone total. As a result of the rate formula set forth in Attachment H, Addendum 2-A of this Tariff (“OG&E Formula Rate”) and the OG&E Formula Rate Implementation Protocols set forth in Attachment H, Addendum 2-B of the Tariff, the Existing Zonal ATRR referenced in Attachment H, Section I, Table 1, Line 7a, Column (3) shall be posted on the SPP website by September 1 of each calendar year and shall be effective on January 1 of the following year. The Arkansas Electric Cooperative Corporation rate formula (“AECC Formula Rate”) and the associated protocols set forth in Attachment H, Addendum 38 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 7c, Column (3). The People’s Electric Cooperative rate formula (“PEC Formula Rate”) and the associated protocols set forth in Attachment H, Addendum 51 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 7d, Column (3). The NextEra Energy Transmission Southwest, LLC (“NEET Southwest Formula Rate”) and the associated protocols set forth in Attachment H, Addendum 44 of this Tariff, the Existing Zonal ATRR is referenced in Attachment H, Section I, Table 1, Line 7e, Column (3). The results for the Point-To-Point rates described herein shall be specifically set forth in the “OGE PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the OG&E Formula Rate shown in Attachment H, Addendum 2-A and Addendum 2-B, and described below:

1. Yearly delivery: the Existing Zonal ATRR referenced in Attachment H, Section I, Table 1, Line 7a, 7c, 7d, and 7e, Column (3) divided by the 12-CP divisor identified on page 1, line 5 of the OG&E Formula Rate \$/kW of Reserved Capacity per year, plus \$0.0752/kW for Oklahoma Municipal Power Authority.
2. Monthly delivery: the yearly charge divided by 12 for the \$/kW of Reserved Capacity per month plus \$0.0063/kW for Oklahoma Municipal Power Authority.
3. Weekly delivery: the yearly charge divided by 52 for the \$/kW Reserved Capacity per week plus \$0.0014/kW for Oklahoma Municipal Power Authority.
4. Weekday delivery: the weekly charge divided by 5 for the \$/kW of Reserved Capacity per day plus \$0.0003/kW for Oklahoma Municipal Power Authority.
5. Weekend and Holiday delivery: the weekly delivery charge divided by 7 for the \$/kW of Reserved Capacity per day plus \$0.0002/kW for Oklahoma Municipal Power Authority.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the OG&E Formula Rate shown in Attachment H, Addendum 2-A and Addendum 2-B, and described below:

1. Monthly delivery: the yearly delivery charge for Firm Point-to-Point service specified above divided by 12 for the \$/kW of Reserved Capacity per month plus \$0.0063/kW for Oklahoma Municipal Power Authority.

2. Weekly delivery: the yearly delivery charge for Firm Point-to-Point service specified above divided by 52 for the \$/kW of Reserved Capacity per week plus \$0.0014/kW for Oklahoma Municipal Power Authority.

3. Weekday delivery: the weekly delivery charge divided by 5 for the \$/kW of Reserved Capacity per day plus \$0.0003/kW for Oklahoma Municipal Power Authority.

4. Weekend and Holiday delivery: the weekly delivery charge divided by 7 for the \$/kW of Reserved Capacity per day plus \$0.0002/kW for Oklahoma Municipal Power Authority.

5. Hourly delivery: the weekend and holiday delivery charge divided by 24 for the \$/MW of Reserved Capacity per hour plus \$0.0086/MWh for Oklahoma Municipal Power Authority.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the Weekend and Holiday Delivery rate specified for Weekday delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Omaha Public Power District (“OPPD”)
Rate Sheet for Point-To-Point Transmission Service

These Point-To-Point charges shall be calculated using OPPD’s Formula-based Rate Template as set forth in Addendum 8 of Attachment H of the SPP Tariff (“OPPD Formula Rate”). The results of the formula calculation shall be posted on the SPP website by July 20 of each calendar year and shall be effective on August 1 of such year. The results for the Point-To-Point rates shall be specifically set forth in the “OPPD PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the OPPD Formula Rate shown in Attachment H, Addendum 8, and described below:

Monthly delivery:	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 13 (\$/kW/Mo).
Weekly delivery:	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 14 (\$/kW/Week).
Daily delivery:	
On-Peak	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 15 (\$/kW/Day)
Off-Peak	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 16 (\$/kW/Day)

For the purposes of the Daily delivery charge, the On-Peak days are Monday through Friday, excluding the NERC defined holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, and Off-Peak days are all other days. The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the OPPD Formula Rate shown in Attachment H, Addendum 8, and described below:

Monthly delivery:	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 13 (\$/kW/Mo).
Weekly delivery:	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 14 (\$/kW/Week).
Daily delivery:	
On-Peak	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 17 (\$/kW/Day)

Off-Peak	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 17a (\$/kW/Day)
Hourly delivery	
On-Peak	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 18
Off-Peak	The rate as shown on the Formula-based Rate Template for OPPD, page 1, line 18a

For the purposes of the Daily delivery charge, the On-Peak days are Monday through Friday, excluding the NERC defined holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, and the Off-Peak days are all other days. For the purposes of the Hourly delivery charge, On-Peak hours are all hours between HE 0700 and continuing through HE 2200, excluding Saturdays, Sundays, and the NERC defined holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, and Off-Peak hours shall be all other hours.

The total demand charge in any week, pursuant to a reservation for Daily or Hourly delivery shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week. In addition, the total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day.

Southwestern Power Administration
Rate Sheet for Point-To-Point Transmission Service

These Point-To-Point charges in the Southwestern Power Administration rate zone (“Southwestern Zone”) shall be calculated using the Point-to-Point Transmission Service rate for Southwestern Power Administration (“Southwestern”) set forth below, plus South Central MCN LLC’s (“South Central MCN”) rate formula set forth in Addendum 43 to Attachment H of this Tariff (“South Central MCN Formula Rate”), plus Missouri Joint Municipal Electric Utility Commission (“MEUC”) rate formula set forth in addendum 50 to Attachment H of this Tariff (“MEUC Formula Rate”), plus People’s Electric Cooperative (“PEC”) rate formula set forth in Addendum 51 to Attachment H of this Tariff (“PEC Formula Rate”). The results for the Point-To-Point rates described herein shall be specifically set forth in the “SPA PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Firm Point-To-Point Transmission Service at the sum of the applicable charges set forth in the RRR File, Southwestern’s Point-to-Point Transmission Service rate, plus the Point-to-Point Transmission Service rate calculated pursuant to the South Central MCN Formula Rate shown in Attachment H, Addendum 43, plus the Point-to Point Transmission Service rate calculated pursuant to the MEUC Formula Rate shown in Attachment H,

Addendum 50, plus the Point-to-Point Transmission Service rate calculated pursuant to the PEC Formula Rate shown in Attachment H, Addendum 51 as described below:

- Yearly: the Southwestern yearly per kilowatt of transmission capacity reserved for annual service or invoiced in accordance with a longer term agreement as set forth in the RRR File, plus the South Central MCN Zonal Annual Transmission Revenue Requirement, as referenced in Attachment H, Section I, Table 1, Line 10b, Column (3), plus the MEUC Zonal Annual Transmission Revenue Requirement, as referenced in Attachment H, Section I, Table 1, Line 10c, Column (3), plus the PEC Zonal Annual Transmission Revenue Requirement, as referenced in Attachment H, Section I, Table 1, Line 10d, Column (3) of the Southwestern Zone divided by the applicable average of the 12 coincident system peaks.
- Monthly: Southwestern's \$1.48 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a longer term agreement, plus South Central MCN's yearly delivery charge divided by 12 months, plus MEUC's yearly delivery charge divided by 12 months, plus PEC's yearly delivery charge divided by 12 months.
- Weekly: Southwestern's \$0.370 per kilowatt of transmission capacity reserved in increments of one week of service, plus South Central MCN's yearly delivery charge divided by 52 weeks, plus MEUC's yearly delivery charge divided by 52 weeks, plus PEC's yearly delivery charge divided by 52 weeks.
- Daily: Southwestern's \$0.0673 per kilowatt of transmission capacity reserved in increments of one day of service, plus South Central MCN's weekly delivery charge divided by 5 days, plus MEUC's weekly delivery charge divided by 5 days, plus PEC's weekly delivery charge divided by 5 days.

Transmission Customers whose loads are directly connected to Southwestern's system and are not within Southwestern's control area will be charged on the greatest of (1) the peak demand at any particular point of delivery during a particular month, rounded up to the nearest whole megawatt, or (2) the highest peak demand recorded at such point of delivery during any of the previous 11 months, rounded up to the nearest whole megawatt, or (3) the capacity reserved by contract, which amount shall be considered such transmission customer's reserved capacity. Secondary Transmission Service for such Transmission Customers shall be limited during any month to the most recent peak demand on which a particular Transmission Customer is billed or to the capacity reserved by contract, whichever is greater.

Non-Firm Point-To-Point Transmission Service The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below:

1. Monthly delivery: Southwestern's \$1.184/KW of Reserved Capacity per month, plus South Central MCN's yearly delivery charge divided by 12 months, plus MEUC's yearly delivery charge divided by 12 months, plus PEC's yearly delivery charge divided by 12 months.
2. Weekly delivery: Southwestern's \$0.296/KW of Reserved Capacity per week, plus South Central MCN's yearly delivery charge divided by 52 weeks, plus MEUC's yearly delivery charge divided by 52 weeks, plus PEC's yearly delivery charge divided by 52 weeks.
3. Daily delivery: Southwestern's \$0.0538/KW of Reserved Capacity per day, plus South Central MCN's weekly delivery charge divided by 5 days, plus MEUC's yearly weekly delivery charge divided by 5 days, plus PEC's yearly weekly delivery charge divided by 5 days.
4. Hourly delivery: Southwestern's \$0.00336/KW of Reserved Capacity per hour, plus South Central MCN's daily delivery charge divided by 16 hours, plus MEUC's daily delivery charge divided by 16 hours, plus PEC's daily delivery charge divided by 16 hours.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Southwestern Public Service Company
Rate Sheet for Point-To-Point Transmission Service

These Point-To-Point charges shall be calculated using the rate formula set forth in Attachment O - SPS of the Xcel Energy Operating Companies Joint Open Access Transmission Tariff (“Xcel Energy OATT”), plus Lea County Electric Cooperative, Inc.’s (“LCEC”) rate formula set forth in Addendum 52 to Attachment H of this Tariff (“LCEC Formula Rate”). The results of the formula calculation shall be posted on the SPP website and in an accessible location on the SPS OASIS website by October 1 of each calendar year and shall be effective on January 1 of the following calendar year. The results for the Point-To-Point rates described herein shall be specifically set forth in the “SPS PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Southwestern Public Service Company formula rate Attachment H, Addendum 5 and the LCEC Formula Rate described below:

1. Monthly delivery: Shall be the rate specified on line 11 of Page 1 of the Attachment

O - SPS of the Xcel Energy OATT of Reserved Capacity per month, plus LCEC's yearly delivery charge divided by 12 months.
2. Weekly delivery: Shall be the rate specified on line 12 of Page 1 of the Attachment

O – SPS of the Xcel Energy OATT of Reserved Capacity per week, plus LCEC's yearly delivery charge divided by 52 weeks.
3. Daily delivery
 - On-Peak: Shall be the rate specified on line 13, column 3 of Page 1 of the Attachment O – SPS of the Xcel Energy OATT of Reserved Capacity per day, plus LCEC's weekly delivery charge divided by 6 days.
 - Off-Peak: Shall be the rate specified on line 13, column 5 of Page 1 of the Attachment O – SPS of the Xcel Energy OATT of Reserved Capacity per day, plus LCEC's weekly delivery charge divided by 7 days.

Service in the opposite direction of the original schedule shall be considered a new and separate service under this Tariff requiring payment of a separate charge.

On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone, excluding Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Off-Peak is all hours not designated as On-Peak.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Southwestern Public Service Company formula rate in Attachment H, Addendum 5 and the LCEC Formula Rate described below. Service in the opposite direction of the original schedule shall be considered a new and separate service under this Tariff requiring payment of a separate charge.

1. Monthly delivery: Shall be the rate specified on line 11 of Page 1 of the Attachment

O – SPS of the Xcel Energy OATT of Reserved Capacity per Month, plus LCEC’s yearly delivery charge divided by 12 months.
2. Weekly delivery: Shall be the rate specified on line 12 of Page 1 of the Attachment

O – SPS of the Xcel Energy OATT of Reserved Capacity per week, plus LCEC’s yearly delivery charge divided by 52 weeks.
3. Daily delivery

On-Peak: Shall be the rate specified on line 13, column 3 of Page 1 of the Attachment O – SPS of the Xcel Energy OATT of Reserved Capacity per day, plus LCEC’s weekly delivery charge divided by 6 days.

Off-Peak: Shall be the rate specified on line 13, column 5 of Page 1 of the Attachment O – SPS of the Xcel Energy

OATT of Reserved Capacity per day, plus LCEC's weekly delivery charge divided by 7 days.

4. Hourly delivery

On-Peak: Shall be the rate specified on line 14, column 3 of Page 1 of the Attachment O – SPS of the Xcel Energy OATT of Reserved Capacity per hour, plus LCEC's daily delivery charge divided by 16 hours.

Off-Peak: Shall be the rate specified on line 14, column 5 of Page 1 of the Attachment O – SPS of the Xcel Energy OATT of Reserved Capacity per hour, plus LCEC's daily delivery charge divided by 24 hours.

On-Peak is all hours between HE 0700 and HE 2200, inclusive, Central Time Zone, excluding Sundays and holidays. Holidays shall be as defined by NERC, currently New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Off-Peak is all hours not designated as On-Peak.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Capacity designations at the Point(s) of Receipt will be inclusive of losses.

Point-To-Point Transmission Service Across the Lamar Tie Line To/From the SPS Zone Transmission

Customers taking Point-to-Point Transmission Service across the Lamar Tie Line to or from the Public Service Company of Colorado (“PSCo”) transmission system and sourcing or sinking in the SPS Zone shall pay to SPP for such service a discounted rate of one-half the applicable rate under this Attachment T, Southwestern Public Service Company Rate Sheet for Point-To-Point Transmission Service.

Sunflower Electric Power Corporation
Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Sunflower Electric Power Corporation rate zone are set forth in the “SECC PTP Rate Attachment T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website.

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Sunflower Electric Power Corporation formula rate shown in Attachment H, Addendum 20, the ITC Great Plains, LLC formula rate shown in Attachment H, Addendum 9, and the Prairie Wind Transmission, LLC formula rate shown in Attachment H, Addendum 15, and described below:

1. Yearly delivery: one-twelfth of the rate per MW of Reserved Capacity per year.
2. Monthly delivery: rate per MW of Reserved Capacity per month.
3. Weekly delivery: rate per MW of Reserved Capacity per week.
4. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
5. Daily off-peak delivery: rate per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the Sunflower Electric Power Corporation formula rate shown in Attachment H, Addendum 20, the ITC Great Plains, LLC formula rate shown in Attachment H, Addendum 9, and the Prairie Wind Transmission, LLC formula rate shown in Attachment H, Addendum 15, and described below:

1. Monthly delivery: rate per MW of Reserved Capacity per month.
2. Weekly delivery: rate per MW of Reserved Capacity per week.
3. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
4. Daily off-peak delivery: rate per MW of Reserved Capacity per day.
5. Hourly on-peak delivery: rate per MW of Reserved Capacity per hour.
6. Hourly off-peak delivery: rate per MW of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily on-peak delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

Upper Missouri Zone

Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Upper Missouri (“UMZ”) rate zone are set forth in the “UMZ PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website. Transmission Owners that have Commission approved rate(s) in the UMZ rate zone are: Basin Electric Power Cooperative (“Basin Electric”); Heartland Consumers Power District (“Heartland”); Missouri River Energy Services (“MRES”); East River Electric Power Cooperative, Inc. (“East River”); Corn Belt Power Cooperative (“Corn Belt”); NorthWestern Energy Public Service Corporation (“NWPS”); Northwest Iowa Power Cooperative (“NIPCO”); Harlan Municipal Utilities (“HMU”); Western Area Power Administration, Upper Great Plains Region (“Western-UGP”); Central Electric Power Cooperative, Inc. (“Central Power”); Mountrail-Williams Electric Cooperative (“Mountrail-Williams”); Mor-Gran-Sou Electric Cooperative, Inc. (“Mor-Gran-Sou”); Roughrider Electric Cooperative, Inc. (“Roughrider”); and L and O Power Cooperative (“LOPC”).

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues, ~~Schedule 15 revenues~~, and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges based upon the rates set forth in the RRR File, calculated pursuant to the formula rates of Basin Electric, Heartland, MRES, MRES Members (includes Moorhead Public Service; Orange City Municipal Utilities; City of Pierre, South Dakota; City of Sioux Center, Iowa; Watertown Municipal Utility Department; Denison Municipal Utilities; and Vermillion Light & Power), East River, Corn Belt, NWPS, NIPCO, HMU, Western-UGP, Central Power, Mountrail-Williams, Mor-Gran-Sou, Roughrider, and LOPC including any ATRR associated with facility credits provided in the UMZ rate zone, set forth in Attachment H, Addendums 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 37, 40, 41, 42, 45, 47, and 49 (list appropriate addendums, respectively) of the Tariff, and as described below:

1. Yearly delivery: the UMZ Monthly delivery rate multiplied by 12 months.
2. Monthly delivery: the sum of the Basin Electric, Heartland, MRES, MRES Members, East River, Corn Belt, NWPS, NIPCO, HMU, Western-UGP, Central Power, Mountrail-Williams, Mor-Gran-Sou, Roughrider, and LOPC Annual Transmission Revenue Requirements determined under these entities' formula rates, including any ATRR associated with facility credits provided in the UMZ rate zone, divided by the UMZ total load estimate and divided by 12 months.
3. Weekly delivery: the UMZ Yearly delivery rate divided by 52.
4. Daily delivery: the UMZ Weekly delivery rate divided by 7.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges based upon the rates set forth in the RRR File, calculated pursuant to the formula rates of Basin Electric, Heartland, MRES, MRES Members, East River, Corn Belt, NWPS,

NIPCO, HMU, Western-UGP, Central Power, Mountrail-Williams, Mor-Gran-Sou, Roughrider, and LOPC including any ATRR associated with facility credits provided in the UMZ rate zone, and as described below:

1. Monthly delivery: the sum of the Basin Electric, Heartland, MRES, MRES Members, East River, Corn Belt, NWPS, NIPCO, HMU, Western-UGP, Central Power, Mountrail-Williams, Mor-Gran-Sou, Roughrider, and LOPC Annual Transmission Revenue Requirements determined under these entities' formula rates, including any ATRR associated with facility credits provided in the UMZ rate zone, divided by the UMZ total load estimate and divided by 12 months.
2. Weekly delivery: the UMZ Monthly delivery rate multiplied by 12 and divided by 52.
3. Daily delivery: the UMZ Weekly delivery rate divided by 7.
4. Hourly delivery: the UMZ Monthly delivery rate divided by 730 hours per month.

Western Farmers Electric Cooperative

Rate Sheet for Point-To-Point Transmission Service

The currently effective rates for Point-To-Point Transmission Service in the Western Farmers Electric Cooperative (“WFEC”) rate Zone are set forth in the “WFEC PTP Rate Att T” tab of the Revenue Requirements and Rates File (“RRR File”) posted on the SPP website. Transmission Owners that have Commission approved rate(s) in the WFEC rate Zone are: WFEC and People’s Electric Cooperative (“PEC”).

Balanced Portfolio Reallocation Adjustment of Point-To-Point Rates

Rates for Point-To-Point Transmission Service specified in this Attachment T shall be adjusted to reflect any amount reallocated from the Zonal Annual Transmission Revenue Requirement in accordance with Section IV.A of Attachment J. The rates, including any applicable reallocation adjustment, shall be set forth in the RRR File posted on the SPP website.

Point-To-Point Transmission Service ~~and Conditional High Impact Large Load Service~~ Revenue Crediting for Point-To-Point Rates

Rates for Point-To-Point Transmission Service under this Attachment T shall reflect any adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, implemented in accordance with Section 34.1(2) of this Tariff. The rates, including any applicable adjustments for Schedule 7 and 8 revenues ~~Schedule 15 revenues~~ and revenues distributed and allocated under Attachment AU, shall be set forth in the RRR File.

Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth in the RRR File, calculated pursuant to the WFEC formula rate and protocols (“WFEC Formula Rate”) shown in Attachment H, Addendum 39, and the PEC formula rate and protocols (“PEC Formula Rate”) shown in Attachment H, Addendum 51, and described below:

1. Yearly delivery: one-twelfth of the rate per MW of Reserved Capacity per year.
2. Monthly delivery: rate per MW of Reserved Capacity per month.
3. Weekly delivery: rate per MW of Reserved Capacity per week.
4. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
5. Daily off-peak delivery: rate per MW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any day during such week.

Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth in the RRR File, calculated pursuant to the WFEF Formula Rate shown in Attachment H, Addendum 39, and the PEC Formula Rate shown in Attachment H, Addendum 51, and described below:

1. Monthly delivery: rate per MW of Reserved Capacity per month.
2. Weekly delivery: rate per MW of Reserved Capacity per week.
3. Daily on-peak delivery: rate per MW of Reserved Capacity per day.
4. Daily off-peak delivery: rate per MW of Reserved Capacity per day.
5. Hourly on-peak delivery: rate per MW of Reserved Capacity per hour.
6. Hourly off-peak delivery: rate per MW of Reserved Capacity per hour.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified for Daily on-peak delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified for Weekly delivery multiplied by the highest amount in megawatts of Reserved Capacity in any hour during such week.

ATTACHMENT AE INTEGRATED MARKETPLACE

Glossary

Local Reliability Issue

A local voltage or reliability condition necessitating a Local Reliability Issue Commitment or a curtailment of a CHILL.

Non-Conforming Load

~~Load that is process driven that does not follow a predictable pattern.~~

Load that cannot be generally forecasted through a mathematically derived pattern using only weather, time, season, or other normal forecasting methods. High-Impact Large Loads are deemed Non-Conforming Loads.

2.2 Application and Asset Registration

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(20) A Market Participant registering a HILL must meet the applicable requirements described in Section 2.XX22 of this Attachment AE.

(20)(21) A Market Participant registering a Resource with a GIA under Attachment BBsupporting a HILL must meet the applicable requirements described in Section 2.XX22.2 of this Attachment AE.

2.5 Provision of Load and Generation Data

A Market Participants, or their designated Meter Agent, ~~shall~~will submit to the Transmission Provider data for the Operating Day representing the actual Resource output, where such output is either on a gross or net basis as specified during market registration as described under Section 2.2(2) of this Attachment AE, and actual load consumption, or where actual data is not available, estimates

thereof, associated with their registered load and Resources in accordance with the timelines specified in the Market Protocols. A Market Participant may designate any qualified entity to perform the Meter Agent function or perform this function on its own behalf.

Any entity performing the Meter Agent function for a Market Participant must execute the Meter Agent Agreement specified in Attachment AM prior to performing such function.

With respect to HILL, a Market Participant or its designated Meter Agent, must submit hourly or five (5) minute interval revenue quality meter data of the load in accordance with the timelines specified in the Market Protocols.

2.11 Must-Offer Requirement

2.11.1 Day-Ahead Market

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B. A Market Participant's compliance with the must offer obligation for an Asset Owner is as follows:

- (1) A Market Participant that has offered all of its available Resources for an Asset Owner, with a commitment status described in Sections 4.1(10)(a), 4.1(10)(b), and/or 4.1(10)(c) of this Attachment AE, for an hour of the Operating Day is deemed to be in compliance with the must offer requirement for that Asset Owner for that hour regardless of its maximum hourly Billable Metered Load and/or, Operating Reserve obligation.
- (2) A Market Participant that does not meet the condition described in Section 2.11.1(B)(1) of this Attachment AE for an Asset Owner for an hour of the Operating Day, but has net resource capacity for that Asset Owner for that hour greater than or equal to 90% of its load for that Asset Owner as described in Section 2.11.1(A)(1) of this Attachment AE is deemed to be in compliance for that Asset Owner with the must offer requirement for that hour.

~~(3) A Market Participant with a Resource supporting HILLs must be made available up to lesser of the HILL Demand Bid or the Resource's applicable GIA Interconnection Service limit with a commitment status described in Sections 4.1(10)(a), 4.1(10)(b), and/or 4.1(10)(c) of this Attachment AE, for each hour of the Operating Day with a corresponding HILL Demand Bid. A Resource supporting CHILLs must be made available up to the lesser of the CHILL Demand Bid or the Resource's applicable GIA Interconnection Service limit with a commitment status described in Sections 4.1(10)(a) or 4.1(10)(b) of this Attachment AE, for each hour of the Operating Day with a corresponding CHILL Demand Bid.~~

- (3) To the extent that a Market Participant does not meet the conditions ~~for an Asset Owner as~~ described in either Attachment AE Section 2.11.1(B)(1) ~~or 2.11.1(B)(2), or 2.11.1(B)(3) for Market Participants with Resources~~

supporting a HILL or CHILL of this Attachment AE for an Asset Owner, the Market Participant will be deemed noncompliant with the must offer requirement for that Asset Owner for that hour and will be assessed a penalty for that hour as determined in Section 3.9 of Attachment AF of this Tariff.

- C. Market Monitor will monitor a Market Participant's Load, Operating Reserve obligation, offered Resources and net resource capacity, for an Asset Owner for each hour of the Operating Day to determine whether the Market Participant has complied with the must offer obligation set forth in Section 2.11.1(B) of this Attachment AE.

2.XX22 High Impact Large Load Requirements

High Impact Large Loads must:

1. Follow all Non-Conforming Load requirements listed in Section 2.12 of Attachment AE;
2. Provide the Transmission Provider with actual load data via telemetry in Real-Time in accordance with the Marketplace Protocols;
3. Have remote capability to disconnect the load from the Transmission System made available to the Transmission Operator;
4. Have an effective up and down ramp rate not exceeding 20MW/minute unless otherwise directed by the SPP Balancing Authority, Reliability Coordinator, or local transmission operator;
5. Provide registration information as specified in the Integrated Marketplace Protocols;
6. Not have a negative withdrawal at the load delivery point without appropriate Transmission Service;

~~2.XX22.1 CONDITIONAL HIGH IMPACT LARGE LOAD~~

A Conditional High Impact Large Load (CHILL) is a Non-Conforming Load with service through Part VII of the Tariff. These loads must follow all requirements listed for HILL in Section 2.XX22 of this Attachment as well as provide the additional requirements listed in their Conditional High Impact Large Load Service Agreement (CHILLSA).

Conditional High Impact Large Loads must:

1. Submit separate Real Time telemetry for each CHILL in accordance with the Marketplace Protocols;
2. Submit separate bill meter values in accordance with Section 2.5 of this attachment for each CHILL;
3. Not register as a Demand Response Resource;
4. Not be a Demand Response Load;

2.XX22.2 RESOURCE SUPPORTING A HILL

Resources with a Generator Interconnection Agreement under Attachment BBA must follow all rules and restrictions included in their Generator Interconnection Agreement;

~~1. Offer into the Energy and Operating Reserve Markets to the extent that the corresponding HILL is participating as described in section 2.11.1 of this Attachment AE;~~

When supporting Resources are participating under a Load Limited Generator Interconnection Agreement, the Market Participant must ensure the total Maximum Economic Capacity Operating Limits of all supporting Resources does not exceed the submitted hourly Non-Conforming load forecast value of the corresponding HILL except when directed by the SPP RC to mitigate Emergency Conditions or as specified in the Resource's Generator Interconnection Agreement.

5.1 Day-Ahead Market

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5.1.2 Day-Ahead Market Execution

The Transmission Provider will employ a simultaneous co-optimization methodology to perform the following tasks in order to clear the Day-Ahead Market for each hour of the upcoming Operating Day:

- (1) Commit Offered Resources, Import Interchange Transaction Offers and Virtual Energy Offers using the SCUC algorithm to meet the Demand Bids, Virtual Energy Bids, Export Interchange Transactions Bids, Instantaneous Load Capacity requirements, and Operating Reserve requirements on a least cost basis for each hour of the upcoming Operating Day.
 - (a) The Day-Ahead Market SCUC algorithm will initially consider commitment of Resources not specified for reliability only use as described in Section 4.1(10)(c) of this Attachment AE, including Resources committed in the Multi-Day Reliability Assessment, up to the Resources' Maximum Economic Capacity Operating Limit (Maximum Discharge Limit or Minimum Charge Limit, when applicable, for MSRs) or Maximum Regulation Capacity Operating Limit if selected for Regulation-Up Service and/or Regulation-Down Service, and down to the Resources' Minimum Economic Capacity Operating Limit (Maximum Charge Limit or Minimum

Discharge Limit, when applicable, for MSRs) or Minimum Regulation Capacity Operating Limit if selected for Regulation-Down Service and/or Regulation-Up Service. In addition, an MCR is not eligible to be selected for Regulation-Down Service and/or Regulation-Up Service in any hour in which it is transitioning between configurations.

- (i) If this capacity is not sufficient to meet the fixed Demand Bids and fixed Export Interchange Transaction Bids, the upper bound of Instantaneous Load Capacity requirement, and Operating Reserve requirements on a system-wide basis, the Day-Ahead Market SCUC algorithm will, in priority order ~~until the capacity shortage is eliminated:~~
 - (1) curtail non-firm fixed Export Interchange Transaction Bids ~~until the capacity shortage is eliminated;~~ -and
 - (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limits, Maximum Emergency Discharge Limit, and down to Minimum Emergency Charge Limit, as applicable, commit Resources designated as reliability only use, as described in Section 4.1(10)(c) of this Attachment AE, and/or de-commit Self-Charging MSRs, on an economic basis ~~until the capacity shortage is eliminated~~ while attempting to maintain the Regulation-Up requirement to the extent possible. Capacity incorporated by the Day-Ahead Market SCUC will be available to the Day-Ahead Market SCED. This includes emergency limits where applicable. ~~The Transmission Provider may, as needed, cap or limit fixed CHILL Demand Bids in order to manage system reliability under capacity shortfall conditions.~~
- (ii) If there is a capacity surplus on a system-wide basis calculated as the sum of self-committed capacity at

minimum output, fixed Import Interchange Transaction Offers, the lower bound of Instantaneous Load Capacity requirement, Regulation-Down requirement, and the Ramp Capability Down requirement that is in excess of the sum of fixed Demand Bids and fixed Export Interchange Transaction Bids, the Day-Ahead Market SCUC algorithm will, in priority order: (1) curtail non-firm fixed Import Interchange Transaction Offers until the capacity surplus is eliminated; and (2) incorporate capacity down to Resources' Minimum Emergency Capacity Operating Limits, Minimum Emergency Discharge Limit, Maximum Emergency Charge Limit, and commit any MSR available for charging designated as reliability only use, as described in Section 4.1(10)(c) of this Attachment AE, until the capacity surplus is eliminated while attempting to maintain the Regulation-Down requirement. Capacity incorporated by the Day-Ahead Market SCUC will be available to the Day-Ahead Market SCED. This includes emergency limits where applicable.

- (b) To the extent that a particular security constraint impacting only the Transmission System cannot be directly addressed within the Day-Ahead Market SCUC algorithm and is not a Local Reliability Issue, the Transmission Provider may manually commit Resources and/or decommit Resources, including self-committed Resources to alleviate such a Transmission System security constraint in accordance with its authority as Reliability Coordinator. Such manual commitments will be selected by the Transmission Provider in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of this Attachment AE. Additionally, such manual commitments will be selected by the Transmission Provider to ensure that

commitment costs are minimized while adhering to Transmission System security constraints and the Resource operating parameter constraints submitted as part of the Day-Ahead Market Offers. The recovery of the compensation paid by the Transmission Provider for such committed Resources under Section 8.5.9 of this Attachment AE will be collected by the Transmission Provider regionally as described under Section 8.5.10 of this Attachment AE.

- (c) A Local Reliability Issue or Local Emergency Condition may need to be addressed during the Day-Ahead Market process. Local Reliability Issues, either initially recognized directly as part of the Day-Ahead Market process or previously recognized and committed as part of any Reliability Unit Commitment process, may require ~~(1)~~ manual commitment or decommitment to one or more Resources ~~or (2) reductions in applicable local CHILL demand bids~~ in the Day-Ahead Market to recognize or continue to recognize the Local Reliability Issue. A Local Emergency Condition previously recognized and committed as part of any Reliability Unit Commitment process may require ~~(1)~~ manual commitment or decommitment to one or more Resources ~~or (2) reductions in applicable local CHILL demand bids~~ in the Day-Ahead Market to continue to recognize the Local Emergency Condition. In the case where a Local Reliability Issue Commitment ~~or reductions in applicable local CHILL demand bids~~ is initiated directly as part of the Day-Ahead Market process, the Transmission Provider will issue or the local transmission operator will request the Transmission Provider to issue such instructions and any commitment by the Transmission Provider will be selected by the Transmission Provider in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of this Attachment AE. To the extent that the Transmission Provider, at the request of a local transmission

operator, initially issues or continues to issue instructions to a Resource to address a Local Reliability Issue or continues to issue instructions to a Resource to address a Local Emergency Condition, such Resource will be eligible for compensation in the same manner as any other Resource. The recovery of the compensation paid by the Transmission Provider for such committed Resources under Section 8.5.9 of this Attachment AE will be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE.

- (d) The Transmission Provider, local transmission operator, and Resource owners will develop operating guides to be applied to manual commitments made by the Transmission Provider, including such commitments made at the request of the local transmission operator to relieve known and recurring Local Reliability Issues in the Day-Ahead Market. Such Resources will be compensated in the same manner as any other Resource. The recovery of such compensation paid by the Transmission Provider for such committed Resources under Section 8.5.9 of this Attachment AE will be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE.
 - (e) The Transmission Provider will re-run the Day-Ahead SCUC algorithm after any manual commitments, time permitting, if such manual commitments were not included in the initial run and will notify the Market Participants that units were manually committed.
- (2) Using the Resource commitment results from the SCUC, clear Resource Offers, Virtual Energy Offers and Import Interchange Transaction Offers to meet Demand Bids, Virtual Energy Bids, Export Interchange Transaction Bids and Operating Reserve requirements on a least cost basis for each hour of the upcoming Operating Day using the SCED algorithm as described in Section 3.3.1 of this Attachment AE.

- (a) The SCED algorithm includes marginal loss sensitivity factors that approximate the change in marginal system losses for a change in Energy dispatch.
- (b) In certain situations, enforcing constraints may result in a solution that is not feasible at a Shadow Price less than an appropriately priced VRL. In such cases, the Transmission Provider must apply VRLs in SCED as described in Section 8.3.2 of this Attachment AE.
- (c) Use of co-optimization logic will provide, through the Shadow Price calculation, MCPs for Operating Reserve that include any lost opportunity costs incurred as a result of Operating Reserve clearing.
- (d) An MCR with a Transition State Time greater than 30 minutes in any hour in which it is transitioning between configurations is not eligible to clear Operating Reserve.

5.2 Day-Ahead Reliability Unit Commitment

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5.2.2 Day-Ahead Reliability Unit Commitment Execution

The Transmission Provider will perform a capacity adequacy analysis for the upcoming Operating Day using the SCUC algorithm with the objective of committing Resources to meet the Transmission Provider load forecast, Export Interchange Transactions, Instantaneous Load Capacity requirements, and Operating Reserve requirements less Import Interchange Transactions over the Operating Day such that commitment costs are minimized while adhering to Transmission System security constraints and the Resource operating parameter constraints submitted as part of the RTBM Offers.

- (1) Commitment costs used in the SCUC are defined as Start-Up Offer, No-Load Offer and incremental cost to operate at minimum output as defined in the submitted Energy Offer Curve.
- (2) The SCUC algorithm will initially consider commitment of Resources not specified for reliability only use as described in Section 4.1(10)(c) of this Attachment AE, up to the Resources' Maximum Economic Capacity Operating Limit, Maximum Discharge Limit, or Minimum Charge Limit, or Maximum Regulation Capacity Operating Limit if selected for Regulation-Up and/or Regulation-Down Service, and down to the Resources' Minimum Economic Capacity Operating Limit, Minimum Discharge Limit, or Maximum Charge Limit, or Minimum Regulation Capacity Operating Limit if selected for Regulation-Down and/or Regulation-Up Service. In addition, an MCR is not eligible to be selected for Regulation-Down Service and/or Regulation-Up Service in any hour in which it is transitioning between configurations.
 - (a) If this capacity plus Import Interchange Transactions is not sufficient on a system-wide basis to meet the Transmission Provider load forecast, Export Interchange Transactions, the upper bound of Instantaneous Load Capacity requirement, and Operating Reserve

requirements, the SCUC algorithm will, in priority order until the capacity shortage is eliminated:

- (1) Curtail non-firm fixed Export Interchange Transaction Bids until the capacity shortage is eliminated; and
- (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limits, Maximum Emergency Discharge Limit, or Minimum Emergency Charge Limit, commit Resources designated as reliability only use, as described in Section 4.1(10)(c) of this Attachment AE,
- (3) de-commit charging Resources that were committed in the Day-Ahead Market with a commitment status of "market" as described in Section 4.1(10)(b) of this Attachment AE, and
- (4) de-commit self-committed charging Resources until the capacity shortage is eliminated.

The Transmission Provider may, as needed, cap or limit fixed CHLL forecast in order to manage system reliability under capacity shortfall conditions.

- (b) If there is a capacity surplus on a system-wide basis calculated as the sum of self-committed capacity at minimum output, fixed Import Interchange Transactions, the lower bound of Instantaneous Load Capacity requirement, and the Regulation-Down requirements that is in excess of the sum of the Transmission Provider load forecast and fixed Export Interchange Transactions, the SCUC algorithm will, in priority order: (1) curtail non-firm fixed Import Interchange Transaction Offers until the capacity surplus is eliminated; and (2) incorporate capacity down to Resources' Minimum Emergency Capacity Operating Limits, Minimum Emergency Discharge Limit, or Maximum Emergency Charge Limit, (3) commit any available Resource with a commitment status of reliability as described in Section 4.1(10)(c) of this Attachment AE that is capable of charging, (4) de-commit Resources that were committed by the Transmission

Provider in the Day-Ahead Market that were not self-committed, and (5) de-commit self-committed Resources until the capacity surplus is eliminated.

- (3) To the extent that a particular security constraint impacting only the Transmission System cannot be directly addressed within the SCUC algorithm and is not a Local Reliability Issue, the Transmission Provider may manually commit Resources and/or decommit Resources, including self-committed Resources to alleviate such a Transmission System security constraint in accordance with its authority as Reliability Coordinator. Such manual commitments will be selected by the Transmission Provider in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of this Attachment AE. Additionally, such manual commitments will be selected by the Transmission Provider to ensure that commitment costs are minimized while adhering to Transmission System security constraints and the Resource operating parameter constraints submitted as part of the RTBM Offers. The recovery of the compensation paid by the Transmission Provider for such committed Resources under Section 8.6.5 of this Attachment AE will be collected by the Transmission Provider regionally as described under Section 8.6.7(A) of this Attachment AE.
- (4) A Local Reliability Issue may arise during the Day-Ahead Reliability Unit Commitment process. Such Local Reliability Issues may require or manual commitment or decommitment to be issued to one or more Resources or (2) reductions in applicable local CHILL Demand Bid forecast to resolve the reliability issue. In such cases, the Transmission Provider will issue or the local transmission operator will request the Transmission Provider to issue such instructions and any commitment or reduction in CHILL Demand Bid forecast by the Transmission Provider will be selected by the Transmission Provider in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of this Attachment AE. To the extent that the Transmission

Provider, at the request of a local transmission operator, issues instructions to a Resource to address a Local Reliability Issue, such Resource will be eligible for compensation in the same manner as any other Resource. The recovery of the compensation paid by the Transmission Provider for such committed Resources under Section 8.6.5 of this Attachment AE will be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE.

- (5) The Transmission Provider, local transmission operator, and Resource owners will develop operating guides to be applied to manual commitments made by the Transmission Provider, including such commitments made at the request of the local transmission operator to relieve known and recurring Local Reliability Issues in the Day-Ahead RUC. Such Resources will be compensated in the same manner as any other Resource. The recovery of such compensation paid by the Transmission Provider for such committed Resources under Section 8.6.5 of this Attachment AE will be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE.

6.1.2 Intra-Day Reliability Unit Commitment Execution

Using the inputs described in Section 6.1.1, the Transmission Provider will perform a capacity adequacy analysis using the SCUC algorithm with the objective of committing Resources to meet the Transmission Provider's load forecast, Export Interchange Transactions, Instantaneous Load Capacity requirements, and Operating Reserve requirements less Import Interchange Transactions over the Operating Day such that commitment costs are minimized while adhering to Transmission System security constraints and the resource operating parameter constraints submitted as part of the RTBM Offers.

- (1) Commitment costs used in the SCUC are defined as Start-Up Offer, No-Load Offer and incremental cost to operate at minimum output as defined on the submitted Energy Offer Curve. Incremental Energy costs above minimum output and Operating Reserve Offers are not considered by the SCUC in making commitment decisions.
- (2) The SCUC algorithm will initially consider commitment of Resources not specified for reliability only use as described in Section 4.1(10)(c) of this Attachment AE, only including capacity up to the Resources' Maximum Economic Capacity Operating Limits (or Maximum Regulation Capacity Operating Limits if selected for Regulation-Up Service and/or Regulation-Down), Maximum Discharge Limit or Minimum Charge Limit and down to the Resources' Minimum Economic Capacity Operating Limits (or Minimum Regulation Capacity Operating Limits if selected for Regulation-Down Service and/or Regulation-Up), Minimum Discharge Limit or Maximum Charge Limit. In addition, MCRs are not eligible to be selected for Regulation-Up Service and/or Regulation-Down Service in any hour in which they are transitioning between configurations.
 - (a) If this capacity plus Import Interchange Transactions is not sufficient on a system-wide basis to meet the Transmission Provider's load forecast, Export Interchange Transactions, the upper bound of Instantaneous Load Capacity requirement, and Operating Reserve requirements, the SCUC algorithm will, in priority order until the capacity shortage is eliminated:
 - (1) curtail non-firm fixed Export Interchange Transaction Bids until the capacity shortage is eliminated; and
 - (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limits, Maximum Emergency Discharge Limit or Minimum Emergency Charge Limit and/or, commit Resources designated as

reliability only use, as described in Section 4.1(10)(c) of this Attachment AE,

(3) de-commit charging Resources that were committed in the Day-Ahead Market with a commitment status of “market” as described in Section 4.1(10)(b) of this Attachment AE, and

(4) de-commit self-committed charging Resources **until the capacity shortage is eliminated.**

~~The Transmission Provider may, as needed, cap or limit fixed CHILL forecast in order to manage system reliability under capacity shortfall conditions.~~

(b) If there is a system-wide capacity surplus calculated as the sum of self-committed capacity at minimum output, fixed Import Interchange Transactions, the lower bound of Instantaneous Load Capacity requirement, and the Regulation-Down requirements that is in excess of the sum of the Transmission Provider load forecast and fixed Export Interchange Transaction, the Day-Ahead Market SCUC algorithm will, in priority order: (1) curtail non-firm fixed Import Interchange Transaction Offers until the capacity surplus is eliminated; and (2) incorporate capacity down to Resources’ Minimum Emergency Capacity Operating Limits, Minimum Emergency Discharge Limit or Maximum Emergency Charge Limit, and/or commit any MSR available for charging designated with a commitment status of reliability as described in Section 4.1(10)(c) of this Attachment AE, (3) de-commit Resources that were committed by the Transmission Provider in the Day-Ahead Market that were not self-committed, and (4) de-commit self-committed Resources until the capacity surplus is eliminated.

(3) To the extent that a particular reliability issue impacting only the Transmission System cannot be directly addressed within the SCUC algorithm and is not a Local Reliability Issue, the Transmission Provider may manually commit Resources and/or decommit Resources, including self-committed Resources to alleviate such Transmission System reliability issues. Such manual commitments ~~will~~ **shall** be selected by the Transmission Provider in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of this Attachment AE. The Transmission Provider ~~shall~~ **will** ensure that commitment costs are minimized while adhering to Transmission System security

constraints and the Resource operating parameter constraints submitted as part of the RTBM Offers. The recovery of the compensation paid by the Transmission Provider for such committed Resources under Section 8.6.5 of this Attachment AE will be collected by the Transmission Provider regionally as described under Section 8.6.7(A) of this Attachment AE.

- (4) A Local Reliability Issue may arise during the Intra-Day Reliability Unit Commitment Process. Such Local Reliability Issue may require ~~(1) manual commitment or decommitment to be issued by the Transmission Provider to one or more Resources;~~ ~~or (2) the reduction of applicable local CHILL Demand Bid forecast~~ to resolve the Local Reliability Issue. Time permitting, the local transmission operator ~~shall~~ ~~will~~ request the Transmission Provider to issue such instructions and any commitment ~~or reduction in CHILL Demand Bid forecast~~ by the Transmission Provider ~~shall~~ ~~will~~ be selected by the Transmission Provider in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of this Attachment AE. To the extent that the Transmission Provider issues instructions to a Resource at the request of a local transmission operator to resolve a Local Reliability Issue, the Resource ~~will~~ ~~shall~~ be eligible for compensation in the same manner as any other Resource. The recovery of the compensation paid by the Transmission Provider for such committed Resources under Section 8.6.5 of this Attachment AE ~~shall~~ ~~will~~ be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE. To the extent time does not permit, the local transmission operator may issue such instructions to the Resource if the Local Reliability Issue is a Local Emergency Condition. In such cases, the following ~~shall~~ ~~will~~ take place:
- (a) If initial instructions are issued by a local transmission operator, the transmission operator ~~shall~~ ~~will~~ notify the Transmission Provider of the instructions given to the Resource ~~or the CHILL~~.
 - (b) The transmission operator and Transmission Provider will coordinate to ensure subsequent instructions are provided by the Transmission Provider.
 - (c) The transmission operator ~~shall~~ ~~will~~ log such instructions, and ~~shall~~ ~~will~~ notify the Transmission Provider of such action. The Transmission Provider ~~shall~~ ~~will~~ log such instructions as manual commitment or decommitment, as appropriate, as if it gave such instruction to the Resource. ~~The Transmission Provider will log such instructions as curtailment of load as if it gave such instruction to the CHILL~~

- (d) The Resource shall will be eligible to receive the compensation for such instructions in the same manner as if it had been committed by the Transmission Provider; except that if the Market Monitor determines that the Resource selected in response to such instructions was selected in a discriminatory manner and the Resource was affiliated with the local transmission operator, such Resource shall will not be eligible to receive compensation under Section 8.6.5 of this Attachment AE. Such determination shall will be made by the Market Monitor using the standards and procedures set forth in Section 6.1.2.1 of this Attachment AE. Recovery of any compensation shall will be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE.
- (e) The Transmission Provider, local transmission operator, and Resource owners shall will develop operating guides to be applied to manual commitments made by the Transmission Provider including such commitments made at the request of the local transmission operator or manual commitments made by the local transmission operator during a Local Emergency Condition to relieve known and recurring Local Reliability Issues in the Intra-Day RUC. Such Resources will be compensated in the same manner as any other Resource. The recovery of the compensation paid by the Transmission Provider under Section 8.6.5 of this Attachment AE shall will be collected by the Transmission Provider locally as described under Section 8.6.44 of this Attachment AE.

ATTACHMENT AQ
DELIVERY POINT ASSESSMENT PROCESS

1.0 Introduction: When it becomes necessary or desirable to make changes in delivery point facilities, to upgrade, retire, replace or establish a delivery point, including metering or other facilities at such location, or for unexpected step load changes at an existing delivery point at the discretion of the Host Transmission Owner, the provisions of this Attachment AQ shall apply. For the purposes of this Attachment, Host Transmission Owner is defined as the owner of that portion of the Transmission System to which such connection or modification is to be made. If the delivery point is associated with a High Impact Large Load ("HILL"), the study of changes in delivery point facilities must additionally satisfy the requirements outlined in Attachment BA of this Tariff

2.0 Study Requests for Changes in Local Delivery Facilities: The Transmission Customer shall make requests for changes in local delivery facilities, including facility upgrades, retirements and replacements, or the establishment of any new delivery point in writing to (a) the Transmission Provider and the Host Transmission Owner as specified in Section 20 of the Network Operating Agreement or to (b) the Transmission Provider as specified in Section 8 of the Point to Point Transmission Service Agreement, as applicable. Such request shall contain as much information as is known or projected at the time of the request as set forth in “Sample Request for Change in Local Delivery Facilities” attached hereto as Addendum 1.

Requests for changes in local delivery facilities that meet the following criteria do not need to be submitted through the process described in Attachment AQ:

1. Any increase of capacity at a delivery point without a corresponding change to the load at the delivery point;
2. Any distribution transformer changes without a corresponding load change; or
3. Increase to a facility rating at a delivery point.

Notwithstanding the above, the Transmission Customer or Host Transmission Owner may elect to submit the request through the process described in Attachment AQ.

3.0 Studies: The Transmission Provider and Host Transmission Owner shall conduct all necessary studies associated with the delivery point change. Such studies shall be conducted at Transmission Customer's expense pursuant to the provisions of this section. In the event that such change in delivery point configuration results in a Delivery Point Network Study (DPNS) as described in Section 3.2 of this Attachment AQ, Transmission Provider will coordinate the studies necessary to evaluate such addition, modification, or retirement. Otherwise, the Host Transmission Owner will coordinate the studies.

3.1 Load Connection Study: Host Transmission Owner shall respond within ten (10) Business Days of receipt of such request and, if necessary, provide a Load Connection Study ("LCS") Agreement and a list of any additional information that Host Transmission Owner would require from the Transmission Customer to proceed with such study. Unless otherwise agreed, the LCS Agreement shall commit the Transmission Customer to pay Host Transmission Owner the actual cost to complete the study. The Host Transmission Owner may require an advance deposit equal to the estimated study cost or \$25,000, whichever is less. In conducting the LCS, the Host Transmission Owner shall assess the feasibility of modifying an existing delivery point or establishing the new delivery point using power flow and short circuit analyses and any other analyses that may be appropriate. It shall also determine the details and estimated cost of facilities necessary for establishing the requested delivery point and any system additions/upgrades needed to address any problems identified in the LCS. For a HILL, there are additional requirements pursuant to Section 2.1.3.3 of Attachment BA of this Tariff.

If the Transmission Customer fails to return an executed LCS Agreement within thirty (30) Calendar Days of receipt along with the required deposit, or at a later date as the Parties may mutually agree, Host Transmission Owner shall deem the study request to be withdrawn. The Transmission Customer may withdraw its study request at any time by written notice of such withdrawal to Host Transmission Owner. Host Transmission Owner shall complete the LCS and issue a Load Connection Report to the Transmission Customer and Transmission Provider within sixty (60) Calendar Days after receipt of an executed LCS Agreement, deposit and necessary data, or at a later date as the Parties may mutually agree.

Upon completion of the LCS, the Transmission Customer shall reimburse Host Transmission Owner for the unpaid cost of the LCS if the cost of LCS exceeds the deposit. Host Transmission Owner shall refund to the Transmission Customer any portion of the deposit that exceeds the cost of the LCS with interest earned in the interest-bearing account in which Host Transmission Owner has placed the deposit, or if such account does not exist, with interest calculated in accordance with 18 C.F.R. § 35.19a(a)(2).

3.2 Transmission System Study: Upon receipt of the Request for Change in Local Delivery Facilities, Transmission Provider shall perform a preliminary assessment of the impact of the requested delivery point configuration change on the Transmission System. The Transmission Provider shall conclude its preliminary assessment of the impact of each requested delivery point configuration change on the Transmission System for all Requests for Change in Local Delivery Facilities and notify the Transmission Customer of the findings within ten (10) Business Days of receipt of all necessary information to conduct the preliminary assessment. In the event that a Request for Change in Local Delivery Facilities contains elements that are not applicable to the scope of Attachment AQ process, the Transmission Provider reserves the right to extend the ten (10) Business Day requirement for providing the preliminary assessment for up to an additional ten (10) Business Days. SPP will notify the Transmission Customer of any extension required for a Request for Change in Local Delivery Facilities that contains elements beyond the scope of the Attachment AQ process within ten (10) Business Days of receipt. SPP shall post on the SPP website by the 20th day of each month all Requests for Change in Local Delivery Facilities that have received a preliminary assessment during the prior calendar month. For all requests for which the Transmission Provider finds no significant impact on the Transmission System, Host Transmission Owner will coordinate completion of such change in local delivery facilities, including all required studies. All HILLs, regardless of the results from the preliminary assessment, will be subject to the Delivery Point Network Study ("DPNS") described below, and all supplemental study requirements outlined in Attachment BA of this Tariff. For all requests for which the Transmission Provider finds that there is significant impact on the Transmission System, it shall, within five (5) Business Days of when the

preliminary assessment results are provided, deliver to the Transmission Customer a ~~Delivery Point Network Study~~ ("DPNS") Agreement and a request for any additional information that it requires from the Transmission Customer to proceed with such study. The study agreement shall commit the Transmission Customer to pay the Transmission Provider the actual cost to complete the study and to make an advance deposit equal to the estimated study cost or \$10,000, whichever is less. The Transmission Customer shall execute and deliver the DPNS Agreement and required deposit to the Transmission Provider as soon as reasonably possible, but not later than thirty (30) Calendar Days following its receipt or at a later date as the Parties may mutually agree. Upon receipt of the executed study agreement, study data, and the required deposit, Transmission Provider shall perform the DPNS. During the conduct of the DPNS, Transmission Provider shall assess the impacts on the Transmission System caused by modifying an existing delivery point or establishing the new delivery point using power flow and short circuit analyses and any other analyses that may be appropriate. For a HILL, there are additional requirements pursuant to Section 2.1.3.4 of Attachment BA of this Tariff

If the Transmission Customer fails to return an executed DPNS Agreement within thirty (30) Calendar Days of receipt or at a later date as the Parties may mutually agree, Transmission Provider and Host Transmission Owner shall deem the study request to be withdrawn. The Transmission Customer may withdraw its study request at any time by written notice of such withdrawal to the Transmission Provider and the Host Transmission Owner.

Transmission Provider shall issue a study report to the Transmission Customer and Host Transmission Owner within ~~ninety-sixty~~ (90/60) Calendar Days of the receipt of an executed DPNS Agreement and the required deposit, or at a later date as the Parties may mutually agree. If Transmission Provider is unable to complete such study in the allotted time, Transmission Provider shall provide an explanation to the Transmission Customer and Host Transmission Owner regarding the cause(s) of such delay and a revised completion date and study cost estimate.

Upon completion of the DPNS, the Transmission Customer shall reimburse Transmission Provider for the unpaid cost of the DPNS if the cost of the study exceeds the deposit. Transmission Provider shall refund the Transmission Customer, with interest earned in the interest-bearing account in which Transmission Provider shall have placed the deposit, any portion of the deposit that exceeds the cost of the DPNS.

3.3 Modifications to Study Request: During the course of a LCS or DPNS, the Transmission Customer, Host Transmission Owner or Transmission Provider may identify desirable changes in the planned facilities that may improve the costs and/or benefits (including reliability) of the planned facilities. To the extent the revised plan and study schedule are acceptable to Host Transmission Owner, Transmission Customer, and if applicable, Transmission Provider, such acceptance not to be unreasonably withheld, Host Transmission Owner and if applicable, Transmission Provider, shall, at Transmission Customer's Expense, proceed with any necessary restudy.

3.4 Integrated Transmission Planning Assessment Evaluation: All requests with a Network Upgrade(s) identified in the DPNS will be subject to further evaluation in the soonest available Integrated Transmission Planning Assessment that is able to include the load changes, if it is determined that the Network Upgrade(s) will be able to meet the study timeframe requirements pursuant to the standardized project timelines in SPP Business Practices, based on the SPP determined Network Upgrade(s) need date.

3.5 Posting of DPNS Report(s): If it is determined that a Network Upgrade(s) identified from a DPNS is unable to be further evaluated pursuant to the Integrated Transmission Planning Assessment as described in Section 3.4 of this Attachment AQ, the corresponding DPNS report will be posted on the SPP website once SPP is notified by the Transmission Customer to update the applicable Network Integration Transmission Service Agreement to reflect the changes in delivery points and the Network Upgrade(s).

4.0 Engineering, Design and Construction of New Facilities: The Transmission Customer and Host Transmission Owner shall agree to and specify in writing each party's responsibility for engineering, design, construction, and cost of facilities described in the final Load Connection Report.

Addendum 1 to Attachment AQ

Sample Request for Change in Local Delivery Facilities

Pursuant to the Delivery Point Assessment Process in Attachment AQ of the Tariff notice is hereby provided on _____ (date of notice) to _____ (the Host Transmission Owner) and Transmission Provider that Transmission Customer requests certain changes in delivery point(s) under the agreement.

Responses marked with an asterisk (*) are required. Supply all details that are known or projected.

Requested Modification

- 1) Description of delivery point modification*
 - a) Type of change requested (new delivery point, upgrade of an existing delivery point, retirement or abandonment of an existing delivery point, etc.) *
 - b) Proposed in service date of the modification*
 - c) Reason for the requested change (i.e. upgrade, retirement, replacement of existing delivery point facilities; establishment of a delivery point and facilities; unexpected step load changes at an existing delivery point) *
 - d) Related transmission service agreement*
 - e) Location of the delivery point change and identification of the facilities involved*
 - i) Geographic location of the new delivery point or the delivery point to be modified*
 - ii) The transmission facilities of the Host Transmission Owner involved in the change*
 - iii) Voltage of the facilities involved*
 - iv) Desired meter location*

- v) Expected impact on other delivery points, if any*
 - (1) Load transfer from another delivery point and, if so, estimated amount*
 - (2) Anticipated modifications to other delivery points due to this change, if any*
- vi) Facilities of others that may be involved*
- 2) Facilities to be constructed
 - a) Facilities to be constructed or provided by the Host Transmission Owner
 - b) Facilities to be constructed or provided by the Transmission Customer
- 3) Technical Aspects of a new delivery point
 - a) Location
 - i) Located near structure number
 - ii) 911 address
 - iii) State, County and ¼ of ¼ Section number
 - iv) GPS Coordinates
 - b) Technical aspects
 - i) Anticipated service voltage
 - ii) Number of wires (3 or 4 wire connection)
 - iii) Service voltage
 - iv) Meter
 - (1) Type
 - (2) Voltage
 - (3) Supplied by
 - (4) Owned by
 - (5) PTs and CTs required
 - (6) Communications configuration

- v) Anticipated starting load
 - vi) Transformer size and voltages
 - vii) Transmission line conductor size and impedance rating
 - viii) Type and location of protective devices
- 4) Other pertinent information

Attachments:

- 1) Ten year load forecast for the delivery point being added or modified and any associated changes in the load forecast for other delivery points.
- 2) One-line diagram showing existing and proposed changes to local delivery facilities pertaining to the request.
- 3) Idev modeling file(s) for anticipated load.

For a High Impact Large Load ("HILL"), the following additional data is required:

1) Dynamic model files (Composite Load Model ("CMLD")). *

2) The completed "Additional HILL Characteristics Form", which is located in Southwest Power Pool, Inc.'s Open Access Transmission Tariff Business Practices, Business Practice 7850. *

3) Type of HILL (data center, cryptocurrency mining, industrial, commercial, etc.) *

Requestor Contact:

Name: _____

Title: _____

Mailing Address: _____

Email Address: _____

Voice Phone No.: _____

By: _____

(Representative of Transmission Customer)

Title: _____

Date: _____

ATTACHMENT AX

PROVISIONAL LOAD PROCESS

1.0 Study Requests for Changes in Local Delivery Facilities: *When it becomes necessary or desirable to make changes in facilities due to increased load and the Transmission Customer does not have enough existing Designated Resources to serve the increased load plus losses, the provisions of this Attachment AX shall apply. For the purposes of this Attachment AX, Host Transmission Owner is defined as the owner of that portion of the Transmission System to which such connection or modification is to be made. The Transmission Customer shall submit a Provisional Load Process request in writing to (a) the Transmission Provider and the Host Transmission Owner as specified in Section 20 of the Network Operating Agreement or (b) the Transmission Provider as specified in Section 8 of the Point-to-Point Transmission Service Agreement, as applicable. Such request shall contain as much information as is known or projected at the time of the request, as set forth in "Sample Request for Provisional Load Process" attached hereto as Addendum 1. The Transmission Customer shall provide an executed Provisional Load Process Study ("PLPS") agreement with the request. The PLPS agreement shall be available on the Transmission Provider's OASIS. The PLPS agreement shall commit the Transmission Customer to pay the Transmission Provider the actual cost to complete the study. If the delivery point is associated with a High Impact Large Load ("HILL"), the study of changes in delivery point facilities must additionally satisfy the requirements outlined in Attachment BA of this Tariff.*

2.0 Studies: *The Transmission Provider and Host Transmission Owner shall conduct all necessary studies associated with the delivery point changes. Such studies shall be conducted at Transmission Customer's expense pursuant to the provisions of this section.*

2.1 Load Connection Study: *Host Transmission Owner shall respond within ten (10) Business Days of receipt of such request and, if necessary, provide a Load Connection Study ("LCS") agreement and a list of any additional information that Host Transmission Owner requires from the Transmission Customer in order to proceed with such study. Unless*

otherwise agreed, the LCS agreement shall commit the Transmission Customer to pay Host Transmission Owner the actual cost to complete the study. The Host Transmission Owner may require an advance deposit equal to the estimated study cost or \$25,000, whichever is less. In conducting the LCS, the Host Transmission Owner shall assess the feasibility of modifying an existing delivery point or establishing a new delivery point using power flow and short circuit analyses and any other analyses that may be appropriate. It shall also determine the details and estimated cost of facilities necessary for establishing the requested delivery point and any system additions and upgrades needed to address any problems identified in the LCS. For a HILL, there are additional requirements pursuant to Section 2.1.3.3 of Attachment BA of this Tariff.

If the Transmission Customer fails to return an executed LCS agreement within thirty (30) Calendar Days of receipt along with the required deposit, or at a later date as the Parties may mutually agree, Host Transmission Owner shall deem the study request to be withdrawn. The Transmission Customer may withdraw its study request at any time by written notice of such withdrawal to the Host Transmission Owner. Host Transmission Owner shall complete the LCS and issue a Load Connection Report to the Transmission Customer and Transmission Provider by or before ninety (90) Calendar Days after receipt of an executed LCS agreement, deposit and necessary data, or at a later date as the Parties may mutually agree.

Upon completion of the LCS, the Transmission Customer shall reimburse Host Transmission Owner for the unpaid cost of the LCS if the cost of the LCS exceeds the deposit. Host Transmission Owner shall refund to the Transmission Customer any portion of the deposit that exceeds the cost of the LCS with interest earned in the interest-bearing account in which Host Transmission Owner has placed the deposit, or if such account does not exist, with interest calculated in accordance with 18 C.F.R. § 35.19a(a)(2).

2.2 Transmission System Study: Upon receipt of the Request for Provisional Load Process, the Transmission Provider shall perform an initial assessment of the impact of the requested delivery point configuration change on the Transmission System. The

Transmission Provider shall conclude its initial assessment and notify the Transmission Customer of the findings. For all requests for which the Transmission Provider finds no significant impact on the Transmission System, the Host Transmission Owner will coordinate completion of such change in local delivery facilities, including all required studies. All HILLs, regardless of the results from the initial assessment, will be subject to the PLPS, described below, and all supplemental study requirements outlined in Attachment BA of this Tariff. For all requests for which the Transmission Provider finds that there is a significant impact on the Transmission System, Transmission Provider shall perform the PLPS. During the PLPS, Transmission Provider shall assess the impacts on the Transmission System caused by delivery point changes due to the increased load using power flow, short circuit, dynamics, and any other analyses that may be appropriate. For a HILL, there are additional requirements pursuant to Section 2.1.3.4 of Attachment BA of this Tariff.

The Transmission Provider will send a study report to the Transmission Customer and the Host Transmission Owner within ninety (90) Calendar Days of all Parties agreeing to study assumptions during the scoping call. If the Transmission Provider is unable to complete the study within ninety (90) Calendar Days, the Transmission Provider shall notify the Transmission Customer and the Host Transmission Owner and provide an estimate of the time needed to reach a final determination along with an explanation of the reason(s) that additional time is required to complete the study. Upon completion of the PLPS, the Transmission Customer shall reimburse the Transmission Provider for the cost of the PLPS. The PLPS results shall be valid for one year after issuance of the study report unless the Transmission Customer notifies the Transmission Provider to effectuate the applicable Provisional Load Process Agreement found in Addendum 2 and Addendum 3 of Attachment AX of this Tariff to reflect the planned changes to delivery points and the planned Designated Upgrade(s).

2.3 Modifications to Study Request: *During the course of a LCS or PLPS, the Transmission Customer, Host Transmission Owner or Transmission Provider may identify*

desirable changes in the planned facilities that may improve the costs and/or benefits (including reliability) of the planned facilities. To the extent the revised plan and study schedule are acceptable to Host Transmission Owner, Transmission Customer, and if applicable, Transmission Provider, such acceptance not to be unreasonably withheld, Host Transmission Owner and if applicable, Transmission Provider, shall, at Transmission Customer's Expense, proceed with any necessary restudy.

2.5 *Posting of PLPS Report(s):* *If a Network Upgrade is identified from a PLPS, the PLPS report will be posted on the SPP website once SPP is notified by the Transmission Customer to update the applicable Provisional Load Process Agreement to reflect the additions or changes to delivery points and the resulting Network Upgrade(s).*

3.0 *Engineering, Design and Construction of New Facilities:* *The Transmission Customer and Host Transmission Owner shall agree to and specify in writing each party's responsibility for engineering, design, construction, and cost of facilities described in the final Load Connection Report.*

4.0 *Delivery Point Transfers:* *At the request of a Transmission Customer, Transmission Provider will study a Delivery Point Transfer as part of the Provisional Load Process Study described in Section 2 if the Transmission Customer does not have enough existing Designated Resources to serve the increased load plus losses.*

Addendum 1 to Attachment AX

Sample Request for Provisional Load Process

Pursuant to the Provisional Load Process in Attachment AX of the Tariff notice is hereby provided on _____ (date of notice) to _____ (the Host Transmission Owner) and Transmission Provider that Transmission Customer requests certain changes in delivery point(s).

Responses marked with an asterisk () are required. Supply all details that are known or projected.*

Requested Modification

- 1) Description of delivery point modification**
 - a) Type of change requested (new delivery point, upgrade of an existing delivery point, etc.)**
 - b) Proposed in service date of the modification**
 - c) Reason for the requested change (i.e. Upgrade, replacement of existing delivery point facilities; establishment of a delivery point and facilities; load changes at an existing delivery point) **
 - d) Related transmission service agreement**
 - e) Location of the delivery point change and identification of the facilities involved**
 - i) Geographic location of the new delivery point or the delivery point to be modified**
 - ii) The transmission facilities of the Host Transmission Owner involved in the change**
 - iii) Voltage of the facilities involved**

iv) *Desired meter location**

v) *Expected impact on other delivery points, if any**

(1) *Load transfer from another delivery point and, if so, estimated amount**

(2) *Anticipated modifications to other delivery points due to this change, if any**

vi) *Facilities of others that may be involved**

f) *Details of planned generation**

i) *Location of generation (bus number or point of interconnection)**

ii) *Amount of generation**

iii) *Idev(s) modeling files for planned generation**

iv) *DYR modeling file for planned generation**

v) *Fuel type**

vi) *Any expected environmental restrictions (e.g. run-time restrictions) or any other restrictions or limitations.*

2) *Facilities to be constructed*

a) *Facilities to be constructed or provided by the Host Transmission Owner*

b) *Facilities to be constructed or provided by the Transmission Customer*

3) *Technical Aspects of a new delivery point*

a) *Location*

i) *Located near structure number*

ii) *911 address*

iii) *State, County and 1/4 of 1/4 Section number**

iv) *GPS Coordinates**

b) *Technical aspects*

i) *Anticipated service voltage*

ii) *Number of wires (3 or 4 wire connection)*

iii) *Service voltage*

iv) *Meter*

(1) *Type*

(2) *Voltage*

(3) *Supplied by*

(4) *Owned by*

(5) *PTs and CTs required*

(6) *Communications configuration*

v) *Anticipated starting load*

vi) *Transformer size and voltages*

vii) *Transmission line conductor size and impedance rating*

viii) *Type and location of protective devices*

4) *Other pertinent information*

Attachments:

- 1) *Ten--year load forecast for the delivery point being added or modified and any associated changes in the load forecast for other delivery points.*
- 2) *One-line diagram showing existing and proposed changes to local delivery facilities pertaining to the request.*
- 3) *Idev modeling file(s) for anticipated load and planned generation.*

For a High Impact Large Load ("HILL"), the following additional data is required:

1) Dynamic model files (Composite Load Model ("CMLD")), *

2) The completed "Additional HILL Characteristics Form", which is located in Southwest Power Pool, Inc.'s Open Access Transmission Tariff Business Practices, Business Practice 7850.*

3) Type of HILL (data center, cryptocurrency mining, hydrogen electrolyzer, industrial commercial, etc.)*

Requestor Contact:

Name: _____

Title: _____

Mailing Address: _____

Email Address: _____

Voice Phone No.: _____

By:

(Representative of Transmission

Customer

Title:

Date:

|

ATTACHMENT BA
High Impact Large Load

SECTION 1. INTRODUCTION

High Impact Large Load (“HILL”) presents unique challenges, that could include a need for rapid load interconnection and a potential need to support the load with additional generation. This Attachment BA addresses the conditions that will allow Transmission Customers and Network Customers with authorization from their relevant electric retail regulatory authority to interconnect a HILL on a timely basis, while maintaining Transmission System reliability.

The processes described in Attachment AQ, Attachment AX, or Attachment Z1 result in transmission service provided under Part II or Part III of the Tariff. The studies provisions described in this Attachment BA provide for the additional processes and studies of necessary to obtaining transmission service for a HILL. The entirety of a HILL may be served by a combination of service types, such as a portion of its load as firm service and a portion that takes Conditional High Impact Large Load Service. A Transmission Customer or Network Customer with authorization from its relevant electric retail regulatory authority also may request transmission service as described in this Attachment BA and Part VII of the Tariff.

If the Eligible Customer seeks to interconnect generation to support the needs of a HILL, such generation must follow the process described in Attachment BB or Attachment V as appropriate.

The provisions of Attachment BA are applicable only to load service requests by Transmission Customers or Network Customers that are submitted on or after the initial effective date of this Attachment BA.

SECTION 2. HIGH IMPACT LARGE LOAD

2.1 OBTAINING TRANSMISSION SERVICE FOR HIGH IMPACT LARGE LOAD

"HILL"

~~The Transmission Provider will review the data provided by the Transmission Customer or Network Customer as specified in Addendum 1 to Attachment AQ, Addendum 1 to Attachment AX, and/or Addendum 1 to Attachment BA to determine if the delivery point change qualifies as a HILL.~~ If the load associated with the delivery point addition or modification is a HILL as defined in Part I of the Tariff, the Transmission Customer or the Network Customer ~~has sufficient Designated Resources to serve the requested transmission service.~~ must satisfy the requirements outlined in this Attachment BA in addition to the requirements of Attachment AQ and Attachment AX, as applicable.

2.1.1 TRANSMISSION CUSTOMER OR NETWORK CUSTOMER HAS SUFFICIENT DESIGNATED RESOURCES FOR THE REQUESTED TRANSMISSION SERVICE:

If the Transmission Provider determines that the Transmission Customer or the Network Customer has sufficient existing Designated Resources to serve its full megawatt amount of existing load and the forecasted megawatt amount of requested transmission service for the HILL, including losses, the Transmission Customer or Network Customer is eligible to proceed with the applicable requirements of Attachment AQ. ~~Additionally, for any portion of the HILL that cannot be reliably served on a firm basis by existing Designated Resources or the current Transmission System may use the processes described in Section 3 of Attachment BA.~~

2.1.2 TRANSMISSION CUSTOMER OR NETWORK CUSTOMER DOES NOT HAVE SUFFICIENT DESIGNATED RESOURCES FOR THE REQUESTED TRANSMISSION SERVICE OR THE CURRENT TRANSMISSION SYSTEM CANNOT RELIABLY SERVE THE HILL:

If the Transmission Provider determines that the Transmission Customer or the Network Customer does not have sufficient existing Designated Resources to serve its full megawatt amount of existing load and the forecasted megawatt amount of requested service for the HILL, including losses, the Transmission Customer or Network Customer may:

- (a) Proceed with the requirements of Attachment AQ for any megawatt amounts of requested service of the HILL that can be served by existing Designated Resources; and/or
- (b) Proceed with the requirements of Attachment AX if the Transmission Customer or Network Customer has planned generation for any megawatt amounts of requested transmission service of the HILL that cannot be served by existing Designated Resources; and/or.
- (c) Proceed with the requirements of Part VII and Section 3 of Attachment BA for any portions of the HILL that cannot be reliably served on a firm basis by existing Designated Resources or the current Transmission System.

2.1.3 HIGH IMPACT LARGE LOAD REQUEST

When the Transmission Provider receives a request from a Transmission Customer or a Network Customer to modify, retire, replace or establish a delivery point under Attachment AQ and/or Attachment AX to serve a HILL, the provisions of this Section 2.1.3 of Attachment BA apply. For the purposes of Section 2.1.3 of Attachment BA, Host Transmission Owner is defined as the owner of that portion of the Transmission System to which such connection or modification is to be made.

2.1.3.1.2. STUDY REQUESTS FOR ADDITIONS OF OR CHANGES TO A HILL: The Transmission Customer or Network Customer will make any request for changes in delivery facilities, including the establishment, retirement, replacement, and modification of any HILL delivery point in writing to the Transmission Provider and the Host Transmission Owner pursuant to Attachment AQ and Attachment AX. Such request must contain as much information as is known or projected at the time of the request as set forth in "Sample Request for Change in HILL Local Delivery Facilities" attached hereto as Addendum 1 to this Attachment AQ BA and/or Addendum 1 to Attachment AX.

2.1.3.2 STUDIES:

In addition to the studies required pursuant to Attachment AQ and Attachment AX, the Transmission Provider and Host Transmission Owner will conduct all necessary studies associated with the HILL delivery point change. Such additional studies will be conducted at the Transmission Customer's or Network Customer's expense pursuant to the provisions of this section. Such The requested change in HILL delivery point configuration results in the HILL supplemental studies Delivery Point Study Supplemental Studies (HDPS), as described in Sections 2.1.3.34 and 2.1.3.45 of this Attachment BA. Transmission Provider will coordinate the supplemental studies necessary to evaluate the HILL such addition, modification, replacement, or retirement. However, in the event such HILL delivery point changes does not impact the Transmission System, the Host Transmission Owner will coordinate the studies.

2.1.3.34 HILL LOAD SUPPLEMENTAL CONNECTION STUDY:

Host Transmission Owner must respond within ten (10) Business Days of receipt of such request and may provide a HILL Supplemental Load Connection Study ("HSLCS") Agreement and a list of for any additional information that Host Transmission Owner requires from the Transmission Customer or Network Customer to proceed with the such study of the HILL. Unless otherwise agreed, the HSLCS Agreement will commit the Transmission Customer or Network Customer to pay Host Transmission Owner the actual cost to complete the study. The Host Transmission Owner may require an advance deposit of \$25,000 for the HSLCS, which is in addition to the Load Connection Study deposit(s) required in Attachment AQ and/or Attachment AX higher. In conducting the any HSLCS, the Host Transmission Owner will assess the HILL delivery point by using the feasibility of modifying, retiring, or replacing an existing HILL delivery point or establishing a new HILL delivery point using power flow, short-circuit analyses, and any other additional analyses that may be appropriate. Host Transmission Owner will also determine the details and estimated cost of facilities necessary for modifying, retiring, replacing, or establishing the requested HILL delivery point and any system additions and/or upgrades needed to address any problems identified in the HSLCS.

If the Transmission Customer or Network Customer fails to return an executed HESCS Agreement, if required, within thirty (30) Calendar Days of receipt along with the any required deposit, or at a later date as the Parties may mutually agree, Host Transmission Owner will deem the HILL study request to be withdrawn. The Transmission Customer or Network Customer may withdraw its HESCS the HILL request at any time by written notice of such withdrawal to Host Transmission Owner and Transmission Provider. Host Transmission Owner must complete the any required HESCS and issue a HILL Supplemental Connection Report to the Transmission Customer or Network Customer and the Transmission Provider within sixty (90) Calendar Days after receipt of an executed HESCS Agreement, any required deposit and any necessary data, or at a later date as the Parties may mutually agree.

Upon completion of the HESCS, the Transmission Customer or Network Customer must reimburse Host Transmission Owner for the unpaid cost of the any HESCS if the cost of HESCS exceeds the deposit. Host Transmission Owner must refund to the Transmission Customer or Network Customer any portion of the deposit that exceeds the cost of the any HESCS with interest earned in the interest-bearing account in which Host Transmission Owner has placed the deposit, or if such account does not exist, with interest calculated in accordance with 18 C.F.R. § 35.19a(a)(2).

2.1.3.4 HILL DELIVERY POINT STUDY (HDPS):

The Transmission Provider will perform an supplemental assessment, in addition to the studies required pursuant to Attachment AQ and Attachment AX, of the impact of a requested HILL delivery point configuration change on the Transmission System for the full requested term, in addition to the studies required in Attachment AQ and Attachment AX. SPP will post on the SPP website by the 20th day of each month all requests for change in HILL local delivery facilities during the prior calendar month. For all requested HILL delivery point changes, the Transmission Provider will deliver to the Transmission Customer or Network Customer a HILL Delivery Point Study (“HDPS”) Agreement and a request for any additional information that it requires from the Transmission Customer

or Network Customer to proceed with such supplemental study. The HDPS Agreement will commit the Transmission Customer or Network Customer to pay the costs outlined in Section 2.1.3.45 of Attachment BA.

The Transmission Customer or Network Customer must execute and deliver the HDPS Agreement and required deposit to the Transmission Provider as soon as reasonably possible, but not later than thirty (30) Calendar Days following receipt of the HDPS Agreement or at a later date as the Parties may mutually agree. Upon receipt of the executed HDPS Agreement, the study data, and the required deposit, Transmission Provider will perform the HDPS. Through the HDPS, the Transmission Provider will assess the impacts on the Transmission System caused by modifying, retiring, or replacing an existing HILL delivery point or establishing the new HILL delivery point using the power flow and short circuit analyses, and any other appropriate analyses required that may be appropriate in accordance with Southwest Power Pool, Inc., Open Access Transmission Tariff Business Practices, Business Practice 7850 and other applicable criteria or reliability standards. If the Transmission Provider identifies the need to perform a detailed Electromagnetic Transient (EMT) study, an additional deposit will be required pursuant Section 2.1.3.45.

If the Transmission Customer or Network Customer fails to return an executed HDPS Agreement within thirty (30) Calendar Days of receipt or at a later date as the Parties may mutually agree, Transmission Provider and Host Transmission Owner will deem the study request to be withdrawn. The Transmission Customer or Network Customer may withdraw its HDPS request at any time by written notice of such withdrawal to the Transmission Provider and the Host Transmission Owner.

Transmission Provider and Host Transmission Owner will issue a study report to the Transmission Customer or Network Customer and Host Transmission Owner within ninety (90) Calendar Days of all the Parties agreeing to the study assumptions during the scoping call. If the Transmission Provider is unable to complete the study within ninety (90) Calendar Days, the Transmission Provider shall notify the Transmission Customer or Network Customer and the Host Transmission Owner and provide an estimate of the time needed to reach a final determination along with an explanation of the reason(s) that

additional time is required to complete the study. ~~will be resolved in accordance with Section 21 of this Tariff.~~

For any Transmission Customer's or Network Customer's request in a completed HDPS ~~having~~ but with identified third party impact(s) where the Transmission Customer or Network Customer has not reached an agreement with the third party in accordance with Section 21 of this Tariff, the Transmission Customer or Network Customer has until the start date of its requested ~~transmission~~ service for a HILL delivery point or one (1) year after the completion of the HDPS, whichever is sooner, to complete such negotiations to resolve the third party issue(s). The Transmission Provider may grant a 90-day extension for completion of such negotiations, at the request of the Transmission Customer or Network Customer. If an extension is granted, the start date of the requested ~~transmission~~ service will be deferred if necessary. If the Transmission Customer or Network Customer has not notified the Transmission Provider of a successful conclusion to the negotiation with the third party by the deadline described above, the Transmission Provider ~~will~~ deem the ~~transmission~~ service request to be terminated and withdrawn.

If the Transmission Customer or Network Customer notifies the Transmission Provider of the successful conclusion of the negotiation with the third party by the deadline described in this Section 2.1.3.46 of Attachment BA, the Transmission Customer or Network Customer may move forward with obtaining ~~transmission~~ service under this Tariff.

~~2.1.3.57 — MODIFICATIONS TO STUDY REQUEST~~

~~During the course of a HLSCS or HDPS, the Transmission Customer or Network Customer, Host Transmission Owner or Transmission Provider may identify desirable changes in the planned facilities that may improve the costs and/or benefits (including reliability) of the planned facilities. To the extent the revised plan and study schedule are acceptable to Host Transmission Owner, Transmission Customer or Network Customer, and if applicable, Transmission Provider, such acceptance not to be unreasonably withheld, Host Transmission Owner and if applicable, Transmission Provider, ~~will~~, at Transmission Customer's or Network Customer's Expense, proceed with any necessary restudy.~~

2.1.3. STUDY COSTS FOR HDPS:

A Transmission Customer or a Network Customer requesting HDPS will be responsible for the additional costs to complete the HDPS necessary to evaluate the HILL. The Transmission Customer and Network Customer must provide a \$10,000 non-refundable application fee for the HILL. The Application fee is initially set at \$10,000, to be adjusted in accordance with the Consumer Price Index for All Urban Consumers as posted on the U.S. Bureau of Labor Statistics website. The inflation adjustment will be calculated from the original application fee amount of \$10,000, to the most up-to-date data available at the time the inflation calculation takes place, where such amount will be rounded to the nearest \$100 and posted on the Transmission Provider's website. The Transmission Provider will post an inflation-adjusted application fee once every three years, with the first posting on or after January 1, 2028. The application fee amount calculated pursuant to this paragraph will be applicable to all HILL delivery point requests submitted sixty (60) or more Calendar Days after the date that the Transmission Provider posts such amount and will remain effective until Transmission Provider posts a revised calculation amount pursuant to this paragraph.

Additionally, the Transmission Customer and Network Customer **must** make an advance deposit of \$100,000 for the HDPS, which is in addition to the study deposit(s) required by Attachment AQ and Attachment AX. ~~If a Transmission Customer's or a Network Customer's request for a HILL is also being studied under Attachment AQ or Attachment AX, the Network Customer or the Transmission Customer will not be responsible for the study deposit required for Delivery Point Network Study outlined in Attachment AQ or the study deposit required for Provisional Load Process Study outlined in Attachment AX.~~ If the Transmission Provider determines the need to perform a detailed EMT analysis, the Transmission Customer and Network Customer **must** make an ~~additional~~ advance deposit of \$200,000, which is in addition to the \$100,000 advance deposit required in this section. Upon completion of the HDPS, the Transmission Customer or Network Customer **must** reimburse Transmission Provider for any unpaid costs of the HDPS if the cost of the study exceeds the **total** deposit(s). Transmission Provider **must** refund the Transmission Customer or Network Customer, with interest earned in the interest-bearing account in which Transmission Provider placed the deposit, any portion of the deposit that exceeds the cost of the HDPS.

2.1.3.9 ENGINEERING, DESIGN AND CONSTRUCTION OF NEW FACILITIES:

The Transmission Customer or Network Customer and Host Transmission Owner **will** agree to and specify in writing each party's responsibility for engineering, design, construction, and cost of facilities described in the final HILL **Supplemental** Connection Report.

2.2 ADDITIONAL REQUIREMENTS FOR HIGH IMPACT LARGE LOADS

2.2.1 Transmission Service

For the study of transmission service to a HILL, the Transmission Customer or Network Customer is required to provide data pursuant to Southwest Power Pool, Inc., Open Access Transmission Tariff Business Practices, Business Practice 7850, in addition to the data required to be provided pursuant to Attachments AQ **or** Attachment AX.

2.2.2 Integrated Marketplace

For the study of transmission service to a HILL, the Transmission Customer or Network Customer is required to provide data pursuant to Section 2.2.1 of Attachment AE and pursuant to the Integrated Marketplace Protocols.

2.2.3 Generation Interconnection Process

For the study of transmission service to a HILL, the Transmission Customer or Network Customer is required to provide data pursuant to Attachment BB.

2.2.4 Additional Requirements for Phasor Measurement Unit

Prior to Service Commencement Date of the HILL, phasor measurement recording and communications equipment must be installed by the Transmission Owner at Transmission Customer's or Network Customer's expense that is capable of gathering phasor measurements as specified in the SPP PMU Communications Handbook. To the extent similar quality equipment is being added or already exists, such as relays or digital fault recorders, that can collect data at least at the same rate as PMUs and which data is synchronized via a high-accuracy satellite clock, such equipment can be utilized to satisfy this requirement if the equipment is located on the Transmission Owner's side of the interconnection. The phasor measurement equipment must be installed at the Transmission Owner's side of HILL interconnection and become part of the Transmission Owner interconnection facilities. Phasor measurements must be streamed in Institute of Electrical and Electronics Engineers (IEEE) C37.118 or equivalent format and be provided to the Transmission Provider. This data must at least be sufficient to determine (i) positive-sequence voltage magnitude and angle, (ii) positive-sequence current magnitude and angle, (iii) frequency, and (iv) rate of change of frequency. Such data must be transmitted over the data circuit(s) as described below indicated in 2.2.4(b). Each Party will promptly advise the other Parties 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 applicable Party. The Party owning such equipment must correct such error or malfunction as soon as reasonably feasible.

~~Transmission Customer or Network Customer Responsibilities of PMU Equipment~~ Transmission Customer or Network Customer **must** maintain satisfactory operating communications with Transmission Provider or representative designated by Transmission Provider. Transmission Customer or Network Customer **must** provide standard voice line, dedicated voice line and facsimile communications through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. Transmission Customer or Network Customer **must** also provide the dedicated data circuit(s) necessary to provide such c~~Transmission Customer's~~ data to Transmission Provider ~~as set forth in 2.2.4(e), Security Arrangements Details~~. The data circuit(s) **must** extend from the HILL interconnection to the location(s) specified by Transmission Provider. Any required maintenance of such communications equipment **will** be performed by Transmission Customer or Network Customer. Operational communications **must** 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. ~~Security Arrangements Details for Communications from PMU Equipment~~.

Infrastructure security of Transmission System equipment and operations and control hardware and software ~~isare~~ essential to ensure day-to-day Transmission System reliability and operational security.

2.2.5 Ride-Through Requirements

Prior to Service Commencement Date of the HILL, the Transmission Customer or Network Customer must comply with the ride-through requirement guidelines outlined in the SPP HILL Ride-Th~~rough~~ ~~R~~requirements.

SECTION 3- CONDITIONAL HIGH-IMPACT-LARGE-LOAD SERVICE PROCESS

3.1 Introduction

~~For any specifications of the HILL, including term of service, that cannot be reliably served on a firm basis by existing Designated Resources or the current Transmission System, a~~

Transmission Customer or a Network Customer may acquire Conditional High Impact Large Load Service ("CHILLS") pursuant to this Section of Attachment BA and Part VII of the Tariff.

3.2 — Request for Conditional High Impact Large Load

The Transmission Customer or Network Customer may make requests for CHILLS at a HILL delivery point, which ~~will~~ be subject to the requirements outlined in Section 2.1.3 of this Attachment BA, Part VII of the Tariff, and Section 2.212.4 of Attachment AE.

3.3 — Study of Request for CHILLS

The Transmission Customer's or Network Customer's request for CHILLS at a HILL delivery point ~~is~~ subject to the study requirements outlined in Section 2.1.3.3 of this Attachment BA.

3.4 — Executing the CHILLS Agreement

After the Transmission Provider provides the HDPS study report to the Transmission Customer or Network Customer, the Transmission Customer or Network Customer may request the Transmission Provider to update or provide a new CHILLS Agreement ("CHILLSA") for the studied HILL delivery point. After execution of the CHILLSA by the Transmission Customer or Network Customer and the Transmission Provider, the Transmission Provider will file the CHILLSA with the Federal Energy Regulatory Commission. Concurrently with the filing of the CHILLSA, a transmission service request will be entered into SPP's OASIS to reflect necessary service and levels for billing purposes.

Section 3. High Impact Large Load Paired Resource Study Process

Each Resource must have a separate study process and interconnection agreement. Each Resource to be considered will be ~~studied~~ considered in accordance with Attachment BB.

Section 3. No Preemption of State Law

Nothing in this Attachment should be construed to preempt any state law, including but not limited to, state laws pertaining to retail sales of electricity, retail wheeling of electricity, generation siting, load and generation co-ownership, or load and generation operation.

|

ADDENDUM 1 OF ATTACHMENT BA:

Sample Request to Change a High Impact Large Load Local Delivery Facility

Pursuant to the High Impact Large Load ("HILL") Delivery Point Assessment Process Section 2.1.3 of Attachment BA of the Tariff, notice is hereby provided on _____ (date of notice) to _____ (the Host Transmission Owner) and Southwest Power Pool, Inc. ("Transmission Provider") that Transmission Customer or Network Customer requests certain changes in HILL delivery point(s):

Responses marked with an asterisk (*) are required. Supply all details that are known or projected.

Requested Modification

1) Description of the HILL delivery point modification*

a) Type of change requested (new delivery point, upgrade of an existing delivery point, retirement or abandonment of an existing delivery point, etc.) *

b) Proposed in-service date of the modification*

c) Reason for the requested change (i.e., upgrade, retirement, replacement of existing HILL delivery point facilities; establishment of a HILL delivery point and facilities)

§

d) Related transmission service agreement*

e) Location of the delivery point change and identification of the facilities involved*

i) Geographic location of the new HILL delivery point or the HILL delivery point to be modified*

ii) The transmission facilities of the Host Transmission Owner involved in the change*

iii) Voltage of the facilities involved*

iv) Desired metering locations*

v) Expected impact on other delivery points, if any, including anticipated modifications to other delivery points due to this change.²

vi) Facilities of others that may be involved.²

D) Type of HILL (data center, industrial, commercial, etc.)²

2) Facilities to be constructed

a) Facilities to be constructed or provided by the Host Transmission Owner

b) Facilities to be constructed or provided by the Transmission Customer

3) Technical Aspects of a HILL delivery point

a) Location

i) Located near structure number

ii) 911 address

iii) State, County and $\frac{1}{4}$ of $\frac{1}{4}$ Section number

iv) GPS Coordinates

b) Technical aspects

i) Anticipated service voltage

ii) Number of wires (3 or 4 wire connection)

iii) Service voltage

iv) Metering

(1) Type

(2) Voltage

(3) Supplied by

(4) Owned by

(5) PTs and CTs required

(6) Communications configuration

v) Anticipated starting load

vi) Transformer (size, voltages, taps, connection, impedance)

vii) Transmission line conductor size and impedance rating

viii) Type and location of protective and isolation devices

4) Other pertinent information

Attachments:

1) Ten-year load forecast (MW and MVAR) for the HILL delivery point being added or modified and any associated changes in the load forecast for other delivery points.*

2) One-line diagram showing existing and proposed changes to HILL local delivery facilities pertaining to the request.*

3) Idev modeling file(s) for anticipated load.*

4) Dynamic model files (Composite Load Model ("CMLD")).*

5) The completed "Additional HILL Characteristics Form", which is located in Southwest Power Pool, Inc.'s Open Access Transmission Tariff Business Practices, Business Practice 7850.*

Requestor Contact:

Name:

Title:

Mailing Address:

Email Address:

Voice Phone No.:

By: _____

(Representative of Transmission _____

Customer: _____

Title: _____

Date: _____

ADDENDUM 2 OF ATTACHMENT BA

Form Of Service Agreement For Conditional

High Impact Large Load Service

1.0 — This Conditional High Impact Large Load Service Agreement (“CHILLSA”), dated as of _____, is entered into, by and between Southwest Power Pool, Inc. (“Transmission Provider”), and _____ (“Transmission Customer” or “Network Customer”) (individually known as “Party” or collectively known as “Parties”).

2.0 — The Transmission Customer or the Network Customer has filed a completed application and request for Conditional High Impact Large Load Service (“CHILLS”) in accordance with Part VII and Attachment BA of the SPP Tariff.

3.0 — Service under this Agreement ~~will~~ be provided by the Transmission Provider upon request by an authorized representative of the Transmission Customer or the Network Customer.

4.0 — The Transmission Customer or Network Customer agrees to supply information the Transmission Provider deems reasonably necessary in accordance with Good Utility Practice in order for it to provide the requested service.

5.0 — The Transmission Provider, as agent for the Transmission Owners, agrees to provide and the Transmission Customer or Network Customer agrees to take and pay for CHILLS in accordance with the provisions of Parts VII and Schedule 15 of the Tariff and this Service Agreement.

6.0 — The Transmission Provider agrees during the term of this CHILLSA, as it may be amended from time to time, to provide CHILLS in accordance with the Tariff to enable delivery energy to the Transmission Customer’s or Network Customer’s delivery point(s) subject to availability and to Curtailment, interruption, or load shed under the terms of the Tariff, including Section 48 and Attachment BA.

7.0 — The terms and conditions of such CHILLS ~~will~~ be governed by the Tariff, as in effect at the time this CHILLSA is executed by the Transmission Customer or Network Customer, or as the Tariff is thereafter amended or by its successor tariff, if any. The Tariff, as it currently exists, or as it is hereafter amended, is incorporated

in this CHILLSA by reference. In the ease of any conflict between this CHILLSA and the Tariff, the Tariff ~~will~~ control. The Transmission Customer or Network Customer has been determined by the Transmission Provider to have a completed application for and requested CHILLSA under the Tariff. The completed specifications are based on the information provided in the completed application and are incorporated herein.

8.0 The Transmission Customer or Network Customer ~~must~~ provide the information as required by Section 2.2 of Attachment BA of the Tariff.

9.0 Service under this CHILLSA ~~will~~ commence on such date as it is permitted to become effective by the Commission. This CHILLSA ~~will~~ be effective through _____ termination. Upon termination, the Transmission Customer or Network Customer remains responsible for any outstanding charges including all costs incurred and apportioned or assigned to the Transmission Customer or Network Customer under this CHILLSA.

10.0 The Transmission Provider and Network Customer or Transmission Customer have executed a CHILLS Operating Agreement as required by the Tariff.

11.0 Any notice or request made to or by either Party regarding this Service Agreement ~~shall~~ be made to the representative of the other Party as indicated below. Such representative and address for notices or requests may be changed from time to time by notice ~~by~~ either Party.

~~Southwest Power Pool:~~

~~_____~~
~~_____~~

~~201 Worthen Drive~~

~~Little Rock, AR 72223-4936~~

~~Transmission Customer:~~

~~_____~~
~~_____~~

~~_____~~
~~_____~~

~~_____~~
~~_____~~

~~12.0 — The Tariff is incorporated herein and made a part hereof.~~

~~13.0 — This Service Agreement ~~may~~ not be assigned, resold, or transferred by either Party.~~

~~14.0 — Nothing contained herein ~~may~~ be construed as affecting in any way the Transmission Provider's or a Transmission Owner's right to unilaterally make application to the Federal Energy Regulatory Commission, or other regulatory agency having jurisdiction, for any change in the Tariff or this Service Agreement under Section 205 of the Federal Power Act, or other applicable statute, and any rules and regulations promulgated thereunder; or the Network Customer's or Transmission Customer's rights under the Federal Power Act and rules and ~~regulations promulgated thereunder.~~~~

~~15.0 — By signing below, the Transmission Customer or Network Customer verifies that all information submitted to the Transmission Provider to provide service under the Tariff is complete, valid and accurate, and the Transmission Provider may rely upon such information to fulfill its responsibilities under the Tariff.~~

~~16.0 — CHILLS Loads~~

~~The CHILLS load is located in the _____ Zone(s) as listed in Appendix~~
~~3.~~

~~The Transmission Customer's or Network Customer's CHILLS load ~~shall~~ be measured on an hourly integrated basis, by suitable metering equipment located at~~

each connection and delivery point. The CHILLS load ~~will be a separate metered quantity, apart from any firm load served at the same point of delivery. Any generation located at the same point of delivery will be metered separately from the CHILLS load and separately from any firm load at the same point of delivery. The meter owner must~~ cause to be provided to the Transmission Provider, Transmission Customer or Network Customer and applicable Transmission Owner, such data as required by Transmission Provider for billing. The Transmission Customer's or Network Customer's load ~~must~~ be adjusted, for settlement purposes, to include applicable transmission and distribution losses. Measurements taken and all metering equipment ~~must~~ be in accordance with the Transmission Provider's standards and practices for similarly determining the Transmission Provider's load. The actual hourly CHILLS load and any firm load, by delivery point, internal generation site, and point where power may flow to and from the Transmission Customer or Network Customer, with separate readings for each direction of flow, ~~must~~ be provided. For instances where both Network Load and CHILLS load are located at the same point of delivery with Behind-The-Meter Generation, as defined in Attachment A-E of the Tariff, the Network Load must be adjusted for any excess hourly generation above the CHILLS Reserved Capacity. Such excess hourly generation ~~shall~~ will be calculated as the minimum of the CHILLS load and the CHILLS Reserved Capacity, plus the hourly generation amount, less the CHILLS Reserved Capacity.

17.0 — Delivery Points

The delivery points are the interconnection points as listed in Appendix 1 to this CHILLSA.

18.0 — Transmission Charge

Demand charge and other applicable charges pursuant to Schedule 15 and Part VII of the Tariff.

19.0 — Ancillary Service Charges

The following Ancillary Services are required under this CHILLSA.

- a) ~~Scheduling, System Control and Dispatch Service per Schedule 1 of the Tariff.~~ b) ~~Tariff Administration Service per Schedule 1-A1 of the Tariff.~~
- c) ~~Reactive Supply and Voltage Control from Generation Sources Service per Schedule 2 of the Tariff.~~
- d) ~~Regulation and Frequency Response Service per Schedule 3 of the Tariff.~~
- e) ~~Energy Imbalance Service per Schedule 4 of the Tariff.~~
- f) ~~Operating Reserve—Spinning Reserve Service per Schedule 5 of the Tariff.~~
- g) ~~Operating Reserve—Supplemental Reserve Service per Schedule 6 of the Tariff.~~

~~20.0—Real Power Losses—Transmission~~

~~The Transmission Customer or Network Customer will be responsible for transmission losses in accordance with Part VII and Attachment M of the Tariff.~~

~~21.0—Real Power Losses—Distribution~~

~~The Transmission Customer or Network Customer will be responsible for any distribution system losses in accordance with Attachment M of the Tariff.~~

~~22.0—Other Terms and Conditions~~

~~IN WITNESS WHEREOF, the Parties have caused this CHILSA to be executed by their respective authorized officials.~~

~~Southwest Power Pool~~

By: _____

Name Title Date

~~Transmission Customer or Network Customer:~~

By: _____

Name Title Date

Appendix 1 to Addendum 2 of Attachment B.A

Delivery Points of

APPENDIX 21 DELIVERY POINTS

Delivery Point Name	Ownership	Voltage (kV)	CHILLI - Reserved Capacity

ADDENDUM 3 TO ATTACHMENT BA
Conditional High Impact Large Load Service
Operating Agreement

This Conditional High Impact Large Load Service ("CHILLS") Operating Agreement ("Operating Agreement") is entered into this _____ day of _____, _____, by and between _____, Conditional High Impact Large Load Service ("CHILLS") customer ("CHILLS Customer"), Southwest Power Pool, Inc. ("Transmission Provider") and _____ ("Host Transmission Owner"). The CHILLS Customer, Transmission Provider and Host Transmission Owner ~~will~~ be referred to individually as a "Party" and collectively as "Parties."

WHEREAS, the Transmission Provider has determined that the CHILLS Customer has made a valid request for CHILLS in accordance with the Transmission Provider's Open Access Transmission Tariff ("Tariff") filed with the Federal Energy Regulatory Commission ("Commission");

WHEREAS, the Transmission Provider administers CHILLS for Transmission Owners within the SPP Region and acts as an agent for these Transmission Owners in providing service under the Tariff;

WHEREAS, the Host Transmission Owner(s) owns the transmission facilities to which the CHILLS load is physically connected;

WHEREAS, the CHILLS Customer has represented that it is an Eligible Customer under the Tariff;

WHEREAS, the CHILLS Customer and Transmission Provider have entered into a CHILLS Agreement ("Service Agreement") under the Tariff; and

WHEREAS, the Parties intend that capitalized terms used herein ~~will~~ have the same meaning as in the Tariff, unless otherwise specified herein;

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein, the Parties agree as follows:

1.0 CHILL Service

~~This Operating Agreement sets out the terms and conditions under which the Transmission Provider, Host Transmission Owner, and CHILLS Customer will cooperate and the Host Transmission Owner and CHILLS Customer will operate their respective systems and specifies the equipment that will be installed and operated. The Parties **must** operate and maintain their respective systems in a manner that will allow the Host Transmission Owner and the CHILLS Customer to operate their systems and the Transmission Provider to perform its obligations consistent with Good Utility Practice.~~

~~2.0 — Designated Representatives of the Parties~~

~~2.1 — Each Party **must** designate a representative and alternate ("Designated Representative(s)") from their respective company to coordinate and implement, on an ongoing basis, the terms and conditions of this Operating Agreement, including operating curtailments, control requirements, technical and operating provisions, integration of equipment, hardware and software, and other operating considerations.~~

~~2.2 — The Designated Representatives **will** represent the Transmission Provider, Host Transmission Owner, and CHILLS Customer in all matters arising under this Operating Agreement and which may be delegated to them by mutual agreement of the Parties hereto.~~

~~2.3 — The Designated Representatives **will** meet or otherwise confer at the request of any Party upon reasonable notice, and each Party may place items on the meeting agenda. All deliberations of the Designated Representatives **must** be conducted by taking into account the exercise of Good Utility Practice. If the Designated Representatives are unable to agree on any matter subject to their deliberation, that matter **will** be resolved pursuant to Section 12.0 of the Tariff, or otherwise, as mutually agreed by the Parties.~~

3.0 — System Operating Principles

3.1 — ~~The CHILLS Customer must design, construct, and operate its facilities safely and efficiently in accordance with Good Utility Practice, NERC, SPP, or any successor requirements, industry standards, criteria, and applicable manufacturer's equipment specifications, and within operating physical parameter ranges (voltage schedule, load power factor, and other parameters) required by the Host Transmission Owner and Transmission Provider.~~

3.2 — ~~The Host Transmission Owner and Transmission Provider reserve the right to inspect the facilities and operating records of the CHILLS Customer upon mutually agreeable terms and conditions.~~

3.3 — ~~Electric service, in the form of three phase, approximately sixty hertz alternating current, must be delivered at designated delivery points and nominal voltages listed in the Service Agreement. When multiple delivery points are provided to a specific CHILLS load identified in Appendix I of the Service Agreement, they must not be operated in parallel by the CHILLS Customer without the approval of the Host Transmission Owner and Transmission Provider. The Designated Representatives will establish the procedure for obtaining such approval. The Designated Representatives will also establish and monitor standards and operating rules and procedures to assure that transmission system integrity and the safety of customers, the public and employees are maintained or enhanced when such parallel operations is permitted either on a continuing basis or for intermittent switching or other service needs. Each Party must exercise due diligence and reasonable care in maintaining and operating its facilities so as to maintain continuity of service.~~

3.4 — ~~The Host Transmission Owner and CHILLS Customer must operate their systems and delivery points in continuous synchronism and in accordance with applicable NERC Standards, SPP Criteria, and Good Utility Practice.~~

3.5 — ~~If the function of any Party's facilities is impaired or the capacity of any delivery point is reduced, or synchronous operation at any delivery point(s)~~

becomes interrupted, either manually or automatically, as a result of force majeure or maintenance coordinated by the Parties, the Parties will cooperate to remove the cause of such impairment, interruption or reduction, so as to restore normal operating conditions expeditiously.

3.6 — The Transmission Provider and Host Transmission Owner, if applicable, reserve the sole right to take any action necessary during an actual or imminent emergency to preserve the reliability and integrity of the Transmission System, limit or prevent damage, expedite restoration of service, ensure safe and reliable operation, avoid adverse effects on the quality of service, or preserve public safety.

3.7 — In an emergency, the reasonable judgment of the Transmission Provider and Host Transmission Owner, if applicable, in accordance with Good Utility Practice, ~~will~~ be the sole determinant of whether the operation of the CHILLS Customer loads or equipment adversely affects the quality of service or interferes with the safe and reliable operation of the transmission system. — The Transmission Provider or Host Transmission Owner, if applicable, may discontinue transmission service to such CHILLS Customer until the power quality or interfering condition has been corrected. Such curtailment of load, interruption, or load shedding ~~will~~ be done on a non-discriminatory basis. The Transmission Provider or Host Transmission Owner, if applicable, will provide reasonable notice and an opportunity to alleviate the condition by the CHILLS Customer to the extent practicable.

~~4.0 System Planning & Protection~~

~~4.1 Information exchanged by the Parties under this article will be used for system planning and protection only, and will not be disclosed to third parties absent mutual consent or order of a court or regulatory agency.~~

~~4.2 The Host Transmission Owner and the CHILLS **must** coordinate with the Transmission Provider: (1) all scheduled outages of generating resources and transmission facilities consistent with the reliability of service to the customers of each Party, and (2) additions or changes in facilities which could affect another Party's system. Where coordination cannot be achieved, the Designated Representatives **will** intervene for resolution.~~

~~4.3 The CHILLS Customer **must** coordinate with the Host Transmission Owner regarding the technical and engineering arrangements for the delivery points, including one line diagrams depicting the electrical facilities configuration and parallel generation, and **must** design and build the facilities to avoid interruptions on the Host Transmission Owner's transmission system.~~

~~4.4 The CHILLS Customer **must** provide for automatic and underfrequency load shedding of the CHILLS Customer load in accordance with the SPP Criteria related to emergency operations.~~

5.0 Maintenance of Facilities

5.1 The CHILLS Customer ~~must~~ maintain its facilities necessary to reliably receive energy from the Host Transmission Owner's transmission system consistent with Good Utility Practice. The Transmission Provider or Host Transmission Owner, as appropriate, may curtail service under this Operating Agreement to limit or prevent damage to generating or transmission facilities caused by the CHILLS Customer's failure to maintain its facilities in accordance with Good Utility Practice, and the Transmission Provider or Host Transmission Owner may seek as a result any appropriate relief from the Commission.

5.2 The Designated Representatives ~~must~~ establish procedures to coordinate the maintenance schedules, and return to service, of the generating resources and transmission and substation facilities, to the greatest extent practical, to ensure sufficient transmission resources are available to maintain system reliability and reliability of service.

5.3 The CHILLS Customer ~~must~~ obtain: (1) concurrence from the Transmission Provider before beginning any scheduled maintenance of facilities which could impact the operation of the Transmission System over which transmission service is administered by Transmission Provider; and (2) clearance from the Transmission Provider when the CHILLS Customer is ready to begin maintenance on a transmission line or substation. The Transmission Provider ~~will~~ coordinate clearances with the Host Transmission Owner. The CHILLS Customer ~~must~~ notify the Transmission Provider and the Host Transmission Owner as soon as practical at the time when any unscheduled or forced outages occur and again when such unscheduled or forced outages end.

6.0 Scheduling Procedures

6.1 The CHILLS Customer is responsible for providing its Resource and load information to the Transmission Provider in accordance with Attachment A.E.

7.0 Ancillary Services

7.1 The CHILLS Customer must make arrangements in appropriate amounts for all of the required Ancillary Services described in the Tariff. The CHILLS Customer must obtain these services from the Transmission Provider.

~~8.0 Metering~~

~~8.1 The CHILLS Customer **must** provide for the installation of meters, associated metering equipment and telemetering equipment. The CHILLS Customer **must** permit (or provide for, if the CHILLS Customer is not the meter owner) the Transmission Provider's and Host Transmission Owner's representative to have access to the equipment at all reasonable hours and for any reasonable purpose, and **must** not permit unauthorized persons to have access to the space housing the equipment. CHILLS Customer **must** provide to (or provide for, if the CHILLS Customer is not the meter owner) the Host Transmission Owner access to load data and other data available from any delivery point meter. If the CHILLS Customer does not own the meter, the Host Transmission Owner **must** make available, upon request, all load data and other data obtained by the Host Transmission Owner from the relevant delivery point meter, if available utilizing existing equipment. The CHILLS Customer will cooperate on the installation of advanced technology metering in place of the standard metering equipment at a delivery point at the expense of the requestor; provided, however, that meter owner **will** not be obligated to install, operate or maintain any meter or related equipment that is not approved for use by the meter owner and/or Host Transmission Owner, and provided that such equipment addition can be accomplished in a manner that does not interfere with the operation of the meter owner's equipment or any Party's fulfillment of any statutory or contractual obligation.~~

~~8.2 The CHILLS Customer **must** provide for the testing of the metering equipment at suitable intervals and its accuracy of registration **must** be maintained in accordance with standards acceptable to the Transmission Provider and consistent with Good Utility Practice. At the request of the Transmission Provider or Host Transmission Owner, a special test **will** be made, but if less than two percent inaccuracy is found, the requesting Party **must** pay for the test. Representatives of the Parties may be present at all routine or special tests and whenever any readings for purposes of~~

settlement are taken from meters not having an automated record. If any test of metering equipment discloses an inaccuracy exceeding two percent, the accounts of the Parties will be adjusted. Such adjustment will apply to the period over which the meter error is shown to have been in effect or, where such period is indeterminable, for one half the period since the prior meter test. Should any metering equipment fail to register, the amounts of energy delivered will be estimated from the best available data.

~~9.0 — Connected Generation Resources~~

~~9.1 — The CHILLS Customer's connected generation resources that have automatic generation control and automatic voltage regulation **must** be operated and maintained consistent with regional operating standards, and the CHILLS Customer or the operator **must** operate, or cause to be operated, such resources to avoid adverse disturbances or interference with the safe and reliable operation of the transmission system as instructed by the Transmission Provider.~~

~~9.2 — For all resources of the CHILLS Customer, the following generation telemetry readings **must** be submitted to the Transmission Provider and Host Transmission Owner:~~

~~1) — Analog MW;~~

~~2) — Integrated MW/HS/HR;~~

~~3) — Analog MVARs; and~~

~~4) — Integrated MVAR/HS/HR.~~

10.0—Redispatching, Curtailment and Load Shedding

~~10.1—The Transmission Provider will redispatch Resources in accordance with the Energy and Operating Reserve Markets operations specified in Attachment AE. The Market Participant must respond immediately to requests for redispatch from the Transmission Provider. The Transmission Provider will bill or credit the Market Participant as appropriate using the settlement procedures specified in Attachment AE.~~

~~10.2—The Parties must implement load shedding procedures to maintain the reliability and integrity for the Transmission System as provided in Section 48 of the Tariff and in accordance with applicable NERC and SPP requirements and Good Utility Practice. Load shedding may include (1) automatic load shedding, (2) manual load shedding, and (3) rotating interruption of customer load. When manual load shedding or rotating interruptions are necessary, the Host Transmission Owner will notify the Network Customer's dispatcher or schedulers of the required action and the Network Customer must comply immediately.~~

~~10.3—The CHILLS Customer will coordinate with the Host Transmission Owner to ensure sufficient load shedding equipment is in place on their respective systems to meet SPP requirements. The CHILLS Customer and the Host Transmission Owner must develop a plan for load shedding which may include manual load shedding by the CHILLS Customer.~~

11.0—Communications

11.1—The CHILLS Customer ~~must~~ at its own expense, install and maintain communication link(s) for scheduling. The communication link(s) ~~will~~ be used for data transfer and for voice communication.

12.0—Cost Responsibility

~~12.1—The CHILLS Customer will be responsible for all costs incurred by the CHILLS Customer, Host Transmission Owner, and Transmission Provider to implement the provisions of this Operating Agreement including, but not limited to, engineering, administrative and general expenses, material and labor expenses associated with the specification, design, review, approval, purchase, installation, maintenance, modification, repair, operation, replacement, checkouts, testing, upgrading, calibration, removal, and relocation of equipment or ~~software~~, so long as the direct assignment of such costs is consistent with Commission policy.~~

~~12.2—The CHILLS Customer will be responsible for all costs incurred by CHILLS Customer, Host Transmission Owner, and Transmission Provider for on-going operation and maintenance of the facilities required to implement the provisions of this Operating Agreement so long as the direct assignment of such costs is consistent with Commission policy. Such work ~~shall~~ will include, but is not limited to, normal and extraordinary engineering, administrative and general expenses, material and labor expenses associated with the specifications, design, review, approval, purchase, installation, maintenance, modification, repair, operation, replacement, checkouts, testing, calibration, removal, or relocation of equipment required to accommodate service provided under this Operating Agreement.~~

~~13.0—Billing and Payments~~

~~Billing and Payments will be in accordance with Attachment AE, Part VII, Schedule 15, and Attachment BA of the Tariff.~~

14.0—Dispute Resolution

Any dispute among the Parties regarding this Operating Agreement ~~will~~ be resolved pursuant to Section 12 of the Tariff, or otherwise, as mutually agreed by the Parties.

15.0—Assignment

~~This Operating Agreement will inure to the benefit of and be binding upon the Parties and their respective successors and assigns, but must not be assigned by any Party, except to successors to all or substantially all of the electric properties and assets of such Party, without the written consent of the other Parties. Such written consent must not be unreasonably withheld.~~

16.0—Choice of Law

~~The interpretation, enforcement, and performance of this Operating Agreement will be governed by the laws of the State of Arkansas, except laws and precedent of such jurisdiction concerning choice of law will not be applied, except to the extent governed by the laws of the United States of America.~~

17.0 — Entire Agreement

~~The Tariff and CHILLS Agreement, as they are amended from time to time, are incorporated herein and made a part hereof. To the extent that a conflict exists between the terms of this Operating Agreement and the terms of the Tariff, the Tariff will control.~~

18.0—Unilateral Changes and Modifications

~~Nothing contained in this Operating Agreement or any associated Service Agreement will be construed as affecting in any way the right of the Transmission Provider or a Transmission Owner unilaterally to file with the Commission, or make application to the Commission for, changes in rates, charges, classification of service, or any rule, regulation, or agreement related thereto, under section 205 of the Federal Power Act and pursuant to the Commission's rules and regulations promulgated thereunder, or under other applicable statutes or regulations.~~

~~Nothing contained in this Operating Agreement or any associated Service Agreement will be construed as affecting in any way the ability of any CHILLS Customer receiving CHILLS under the Tariff to exercise any right under the Federal Power Act and pursuant to the Commission's rules and regulations promulgated thereunder, provided, however, that it is expressly recognized that this Operating Agreement is necessary for the implementation of the Tariff and Service Agreement. Therefore, no Party may propose a change to this Operating Agreement that is inconsistent with the rates, terms and conditions of the Tariff and/or Service Agreement.~~

19.0 — Term

~~This Operating Agreement will become effective on the date assigned by the Commission ("Effective Date"), and will continue in effect until the Tariff or the CHILS Customer's Service Agreement is terminated, whichever occurs first.~~

~~20.0~~ Notice

~~20.1~~ Any notice that may be given to or made upon any Party by any other Party under any of the provisions of this Operating Agreement ~~must~~ be in writing, unless otherwise specifically provided herein, and ~~will~~ be considered delivered when the notice is personally delivered or deposited in the United States mail, certified or registered postage prepaid, to the following:

[Transmission Provider]

[name]

[title]

[address]

[phone]

[fax]

[email address]

[Host Transmission Owner]

[name]

[title]

[address]

[phone]

[fax]

[email address]

[CHILLS Customer]

[name]

[title]

[address]

[phone]

[fax]

[email address]

Any Party may change its notice address by written notice to the other Parties in accordance with this Article 20.

~~20.2~~ Any notice, request, or demand pertaining to operating matters may be delivered in writing, in person or by first class mail, e-mail, messenger, or facsimile transmission as may be appropriate and ~~must~~ be confirmed in writing as soon as reasonably practical thereafter, if any Party so requests in any particular instance.

21.0 — Execution in Counterparts

This Operating Agreement may be executed in any number of counterparts with the same effect as if all Parties executed the same document. All such counterparts ~~will~~ be construed together and ~~will~~ constitute one instrument.

IN WITNESS WHEREOF, the Parties have caused this Operating Agreement to be executed by their respective authorized officials, and copies delivered to each Party, to become effective as of the Effective Date.

TRANSMISSION PROVIDER _____ HOST TRANSMISSION OWNER _____

Signature _____ Signature _____

Printed Name _____ Printed Name _____

Title _____ Title _____

Date _____ Date _____

CHILLS CUSTOMER _____

Signature _____

Printed Name _____

Title _____

Date _____

|

ATTACHMENT BB
HIGH IMPACT LARGE LOAD GENERATION ASSESSMENT

Section 1. Definitions

Affected System shall mean will mean an electric system other than the Transmission System that may be affected by the proposed interconnection, as defined in Attachment V of the Tariff.

Affected System Operator shall mean will mean the entity that operates an Affected System, as defined in Attachment V of the Tariff.

Affiliate shall mean will 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, as defined in Attachment V of the Tariff.

Applicable Laws and Regulations as defined in Attachment V of the Tariff, shall mean will 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 as defined in Attachment V of the Tariff, shall mean will mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

Applicable Reliability Standards as defined in Attachment V of the Tariff, shall mean will 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 as defined in Attachment V of the Tariff, shall mean will mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider.

Breach will mean the failure of a Party to perform or observe any material term or condition of the HILLGIA or Load Limited HILLGIA, as applicable.

Breaching Party will mean a Party that is in Breach of the HILLGIA or Load Limited HILLGIA, as applicable.

Business Day shall mean will mean Monday through Friday, excluding Federal Holidays, as defined in Part I of the Tariff.

Calendar Day shall mean will mean any day including Saturday, Sunday or a Federal Holiday, as defined in Part I of the Tariff.

Commercial Operation ~~shall mean~~ will mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation, as defined in Attachment V of the Tariff.

Commercial Operation Date of a unit ~~will mean~~ the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the HILLGIA or Load Limited HILLGIA, as applicable.

Conditional High Impact Large Load (CHILL) ~~shall have~~ will have the meaning in Part I of the Tariff, as defined in Part I of the Tariff.

Confidential Information as defined in Attachment V of the Tariff, ~~shall mean~~ will 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 ~~will 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 restudies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing. Contingent Facilities are identified in Appendix A of the HILLGIA or Load Limited HILLGIA, as applicable.

Control Area as defined in Attachment V of the Tariff, ~~shall mean~~ will 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.

Default ~~will mean~~ the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the HILLGIA or Load Limited HILLGIA, as applicable.

Definitive Interconnection System Impact Study (DISIS) ~~shall have the meaning of Attachment V of the Tariff,~~ as defined in Attachment V of the Tariff.

Deliverability Area as defined in Attachment V of the Tariff, ~~shall mean~~ will mean a portion of the Transmission System in which a generator can reliably deliver all or a portion of its output capability.

Dispute Resolution ~~will mean~~ the procedure in Section 13.5 of this Attachment BB for resolution of a dispute between the Parties in which they will first attempt to resolve the dispute on an informal basis.

Distribution System as defined in Attachment V of the Tariff, ~~shall mean~~ will mean the Transmission Owner's facilities and equipment that are not included in the Transmission System. The voltage levels at which Distribution Systems operate differ among areas.

Distribution Upgrades as defined in Attachment V of the Tariff, shall mean will mean the additions, modifications, and upgrades to the 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 will mean the date on which the HILLGIA becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

Electromagnetic Transient Study or EMT Study as defined in Attachment V of the Tariff, shall mean will mean an analysis to determine the electromagnetic transient response of the electric power system due to system disturbances.

Emergency Condition will 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 the Transmission System, or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Transmission Owner, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Owner's Interconnection Facilities; or (4) 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 will be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the HILLGIA to possess black start capability.

Engineering & Procurement (E&P) Agreement as defined in Attachment V of the Tariff, shall mean will mean an agreement that authorizes the Transmission Owner 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 as defined in Attachment V of the Tariff, shall mean will mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

Environmental Review will mean a study conducted by WesternAPA-Division, as the Transmission Owner, that contains a review of the proposed interconnection to the WesternAPA-Division's transmission facilities, pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. §4321, et seq., as amended, and setting forth Interconnection Customer's responsibilities in connection with such review of the interconnection.

Electric Storage Resource Load Assessment (ESR-LA) ~~Will~~ mean a study conducted by the Transmission Provider to evaluate the impacts of an Electric Storage Resource (ESR) withdrawing energy from the Transmission System. The ESR-LA will consist of, but is not limited to, dynamic and voltage stability analyses in accordance with NERC reliability standards.

Existing Generating Facility ~~as defined in Attachment V of the Tariff.shall~~
~~meanwill mean a Generating Facility that is currently interconnected to the Transmission System of the Transmission Provider.~~

Federal Power Act ~~as defined in Attachment V of the Tariff.shall meanwill mean~~
~~the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.~~

FERC ~~as defined in Attachment V of the Tariff.shall meanwill mean the Federal Energy Regulatory Commission (Commission) or its successor.~~

Financial Security ~~will mean~~ the security deposits required of the HILLGA Customer to enter the HILLGA.

Force Majeure ~~as defined in Attachment V of the Tariff.shall meanwill 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 ~~will mean a~~ HILLGA Customer's device for the production and/or storage for later injection of electricity identified in the HILLGA Request, but ~~will~~ not include the Interconnection Customer's Interconnection Facilities and ~~will~~ not include a Storage as Transmission Only Asset as defined in Section 1 of the Tariff. A Generating Facility consists of one or more generating unit(s) and/or storage device(s) which usually can operate independently and be brought online or taken offline individually.

Generating Facility Capacity ~~as defined in Attachment V of the Tariff.shallwill mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.~~

Generating Facility Modification ~~as defined in Attachment V of the Tariff.wishall mean modification to an Existing Generating Facility, including comparable replacement of only a portion of the equipment at the Existing Generating Facility.~~

Good Utility Practice ~~shallwill 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 as defined in Part I of the Tariff.~~

Governmental Authority ~~as defined in Attachment V of the Tariff shall will 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, Transmission Owner or any Affiliate thereof.~~

Hazardous Substances ~~as defined in Attachment V of the Tariff shall will 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.~~

High Impact Large Load (HILL) ~~shall will have the meaning as defined in Part I of the Tariff.~~

High Impact Large Load Generation Assessment (HILLGA) **will** mean an engineering process that evaluates the impact of the proposed interconnection on the safety and reliability of Transmission System and, if applicable, an Affected System. The HILLGA is part of **CHILL and** HILL processes that study: 1) the proposed load, 2) the proposed Generating Facility to follow the proposed load, and 3) the combination of the supported proposed load and proposed Generating Facility to follow the proposed load.

High Impact Large Load Generation Assessment Customer (HILLGA Customer, HILLGAC) **will** mean an Interconnection Customer that proposes to interconnect its Generating Facility with the Transmission System pursuant to the High Impact Large Load Generation Assessment.

High Impact Large Load Interconnection Service (HILL Interconnection Service) **will** mean a HILLGA Request, in the form of Appendix 1 to the High Impact Large Load Generation Assessment Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of an Existing Generating Facility that is interconnected with the Transmission System.

~~**High Impact Large Load Generation Assessment Deliverability Area (HILLGA-DA)** shall will mean a HILL generator connected to the local Deliverability Area where the HILL is located in accordance with Section 3.1.1(5)a of this Attachment BB.~~

High Impact Large Load Generation Assessment Local Interconnection (HILLGA-Local) **will** mean a HILL generator connected to the Transmission System in close proximity to the HILL in accordance with Section 3.1.1(5)b of this Attachment BB.

High Impact Large Load Generation Assessment Request (HILLGA Request) **will** mean an Interconnection Request submitted, in the form specified in Appendix 1 to this Attachment BB, pursuant to the High Impact Large Load Generation Assessment Study Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of an Existing Generating Facility that is interconnected with the Transmission System.

High Impact Large Load Generation Assessment Study Agreement (HILLGA Study Agreement) **will** mean the study agreement for the High Impact Large Load Generation Assessment in Appendix 1 to this Attachment BB.

High Impact Large Load Generation Assessment System Impact Study (HILLGA System Impact Study, SIS) **will** mean the system impact study that identifies and details the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, or that may be caused by the withdrawal or addition of an Interconnection Request, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in this Attachment BB.

High Impact Large Load Generator Interconnection Agreement (HILLGIA) **will** mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Generating Facility that is included in Appendix **XX2** to this Attachment BB or in Appendix **XX3** when Western-UGP is a Party as the Transmission Owner to the HILLGIA.

Initial Queue Position ~~shall~~**will have the meaning** as defined in Attachment V of the Tariff.

Initial Synchronization Date ~~as defined in Attachment V of the Tariff.~~**shall**~~will mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.~~

In-Service Date ~~as defined in Attachment V of the Tariff.~~**shall**~~will mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Transmission Owner's Interconnection Facilities to obtain back feed power.~~

Interconnection Customer ~~shall~~**will have the meaning of** as defined in Attachment V of the Tariff.

HILLGA Customer's Interconnection Facilities **will** mean all facilities and equipment, as identified in Appendix A of the HILLGIA or Load Limited HILLGIA, as applicable, 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 System. Interconnection Customer's Interconnection Facilities are sole use facilities.

Interconnection Facilities as defined in Attachment V of the Tariff, shall mean the Transmission Owner'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 System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Request as defined in Attachment V of the Tariff, shall mean an Interconnection Customer's request, in the form of Appendix 3 or Appendix 5 to the Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, to interconnect a Replacement Generating Facility, increase the capacity of, or make a Material Modification to the operating characteristics of, an Existing Generating Facility that is interconnected with the Transmission System.

Interconnection Service will mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the 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 HILLGIA and, if applicable, the Tariff.

Interconnection Study will mean any of the following studies: the Replacement Impact Study, the Reliability Assessment Study, the Definitive Interconnection System Impact Study, the HILLGA System Impact Study, and the Interconnection Facilities Study described in the Generator Interconnection Procedures.

IRS as defined in Attachment V of the Tariff, shall mean the Internal Revenue Service.

Joint Operating Agreement between the Midcontinent Independent System Operator, Inc. and Southwest Power Pool, Inc. ("MISO-SPP JOA"): shall have the meaning as defined in Section 4 Part I of the Tariff.

Joint Operating Committee as defined in Attachment V of the Tariff, shall be a group made up of representatives from Interconnection Customer, Transmission Owner and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

Joint Targeted Interconnection Queue ("JTIQ") shall have the meaning as defined in Section 4 Part I of the Tariff.

JTIQ Upgrade shall have the meaning as defined in Section 4 Part I of the Tariff.

Load Limited Resource Interconnection Service (LLRIS) ~~will~~ mean an Interconnection Service that allows the Interconnection Customer to integrate its Generating Facility with the Transmission System with injection rights limited to the HILL for which it is supporting. LLRIS in and of itself does not convey transmission service.

Loss ~~will~~ 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 another Party's performance, or non-performance of its obligations under the HILLGIA or Load Limited HILLGIA, as applicable, on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party. The term "Loss" as used in this Section 1 ~~will~~ apply only to the use of the term in Section 9.1.2 of the Generator Interconnection Study Agreement and Section 10.1.2 of the Interim Availability Interconnection System Impact Study Agreement.

Maximum Injection Capability ~~as defined in Attachment V of the Tariff shall will mean the maximum amount of real power that may be injected by a Generating Facility at the Point of Interconnection.~~

Metering Equipment ~~will~~ mean all metering equipment installed or to be installed at the Generating Facility pursuant to the HILLGIA or Load Limited HILLGIA, as applicable, 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.

MISO ~~shall will have the meaning~~ as defined in ~~Section 4 Part I~~ of the Tariff.

Nameplate Capacity ~~as defined in Attachment V of the Tariff shall will mean the maximum real power rating listed on the nameplate of the Generating Facility measured in alternating current megawatts (AC MW), or the sum of all such ratings of a Generating Facility where it includes multiple energy production devices.~~

NERC ~~as defined in Attachment V of the Tariff shall will mean the North American Electric Reliability Corporation or its successor organization.~~

Network Resource ~~shall will 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 as defined in Part I of the Tariff.~~

Network Resource Deliverability ~~shall will mean the amount of real power that can be delivered to the aggregate of Network Load within a Deliverability Area by a Generating Facility, as measured at the Point of Interconnection. Network Resource~~

~~Deliverability in and of itself does not convey transmission service as defined in Attachment V of the Tariff.~~

Network Resource Interconnection Service (NRIS) ~~shall will have the meaning as defined~~ in Attachment V of the Tariff.

Network Upgrades ~~as defined in Attachment V of the Tariff. shall will mean the additions, modifications, and upgrades to the Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission System to accommodate the interconnection of the Generating Facility to the Transmission System.~~

Notice of Dispute ~~will~~ mean a written notice of a dispute or claim that arises out of or in connection with the HILLGIA or Load Limited HILLGIA, as applicable, or its performance.

Party or Parties ~~as defined in Attachment V of the Tariff. shall will mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.~~

Permissible Technological Advancement ~~as defined in Attachment V of the Tariff. shall will mean an advancement to turbines, inverters, plant supervisory controls or other technological advancements that do not increase the Interconnection Customer's requested Interconnection Service or cause any reliability concerns. A Permissible Technological Advancement does 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), nor does it include changes in generation technology type or fuel type.~~

Point of Change of Ownership ~~will~~ mean the point, as set forth in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Owner's Interconnection Facilities.

Point of Interconnection ~~will~~ mean the point, as set forth in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, where the Interconnection Facilities connect to the Transmission System.

Queue ~~as defined in Attachment V of the Tariff. shall will mean the Definitive Interconnection System Impact Study Queue or the Interconnection Facilities Study Queue, as applicable.~~

Reasonable Efforts ~~will~~ mean, with respect to an action required to be attempted or taken by a Party under the HILLGIA or Load Limited HILLGIA, as applicable, 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.

Scoping Meeting ~~will~~ mean the meeting between representatives of the HILLGA Customer, Transmission Owner and Transmission Provider conducted for the purpose of discussing alternative interconnection options, to exchange information including any

transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Shared Network Upgrade will mean a Network Upgrade listed in Appendix A of the HILLGIA that is needed for the interconnection of multiple Interconnection Customers' Generating Facilities where such Interconnection Customers share the cost.

Site Control as defined in Attachment V of the Tariff shall will mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size for the purpose of constructing the Generating Facility or Generating Facility's tie line; (2) an option to purchase or acquire a leasehold site of sufficient size for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site of sufficient size for such purpose.

Stand Alone Network Upgrades will mean Network Upgrades that are not part of an Affected Systems that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. The Transmission Provider, Transmission Owner and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable. If the Transmission Provider, Transmission Owner and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Owner must provide the Interconnection Customer a written technical explanation outlining why the Transmission Owner does not consider the Network Upgrade to be a Stand Alone Network Upgrade within fifteen (15) days of its determination.

System Protection Facilities as defined in Attachment V of the Tariff shall will mean the equipment, including necessary protection signal communications equipment, required to protect (1) the 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 System or on other delivery systems or other generating systems to which the Transmission System is directly connected.

Tariff as defined in Attachment V of the Tariff shall will 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 will 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 HILLGIA to the extent necessary.

Transmission Provider as defined in Attachment V of the Tariff, 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 Owner's Interconnection Facilities will mean all facilities and equipment owned, controlled, or operated by the Transmission Owner from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, including any modifications, additions or upgrades to such facilities and equipment. Transmission Owner's Interconnection Facilities are sole use facilities and will not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Transmission System as defined in Attachment V of the Tariff, 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 as defined in Attachment V of the Tariff, 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.

Western Area Power Administration-Upper Great Plains Region ("Western-UGP") as defined in Attachment V of the Tariff, shall mean a division of the Western Area Power Administration, a Federal Power Marketing Agency, and Transmission Owner, that markets and transmits Federal power over Federal transmission facilities that have been transferred to the functional control of the Transmission Provider.

Section 2. High Impact Large Load Generation Assessment Scope and Application

2.1 Reserved.

2.2 High Impact Large Load Generation Assessment

The HILLGA is an expedited process designed to review and approve the interconnection of a new Generating Facility, or an existing generator in accordance with Section 6, to the Transmission System when a Generating Facility is supportive of HILLGS, ~~including CHILLS as defined in Attachment BA of the Tariff~~. This Attachment BB does not apply to requests for generation interconnection that is not supportive of a HILLGS ~~or CHILLS~~ request(s). Unless explicitly indicated, a HILLGA Request will not be subject to the provisions of Attachment V of the Tariff (“Generator Interconnection Procedures”). Likewise, Interconnection Requests processed through Attachment V of the Tariff will not be subject to the provisions of the HILLGA as set forth herein.

2.3 Comparability.

Transmission Provider will receive, process and analyze all HILLGA Requests in a timely manner as set forth in this Attachment BB. Transmission Provider will use the same Reasonable Efforts in processing and analyzing HILLGA Requests from all HILLGA Customers, whether the Generating Facilities are owned by a Transmission Owner, its subsidiaries or Affiliates or others.

2.4 HILLGA Customer Requirements.

The expedited procedure described in this Attachment BB requires that the HILLGA Customer have plans, designs and interconnection points determined prior to submitting a HILLGA Request. The HILLGA Customer may select one of three generator interconnection studies described in this Attachment BB.

2.5 HILLGA Transmission Owner Requirements.

The expedited procedure described in this Attachment BB requires that the Transmission Owner coordinate with the Transmission Provider and HILLGA Customer in a timely manner.

2.5 No Applicability to Transmission Service.

Nothing in this Attachment BB will constitute a request for transmission service or confer upon a HILLGA Customer any right to receive transmission service.

2.6 Participation by the United States Subject to Federal Laws and Regulations

In the event that WAPA-Division Western UGP is the Transmission Owner under any of the provisions or agreements in this Attachment BB, then in such case Section 39.3 of this Tariff is incorporated as if it were a part hereof.

Section 3. HILLGA Requests

3.1 General.

A HILLGA Customer **must** submit to Transmission Provider a HILLGA Request by providing an executed HILLGA Study Agreement in the form of Appendix 1 to this Attachment BB, and all other items set forth in Section 8.2 of this Attachment BB. All HILLGA Requests **must** be submitted in the manner specified in Section 1 of the “Generator Interconnection Business Guide and Practice” manual posted on the Transmission Provider’s Generator Interconnection Study posting page on OASIS, and must be associated with a corresponding executed HILL Delivery Point Study (“HDPS”) Agreement.

HILLGA Customers may request a level of HILLGA Service below the full Generating Facility Capacity. These requests for Interconnection Service **will** be studied at the level of service requested for purposes of the HILL to determine the cost of the Interconnection Facilities, Network Upgrades, and associated costs. The generator may be subject to other studies at the full Generating Facility Capacity to ensure the safety and reliability of the Transmission System, with the study costs borne by the HILLGA 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 would also be borne by the HILLGA Customer. HILLGA Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the HILLGIA. The necessary control technologies and protection systems **will** be established in Appendix C of the executed, or requested to be filed unexecuted, HILLGIA.

Transmission Provider **will** study Generating Facilities that include at least one Electric Storage Resource at non-peak load and using the operating assumptions requested by HILLGA Customer, unless Transmission Provider determines that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions. Transmission Provider **will** study these requests for Interconnection Service, with the study costs borne by HILLGA Customer, using the submitted operating assumptions. These requests for Interconnection Service also 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 HILLGA Customer. HILLGA Customer’s Generating Facility may be subject to additional control technologies as

well as testing and validation of additional control technologies consistent with Article 6 of the HILLGIA. The necessary control technologies and protection systems will be set forth in Appendix C of HILLGA Customer's HILLGIA.

3.1.1 HILLGA Requirements

- HILLGA Customer must meet the following requirements:

1) The HILLGA Customer submits the HILLGA Request.

~~2) The Maximum Injection~~

2) -The projected capacity accreditation MW value, as determined pursuant to Attachment AA of the Tariff, for the Generating Facility(ies) submitted in Capability of the HILLGA Request(s) must not exceed the projected capacity accreditation equal to the amount of requested MW load amount of the associated HILL Request as specified in the executed study agreement subject to Attachments AQ, AX, or BA of this Tariff, multiplied by the product of (a) 100% plus the highest approved Summer Season Planning Reserve Margin percentage set forth in the SPP Planning Criteria and (b) 125%. The calculation is as follows:

$$\text{Total capacity in HILLGA Request(s)} \leq \text{HILL Request load} \times \text{Max (100\%+PRM 125\%)}$$

3) HILLGA Customer must submit a separate HILLGA Request for each Generating Facility associated with the HILL. HILLGA Customer must provide a Point of Interconnection for each HILLGA Request. Each HILLGA Request must be submitted with the correct deposit.

4) A HILLGA Request interconnecting to facilities not under SPP's functional control must follow the procedures for non-jurisdictional generator interconnections in Section 6.3 of SPP Business Practice 7250.

5) The proposed Point of Interconnection for a HILLGA Request connecting to the SPP Transmission System must be identified by the HILLGA Customer as either being in the same Local Deliverability Area as the HILL or in the Local Delivery Area.

~~a. DELIVERABILITY AREA: the designated Point of Interconnection is located within the same Deliverability Area as the HILL ("HILLGA-DA Interconnection") and meets the following criteria:~~

~~i. The projected capacity accreditation as determined pursuant to Attachment AA is greater than or equal to the amount of HILL service granted for each of the first five (5) years after the Commercial Operation Date of the Generating Facility.~~

~~1. The system-level accreditation percentages applied wind, solar, and energy storage resources, excluding pumped storage hydroelectric resources, shall be based on the most recent posting of the ELCC Report~~

~~2. The system-level accreditation percentages applied to thermal fuel-type resources (i.e. natural gas, petroleum, coal, nuclear, biomass, geothermal, waste heat), pump storage hydroelectric resources, and hydroelectric resources with reservoir storage capability not subject to hourly river flow limitations similar to run-of-river hydro, shall will be based on the most recent class average EFORD and EPOF, after considering the EPOF adjustment, on the SPP website.~~

~~i. The Generating Facility is capable of following a dispatch signal and can achieve a ramp rate of 20 MW/Min for a duration resulting in a total ramp equal to or greater than 50% of the granted HILL service.~~

b. LOCAL INTERCONNECTION: The Point of Interconnection is on the Transmission System no more than two substations away from the HILL(s) Local Delivery Facilities ("HILLGA-Local"). A HILL Generating Facility may be supporting multiple HILL's if no more than 5 substations are involved in the supporting and no more than two existing transmission line segments are utilized.

A HILL Generating Facility connecting to 765 kV transmission is limited to one bus distance to be considered local.

ii. The Generating Facility is capable of following a dispatch signal and can achieve a ramp rate of 20 MW/Min for a duration resulting in a total ramp equal to or greater than 50% of the granted HILL service.

~~c. Where both the Deliverability Area and Local Delivery Facilities options are studied as part of the HILLGA System Impact Study the HILLGA Customer would select the exact Point of Interconnection before proceeding with a HILLGA or withdrawal the HILLGA Request(s).~~

6 Any expected environmental restrictions (e.g. run-time restrictions) or any other restrictions or limitations.

7.

3.1.2 Joint HILLGA Interconnection Requests

More than one HILL request may be evaluated simultaneously with one or more HILLGA Requests. All requested load and generation information for each site must be submitted simultaneously with the HILLGA.

3.2 Identification of Type of High Impact Large Load Interconnection Service (HILL Interconnection Service)

The HILLGA will evaluate Load Limited Resource Interconnection Service (LLRIS) as described in this Attachment BB. ~~where Section 6 applies exclusively to Network Resource Interconnection Service (NRIS) as defined in Attachment V of this Tariff, to the Resource Deliverability Area (DA).~~

HILLGA Customer ~~must~~ select one of the following assessment methods for the request.

The HILLGA System Impact Study performed for HILLGA-Local Interconnections **will** grant LLRIS. The Transmission Provider will perform the HILLGA System Impact Study studying the Transmission System impacts limited to the supported HILL. The Transmission Provider will also perform the NRIS analysis, ~~as defined in Attachment V of this tariff~~ for operational information in case of emergency. The study procedures are described below and in Section 8.2 of SPP Business Practice 7250. ~~For Generating Facilities that include at least one Electric Storage Resource that request to use operating assumptions pursuant to Section 3.1, unless Transmission Provider determines that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions, and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Generating Facility without requiring additional Network Upgrades.~~

~~a. The HILLGA System Impact Study for HILL-DA Interconnections will be performed to grant NRIS. The Transmission Provider will perform the SIS described in Section 6 of this Attachment BB and assign additional Network Upgrades as required for this service type. The Generating Facility output would not be limited to the associated HILL load under this option. The study procedures are described below and in Section 8.3 SPP Business Practice 7250. For Generating Facilities that include at least one Electric Storage Resource that request to use operating assumptions pursuant to Section 3.1, unless Transmission Provider determines that Good Utility Practice, including Applicable Reliability Standards,~~

~~otherwise requires the use of different operating assumptions, and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Generating Facility without requiring additional Network Upgrades.~~

3.3 Reserved.

3.4 Valid Interconnection Request.

3.4.1 Initiating a HILLGA Request.

To initiate a HILLGA Request, HILLGA Customer must satisfy the requirements in Section 8.2 of this Attachment BB.

3.4.2 Acknowledgment of HILLGA Request.

Transmission Provider **will** acknowledge receipt of the HILLGA Request within five (5) Business Days of receipt of the request.

3.4.3 Deficiencies in HILLGA Request.

A HILLGA Request will not be considered to be a valid request until all items in Section 8.2 of this Attachment BB have been received by Transmission Provider.

3.4.4 Scoping Meeting.

After the receipt of a valid HILLGA Request, a Scoping Meeting **will** be held on a date mutually agreed upon by the Parties.

The purpose of the Scoping Meeting **will** be to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection. Transmission Provider, Transmission Owner and HILLGA Customer **will** provide 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, Transmission Owner and HILLGA Customer will also make available personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the Scoping Meeting, HILLGA Customer **must** designate its Point of Interconnection, pursuant to Section 8.2 of this Attachment BB, no later than the end of the HILLGA Review Period. Changes in the Point of

Interconnection will not be permitted after the end of the HILLGA Review Period. The duration of the meeting **must** be sufficient to accomplish its purpose.

3.4.4.1 Duplicate Requests Prohibited

If a HILLGA Customer submits a HILLGA Request for a HILLGA at the same Point of Interconnection as another HILLGA Request, the HILLGA **will** be studied sequentially based upon the order in which it was received.

3.4.4.2 Point of Interconnection Protections

If, at the time of the submission of a HILLGA Request there exists an active or pending Interconnection Request at the same Point of Interconnection, then any additional costs will be assigned to the HILLGA Customer.

3.4.5 Environmental Review.

In the event the HILLGA Request will result in an interconnection to, or modification of, the transmission facilities of Western-UGP, the HILLGA Request **will** be subject to an Environmental Review as described in Section 8.6.1 of this Attachment BB. The HILLGA Customer may request that the Environment Review begin any time after the HILLGA Request is accepted.

3.5 OASIS Posting.

3.5.1 HILLGA Requests **will** be listed on the Transmission Provider's OASIS along with all other Interconnection Requests in accordance with Section 3.5.1 of Attachment V of the Tariff.

3.6 Coordination with Affected Systems.

Except for the JTIQ Upgrade process described in Sections 3.6.4 of ~~the~~ this Attachment BB, Transmission Provider will coordinate the conduct of any studies required to determine the impact of the HILLGA Request on Affected Systems with Affected System Operators and, if possible, include those results (if available) in its HILLGA study report within the time frame specified in this Attachment BB. Transmission Provider will include such Affected System Operators in all meetings held with HILLGA Customer as required by this Attachment BB. HILLGA 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 **must** 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.

3.6.1 Reserved for Future Use.

3.6.2 Reserved for Future Use.

3.6.3 Reserved for Future Use.

3.6.4 JTIQ Provisions

A. Impacts to JTIQ Upgrades

Transmission Provider will use the criteria described in Section 9.4.2 (d)(ii) of the MISO-SPP JOA to determine whether an SPP HILLGA Request has an impact on one or more of the JTIQ Upgrades.

- 1) SPP HILLGA Requests that are determined to have an impact on one or more of the JTIQ Upgrades will be allocated a portion of the cost of a portfolio of JTIQ Upgrades pursuant to Section IV of Attachment AV of this Tariff based on the amount of Interconnection Service requested. Transmission Provider will identify the impacting HILLGA Requests and associated cost allocated to each HILLGA Request in the HILLGA report. Impacts to MISO facilities other than the JTIQ Upgrades will be determined pursuant to the provisions of Section 3.6.4(B) of this Attachment BB.
- 2) SPP HILLGA Requests that are determined not to have an impact on one or more of the JTIQ Upgrades will not be allocated any portion of the cost of a portfolio of JTIQ Upgrades, and will be subject to the following provisions:
 - a) Such SPP HILLGA Requests with POIs located in DISIS group 4 or 5, as defined in SPP Business Practice 7250, will be evaluated pursuant to the provisions of Section 3.6 to determine their impact to MISO facilities other than the JTIQ Upgrades.
 - b) Such SPP HILLGA Requests with POIs located in a group other than DISIS group 4 or 5, as defined in SPP Business Practice 7250, will be

evaluated pursuant to the provisions of Section 3.6.4(B) of this Attachment BB to determine their impact to MISO facilities other than the JTIQ Upgrades.

- 3) When the Transmission Provider, in coordination with MISO and pursuant to the provisions of Section 9.4.2(e)(iii) of the MISO-SPP JOA, determines that the JTIQ Upgrades are likely to exceed the Target MW Value as defined in Attachment AV of this Tariff upon completion of the current study cycle, a supplemental affected system study will be conducted pursuant to the provisions of Section 9.4.3 of the MISO-SPP JOA in lieu of the procedure described in Subsection (B) of this Section 3.6.4. The costs of upgrades identified through the supplemental affected system study will be assigned to the impacting Interconnection Request(s) pursuant to the cost allocation provision of the MISO Tariff. The Transmission Provider, in coordination with MISO, will establish a cost criterion in dollars per megawatt (\$/MW) pursuant to Section 9.4.2(e)(iii)(a)ii.b and 9.4.2(e)(iii)(a)ii.c of the MISO-SPP JOA. Where the costs assigned to an HILLGA Request for upgrades identified through the supplemental affected system study that are located outside the local facilities of MISO as defined in Subsection (B) of this Section 3.6.4 exceed the cost criterion, the HILLGA Request will be exempt from charges for the JTIQ Upgrades. Otherwise, the HILLGA Request will be obligated to pay a portion of the JTIQ Upgrade cost as provided in Subsection (1) of this Section 3.6.4.

B. Impacts to MISO Facilities Other than JTIQ Upgrades

This Section 3.6.4(B) applies only to those SPP HILLGA Requests described in Section 3.6.4(A)(1), Section 3.6.4(A)(2)(b), and Section 3.6.4(A)(3) of this Attachment BB. During the course of the HILLGA, Transmission Provider will monitor the local facilities of MISO, comprised of those facilities that are both (i) near the MISO-SPP border as determined by the table below, and (ii) affected by one or more Interconnection Requests being evaluated in the HILLGA having a distribution factor of at least ten percent (10%) on the MISO facilities near the MISO-SPP border described in (i).

<u>Nominal Operating Voltage of MISO Facilities</u>	<u>MISO Facilities to be Monitored</u>
<u>Less than 200 kV</u>	<u>Facilities within five (5) substations of an SPP substation</u>
<u>Between 200 kV and 300 kV, inclusive</u>	<u>Facilities within two (2) substations of an SPP substation</u>
<u>Greater than 300 kV</u>	<u>Facilities within one (1) substation of an SPP substation</u>

Transmission Provider, in coordination with MISO and its transmission owners, will formulate a mitigation plan to alleviate constraints on the local facilities of MISO that are identified during the respective HILLGA processes. Mitigations may include new Affected System upgrades. The cost of new Affected System upgrades identified by Transmission Provider and MISO through the process in this subsection (B) will be assigned to the SPP HILLGA Request(s) pursuant to the cost allocation process in Section 4.2.2 of this Attachment BB.

3.7 Withdrawal.

HILLGA Customer may withdraw its HILLGA Request at any time by written notice of such withdrawal to Transmission Provider. In addition, if HILLGA Customer fails to adhere to all requirements of this Attachment BB, except as provided in Section 13.5 (Disputes), Transmission Provider will deem the HILLGA Request to be withdrawn and will provide written notice to HILLGA Customer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, HILLGA Customer will 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.

A HILLGA Customer that withdraws or is deemed to have withdrawn its HILLGA Request must pay to Transmission Provider all costs that Transmission Provider prudently incurs with respect to that HILLGA Request prior to Transmission Provider's receipt of notice described above. HILLGA Customer must pay all monies due to Transmission Provider before it is allowed to obtain any HILLGA study data or results.

Transmission Provider will (i) update the OASIS list of HILLGA Requests and (ii) refund to HILLGA Customer any portion of HILLGA Customer's deposit or study payments that exceeds the costs that Transmission Provider has incurred, including interest earned in the interest-bearing account in which Transmission Provider will have deposited such amount. In the event of such withdrawal, Transmission Provider, subject to the confidentiality provisions of Section 13.1 of this Attachment BB, will provide, at HILLGA

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

3.8 Identification of Contingent Facilities.

Contingent Facilities, which may include JTIQ Upgrades, will be identified at the conclusion of the HILLGA System Impact Study and included in the HILLGA Customer's HILLGIA. Transmission Provider will also provide, upon request of the HILLGA Customer, the estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each identified Contingent Facility when this information is readily available and not commercially sensitive.

Prior to assigning cost allocation for new upgrades pursuant to Section 4.2.2 of this Attachment BB, the Transmission Provider will first mitigate constraints seen in the study process with Network Upgrades that are part of the current SPP Transmission Expansion Plan. Network Upgrades that are not yet approved, but are currently assigned to active prior-queued Interconnection Requests will not be considered.

For each Network Upgrade identified, the average incremental power flow impact of each HILLGA Request, as defined in Section 4.2.2 of this Attachment BB, will be determined using each seasonal model available for the study period during which the generating facility associated with the HILLGA Request is most likely to be generating at nameplate capacity, after the Date Upgrade Needed, as defined in Section 4.2.2 of this Attachment BB, of such upgraded facility. Each impact amount will be determined by first establishing a set of initial seasonal Base Case power flow models that excludes flows associated with the HILLGA Request. Then the HILLGA Request will be added to the models and the change in flow across such Network Upgrades will be determined. Dependence on a Network Upgrade will be assigned if the HILLGA Request has a positive incremental impact on such Network Upgrade with a distribution factor that is greater than or equal to the amounts set forth in Sections 3.8.1. Incremental flows having a negative impact (counter flow) on a Network Upgrade will be ignored.

3.8.1 The distribution factor for non-binding requests seeking NRIS to the Deliverability Area (DA) will be 3% for all constraints.

Section 4. HILLGA Request Evaluation Process

4.1 Priority.

4.1.1 The Transmission Provider **will** assign an Initial Queue Position to each HILLGA Request based on the date and time of receipt of the valid HILLGA Request; provided that if the sole reason a HILLGA Request is not valid is the lack of required information on the application form, and HILLGA Customer provides such information in accordance with Section 3.4.3 of the this Attachment BB, then Transmission Provider **will** assign HILLGA Customer an Initial Queue Position based on the date the application form was originally submitted to the Transmission Provider. The Initial Queue Position of each HILLGA Request will determine the order in which HILLGA Requests are processed.

4.2 General Study Process.

4.2.1 HILLGA System Impact Study Procedures.

Transmission Provider **will** accept HILLGA Requests at any time. Following the receipt of the HILLGA Request, there **will** be a fifteen (15) Calendar Day review period to resolve any deficiencies in the HILLGA Request. Following the HILLGA Request review period, the Transmission Provider **will** complete the study of the HILLGA Request in accordance with the timeline specified in Section 8.5 of this Attachment BB. The Transmission Provider **will** study the HILLGA Request separately to the extent warranted by Good Utility Practice.

4.2.2 Study Cost and Network Upgrade Cost Allocation.

The Transmission Provider **will** determine the cost to the HILLGA Customer. The HILLGA Customer **will** be responsible to pay for the full cost of the HILLGA Study. If HILLGA Customer withdraws its HILLGA Request before or during the HILLGA Study, the Transmission Provider will stop the study and the HILLGA Customer will be responsible for study costs for the work completed.

For Network Upgrades identified in the HILLGA Studies, the Transmission Provider **will** calculate the cost of Network Upgrade(s). The Transmission Provider **will** review all Network Upgrades and determine the earliest date that each upgrade is required to be in-service in order to provide the requested Interconnection Service (“Date Upgrade Needed”).

4.3 Transferability of Queue Position.

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

4.4 Modifications.

HILLGA Customer will submit to Transmission Provider, in writing, modifications to any information provided in the HILLGA Request. HILLGA Customer will retain its Initial Queue Position if the modifications are in accordance with Sections 4.4.1, 4.4.2 or 4.4.5 of the GIP, or are determined not to be Material Modifications pursuant to Section 4.4.3 of the GIP. Due to the expedited nature of HILLGA, any modification would reset the HILLGA System Impact Study's ninety (90) Calendar Day timing.

Notwithstanding the above, during the course of the HILLGA System Impact Study, either HILLGA Customer or Transmission Provider may propose changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the HILLGA Request. To the extent the identified changes are acceptable to Transmission Provider and HILLGA Customer, such acceptance not to be unreasonably withheld, Transmission Provider will modify the Point of Interconnection and/or configuration in accordance with such changes and proceed with any re-studies necessary to do so in accordance with Section 8.8 of the GIP and Section 8.13 of the GIP as applicable and HILLGA Customer will retain its Initial Queue Position.

4.4.1 During HILLGA System Impact Study, modifications to the HILLGA Request permitted under this section will include specifically a decrease of Maximum Injection Capability and/or Network Resource Deliverability (MW) of up to ten percent (10%) of the original requested Maximum Injection Capability or Network Resource Deliverability. For increases in Nameplate Capacity, Maximum Injection Capability, or Network Resource Deliverability, the incremental increase in any of these quantities will go to the end of the queue for the purposes of cost allocation and study analysis.

4.4.2 Prior to making any modification other than those specifically permitted by Sections 4.4.1, and 4.4.4 of the GIP, HILLGA Customer may first request that Transmission Provider evaluate whether such modification is a Material Modification. In response to HILLGA Customer's request, Transmission Provider will evaluate the proposed modifications prior to making them and inform HILLGA Customer in writing of whether the modifications would constitute a Material Modification. Any change to the Point of Interconnection, except those deemed acceptable under Sections 4.4.1 and 8.2 of the GIP or so allowed elsewhere, will constitute a

Material Modification. HILLGA Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

Transmission Provider will study the addition of a Generating Facility that include at least one Electric Storage Resource at non-peak load and using the operating assumptions requested by HILLGA Customer, unless Transmission Provider determines that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions.

4.4.3 Upon receipt of Interconnection Customer's request for modification permitted under this Section 4.4 of the GIP, the Transmission Provider will notify the HILLGA Customer if a study is necessary to determine whether the change is considered a Material Modification pursuant to this Tariff Attachment V.

4.4.4 Prior to the Effective Date of the GIA, extensions of less than three (3) cumulative years in the Commercial Operation Date of the Generating Facility to which the HILLGA Request relates are not material and should be handled through construction sequencing. Extensions of more than three (3) cumulative years of the Commercial Operation Date of the Generating Facility are deemed to be a Material Modification. Extensions of Commercial Operation Date due to circumstances in Section 8.7 of the GIP are applicable to this Section 4.4.4.

4.4.5 Technological Change Procedure.

If a HILLGA Customer seeks to incorporate a technological advancement into its Generating Facility, it should submit a technological advancement request to the Transmission Provider in writing prior to the end of HILLGA System Impact Study.

The technological advancement request must include a description of the proposed advancement and provide details necessary to evaluate whether the proposed advancement is material, including but not limited to, listing the specific parameters in Attachments A and B to Appendix 3 of the GIP that would change as a result of the proposed advancement.

If the proposed technological advancement is a Permissible Technological Advancement or would not change any of the parameters in Attachments A or B to Appendix 3 of the GIP, no study will be necessary and the proposed advancement will not be considered a Material Modification.

The Transmission Provider will evaluate the request pursuant to Section 4.4.3 of this GIP. Studies conducted for purposes of this Section 4.4.5 of the GIP will be completed in thirty (30) Calendar Days after the HILLGA Customer submits a formal technological advancement request to the transmission provider, provided that the HILLGA Customer has provided the required information and study deposit.

Section 5. Reserved.

Section 6. ~~Reserved.~~ HILLGA-DA-NRIS Provisions and Process Expiration.

~~The following provisions apply to HILLGA Requests that have selected HILL Interconnection for Normal-NRIS to the Resource Deliverability Area ("HILLGA-DA"):~~

- ~~a) HILLGA-DA Interconnection provides HILLGA Requests the ability to inject onto SPP's Transmission System without being limited to the HILL; and~~
- ~~b) Existing generation with ERIIS is able to be paired with HILL under this process and receive full NRIS-DA; and~~
- ~~c) HILLGA-DA-NRIS Service is contingent upon the HILL achieving ninety (90%) of the granted service for each of the first five (5) years after the Commercial-Operation-Date of the Generating Facility. Failure to meet this requirement shall result in the termination of the HILLGA and the Generating Facility will no longer have the right to inject into the Transmission System. The Generating Facility would have the ability to reestablish Generation Interconnection Service under Attachment V.~~
- ~~d) The HILLGA process for HILLGA-DA provisions in this Section 6 will end five (5) years after the initial effective date of this Attachment BB.~~

Section 7. Reserved.

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Section 8. High Impact Large Load and Generation Assessment (HILLGA)

8.1 HILLGA Agreement.

The HILLGA Agreement will provide that HILLGA Customer will compensate Transmission Provider for the actual cost of the HILLGA.

8.2 Execution of HILLGA Study Agreement.

Once the Transmission Customer has executed the HILL Delivery Point Study (“HDPS”) Agreement and has indicated that it also is proposing a corresponding generator, the HILLGA Customer must execute and deliver the HILLGA Study Agreement to the Transmission Provider, along with each of the following:

a. Demonstration of Site Control:

1. Site Control for the Generating Facility:

Specifications for acceptable site size for the purpose of demonstrating Site Control for the Generating Facility are contained in the “Guidelines for the SPP GIP Process and Business Practices” posted on the Transmission Provider’s Generator Interconnection Study posting page on OASIS; HILLGA Customer may propose an alternative site size for Transmission Provider approval. Transmission Provider will approve a demonstration of Site Control for the Generating Facility with an alternative site size when the HILLGA Customer submits to Transmission Provider a final layout drawing of the Generating Facility that includes at a minimum: (i) the spacing and number of turbines; (ii) the cable requirements to interconnect the individual turbines to the collector substation and the cable requirements from the collector substation to the interconnection substation; (iii) the resistance and impedance measurements of the interconnecting cable and (iv) acknowledgment by Interconnection Customer that the layout drawing is intended to be final and not subsequently substantially changed. Once an HILLGA Request has been submitted, and Transmission Provider has approved the final layout drawing and demonstration of Site Control, any subsequent change to the design of the Generating Facility as depicted in the layout drawing will be subject to a modification analysis after HILLGIA execution.

2. Site Control for the Generating Facility’s Tie Line:

Reasonable evidence of Site Control for seventy-five percent (75%) of the mileage of the Generating Facility’s high

voltage tie line to the Point of Interconnection. Site control details will be utilized to ensure that projects are not in multiple study processes.

3. POI Substation:

Reasonable evidence of Site Control of one-hundred percent (100%) of any new substations identified as required at the Point of Interconnection;

b. Study deposit in the amount of:

Flat \$250,000 up to 500MW and \$500,000 over 500MW

Study deposits provided pursuant to this section will be applied toward any studies applicable to the HILLGA Request. The study deposit will be at risk at the start of the HILLGA.

c. Definitive Point of Interconnection;

d. Nameplate Capacity, Maximum Injection Capability, and Network Resource Deliverability (MW) pursuant to Appendix 1, Attachment 2 of this Attachment BB. The Network Resource Deliverability must equal the Maximum Injection Capability;

e. Security deposit equal to \$8,000/MW of the requested Maximum Injection Capability (“Financial Security One”);

f. Application fee of \$20,000. Application fee, initially set at \$20,000, to be adjusted in accordance with the Consumer Price Index for All Urban Consumers as posted on inflation-calculator located at the U.S. Bureau of Labor Statistics website. The inflation adjustment will be calculated from the original application fee amount of \$20,000, to the most up-to-date data available at the time the inflation calculation takes place, where such amount will be rounded to the nearest \$100 and posted on the Transmission Provider’s website. The Transmission Provider will post an inflation-adjusted application fee once every three years, with the first posting on or after January 1, 2028. The application fee amount calculated pursuant to this paragraph will be applicable to all HILLGA Request submitted sixty (60) or more Calendar Days after the date that the Transmission Provider posts such amount and will remain effective until Transmission Provider posts a revised amount calculation pursuant to this paragraph;

- g. Provide executed HILL Delivery Point Study (“HDPS”) Agreement or show that a HILL Delivery Point Study (“HDPS”) Agreement has been executed
- h. Reasonable evidence of having satisfied at least one of the following development milestones:
 - (i) the execution of a contract for the supply or transportation of fuel to the Generating Facility;
 - (ii) the execution of a contract for the supply of cooling water to the Generating Facility;
 - (iii) execution of a contract for the engineering for, procurement of major equipment for, or construction of, the Generating Facility;
 - (iv) execution of a contract (or comparable evidence) for the sale of electric energy or capacity from the Generating Facility;
 - (v) statement signed by an officer or authorized agent of the HILLGA Customer attesting the Generating Facility is included in an applicable state resource plan;
 - (vi) other information that the Transmission Provider deems to be reasonable evidence that the Generating Facility will qualify as a Designated Resource;
 - (vii) application for an air, water, or land use permit;
 - (viii) Pre-Confirmed or Confirmed Long-Term Transmission Service Request (“TSR”) from the source Generating Facility in the Interconnection Request;
 - (ix) effective Interim Generator Interconnection Agreement associated with the same HILLGA Request; or
 - (x) final detailed Generating Facility Design, and for Inverter-Based Resources, submission of Electromagnetic Transient (EMT) model.

If the HILLGA System Impact Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting, a substitute Point of Interconnection identified by Transmission Provider may be substituted for the designated Point of Interconnection specified above, and restudies will be completed pursuant to Section 8.8 of this Attachment BB as applicable, however, the location of the new point of interconnection must meet the same criteria as defined in the HILLGA.

The proposed Commercial Operation Date of the new Generating Facility or increase in capacity of the Existing Generating Facility will be no later than five (5) years from the execution of the HILLGA Study Agreement.

8.3 HILLGA Review Period.

During the HILLGA Review Period, the Transmission Provider will validate HILLGA Requests within fifteen (15) Calendar Days. The Transmission Provider will notify the Interconnection Customer of any deficiencies that would warrant withdrawal of the HILLGA Request. HILLGA Customer will have ten (10) Business Days from the date of the notice to cure any deficiencies, which may extend beyond the HILLGA Review Period. If the HILLGA Customer does not cure the deficiencies within such time period, the HILLGA Request will be deemed withdrawn. Transmission Provider may conduct additional Scoping Meetings during the HILLGA Review Period.

8.4 Scope of HILLGA System Impact Study.

8.4.1 The HILLGA System Impact Study will evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The HILLGA System Impact Study will consider the Base Case, and all generating facilities that, on the date the HILLGA System Impact Study is commenced:

- (i) are directly interconnected to the Transmission System;
- (ii) are interconnected to Affected Systems and may have an impact on the HILLGA Request;
- (iii) have executed a GIA or requested that an unexecuted GIA be filed with FERC.

8.4.2 The HILLGA System Impact Study will consist of a power flow analysis, calculation of the short-circuit ratio, a Short Circuit Ratio and Critical Clearing Time (“SCRCCT”) screening, and short circuit analysis. When the SCRCCT screening indicates possible inverter instability due to an Interconnection Request, an EMT Study will be performed commencing not less than fifteen (15) months prior to the inverter-based resource Commercial Operation Date. The HILLGA System Impact 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. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the HILLGA

System Impact Study will consider the level of Interconnection Service requested by the Interconnection HILLGA Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns. The HILLGA System Impact Study report will provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost responsibility (+/-30% accuracy) and a non-binding good faith estimated time to construct. The HILLGA System Impact Study report will also indicate whether the HILLGA Request is responsible for a portion of the cost of a portfolio of JTIQ Upgrades, and if so, will also indicate (i) the estimated portion of cost assigned to the Interconnection Request for the JTIQ Upgrades, and (ii) whether the service will be delayed or limited prior to completion of one or more JTIQ Upgrades.

8.4.3 Availability of Limited Operation.

If the HILLGA System Impact Study determines that the full amount of interconnection capacity requested by the HILLGA Customer is not available by its requested Commercial Operation Date due to transmission constraints that may be remedied by an upgrade(s), including a Contingent Facility, with an in-service date beyond the Commercial Operation Date proposed by the HILLGA Customer, the Transmission Provider will quantify the amount of interconnection capacity available to the HILLGA Customer prior to the in-service date of such upgrade(s) ("Limited Operation"). The HILLGA Customer will be notified of the amount of interconnection capacity available under the Limited Operation condition. The HILLGA Customer may choose to proceed with Limited Operation. The HILLGA Customer may also be subject to conditions in Section 8.7 of this Attachment BB.

8.4.4 Facilities Analysis.

During the HILLGA System Impact Study, the Transmission Provider will specify and estimate the cost of the equipment, engineering, procurement and construction work needed for transmission facilities at the Point of Interconnection to physically and electrically connect the Generating Facility to the Transmission System ("Facilities Analysis"). The Facilities Analysis will 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 Owner'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 results of the Facilities Analysis **will** be utilized as part of the Interconnection Facilities Study.

The Facilities Analysis will also identify any potential control equipment for (1) requests for Interconnection Service that are lower than the Generating Facility Capacity, and/or (2) requests to study a Generating Facility that include at least one Electric Storage Resource at non-peak load and using the operating assumptions requested by Interconnection Customer, unless Transmission Provider determines that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions.

8.5 HILLGA System Impact Study Procedures.

The Transmission Provider **will** coordinate the HILLGA System Impact Study with any Affected System that is affected by the HILLGA Request pursuant to Section 3.6 of this Attachment BB. The Transmission Provider **will** utilize existing studies to the extent practicable when it performs the study. The Transmission Provider **will** use Reasonable Efforts to complete the HILLGA System Impact Study no later than ninety (90) Calendar Days from the start of the System Impact Study. **If the Transmission Provider is unable to complete the study within ninety (90) Calendar Days, the Transmission Provider will notify the Transmission Customer or Network Customer and the Host Transmission Owner and provide an estimate of the time needed to reach a final determination along with an explanation of the reason(s) that additional time is required to complete the study.**

8.6 Environmental Review.

8.6.1 Environmental Review.

This Section 8.6.1 applies only in the event the HILLGA Request will result in an interconnection to, or modification to, the transmission facilities of Western-UGP. Unless previously

requested, Western-UGP **will** use Reasonable Efforts to tender to the HILLGA Customer, within fifteen (15) Calendar Days of the end of HILLGA Review Period, an Environmental Review agreement authorizing Western-UGP, at HILLGA Customer's expense, to perform environmental review of the proposed interconnection to Western-UGP's transmission facilities, including review under NEPA, 42 U.S.C. §4321, et seq., as amended, and setting forth HILLGA Customer's responsibilities in connection with such environmental review. The Environmental Review agreement **will** contain a non-binding good faith estimate of the cost and timeframe for completing the Environmental Review. HILLGA Customer **must** execute the environmental review agreement and return it, with the estimated funds set forth in the agreement based upon the level of Environmental Review required, to Western-UGP within thirty (30) Calendar Days after receipt by the HILLGA Customer. If an executed Environmental Review agreement and the required funds are not provided in the manner set forth above, the HILLGA Request **will** be deemed withdrawn. Notwithstanding the provisions of Section 3.7 of this Attachment BB, an HILLGA Customer **will** have no right to cure the failure to deliver the executed Environmental Review agreement or the required funds in the timeframe identified above. If the costs incurred by Western-UGP are less than the deposit submitted by HILLGA Customer, Western-UGP **must** refund the difference, without interest, as soon as the necessary vouchers are prepared. In addition, if at any time prior to the issuance of Western-UGP's final NEPA decisional document the HILLGA Customer fails to comply with the terms of the Environmental Review agreement, Western-UGP **must** notify the Transmission Provider of the Interconnection Customer's failure. Upon such notification, Transmission Provider may deem the HILLGA Request withdrawn.

8.6.1.1 Environmental Review Procedures.

- a. After receipt of an executed Environmental Review agreement, Western-UGP **must** use Reasonable Efforts to complete the study and issue a draft study report to HILLGA Customer within eighteen (18) months, or the actual time required to complete the necessary level of Environmental Review.
- b. At the request of HILLGA Customer or at any time Western-UGP determines that it will not meet the required time frame for completing the Environmental Review, Western-UGP **must** notify HILLGA Customer as to the schedule status of the Environmental Review. If Western-UGP is unable to complete the Environmental Review within the

time required, it **must** notify HILLGA Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

- c. Western-UGP **must** notify the Transmission Provider of the schedule status of the Environmental Review.

8.7 HILLGA Requests That Require Previously Approved Network Upgrades.

At the completion of the HILLGA System Impact Study, the HILLGA System Impact Study may identify one or more Network Upgrades previously approved for construction under Section VI of Attachment O of this Tariff (“Previously Approved Network Upgrade”) and required to be in-service prior to a HILLGA Customer’s Commercial Operation Date. If a Previously Approved Network Upgrade will not be in-service prior to the HILLGA Customer’s Commercial Operation Date, HILLGA Customer’s Commercial Operation Date **will** be extended for a maximum period of three (3) years pursuant to Section 4.4.4 of this Attachment BB to accommodate the in-service date for a Previously Approved Network Upgrade. If the three (3) year extension is not sufficient for a Previously Approved Network Upgrade to be placed into service prior to the HILLGA Customer’s Commercial Operation Date, the HILLGA Customer may either (1) withdraw the HILLGA Request, or (2) agree to the following conditions in the HILLGIA:

- a. The Generating Facility will be allowed to operate under Limited Operation in accordance with Section 8.4.3 of this Attachment BB before a Previously Approved Network Upgrade is placed into service;
- b. The HILLGA Customer will meet all requirements of this Attachment BB; and
- c. The HILLGA Customer will provide financial security and authorize engineering, procurement, and construction of its cost assigned Network Upgrades and interconnection facilities no later than thirty (30) days after the effective date of the HILLGIA.

8.8 Re-Study of HILLGA System Impact Study.

If Re-Study of the HILLGA System Impact Study is required due to a higher queued project dropping out of the queue, or a modification of a higher

queued project subject to Section 4.4 of the GIP, or re-designation of the Point of Interconnection pursuant to Section 8.2 of the GIP, the Transmission Provider will notify HILLGA Customer in writing. Such Re-Study will take no longer than sixty (60) Calendar Days from the date of notice. Any cost of Re-Study, as reduced by deposit amounts retained for other Interconnection Customer(s) under Section 13.3 of the GIP, will be borne by the HILLGA Customer.

After the completion of the Restudy, an HILLGA Customer that is being restudied may elect to remain in the HILLGA System Impact Study, proceeding to HILLGIA negotiation, or withdraw its HILLGA Request and receive a refund of its security deposit in accordance with Sections 8.10 and 13.3 of this Attachment BB.

8.9 Meeting with Transmission Provider.

The HILLGA Customer may request that the Transmission Provider, Transmission Owner and HILLGA Customer meet to discuss the results of the HILLGA System Impact Study. Such meeting will be held on a date mutually agreed upon by the Parties.

8.10 Financial Security Refund Eligibility.

- a. For the purposes of this Section 8.10, allocated costs includes the costs of Network Upgrades, Shared Network Upgrades, Transmission Owner Interconnection Facilities, JTIQ Upgrades, and any cost of upgrades required to mitigate impacts to Affected Systems that have been assigned to the HILLGA Request.
- b. If any portion of Financial Security One is retained by Transmission Provider due to harm caused by withdrawal of a HILLGA Request, the retained portion will be applied toward the increased cost of designing, procuring, and constructing any Network Upgrades assigned to another Interconnection Customer or HILLGA Customer as a result of the withdrawal. Any remaining funds will be refunded to the withdrawing HILLGA Customer with accrued interest calculated from the date of the receipt of the Financial Security One to the date of the refund, if any. The refund will be made after the completion of any necessary Interconnection Studies needed to determine the adverse impact to other Interconnection Requests or HILLGA Requests.
- c. Following the execution of a HILLGIA or the filing of an unexecuted HILLGIA at the Commission, Financial Security One will be applied in accordance with Article 11.6 of the HILLGIA. Any remaining funds will be refunded to the HILLGA Customer in accordance with the terms of the HILLGIA.

Section 9. Engineering & Procurement ('E&P') Agreement

Prior to executing a HILLGIA, a HILLGA Customer may, in order to advance the implementation of its interconnection, request and Transmission Owner will offer the HILLGA Customer, an E&P Agreement that authorizes Transmission Owner to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, Transmission Owner will not be obligated to offer an E&P Agreement if HILLGA Customer is in Dispute Resolution as a result of an allegation that HILLGA Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of this Attachment BB. The E&P Agreement is an optional procedure and it will not alter the HILLGA Customer's HILLGA Request or In-Service Date. The E&P Agreement will provide for HILLGA Customer to pay the cost of all activities authorized by HILLGA Customer and to make advance payments or provide other satisfactory security for such costs. An E&P Agreement executed by Western-UGP, as the Transmission Owner, requires advance payments.

HILLGA Customer must pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If HILLGA Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, HILLGA Customer will be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, Transmission Owner may elect: (i) to take title to the equipment, in which event Transmission Owner must refund HILLGA Customer any amounts paid by HILLGA Customer for such equipment and must pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to HILLGA Customer, in which event HILLGA Customer must pay any unpaid balance and cost of delivery of such equipment.

Section 10. Reserved

Section 11. HILLGIA

11.1 Tender.

The Transmission Provider **will** tender to the HILLGA Customer a draft HILLGIA together with draft appendices simultaneous with the posting of the HILLGA System Impact Study report. The draft HILLGIA **will** be in the form of the HILLGIA in this Attachment BB, Appendix 3, or Appendix 4 when Western-UGP is a Party, as the Transmission Owner, to the HILLGIA. If the Transmission Provider identifies that Interconnection Facilities or Network Upgrades are required on the Western-UGP Transmission System, the HILLGIA **will** be subject to completion of the appropriate NEPA level of Environmental Review. Until the required NEPA decision document is issued, no construction activities relating to the transmission facilities of Western-UGP **will** commence and may impact the Commercial Operation Date for the HILLGA Request. Such NEPA related restrictions, if applicable, **will** be set forth in the HILLGIA.

11.2 Negotiation.

Transmission Provider, Transmission Owner and HILLGA Customer **will** negotiate concerning any disputed provisions of the appendices to the draft HILLGIA for not more than forty-five (45) Calendar Days after tender of the draft HILLGIA, unless another time period is agreed upon by all Parties. If HILLGA Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft HILLGIA pursuant to Section 11.1 and request submission of the unexecuted HILLGIA with FERC or initiate Dispute Resolution procedures pursuant to Section 13.5. If HILLGA Customer requests termination of the negotiations, but within forty-five (45) Calendar Days thereafter fails to request either the filing of the unexecuted HILLGIA or initiate Dispute Resolution, it **will** be deemed to have withdrawn its HILLGA Request. Unless otherwise agreed by the Parties, if HILLGA Customer has not executed the HILLGIA, requested filing of an unexecuted HILLGIA, or initiated Dispute Resolution procedures pursuant to Section 13.5 within forty-five (45) Calendar Days of tender of draft HILLGIA appendices, it **will** be deemed to have withdrawn its HILLGA Request. Transmission Provider **will** provide to HILLGA Customer a final HILLGIA within ten (10) Business Days after the completion of the negotiation process.

11.3 Execution and Filing.

Within ten (10) Business Days after receipt of the final HILLGIA, HILLGA Customer **must** provide Transmission Provider reasonable evidence of continued Site Control. At the same time, HILLGA Customer also **must** provide reasonable evidence that one or more of the following milestones in the development of the Generating Facility, at HILLGA Customer

election, has been achieved: (i) the execution of a contract for the supply or transportation of fuel to the Generating Facility; (ii) the execution of a contract for the supply of cooling water to the Generating Facility; (iii) execution of a contract for the engineering for, procurement of major equipment for, or construction of, the Generating Facility; (iv) execution of a contract (or comparable evidence) for the sale of electric energy or capacity from the Generating Facility; (v) statement signed by an officer or authorized agent of the Interconnection Customer attesting the Generating Facility is included in an applicable state resource plan; (vi) other information that the Transmission Provider deems to be reasonable evidence that the Generating Facility will qualify as a Designated Resource; (vii) application for an air, water, or land use permit; (viii) Pre-Confirmed or Confirmed Long-Term Transmission Service Request (“TSR”) from the source Generating Facility in the Interconnection Request; (ix) effective Load Limited HILLGIA associated with the same HILLGA Request; or (x) final detailed Generating Facility Design, and for Inverter-Based Resources, submission of Electromagnetic Transient (EMT) model. The Transmission Provider will not execute the final HILLGIA unless the HILLGA Customer provides the information described in this paragraph.

Within ten (10) Business Days after receipt of the final HILLGIA, the HILLGA Customer **must** either: (i) execute the tendered HILLGIA and return to the Transmission Owner and Transmission Provider; or (ii) request in writing that Transmission Provider file with FERC a HILLGIA in unexecuted form. Within ten (10) Business Days of receipt of the tendered HILLGIA the Transmission Owner **must** execute and send a copy of the executed HILLGIA to HILLGA Customer and Transmission Provider. As soon as practicable, but not later than thirty (30) Calendar Days after receiving either the executed version of the tendered HILLGIA (if it does not conform with a FERC-approved standard form of interconnection agreement) or ten (10) Business Days after receiving the request to file an unexecuted HILLGIA, Transmission Provider **will** file the HILLGIA with FERC, together with its explanation of any matters as to which HILLGA Customer, Transmission Owner and Transmission Provider disagree and support for the costs that Transmission Provider and/or the Transmission Owner propose to charge to HILLGA Customer under the HILLGIA. An unexecuted HILLGIA should contain terms and conditions deemed appropriate by Transmission Provider and the Transmission Owner for the HILLGA Request. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted HILLGIA, they may proceed pending FERC action.

11.4 Commencement of Interconnection Activities.

If HILLGA Customer executes the final HILLGIA, Transmission Provider, the Transmission Owner and HILLGA Customer **must** perform their

respective obligations in accordance with the terms of the HILLGIA, subject to modification by FERC. Upon submission of an unexecuted HILLGIA, HILLGA Customer, Transmission Owner and Transmission Provider **must** promptly comply with the unexecuted HILLGIA, subject to modification by FERC.

Section 12. Construction of Interconnection Facilities and Network Upgrades

12.1 Schedule.

Transmission Provider, the Transmission Owner and HILLGA Customer will negotiate in good faith concerning a schedule for the construction of Transmission Owner's Interconnection Facilities and the Network Upgrades.

12.2 Construction Sequencing of Transmission Owner's Interconnection Facilities, Network Upgrades and Distribution Upgrades.

12.2.1 General.

In general, the In-Service Date of an HILLGA Customer seeking interconnection to the Transmission System will determine the sequence of construction of Interconnection Facilities, Network Upgrades and Distribution Upgrades.

12.2.2 Advance Construction of Network Upgrades that are an Obligation of an Entity other than Interconnection Customer.

A HILLGA Customer with a HILLGIA, in order to maintain its In-Service Date, may request that Transmission Provider advance to the extent necessary the completion of Network Upgrades that: (i) were assumed in the Interconnection Studies for such HILLGA Customer, (ii) are necessary to support such In-Service Date, and (iii) would otherwise not be completed, pursuant to a contractual obligation of an entity other than HILLGA Customer that is seeking interconnection to the Transmission System, in time to support such In-Service Date. Upon such request, Transmission Owner will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that HILLGA Customer commits to pay Transmission Owner: (i) any associated expediting costs and (ii) the cost of such Network Upgrades.

Transmission Provider will refund to HILLGA Customer both the expediting costs and the cost of Network Upgrades, in accordance with Article 11.4 of the HILLGIA. Consequently, the entity with a contractual obligation to construct such Network Upgrades will be obligated to pay only that portion of the costs of the Network Upgrades that Transmission Provider has not refunded to HILLGA Customer. Payment by that entity will be due on the date that it would have been due had there been no request for advance construction. Transmission Provider will forward to HILLGA Customer the amount paid by the entity with a contractual obligation to construct the Network Upgrades as payment in full for the outstanding balance owed to HILLGA Customer. Transmission

Provider then **will** refund to that entity the amount that it paid for the Network Upgrades, in accordance with Article 11.4 of the HILLGIA.

12.2.3 Advancing Construction of Network Upgrades that are Part of an Expansion Plan of the Transmission Provider.

An HILLGA Customer with a HILLGIA, in order to maintain its In-Service Date, may request that Transmission Owner advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an expansion plan of Transmission Provider, in time to support such In-Service Date. Upon such request, Transmission Owner will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that HILLGA Customer commits to pay Transmission Owner any associated expediting costs.

12.2.4 Amended HILLGA System Impact Study.

An HILLGA will be amended to determine the facilities necessary to support the requested In-Service Date. This amended study will include those transmission and Generating Facilities that are expected to be in service on or before the requested In-Service Date.

12.3 Upgrades which will not be constructed by Transmission Owner.

For all interconnection agreements that identify Network Upgrades and Distribution Upgrades as listed in Appendix A of the HILLGIA which are required to be built by an entity other than the Transmission Owner (as defined in Attachment V of the Tariff), such upgrades **must** be constructed in accordance with the process defined under Section VI of Attachment O to the Tariff.

Section 13. Miscellaneous

13.1 Confidentiality.

Confidential Information will 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 a HILLGIA.

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 must provide in writing, the basis for asserting that the information referred to in this Article warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party will be responsible for the costs associated with affording confidential treatment to its information.

13.1.1 Scope.

Confidential Information will 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 the HILLGIA; or (6) is required, in accordance with Section 13.1.6, 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 the HILLGIA. 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.

13.1.2 Release of Confidential Information.

Neither Party **will** release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), employees, consultants, or to parties who may be or considering providing financing to or equity participation with HILLGA Customer, or to potential purchasers or assignees of HILLGA Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this Section 13.1 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person **will** remain primarily responsible for any release of Confidential Information in contravention of this Section 13.1.

13.1.3 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 **will** 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.

13.1.4 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.

13.1.5 Standard of Care.

Each Party **must** 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 these procedures or its regulatory requirements.

13.1.6 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 **must** 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 the HILLGIA. 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.

13.1.7 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 Section 13.1. Each Party accordingly agrees that the other Party will be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Section 13.1, which equitable relief will be granted without bond or proof of damages, and the receiving Party must not plead in defense that there would be an adequate remedy at law. Such remedy will not be deemed an exclusive remedy for the Breach of this Section 13.1, but will 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, will be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Section 13.1.

13.1.8 Disclosure to FERC, its Staff, or a State.

Notwithstanding anything in this Section 13.1 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 the GIP, the Party will 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 prior to the release of the Confidential Information to FERC or its staff. The Party must notify the other Party to the GIA 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 **must** be treated in a similar manner, consistent with applicable Federal and state laws, rules and regulations.

13.1.9 Subject to the exception in Section 13.1.8, any information that a Party claims is competitively sensitive, commercial or financial information ("Confidential Information") **may** 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 GIP or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality **must** 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.

13.1.10 This provision **will** not apply to any information that was or is hereafter in the public domain (except as a result of a Breach of this provision).

13.1.11 Transmission Provider **will**, at HILLGA Customer's election, destroy, in a confidential manner, or return the Confidential Information provided at the time of Confidential Information is no longer needed.

13.2 Delegation of Responsibility.

Transmission Provider may use the services of subcontractors as it deems appropriate to perform its obligations under this Attachment **BB**. Transmission Provider **will** remain primarily liable to Interconnection Customer for the performance of such subcontractors and compliance with its obligations of this Attachment **BB**. The subcontractor **must** keep all information provided confidential and **may** use such information solely for

the performance of such obligation for which it was provided and no other purpose.

13.3 Obligation for Study Costs.

Except as provided below, Transmission Provider will charge and HILLGA Customer must pay the actual costs of the HILLGA and any required re-studies. Any difference between the study deposit and the actual cost of the applicable HILLGA must be paid by or refunded, except as otherwise provided herein, to HILLGA Customer. Any invoices for HILLGA will include a detailed and itemized accounting of the cost of the HILLGA. HILLGA Customer must pay any such undisputed costs within thirty (30) Calendar Days of receipt of an invoice therefore. Transmission Provider will not be obligated to perform or continue to perform any studies unless HILLGA Customer has paid all undisputed amounts in compliance herewith. Study deposits collected in accordance with Section 8.2 of this Attachment BB may also be used to pay the study costs for any restudies in accordance with Section 8.13 of this Attachment BB.

Transmission Provider will allocate the retained study deposit funds to the HILLGA Customer after the final HILLGA System Impact Study report is posted, and the allocated funds will be released when an active HILLGA Request reaches Commercial Operation. Any remaining study deposit funds will be used to reduce fees associated with Transmission Provider's Tariff Administration Services found in Schedule 1-A of its Open Access Transmission Tariff. Study deposit funds allocated to HILLGA Requests that withdraw after the HILLGA study report is posted, but prior to reaching Commercial Operation will be used to fund any restudies caused by the withdrawn HILLGA Request. If Transmission Provider determines the withdrawal does not necessitate a restudy or if there are remaining study deposit funds, then the funds will be used to reduce fees associated with Transmission Provider's Tariff Administration Services found in Schedule 1-A of its Open Access Transmission Tariff.

13.4 Third Parties Conducting Studies.

Transmission Provider may utilize a third party consultant to perform HILLGAs.

Use of a third party consultant will be in accordance with Article 26 of the HILLGIA (Subcontractors) and limited to situations where Transmission Provider determines that doing so will help maintain or accelerate the study process for HILLGA Customer's pending HILLGA Request and not interfere with Transmission Provider's progress on studies for other pending HILLGA Requests. Transmission Provider will convey all workpapers, data bases, study results and all other supporting documentation prepared to date with respect to the HILLGA Request as soon as practicable upon HILLGA

Customer's request subject to the confidentiality provision in Section 13.1. Such third party consultant **will** be required to comply with this Attachment BB, Article 26 of the HILLGA (Subcontractors), and the relevant Tariff procedures and protocols as would apply if Transmission Provider were to conduct the HILLGA and **will** use the information provided to it solely for purposes of performing such services and for no other purposes. Transmission Provider **will** cooperate with such third party consultant and HILLGA Customer to complete and issue the HILLGA in the shortest reasonable time.

13.5 Disputes.

13.5.1 In the event any Party has a dispute, or asserts a claim, that arises out of or in connection with this Attachment BB, or their performance, the Parties agree to resolve such dispute using the dispute resolution procedures in Section 12 of the Tariff.

13.5.2 Non-binding dispute resolution procedures.

If a Party has submitted a notice of dispute pursuant to Section 13.5.1 of this Attachment BB, and the Parties are unable to resolve the claim or dispute informally within the thirty (30) Calendar Days provided in Section 12.1 of the Tariff, and the Parties cannot reach mutual agreement in Section 12.1 of the Tariff to pursue the arbitration process in Section 12.2 of the Tariff, any Party may request that the other Parties engage in Non-binding Dispute Resolution pursuant to this section by providing written notice to Parties ("Request for Non-binding Dispute Resolution"). Conversely, any Party may file a Request for Non-binding Dispute Resolution pursuant to this section without first seeking mutual agreement to pursue the arbitration process in Section 12.2 of the Tariff. The Non-binding Dispute Resolution process in this Section 13.5.2 of this Attachment BB **will** serve as an alternative to, and not a replacement of, the arbitration process in Section 12.2 of the Tariff. Pursuant to this process, the Parties must within thirty (30) Calendar Days of receipt of the Request for Non-binding Dispute Resolution appoint a neutral decision-maker that is an independent subcontractor that **will** not have any current or past substantial business or financial relationships with any Party. Unless otherwise agreed by the Parties, the decision-maker **will** render a decision within sixty (60) Calendar Days of appointment and **will** notify the Parties in writing of such decision and reasons therefore. This decision-maker **will** be authorized only to interpret and apply the provisions of this Attachment BB and HILLGA and **will** have no power to modify or change any provision of this Attachment BB and HILLGA in any manner. The result reached in this process is not

binding, but, unless otherwise agreed, the Parties may cite the record and decision in the Non-binding Dispute Resolution process in future Dispute Resolution processes, including in arbitration pursuant to Section 12.2 of the Tariff, or in a Federal Power Act section 206 complaint. Each Party will be responsible for its own costs incurred during the process and the cost of the decision-maker will be divided equally among each Party to the dispute.

13.6 Local Furnishing Bonds.

13.6.1 Transmission Owners That Own Facilities Financed by Local Furnishing or Other Tax-Exempt Bonds or That Are Tax Exempt Entities.

This provision is applicable only to a Transmission Owner that has financed facilities for the local furnishing of electric energy with tax-exempt bonds, as described in Section 142(f) of the Internal Revenue Code ("local furnishing bonds") or facilities with other bonds the interest on which is excluded from gross income under Section 103 of the Internal Revenue Code ("other tax-exempt bonds"), or that are tax-exempt entities, described in Section 501(c) of the Internal Revenue Code. Notwithstanding any other provision of this Attachment BB, Transmission Provider will not be required to provide HILL Interconnection Service to HILLGA Customer pursuant to this Attachment BB if the provision of such HILL Interconnection Service would jeopardize the tax-exempt status of any local furnishing bond(s) or other tax-exempt bonds used to finance a Transmission Owner's facilities that would be used in providing such HILL Interconnection Service or would jeopardize the tax-exempt status of the tax-exempt entity.

13.6.2 Alternative Procedures for Requesting HILL Interconnection Service.

If Transmission Provider determines that the provision of HILL Interconnection Service requested by HILLGA Customer would jeopardize the tax-exempt status of any local furnishing bond(s) or other tax-exempt bonds used to finance a Transmission Owner's facilities that would be used in providing such HILL Interconnection Service or would jeopardize the tax-exempt status of the Transmission Owner, Transmission Provider will advise the HILLGA Customer within thirty (30) Calendar Days of receipt of the HILLGA Request.

HILLGA Customer thereafter may renew its request for interconnection using the process specified in Article 5.2(ii) of the Transmission Provider's Tariff.

13.7 No Preemption of State Law

Nothing in this Attachment should be construed to preempt any state law, including but not limited to, state laws pertaining to retail sales of electricity, retail wheeling of electricity, generation siting, load and generation co-ownership, or load and generation operation

APPENDIX 1 TO ATTACHMENT BB

HILLGA 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 _____ ("HILLGA Customer") and Southwest Power Pool, Inc. a non-profit organization under the laws of the State of Arkansas ("Transmission Provider "). HILLGA Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, HILLGA Customer is submitting an HILLGA Request to interconnect its Generating Facility with the Transmission System or adding generating capacity addition to an Existing Generating Facility as detailed in Attachment A to this Agreement; and

WHEREAS, Interconnection Customer has requested that Transmission Provider study the HILLGA Request to assess the impact of its HILLGA Request to the Transmission System, and of any Affected Systems; and

WHEREAS, Interconnection Customer has requested that Transmission Provider perform, subject to further confirmation, an Interconnection Facilities Study to specify and estimate the cost and schedule of the equipment, engineering, procurement and construction work needed to implement the conclusions of the HILLGA System Impact Study in accordance with Good Utility Practice to physically and electrically connect the 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 **will** have the meanings indicated in Attachment BB of the Transmission Provider's Tariff.

2.0 HILLGA System Impact Study

2.1 HILLGA Customer elects and Transmission Provider **will** cause to be performed an HILLGA System Impact Study analysis, consistent with Section 8 of Attachment BB in accordance with the Tariff.

2.2 Reserved

2.3 The scope of the HILLGA System Impact Study **will** be subject to the assumptions set forth in Attachment B to this Agreement.

2.4 The HILLGA System Impact Study will be based upon the technical information provided by HILLGA Customer. Transmission Provider reserves the right to request additional technical information from HILLGA Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the HILLGA System Impact Study.

2.5 The HILLGA System Impact Study report will provide the following information:

(i) identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

(ii) identification of any thermal overload or voltage limit violations resulting from the interconnection;

(iii) description and non-binding, good faith estimated cost of and schedule for facilities required to interconnect the Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues; and

(iv) will include a Facilities Analysis as specified in Section 8.4.4 of Attachment BB that will provide cost estimates for Transmission Owner's Interconnection Facilities and Network Upgrades at the Point of Interconnection.

3.0 Interconnection Facilities Study

3.1 Simultaneous with or subsequent to the HILLGA System Impact Study, Transmission Provider will cause to be performed an Interconnection Facilities Study consistent with Section 8 of Attachment BB.

3.2 The scope of the Interconnection Facilities Study will be subject to the data provided in Attachment C to this Agreement.

3.3 The Interconnection Facilities Study report will provide a description, estimated cost of, and schedule for the following consistent with Section 8.11 of Attachment BB:

(i) required facilities to interconnect the Generating Facility to the Transmission System and

(ii) the short circuit and power flow issues identified in the HILLGA System Impact Study.

4.0 HILLGA Customer must provide the deposit specified under Section 8.2 of Attachment BB for the performance of the HILLGA.

Upon receipt of the HILLGA results, Transmission Provider will charge and HILLGA Customer must pay the actual costs of the HILLGA.

Upon issuance of the final HILLGA report, Transmission Provider ~~shall~~ will deduct associated study costs from the HILLGA Customer's study deposits provided in accordance with Section 8.2 of Attachment BB. Transmission Provider will continue to hold the amounts on deposit until settlement of the final invoice. Any difference between the study deposit and HILLGA Customer's study cost

obligation **must** be paid by or refunded to HILLGA Customer, as appropriate per Section 13.3 of Attachment BB.

5.0 Conditions for Limited Operation. If the HILLGA Customer agrees to proceed under Limited Operation pursuant to Section 8.7 of Attachment BB, the HILLGA Customer agrees to the following conditions:

1. The Generating Facility will be allowed to operate under Limited Operation in accordance with Section 8.4.3 of Attachment BB before a Network Upgrades previously approved for construction under Section VI of Attachment O of this Tariff (“Previously Approved Network Upgrade”) is placed into service;
2. The HILLGA Customer will meet all requirements of Attachment BB; and
3. The HILLGA Customer will provide financial security and authorize engineering, procurement, and construction of its cost assigned Network Upgrades and interconnection facilities no later than thirty (30) Calendar Days after the effective date of the HILLGIA in accordance with Article 11.6 of the HILLGIA.

6.0 Governing Law

6.1 Governance. The validity, interpretation and performance of this Agreement and each of its provisions **will** be governed by the laws of the United States of America except to the extent that the laws of the state of Arkansas may apply.

6.2 Applicability. This Agreement is subject to all applicable federal and state Laws and Regulations.

6.3 Reservation of Rights. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

7.0 Notices.

7.1 General. Unless otherwise provided in this Agreement, 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 **will** 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.

To Transmission Provider:

Southwest Power Pool, Inc.

201 Worthen Drive

Little Rock, AR 72223-4936

Attention: Manager, GI Studies

To Interconnection Customer:

Attention: _____

7.2 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.

8.0 Force Majeure

8.1 Economic Hardship. Economic hardship is not considered a Force Majeure event.

8.2 Default. Neither Party **will** be considered to be in Default with respect to any obligation hereunder, 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 **must** 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 **must** be confirmed in writing as soon as reasonably possible and **must** specifically state the full details 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 **will** exercise due diligence to remove such disability with reasonable dispatch, but **will** 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.

9.0 Indemnity

9.1 Indemnity. The Parties **will** 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 Parties' action or inactions of its obligations under this Agreement on behalf of the

indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

9.1.1 Indemnified Person. If an indemnified person is entitled to indemnification under this Article 9 as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 9.1 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.

9.1.2 Indemnifying Party. If an indemnifying Party is obligated to indemnify and hold any indemnified person harmless under this Article 9, the amount owing to the indemnified person **will** be the amount of such indemnified person's actual Loss, net of any insurance or other recovery.

9.1.3 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 9.1 may apply, the indemnified person **must** notify the indemnifying Party of such fact. Any failure of or delay in such notification **will** not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party **will** 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 **will** 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 **will** 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 **will** 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) **will** 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 **must** pay the reasonable expenses of the indemnified person, and (ii) **will** not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the indemnified person, which **will** not be reasonably withheld, conditioned or delayed.

9.2 Consequential Damages. Other than the Liquidated Damages heretofore described, in no event **will** either Party be liable under any provision of this Agreement 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.

10.0 Assignment

10.1 Assignment. This Agreement may be assigned by either Party only with the written consent of the other Party; provided that either Party may assign this Agreement 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 Agreement; and provided further that the HILLGA Customer **will** have the right to assign this Agreement, without the consent of Transmission Provider for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the Transmission Provider of any such assignment. Any financing arrangement entered into by the HILLGA 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 the Transmission Provider of the date and particulars of any such exercise of assignment right. Any attempted assignment that violates this Article or Applicable Laws and Regulations is void and ineffective. Any assignment under this Agreement **will** not relieve a Party of its obligations, nor **will** 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.

11.0 Severability

11.1 Severability. If any provision in this Agreement is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination **will** not invalidate, void or make unenforceable any other provision, agreement or covenant of this Agreement.

12.0 Comparability

12.1 Comparability. The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

13.0 Deposits and Invoice Procedures

13.1 General. The Transmission Provider and the HILLGA Customer 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 Attachment BB, including credits, **will** be netted so that only the net amount remaining due **must** be paid by the owing Party.

13.2 Study Deposits. The HILLGA Customer **must** provide study deposits, in accordance with Attachment BB to the Transmission Provider. The study deposits amounts and schedule **will** be in accordance with Attachment BB.

13.3 Final Invoice. Within six **(6)** months after completion of the studies Transmission Provider **will** provide an invoice of the final cost of the studies and **will** set forth such costs in sufficient detail to enable the HILLGA Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Transmission Provider **must** refund to HILLGA Customer any amount by which the actual payment by HILLGA Customer for estimated costs exceeds the actual costs of the studies within thirty (30) Calendar Days of the issuance of such final study invoice.

13.4 Payment. Invoices **will** be rendered to the paying Party at the address specified Appendix A to this Agreement. The Party receiving the invoice **must** pay the invoice within thirty (30) Calendar Days of receipt. All payments **will** 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 Attachment BB.

13.5 Disputes. In the event of a billing dispute between Transmission Provider and HILLGA Customer, Transmission Provider **will** continue to provide studies for HILL Interconnection Service under this Attachment BB as long as HILLGA 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 HILLGA Customer fails to meet these two requirements for continuation of service, then Transmission Provider may provide notice to HILLGA Customer of a Default pursuant to Article 15 of this Agreement. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party **must** pay the amount due together with accrued interest in accordance with Section 3.7 of this Attachment BB.

14.0 Representations, Warranties, and Covenants

14.1 General. Each Party makes the following representations, warranties and covenants:

14.1.1 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; 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 Agreement and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this Agreement.

14.1.2 Authority. Such Party has the right, power and authority to enter into this Agreement, to become a party hereto and to perform its obligations hereunder. This Agreement 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).

14.1.3 No Conflict. The execution, delivery and performance of this Agreement 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.

14.1.4 Consent and Approval. Such Party has sought or obtained, or, in accordance with this Agreement 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 Agreement, and it will provide to any Governmental Authority notice of any actions under this Agreement that are required by Applicable Laws and Regulations.

15.0 Breach, Cure and Default

15.1 General. A breach of this Agreement ("Breach") will occur upon the failure by a Party to perform or observe any material term or condition of this Agreement. A default of this Agreement ("Default") will occur upon the failure of a Party in Breach of this Agreement to cure such Breach in accordance with the provisions of Article 15.3 of this Agreement.

15.2 Events of Breach. A Breach of this Agreement will include:

- (a) The failure to pay any amount when due;
- (b) The failure to comply with any material term or condition of this Agreement, including but not limited to any material Breach of a representation, warranty or covenant made in this Agreement;
- (c) If a Party: (1) becomes insolvent; (2) files a voluntary petition in bankruptcy under any provision of any federal or state bankruptcy law or consents to the filing of any bankruptcy or reorganization petition against it under any similar law; (3) makes a general assignment for the benefit of its creditors; or (4) consents to the appointment of a receiver, trustee or liquidator;
- (d) Assignment of this Agreement in a manner inconsistent with the terms of this Agreement;
- (e) Failure of any Party to provide information or data to the other Party as required under this Agreement, provided the Party entitled to the information or data under this Agreement requires such information or data to satisfy its obligations under this Agreement.

15.3 Cure and Default. Upon the occurrence of an event of Breach, the Party not in Breach (hereinafter the "Non-Breaching Party"), when it becomes aware of the Breach, will give written notice of the Breach to the Breaching Party (the "Breaching Party") and to any other person a Party to this Agreement identifies in writing to the other Party in advance. Such notice must set forth, in reasonable detail, the nature of the Breach, and where known and applicable, the steps

necessary to cure such Breach. Upon receiving written notice of the Breach hereunder, the Breaching Party **will** have thirty (30) days to cure such Breach. If the Breach is such that it cannot be cured within thirty (30) days, the Breaching Party will commence in good faith all steps as are reasonable and appropriate to cure the Breach within such thirty (30) day time period and thereafter diligently pursue such action to completion. In the event the Breaching Party fails to cure the Breach, or to commence reasonable and appropriate steps to cure the Breach, within thirty (30) days of becoming aware of the Breach, the Breaching Party will be in Default of the Agreement.

15.4 Right to Compel Performance. Notwithstanding the foregoing, upon the occurrence of an event of Default, the non-Defaulting Party **will** be entitled to: (1) commence an action to require the Defaulting Party to remedy such Default and specifically perform its duties and obligations hereunder in accordance with the terms and conditions hereof, and (2) exercise such other rights and remedies as it may have in equity or at law.

16.0 Miscellaneous

16.1 Binding Effect. This Agreement and the rights and obligations hereof, **will** be binding upon and **will** inure to the benefit of the successors and assigns of the Parties hereto.

16.2 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement **will** prevail and be deemed the final intent of the Parties.

16.3 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, **will** 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 Agreement, 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 Agreement), 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.

16.4 Entire Agreement. This Agreement, 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 Agreement. There are no other agreements, representations, warranties, or covenants that constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

16.5 No Third Party Beneficiaries. This Agreement 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.

16.6 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement 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 Agreement will 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 Agreement. Termination or Default of this Agreement for any reason by Interconnection Customer will not constitute a waiver of Interconnection Customer's legal rights to obtain an interconnection from Transmission Provider. Any waiver of this Agreement must, if requested, be provided in writing.

16.7 Headings. The descriptive headings of the various Articles of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

16.8 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

16.9 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by the Parties.

16.10 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by the Parties. Such amendment will become effective and a part of this Agreement upon satisfaction of all Applicable Laws and Regulations.

16.11 No Partnership. This Agreement will 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 will 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 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]

By: _____

Title: _____

Date: _____

[Insert name of HILLGA Customer]

By: _____

Title: _____

Date: _____

Attachment A to Appendix 1

HILLGA REQUEST

1. The undersigned HILLGA Customer submits this request to interconnect its Generating Facility with the Transmission System pursuant to the Tariff.

2. This HILLGA Request is for (check one):

_____ A proposed new Generating Facility.

_____ An increase in the generating capacity of an Existing Generating Facility.

3. The type of HILLGA interconnection service requested will be (check one):

_____ Load Limited Resource Interconnection Service (LLRIS).

_____ Network Resource Interconnection Service (NRIS).

_____ Both LLRIS and NRIS.

4. All requests for Network Resource Interconnection Service are also studied for Energy Resource Interconnection Service. Reserved

5. The HILLGA Customer provides the following information:

a. Address or location or the proposed new 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:

Geographic coordinates of the proposed new or Existing Generating Facility site:

Latitude: _____ degrees, _____ minutes, _____ seconds (North)

Longitude: _____ degrees, _____ minutes, _____ seconds (West);

b. Nameplate Capacity of the proposed new Generating Facility or the amount of increase in the Nameplate Capacity of an Existing Generating Facility in alternating _____ current _____ megawatts;

Requested Maximum Injection Capability or the amount of increase in Maximum Injection Capability in megawatts (Maximum Injection Capability must be less than or _____ equal _____ to _____ Nameplate _____ Capacity);

Requested Network Resource Deliverability or the amount of increase in Network

Resource Deliverability in megawatts (Network Resource Deliverability must be less than or equal to Maximum Injection Capability).

	<u>Existing</u> <u>MW</u>	<u>Increased</u> <u>MW</u>	<u>Total</u> <u>MW</u>
<u>Nameplate Capacity</u>			
<u>Maximum Injection Capability (at POI)</u>			
<u>Network Resource Deliverability (at POI)</u>			
<u>Maximum Ramping Capability based on MW per minute, or percentage of Nameplate Capacity per minute</u>			

- c. A description of the equipment configuration (i.e. Number of generators/inverters and number of Intermediate Step-up transformers) for the entire Generating Facility.
- d. Preliminary one-line diagram of the Generating Facility that includes:
- Breaker layout, bus configuration (if available) and number of generators
 - Zero impedance lines (if applicable)
 - Distance from the collector substation to the POI in miles and the line impedance; _____
- e. Collector System Feeder Spreadsheet and Layout Diagrams;
- f. PSS/E User Defined Model files (.dll, .lib, .obj), documentation (generator model, power plant controller, etc.), and stability model files (.dyr, generator model, power plant controller, etc.);
- g. Commercial Operation Date (month/day/year); ____ / ____ / ____;
- h. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person in Item 9 below;
- i. Location of the proposed Point of Interconnection including the substation name or the name of the line to be tapped (including the voltage), the estimated distance from the substation endpoints of a line tap, address, and GPS coordinates.

POI substation name: _____

If a line tap, POI line name: _____ (endpoint 1) to _____ (endpoint 2)

POI Distance from endpoint 1: _____ miles

POI Distance from endpoint2: _____ miles

POI voltage: ____ kV

Address or location of the Point of Interconnection:

Geographic coordinates of the proposed Point of Interconnection:

Latitude: degrees, minutes, seconds (North)

Longitude: degrees, minutes, seconds (West);

j. Geographical map showing the approximate location of the proposed Point of Interconnection and the location of the Generating Facility;

k. Generating Facility Data (set forth in Attachment B to this Appendix 1);

l. *Reserved for future use;*

m. Fuel type(s) included in this project configuration:

 Battery/Storage
 Hybrid
 Hydro
 Nuclear
 Solar
 Thermal
 Wind
 Other: _____

Describe the prime mover (Combined Cycle Comb. Turbine, Combined Cycle Steam, Gas Turbine, Internal Combustion Engine, Steam Turbine, etc.):

n. Primary frequency response operating range for electric storage resources;

o. If Interconnection Facilities will be shared, the project number of other Existing Generating Facilities or Interconnection Requests with which Interconnection Facilities will be shared will be listed below. If no project number is available, state the name of the Interconnection Customer and describe the applicable Generating Facilities below.

p. Any expected environmental restrictions (e.g. run-time restrictions) or any other restrictions or limitations

6. Applicable deposit amount and application fee as specified in Section 8.2 of Attachment BB of the Tariff.

7. Evidence of Site Control as specified in Section 8.2 of Attachment BB of the Tariff:

Site Control for the Generating Facility and one of the following:

Site Control for at least seventy-five percent (75%) of the Generating Facility's high voltage tie line to Point of Interconnection

8. This HILLGA Request **must** be submitted in the manner specified for new HILLGA Requests in Section 1 of the "Generator Interconnection Business Guide and Practice" manual posted on the Transmission Provider's Generator Interconnection Study posting page on OASIS.

8.1 The following executed HILL Delivery Point Study ("HDPS") Agreement in association with this request.

HDPS Agreement identifier or attachment

9. Representative of Interconnection Customer to contact (including e-mail address):

Name of Contact Person: _____

Mailing Address: _____

City, State, Zip _____

Telephone: _____

E-mail address: _____

10. This HILLGA Request is submitted by:

Name of HILLGA Customer (Company): _____

By (signature): _____

Name (type or print): _____

Title: _____

Date: _____

Attachment B to Appendix 1

ASSUMPTIONS USED IN CONDUCTING THE HILLGA

The HILLGA will be based upon the information set forth in the HILLGA Requests and results of applicable prior studies, subject to any modifications in accordance with Section 4.4 of Attachment BB of the Tariff.

GENERATING FACILITY DATA FOR THE HILLGA

Interconnection Facilities Tie Line Information

Nominal Voltage (kV)

Line length (miles)

Summer Line Rating (MVA)

Winter Line Rating (MVA)

Positive Sequence Resistance R1(in p.u.*)

Positive Sequence Reactance X1(in p.u.*)

Positive Sequence Susceptance B1(in p.u.*)

Zero Sequence Resistance R0(in p.u.*)

Zero Sequence Reactance X0(in p.u.*)

Zero Sequence Susceptance B0 (in p.u.*)

Positive Sequence Shunt G1 (in p.u.*)

Positive Sequence Shunt B1 (in p.u.*)

Zero Sequence Shunt G0 (in p.u.*)

Zero Sequence Shunt B0 (in p.u.*)

*On 100-MVA Base

Main Substation Transformer

(for a single generator or the step-up from collector system to POI voltage)

Number of transformers

RATINGS

Self-Cooled

Maximum Nameplate

Capacity (kVA)

MVA Base

_____ MVA

Maximum Nameplate
Ratings

_____ / _____ MVA

Generator Side

System Side

Tertiary

Voltage Ratio

Primary

Secondary

Nominal Voltage

Winding Connections
(Delta or Wye)

Tapped Winding

Low Voltage

High Voltage

Tertiary Voltage

Winding Connections
(Delta or Wye)

IMPEDANCE

Primary-Secondary

Primary-Tertiary

Secondary-Tertiary

Positive Z1 (on self-
cooled kVA rating)

Zero Z0 (on self-
cooled kVA rating)

Fixed Taps Present Taps Available
Available

TAP SETTING

Tap Ratio Range

Number of Taps

No Load Loss W

Exciting I: p.u.

Static Reactive Compensation Device

Voltage (kV)

Total Size (MVAR)

Step Size (MVAR) Number of Steps

Equivalent Collector System

Equivalent Collector System for each modeled medium voltage feeder line

Collector system voltage = kV

R = per unit on 100 MVA Base and collector kV base (positive sequence)

X = per unit on 100 MVA Base and collector kV base (positive sequence)

B = per unit on 100 MVA Base and collector kV base (positive sequence)

Generator Step-up Transformer

Number of transformers

RATINGS

Self-Cooled

Maximum Nameplate

Capacity (kVA)

MVA Base

MVA

Maximum Nameplate
Ratings

 / MVA

Generator Side

System Side

Tertiary

Voltage Ratio

Primary

Secondary

Nominal Voltage

Winding Connections
(Delta or Wye)

Tapped Winding

Low Voltage

High Voltage

Tertiary Voltage

Winding Connections
(Delta or Wye)

IMPEDANCE
Positive Z1 (on self-
cooled kVA rating)
Zero Z0 (on self-
cooled kVA rating)

Primary-Secondary

Primary-Tertiary

Secondary-
Tertiary

Fixed Taps Available

Present Taps Available

TAP SETTING

Tap Ratio Range

Number of Taps

No Load Loss W

Exciting I: p.u.

Unit Ratings

Number of generating units

<u>Subtransient (first cycle) Zero Sequence Reactance X0*</u>	
<u>Stationary (after 50ms) Positive Sequence Resistance R1*</u>	
<u>Stationary (after 50ms) Positive Sequence Reactance X1*</u>	
<u>Stationary (after 50ms) Negative Sequence Resistance R2*</u>	
<u>Stationary (after 50ms) Negative Sequence Reactance X2*</u>	
<u>Stationary (after 50ms) Zero Sequence Resistance R0*</u>	
<u>Stationary (after 50ms) Zero Sequence Reactance X0*</u>	
<u>Voltage Controlled Current Source (VCCS) curve</u>	

*In p.u. nameplate kVA based

	<u>Direct Axis</u>	<u>Quadrature Axis</u>
<u>Synchronous – saturated</u>	<u>X_{dv}</u>	<u>X_{qv}</u>
<u>Synchronous – unsaturated</u>	<u>X_{di}</u>	<u>X_{qi}</u>
<u>Transient – saturated</u>	<u>X'_{dv}</u>	<u>X'_{qv}</u>
<u>Transient – unsaturated</u>	<u>X'_{di}</u>	<u>X'_{qi}</u>
<u>Subtransient – saturated</u>	<u>X''_{dv}</u>	<u>X''_{qv}</u>
<u>Subtransient – unsaturated</u>	<u>X''_{di}</u>	<u>X''_{qi}</u>
<u>Negative Sequence – saturated</u>	<u>X_{2v}</u>	
<u>Negative Sequence – unsaturated</u>	<u>X_{2i}</u>	
<u>Zero Sequence – saturated</u>	<u>X_{0v}</u>	
<u>Zero Sequence – unsaturated</u>	<u>X_{0i}</u>	
<u>Leakage Reactance</u>	<u>X_{lm}</u>	

FIELD TIME CONSTANT DATA (SEC)

<u>Open Circuit</u>	<u>T'_{do}</u>	<u>T'_{qo}</u>
<u>Three-Phase Short Circuit Transient</u>	<u>T'_{d3}</u>	<u>T'_q</u>
<u>Line to Line Short Circuit Transient</u>	<u>T'_{d2}</u>	
<u>Line to Neutral Short Circuit Transient</u>	<u>T'_{d1}</u>	
<u>Short Circuit Subtransient</u>	<u>T''_d</u>	<u>T''_q</u>
<u>Open Circuit Subtransient</u>	<u>T''_{do}</u>	<u>T''_{qo}</u>

ARMATURE WINDING RESISTANCE DATA (PER UNIT)

<u>Positive</u>	<u>R₁</u>
<u>Negative</u>	<u>R₂</u>
<u>Zero</u>	<u>R₀</u>

CURVES

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

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.

ENERGY STORAGE RESOURCES

Device manufacturer: _____

Technology (Li-ion, Lead Acid, Flow Battery, Pumped Hydro, Flywheel, etc.) _____

Check one of the following:

_____ Stand-alone

_____ Co-located with another Generating Facility (co-located means at the same POI)

Maximum Energy Output Rating (MWh) _____ at Maximum Power Output (MW)

Maximum Contractual Power Output (MW) _____

Charging Parameters

Check one of the following:

Yes, the energy storage resource will take energy from the Transmission System when operating in charging mode. The maximum rate of charge capability of the Generating Facility will be _____ MW. The maximum rate of charge to be utilized (requested maximum) _____ will _____ be _____ MW.

Charging Power Factor _____ lag _____ lead at rated output

No, the energy storage resource will never take energy from the Transmission System when operating in charging mode, by either Self-Dispatch or at the direction of SPP. The monitoring and control equipment that will be used to ensure that the Generating Facility never takes energy from the Transmission System when operating in charging mode is described _____ as _____ follows:

Inverter-Based Resource Data

Phase-Locked Loop (“PLL”) controller parameters for inverter-based resources:

- PLL Proportional Gain K_p _____
- PLL Integral Gain K_i _____
- PLL Frequency Limits ω_l _____ (rad/sec) and ω_h _____ (rad/sec)

The above data applies to a generic structure of the PLL (also commonly known as a synchronous reference frame PLL) and that the actual PLL structure within an Original Equipment Manufacturer’s (OEM) device may differ from this generic structure. Should a difference exist, the parameter values of the PLL **must** be provided such that the most recent equivalently parameterized generic industry model shows the same trend as the performance shown by actual OEM equipment.

Plant Load

Load MW _____

Load MVAR _____

Specify Load Bus Voltage _____ kV

Mutual Coupling Impedance

Mutual coupling impedance and 'B' factors for mutually coupled transmission lines

Electromagnetic Transient (EMT) Models:

See SPP Electromagnetic Transient (EMT) Model Requirements Document

Attachment C to Appendix 1

**DATA FORM TO BE PROVIDED BY HILLGA CUSTOMER FOR THE
INTERCONNECTION FACILITIES STUDY**

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 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 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 Date: _____

receives back feed power

Generation Testing Date: _____

Commercial Operation Date: _____

APPENDIX 2 TO ATTACHMENT BB
HIGH IMPACT LARGE LOAD ASSESSMENT GENERATOR INTERCONNECTION
AGREEMENT (HILLGIA)

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HIGH IMPACT LARGE LOAD GENERATOR INTERCONNECTION AGREEMENT

**THIS HIGH IMPACT LARGE LOAD GENERATOR INTERCONNECTION
AGREEMENT**

(“Agreement” or “HILLGIA”) is made and entered into this ____ day of _____, 20____, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ (“HILLGA Customer” with a Generating Facility), Southwest Power Pool, Inc., a corporation organized and existing under the laws of the State of Arkansas (“Transmission Provider”) and _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ (“Transmission Owner”). HILLGA Customer, Transmission Provider and Transmission Owner each may be referred to as a “Party” or collectively as the “Parties.”

Recitals

WHEREAS, Transmission Provider functionally controls the operation of the Transmission System; and,

WHEREAS, HILLGA Customer intends to own, lease and/or control and operate the Generating Facility identified as a Generating Facility in Appendix C to this Agreement; and,

WHEREAS, HILLGA Customer’s Generating Facility will be supporting a High Impact Large Load that is associated with a request through Attachment AQ, AX or BA of the Tariff; and,

WHEREAS, Transmission Owner owns facilities to which the Generating Facility is to be interconnected and may be constructing facilities to allow the interconnection; and,

WHEREAS, HILLGA Customer, Transmission Provider and Transmission Owner have agreed to enter into this Agreement for the purpose of interconnecting the 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 Agreement, terms with initial capitalization that are not defined in Article 1 **will** have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

Article 1. Definitions

Affected System will mean an electric system other than the Transmission System that may be affected by the proposed interconnection.

Affected System Operator will mean the entity that operates an Affected System.

Affiliate will 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.

Applicable Laws and Regulations will 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 will mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

Applicable Reliability Standards will 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 will mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider.

Breach will mean the failure of a Party to perform or observe any material term or condition of the HILLGIA or Load Limited HILLGIA, as applicable.

Breaching Party will mean a Party that is in Breach of the HILLGIA or Load Limited HILLGIA, as applicable.

Business Day will mean Monday through Friday, excluding Federal Holidays.

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

Commercial Operation will 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 will mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the HILLGIA or Load Limited HILLGIA, as applicable.

~~Conditional High Impact Large Load (CHILL) shall~~ will have the meaning in Part I of the Tariff.

Confidential Information will 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 will 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 restudies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing. Contingent Facilities are identified in Appendix A of the HILLGIA or Load Limited HILLGIA, as applicable.

Control Area will 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.

Default will mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the HILLGIA or Load Limited HILLGIA, as applicable.

Definitive Interconnection System Impact Study (DISIS) will have the meaning of Attachment V of the Tariff.

Deliverability Area will mean a portion of the Transmission System in which a generator can reliably deliver all or a portion of its output capability.

Dispute Resolution will mean the procedure in Section 13.5 of this Attachment BB for resolution of a dispute between the Parties in which they will first attempt to resolve the dispute on an informal basis.

Distribution System will mean the Transmission Owner's facilities and equipment that are not included in the Transmission System. The voltage levels at which Distribution Systems operate differ among areas.

Distribution Upgrades will mean the additions, modifications, and upgrades to the 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 will mean the date on which the HILLGIA 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 Load Assessment (ESR-LA) Shall mean a study conducted by the Transmission Provider to evaluate the impacts of an Electric Storage Resource (ESR) withdrawing energy from the Transmission System. The ESR-LA will consist of, but is not limited to, dynamic and voltage stability analyses in accordance with NERC reliability standards.

Electromagnetic Transient Study or EMT Study will mean an analysis to determine the electromagnetic transient response of the electric power system due to system disturbances.

Emergency Condition will 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 the Transmission System, or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Transmission Owner, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Owner's Interconnection Facilities; or (4) 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 will be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the HILLGA to possess black start capability.

Engineering & Procurement (E&P) Agreement will mean an agreement that authorizes the Transmission Owner 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 will mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

Environmental Review will mean a study conducted by the WesternAPA-Division, as the Transmission Owner, that contains a review of the proposed interconnection to the WesternAPA-Division's transmission facilities, pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. §4321, et seq., as amended, and setting forth Interconnection Customer's responsibilities in connection with such review of the interconnection.

Existing Generating Facility will mean a Generating Facility that is currently interconnected to the Transmission System of the Transmission Provider.

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

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

Financial Security will mean the security deposits required of the HILLGA Customer to enter the HILLGA.

Force Majeure will 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 will mean HILLGA Customer's device for the production and/or storage for later injection of electricity identified in the HILLGA Request, but will not include the Interconnection Customer's Interconnection Facilities and will not include a Storage as Transmission Only Asset as defined in Section 1 of the Tariff. A Generating Facility consists of one or more generating unit(s) and/or storage device(s) which usually can operate independently and be brought online or taken offline individually.

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

Generating Facility Modification will mean modification to an Existing Generating Facility, including comparable replacement of only a portion of the equipment at the Existing Generating Facility.

Good Utility Practice will 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 will 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, Transmission Owner or any Affiliate thereof.

Hazardous Substances will 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.

High Impact Large Load (HILL) will have the meaning in Part I of the Tariff.

High Impact Large Load Generation Assessment (HILLGA) will mean an engineering process that evaluates the impact of the proposed interconnection on the safety and reliability of Transmission System and, if applicable, an Affected System. The HILLGA is part of CHILL and the HILL processes that study: 1) the proposed load, 2) the proposed Generating Facility to follow

the proposed load, and 3) the combination of the supported proposed load and proposed Generating Facility to follow the proposed load.

High Impact Large Load Generation Assessment Customer (HILLGA Customer, HILLGAC) **will** mean an Interconnection Customer that proposes to interconnect its Generating Facility with the Transmission System pursuant to the High Impact Large Load Generation Assessment.

High Impact Large Load Interconnection Service (HILL Interconnection Service) **will** mean a HILLGA Request, in the form of Appendix 1 to the High Impact Large Load Generation Assessment Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of an Existing Generating Facility that is interconnected with the Transmission System.

~~**High Impact Large Load Generation Assessment Deliverability Area (HILLGA-DA)** **shall** mean a HILL generator connected to the local Deliverability Area where the HILL is located in accordance with Section 3.1.1(5)a of this Attachment BB.~~

High Impact Large Load Generation Assessment Local Interconnection (HILLGA-Local) **will** mean a HILL generator connected to the Transmission System in close proximity to the HILL in accordance with Section 3.1.1(5)b of this Attachment BB.

High Impact Large Load Generation Assessment Request (HILLGA Request) **will** mean an Interconnection Request submitted, in the form specified in Appendix 1 to this Attachment BB, pursuant to the High Impact Large Load Generation Assessment Study Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of an Existing Generating Facility that is interconnected with the Transmission System.

High Impact Large Load Generation Assessment Study Agreement (HILLGA Study Agreement) **will** mean the study agreement for the High Impact Large Load Generation Assessment in Appendix 1 to this Attachment BB.

High Impact Large Load Generation Assessment System Impact Study (HILLGA System Impact Study, SIS) **will** mean the system impact study that identifies and details the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, or that may be caused by the withdrawal or addition of an Interconnection Request, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in this Attachment BB.

High Impact Large Load Generator Interconnection Agreement (HILLGIA) **will** mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Generating Facility that is included in Appendix ~~XX2~~ to this Attachment BB or in Appendix ~~XX3~~ when Western-UGP is a Party as the Transmission Owner to the HILLGIA.

Initial Queue Position **will** have the meaning as defined in Attachment V of the Tariff.

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

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

Interconnection Customer **will** have the meaning of Attachment V of the Tariff.

HILLGA Customer's Interconnection Facilities **will** mean all facilities and equipment, as identified in Appendix A of the HILLGIA or Load Limited HILLGIA, as applicable, 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 System. Interconnection Customer's Interconnection Facilities are sole use facilities.

Interconnection Facilities **will** mean the Transmission Owner'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 System. Interconnection Facilities are sole use facilities and **will** not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Request **will** mean an Interconnection Customer's request, in the form of Appendix 3 or Appendix 5 to the Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, to interconnect a Replacement Generating Facility, increase the capacity of, or make a Material Modification to the operating characteristics of, an Existing Generating Facility that is interconnected with the Transmission System.

Interconnection Service **will** mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the 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 HILLGIA and, if applicable, the Tariff.

Interconnection Study **will** mean any of the following studies: the Replacement Impact Study, the Reliability Assessment Study, the Definitive Interconnection System Impact Study, the HILLGA System Impact Study, and the Interconnection Facilities Study described in the Generator Interconnection Procedures.

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

Joint Operating Agreement between the Midcontinent Independent System Operator, Inc. and Southwest Power Pool, Inc. ("MISO-SPP JOA"): **will** have the meaning as defined in Section 1 of the Tariff.

Joint Operating Committee will be a group made up of representatives from Interconnection Customer, Transmission Owner and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

Joint Targeted Interconnection Queue (“JTIQ”) will have the meaning as defined in Section 1 of the Tariff.

JTIQ Upgrade will have the meaning as defined in Section 1 of the Tariff.

Load Limited Resource Interconnection Service (LLRIS) will mean an Interconnection Service that allows the Interconnection Customer to integrate its Generating Facility with the Transmission System with injection rights limited to the HILL for which it is supporting. LLRIS in and of itself does not convey transmission service.

Loss will 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 another Party's performance, or non-performance of its obligations under the HILLGIA or Load Limited HILLGIA, as applicable, on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party. The term “Loss” as used in this Section 1 will apply only to the use of the term in Section 9.1.2 of the Generator Interconnection Study Agreement and Section 10.1.2 of the Interim Availability Interconnection System Impact Study Agreement.

Maximum Injection Capability will mean the maximum amount of real power that may be injected by a Generating Facility at the Point of Interconnection.

Metering Equipment will mean all metering equipment installed or to be installed at the Generating Facility pursuant to the HILLGIA or Load Limited HILLGIA, as applicable, 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.

MISO will have the meaning as defined in Section 1 of the Tariff.

Nameplate Capacity will mean the maximum real power rating listed on the nameplate of the Generating Facility measured in alternating current megawatts (AC MW), or the sum of all such ratings of a Generating Facility where it includes multiple energy production devices.

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

Network Resource will 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 Deliverability will mean the amount of real power that can be delivered to the aggregate of Network Load within a Deliverability Area by a Generating Facility, as measured at the Point of Interconnection. Network Resource Deliverability in and of itself does not convey transmission service.

Network Resource Interconnection Service (NRIS) will have the meaning in Attachment V of the Tariff.

Network Upgrades will mean the additions, modifications, and upgrades to the Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission System to accommodate the interconnection of the Generating Facility to the Transmission System.

Notice of Dispute will mean a written notice of a dispute or claim that arises out of or in connection with the HILLGIA or Load Limited HILLGIA, as applicable, or its performance.

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

Permissible Technological Advancement will mean an advancement to turbines, inverters, plant supervisory controls or other technological advancements that do not increase the Interconnection Customer's requested Interconnection Service or cause any reliability concerns. A Permissible Technological Advancement does 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), nor does it include changes in generation technology type or fuel type.

Point of Change of Ownership will mean the point, as set forth in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Owner's Interconnection Facilities.

Point of Interconnection will mean the point, as set forth in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, where the Interconnection Facilities connect to the Transmission System.

Queue will mean the Definitive Interconnection System Impact Study Queue or the Interconnection Facilities Study Queue, as applicable.

Reasonable Efforts will mean, with respect to an action required to be attempted or taken by a Party under the HILLGIA or Load Limited HILLGIA, as applicable, 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.

Scoping Meeting will mean the meeting between representatives of the HILLGA Customer, Transmission Owner and Transmission Provider conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such

interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Shared Network Upgrade **will** mean a Network Upgrade listed in Appendix A of the HILLGIA that is needed for the interconnection of multiple Interconnection Customers' Generating Facilities where such Interconnection Customers share the cost.

Site Control **will** mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size for the purpose of constructing the Generating Facility or Generating Facility's tie line; (2) an option to purchase or acquire a leasehold site of sufficient size for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site of sufficient size for such purpose.

Stand Alone Network Upgrades **will** mean Network Upgrades that are not part of an Affected Systems that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. The Transmission Provider, Transmission Owner and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable. If the Transmission Provider, Transmission Owner and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Owner must provide the Interconnection Customer a written technical explanation outlining why the Transmission Owner does not consider the Network Upgrade to be a Stand Alone Network Upgrade within fifteen (15) days of its determination.

System Protection Facilities **will** mean the equipment, including necessary protection signal communications equipment, required to protect (1) the 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 System or on other delivery systems or other generating systems to which the Transmission System is directly connected.

Tariff **will** 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 **will** 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 HILLGIA to the extent necessary.

Transmission Provider **will** 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 Owner's Interconnection Facilities will mean all facilities and equipment owned, controlled, or operated by the Transmission Owner from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, including any modifications, additions or upgrades to such facilities and equipment. Transmission Owner's Interconnection Facilities are sole use facilities and will not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

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

Western Area Power Administration-Upper Great Plains Region ("Western-UGP") will mean a division of the Western Area Power Administration, a Federal Power Marketing Agency, and Transmission Owner, that markets and transmits Federal power over Federal transmission facilities that have been transferred to the functional control of the Transmission Provider.

Article 2. Effective Date, Term, and Termination

2.1 Effective Date. This HILLGIA will 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 will promptly file this HILLGIA 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 HILLGIA will remain in effect for a period of five (5) years from the Commercial Operation Date of the Generating Facility..

2.3 Termination Procedures.

2.3.1 Written Notice. This HILLGIA may be terminated by HILLGA Customer after giving Transmission Provider and Transmission Owner ninety (90) Calendar Days advance written notice, or by Transmission Provider notifying FERC after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Failure to Achieve Commercial Operation. If the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date specified in Appendix B, this HILLGIA may be terminated by the Transmission Provider after giving the HILLGA Customer ninety (90) Calendar Days advance written notice. Where a portion of the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date specified in Appendix B, the Transmission Provider will issue a revised GIA to reflect the amount of the Generating Facility

Capacity that achieved Commercial Operation. The revised HILLGIA **will** be consistent with the Attachment BB of the Tariff in effect on the Effective Date of the HILLGIA.

2.3.3 Default. Any Party may terminate this HILLGIA in accordance with Article 17.

2.3.4 Notice to FERC. Notwithstanding Articles 2.3.1, 2.3.2 and 2.3.3, no termination **will** 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 HILLGIA, which notice has been accepted for filing by FERC.

2.3.5 Paired HILL Fails to Connect to the Transmission System. If the HILL specified in Appendix J as supported by the Generating Facility fails to connect to the Transmission System within five (5) years from the Effective Date of this HILLGIA this HILLGIA will be terminated by the Transmission Provider after giving the HILLGA Customer ninety (90) Calendar Days advance written notice.

2.4 Termination Costs. If a Party elects to terminate this Agreement pursuant to Article 2.3 above, HILLGA Customer and Transmission Owner **must** pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by any other Party, as of the date of such Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this HILLGIA. In the event of termination by any Party, all Parties **must** use Commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this HILLGIA, unless otherwise ordered or approved by FERC:

2.4.1 With respect to any portion of Transmission Owner's Interconnection Facilities that have not yet been constructed or installed, Transmission Owner **must** to the extent possible and with HILLGA 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 HILLGA Customer elects not to authorize such cancellation, HILLGA Customer **will** assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Owner **must** deliver such material and equipment, and, if necessary, assign such contracts, to HILLGA Customer as soon as practicable, at HILLGA Customer's expense. To the extent that HILLGA Customer has already paid Transmission Owner for any or all such costs of materials or equipment not taken by HILLGA Customer, Transmission Owner **must** promptly refund such amounts to HILLGA Customer, less any costs, including penalties incurred by Transmission Owner to cancel any pending orders of or return such materials, equipment, or contracts.

If an HILLGA Customer terminates this HILLGIA, it **will** be responsible for all costs incurred in association with that HILLGA 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 Owner has incurred expenses and has not been reimbursed by HILLGA Customer and the HILLGA Customer's allocated share of Network Upgrade(s) costs as calculated pursuant to Section 4.2.5 of the HILLGIP and as listed in Appendix A of this HILLGIA which are required for service to other HILLGA Customer(s).

2.4.2 Transmission Owner may, at its option, retain any portion of such materials, equipment, or facilities that HILLGA Customer chooses not to accept delivery of, in which case Transmission Owner **will** 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 HILLGIA, HILLGA Customer **will** 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 HILLGIA, the Parties will take all appropriate steps to disconnect the Generating Facility from the Transmission System. All costs required to effectuate such disconnection **will** be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this HILLGIA or such non-terminating Party otherwise is responsible for these costs under this HILLGIA.

2.6 Survival. This HILLGIA **will** 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 HILLGIA; to permit payments for any credits under this HILLGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this HILLGIA was in effect; and to permit each Party to have access to the lands of another Party pursuant to this HILLGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

Article 3. Regulatory Filings

3.1 Filing. Transmission Provider **will** file this HILLGIA (and any amendment hereto) with the appropriate Governmental Authority, if required. HILLGA Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If HILLGA Customer has executed this HILLGIA, or any amendment thereto, HILLGA Customer **must** 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. The type of Interconnection Service selected by HILLGA Customer is specified in Appendix A of this HILLGIA:

4.1.1 Load Limited Resource Interconnection Service.

4.1.1.1 The Product. Load Limited Resource Interconnection Service allows HILLGA Customer to connect the Generating Facility to the Transmission System and be eligible to deliver the Generating Facility's Maximum Injection Capability no more than two substations away from the HILL(s) Local Delivery Facilities ("HILLGA-Local"). A HILL Generating Facility may be supporting multiple HILL's if no more than 5 substations are involved in the supporting and no more than two existing transmission line segments are utilized. **A HILL Generating Facility connecting to 765 kV transmission is limited to one bus distance to be considered local.**

4.1.1.2 Transmission Delivery Service Implications. Under Load Limited Resource Interconnection Service, HILLGA Customer would only be eligible to deliver the Generating Facility's Maximum Injection Capability no more than two substations away from the HILL(s) Local Delivery Facilities ("HILLGA-Local"). A HILL Generating Facility may be supporting multiple HILL's if no more than 5 substations are involved in the supporting and no more than two existing transmission line segments are utilized; and The HILLGA Customer's ability to inject its Generating Facility output beyond the Point of Interconnection, therefore, would only be allowed under emergency conditions per Attachment AE. The provision of Firm Point-To-Point Transmission Service or Network Integration Transmission Service may require the construction of additional Network Upgrades. **A HILL Generating Facility connecting to 765 kV transmission is limited to one bus distance to be considered local**

4.1.2—Network Resource Interconnection Service:

4.1.2.1 The Product. ~~Transmission Provider must conduct the necessary studies and the Transmission Owner must construct the Network Upgrades needed to integrate the Generating Facility in the same manner as all other Network Resources. To the extent HILLGA Customer wants to receive Network Resource Interconnection Service, Transmission Owner must~~**shall**~~construct the facilities identified in Appendix A to this HILLGA.~~

4.1.2.2 Transmission—Delivery—Service—Implications. ~~Network—Resource Interconnection Service allows HILLGA Customer's Generating Facility to be designated by any Network Customer under the Tariff on the Transmission System as a Network Resource, up to the Generating Facility's full Network Resource Deliverability, on the same basis as existing Network Resources interconnected to the 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 HILLGA Customer's Generating Facility in the same manner as it accesses Network Resources. A 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 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 HILLGA Customer's 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 HILLGA Customer with the capability to physically deliver the output of its Generating Facility to any particular load on the Transmission System without incurring congestion costs. In the event of transmission constraints on the Transmission System, HILLGA Customer's Generating Facility ~~shall~~will 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 HILLGA Customer's Generating Facility be designated as a Network Resource by a Network Service Customer under the Tariff or that HILLGA Customer identify a specific buyer (or sink). To the extent a Network Customer does designate the Generating Facility as a Network Resource, it must do so pursuant to Transmission Provider's Tariff.

Once an HILLGA Customer satisfies the requirements for obtaining Network Resource Interconnection Service, any future transmission service request for delivery from the Generating Facility within the 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 Generating Facility be undertaken, regardless of whether or not such Generating Facility is ever designated by a Network Customer as a Network Resource and regardless of changes in ownership of the 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 HILLGA Customer enters into an arrangement for long term transmission service for deliveries from the Generating Facility outside the

~~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 **will** provide Interconnection Service for the Generating Facility at the Point of Interconnection.

4.3 Performance Standards. Each Party **will** perform all of its obligations under this HILLGIA 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 **will** not be deemed to be in Breach of this HILLGIA for its compliance therewith. If such Party is a Transmission Provider or Transmission Owner, then that Party **must** amend the HILLGIA and submit the amendment to FERC for approval.

4.4 No Transmission Delivery Service. The execution of this HILLGIA 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 HILLGA Customer Provided Services. The services provided by HILLGA Customer under this GIA are set forth in Article 9.6 and Article 13.5.1. HILLGA Customer **will** be paid for such services in accordance with Article 11.8.

4.6 Limitations on HILLGA Interconnection Service

The HILLGA Interconnection Service **will** be subject to the limitations specified in Appendix J to this HILLGIA.

Article 5. Interconnection Facilities Engineering, Procurement, and Construction

5.1 Options. Unless otherwise mutually agreed to between the Parties, HILLGA Customer **will** select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Option To Build as described under Article 5.1.2 or the Negotiated Option described under Article 5.1.3, and such dates and selected option, as applicable, **will** be set forth in Appendix B, Milestones. At the same time, HILLGA Customer **will** indicate whether it elects to exercise the Option to Build set forth in Article 5.1.2 below. If the dates designated by HILLGA Customer are not acceptable to Transmission Owner, Transmission Owner **must** so notify HILLGA Customer within thirty (30) Calendar Days. Upon receipt of the notification that HILLGA Customer's designated dates are not acceptable to Transmission Owner, the HILLGA Customer **must** notify Transmission Owner 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 Owner **must** design, procure, and construct Transmission Owner's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Owner's Interconnection Facilities and Network Upgrades by the dates set forth in Appendix B, Milestones.

Transmission Owner **will** 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 Owner reasonably expects that it will not be able to complete Transmission Owner's Interconnection Facilities, and Network Upgrades by the specified dates, Transmission Owner **must** promptly provide written notice to HILLGA Customer and **must** undertake Reasonable Efforts to meet the earliest dates thereafter.

5.1.2 Option to Build. HILLGA Customer **will** have the option to assume responsibility for the design, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.1. Transmission Owner and HILLGA 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, HILLGA Customer **will** have no right to construct Network Upgrades under this option.

5.1.3 Negotiated Option. If the dates designated by HILLGA Customer are not acceptable to Transmission Owner, the Parties **will** 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 Owner's Interconnection Facilities and Stand Alone Network Upgrades if the HILLGA Customer elects to exercise the Option to Build under Article 5.1.2). If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1(Standard Option), Transmission Owner **will** assume responsibility for the design, procurement and construction of all facilities other than Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades if the HILLGA Customer elects the Option to Build.

5.2 General Conditions Applicable to Option to Build. If HILLGA Customer assumes responsibility for the design, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades,

- (1) HILLGA Customer **must** engineer, procure equipment, and construct Transmission Owner'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 Owner;
- (2) HILLGA Customer's engineering, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades **must** comply with all requirements of law to which Transmission Provider would be subject in the engineering, procurement or construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades;

- (3) Transmission Owner **will** review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) Prior to commencement of construction, HILLGA Customer **must** provide to Transmission Provider and Transmission Owner a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and **must** promptly respond to requests for information from Transmission Provider and Transmission Owner;
- (5) At any time during construction, Transmission Owner **will** have the right to gain unrestricted access to Transmission Owner'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 Owner, HILLGA Customer **will** be obligated to remedy deficiencies in that portion of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades;
- (7) HILLGA Customer **must** indemnify Transmission Provider and Transmission Owner for claims arising from HILLGA Customer's construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;
- (8) The HILLGA Customer **must** transfer control of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;
- (9) Unless Parties otherwise agree, HILLGA Customer **must** transfer ownership of Transmission Owner's Interconnection Facilities and Stand-Alone Network Upgrades to Transmission Owner not later than the Commercial Operation Date;
- (10) Transmission Owner **must** approve and accept for operation and maintenance Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and
- (11) HILLGA Customer **must** deliver to Transmission Owner "as-built" drawings, information, and any other documents that are reasonably required by Transmission Owner to assure that the Interconnection Facilities and Stand- Alone Network Upgrades are built to the standards and specifications required by Transmission Provider.
- (12) If HILLGA Customer exercises the Option to Build pursuant to Article 5.1.2, HILLGA Customer **must** pay Transmission Owner the agreed upon amount of [\$ PLACEHOLDER] for Transmission Owner to execute the responsibilities

enumerated to Transmission Owner under Article 5.2. Transmission Owner **will** invoice HILLGA Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

5.3 Liquidated Damages. The actual damages to HILLGA Customer, in the event Transmission Owner's Interconnection Facilities or Network Upgrades are not completed by the dates designated by HILLGA Customer and accepted by Transmission Owner pursuant to subparagraph 5.1.3, above, may include HILLGA 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 Owner to HILLGA Customer in the event that Transmission Owner does not complete any portion of Transmission Owner's Interconnection Facilities or Network Upgrades by the applicable dates, **will** be an amount equal to ½ of 1 percent per day of the actual cost of Transmission Owner's Interconnection Facilities and Network Upgrades, in the aggregate, for which Transmission Owner has assumed responsibility to design, procure and construct.

However, in no event **will** the total liquidated damages exceed **twenty percent (20%) percent** of the actual cost of Transmission Owner's Interconnection Facilities and Network Upgrades for which Transmission Owner has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Transmission Owner to HILLGA Customer as just compensation for the damages caused to HILLGA 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 HILLGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Transmission Owner's failure to meet its schedule.

No liquidated damages **will** be paid to HILLGA Customer if: (1) HILLGA Customer is not ready to commence use of Transmission Owner's Interconnection Facilities or Network Upgrades to take the delivery of power for the Generating Facility's Trial Operation or to export power from the Generating Facility on the specified dates, unless HILLGA Customer would have been able to commence use of Transmission Owner's Interconnection Facilities or Network Upgrades to take the delivery of power for Generating Facility's Trial Operation or to export power from the Generating Facility, but for Transmission Owner's delay; (2) Transmission Owner's failure to meet the specified dates is the result of the action or inaction of HILLGA Customer or any other HILLGA Customer who has entered into a HILLGIA with Transmission Owner or any cause beyond Transmission Owner's reasonable control or reasonable ability to cure; (3) the HILLGA Customer has assumed responsibility for the design, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

5.4 Power System Stabilizers. The HILLGA Customer **must** 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 Generating Facility. If the Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, HILLGA Customer **must** immediately notify Transmission Owner's system operator, or its designated representative. The requirements of this paragraph **will** not apply to non-synchronous generators.

5.5 Equipment Procurement. If responsibility for construction of Transmission Owner's Interconnection Facilities or Network Upgrades is to be borne by Transmission Owner, then Transmission Owner **will** commence design of Transmission Owner'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 Interconnection Facilities Study pursuant to the HILLGA Study Agreement;

5.5.2 Transmission Owner has received written authorization to proceed with design and procurement from HILLGA Customer by the date specified in Appendix B, Milestones; and

5.5.3 HILLGA Customer has provided security to Transmission Provider in accordance with Article 11.7 by the dates specified in Appendix B, Milestones.

5.6 Construction Commencement. Transmission Owner **must** commence construction of Transmission Owner'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 Owner's Interconnection Facilities and Network Upgrades;

5.6.3 Transmission Owner has received written authorization to proceed with construction from HILLGA Customer by the date specified in Appendix B, Milestones; and

5.6.4 HILLGA Customer has provided security to Transmission Provider in accordance with Article 11.7 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. Parties may, at any time, request a progress report from other Parties. If, at any time, HILLGA Customer determines that the completion of Transmission Owner's Interconnection Facilities and Network Upgrades will not be required until after the specified In-Service Date, HILLGA Customer will provide written notice to Transmission Provider and Transmission Owner of such later

date upon which the completion of Transmission Owner's Interconnection Facilities and Network Upgrades will be required.

5.8 Information Exchange. As soon as reasonably practicable after the Effective Date, the Parties **will** exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with the Transmission System, and **will** work diligently and in good faith to make any necessary design changes.

5.9 Limited Operation. If any of Transmission Owner's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Generating Facility, Transmission Provider **will**, upon the request and at the expense of HILLGA Customer, perform operating studies on a timely basis to determine the extent to which the Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Owner's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this GIA ("Limited Operation"). Transmission Owner **will** permit HILLGA Customer to operate the Generating Facility and Interconnection Customer's Interconnection Facilities under Limited Operation in accordance with the results of such studies performed by Transmission Provider.

5.10 Interconnection Customer's Interconnection Facilities ('ICIF'). Interconnection Customer **will**, 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. HILLGA Customer **must** submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Owner 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 Owner **must** review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Owner and comment on such specifications within thirty (30) Calendar Days of HILLGA Customer's submission. All specifications provided hereunder **will** be deemed confidential.

5.10.2 Transmission Owner's Review. Transmission Owner's review of HILLGA Customer's final specifications **will** not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Generating Facility, or the ICIF. HILLGA Customer **must** make such changes to the ICIF as may reasonably be required by Transmission Owner, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Owner.

5.10.3 ICIF Construction. The ICIF **must** 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, HILLGA Customer **must** deliver to Transmission Owner "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the 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 HILLGA Customer's step-up transformers, the facilities connecting the 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 Generating Facility. The HILLGA Customer **must** provide Transmission Owner specifications for the excitation system, automatic voltage regulator, Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

5.10.4 Updated Information Submission by HILLGA Customer. The updated information submission by the HILLGA Customer, including manufacturer information, **must** occur no later than one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date. HILLGA Customer **must** submit a completed copy of the Generating Facility data requirements contained in Attachment A to Appendix 1 to Attachment BB of the Tariff. It **must** also include any additional information provided to Transmission Provider for the Interconnection Facilities Studies. Information in this submission **must** be the most current Generating Facility design or expected performance data. Information submitted for stability models **must** be compatible with Transmission Provider standard models. If there is no compatible model, the HILLGA Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the HILLGA Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the HILLGA Study Agreement between Transmission Provider and HILLGA Customer, then Transmission Provider will conduct appropriate studies to determine the impact on the Transmission System based on the actual data submitted pursuant to this Article 5.10.4. The HILLGA Customer **may** not begin Trial Operation until such studies are completed.

5.10.5 Information Supplementation. Prior to the Commercial Operation Date, or as soon as possible thereafter, the Parties **must** supplement their information submissions described above in this Article 5 with any and all "as-built" Generating Facility information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The HILLGA Customer **must** conduct tests on the Generating Facility as required by Good Utility Practice such as an open circuit "step voltage" test on the

Generating Facility to verify proper operation of the Generating Facility's automatic voltage regulator.

Unless otherwise agreed, the test conditions **will** include: (1) Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5%~~-percent~~) change in Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage. HILLGA Customer **must** provide validated test recordings showing the responses of 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 Generating Facility's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Generating Facility terminal or field voltages is provided. Generating Facility testing **must** be conducted and results provided to the Transmission Provider for each individual generating unit in a station.

Subsequent to the Commercial Operation Date, the HILLGA Customer **must** provide Transmission Owner and Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Owner **must** provide the HILLGA Customer and Transmission Provider any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Owner-owned substation that may affect the HILLGA Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties **must** provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

5.11 Transmission Owner's Interconnection Facilities Construction. Transmission Owner's Interconnection Facilities and Network Upgrades **must** 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 Owner **must** deliver to HILLGA Customer the following "as-built" drawings, information and documents for Transmission Owner's Interconnection Facilities and Network Upgrades [include appropriate drawings and relay diagrams].

Transmission Owner will obtain control of Transmission Owner'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") **will** furnish at no cost to any 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 Generating Facility with the Transmission System; (ii) operate and maintain the 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 HILLGIA. In exercising such licenses, rights of way and easements, the Access Party **must** not unreasonably disrupt or interfere with normal operation of the Granting Party's business and **must** 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 Owner's Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than HILLGA Customer or Transmission Owner, Transmission Owner **must** at HILLGA 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 Owner's Interconnection Facilities and/or Network Upgrades upon such property.

5.14 Permits. Transmission Provider or Transmission Owner and HILLGA Customer **must** 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 **will** provide permitting assistance to HILLGA Customer comparable to that provided to Transmission Provider's own, or an Affiliate's generation.

5.15 Early Construction of Base Case Facilities. HILLGA Customer may request Transmission Owner to construct, and Transmission Owner **must** construct, using Reasonable Efforts to accommodate HILLGA Customer's In-Service Date, all or any portion of any Network Upgrades required for HILLGA Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for HILLGA Customer, and which also are required to be constructed for another HILLGA Customer, but where such construction is not scheduled to be completed in time to achieve HILLGA Customer's In-Service Date.

5.16 Suspension.

5.16.1 Suspension by HILLGA Customer. HILLGA Customer, upon written notice to Transmission Provider and Transmission Owner, may suspend, for a period not to exceed **eighteen (18)** months, work by Transmission Owner associated with the construction and installation of Transmission Owner's Interconnection Facilities and/or Network Upgrades required under this HILLGIA under the following terms and conditions,

- i. Construction of Network Upgrades that are required to provide Interconnection Service to other Generating Facilities and for which HILLGA Customer shares cost responsibility cannot be suspended pursuant to this Article 5.16.
- ii. If the suspension period begins later than or extends beyond six (6) months following the Effective Date of the HILLGIA, the HILLGA Customer must provide to the Transmission Provider security in the form described under Article 11.7 in an amount equal to the greater of:
 - a. the HILLGA Customer's allocated share of Network Upgrade(s) as calculated pursuant to Section 4.2.2 of Attachment BB of the Tariff and as identified in Appendix A of this GIA unless previously provided under Section 8.9 of this Attachment BB of the Tariff; or
 - b. \$5,000,000 if the Generating Facility is greater than or equal to 100 MW; or
 - c. \$2,500,000 if the Generating Facility is greater than or equal to 50 MW and less than 100 MW; or
 - d. \$1,000,000 if the Generating Facility is less than 50 MW; or
 - e. \$500,000 if the Generating Facility is less than or equal to 2 MW.
- iii. In the event that this HILLGIA is terminated under this Article 5.16, the Transmission Provider will retain the security provided pursuant to Article 5.16.1.ii in the amount required to meet HILLGA Customer's obligations pursuant to this GIA. Any difference between the security provided and HILLGA Customer's obligations will be settled pursuant to Article 12.
- iv. In the event HILLGA Customer suspends work by Transmission Owner required under this HILLGIA pursuant to this Article 5.16 and has not requested Transmission Owner to resume the work required under this HILLGIA on or before the expiration of eighteen (18) months from the date of suspension, this HILLGIA will be deemed terminated unless Article 16 applies.
- v. In the event HILLGA Customer suspends work by Transmission Owner required under this HILLGIA pursuant to this Article 5.16 and has not complied requirements of Article 5.16.1.ii on or before the later of the expiration of six (6) months following the effective date of the GIA or the date the suspension is requested, this HILLGIA will be deemed terminated by the HILLGA Customer.
- vi. In the event HILLGA Customer suspends work by Transmission Owner required under this HILLGIA pursuant to this Article 5.16, the Transmission System must be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Owner's safety and reliability criteria. HILLGA Customer will be responsible for all reasonable and necessary costs which Transmission Owner and Transmission Provider (i) have incurred pursuant to this HILLGIA prior to the

suspension and (ii) incur 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 Owner cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Owner **must** obtain HILLGA Customer's authorization to do so. Transmission Owner and Transmission Provider **will** invoice HILLGA Customer for such costs pursuant to Article 12 and **must** use due diligence to minimize its costs.

vii. In the event HILLGA Customer provides written notice to resume work for those facilities for which work has been suspended pursuant to this Article 5.16.1, the HILLGA Customer **will** receive a refund, including interest, of any payments provided in accordance with Article 5.16.1.ii in excess of the sum of HILLGA Customer's allocated share of Network Upgrade(s) costs and any costs incurred under Article 5.16.1.vi within **thirty (30)** days of the date of such notice.

5.16.2 Exemptions. The HILLGA Customer **will** be exempt from the payments described under Article 5.16.1.ii.b, 5.16.1.ii.c and 5.16.1.ii.d if the following occurs or Suspension is requested for the following reasons:

- i. Construction of a Network Upgrade or the Generating Facility is prevented by order of a Governmental Authority; or
- ii. Transmission Provider determines through an Interconnection Study that the Suspension does not qualify as a modification that has an impact on the cost or timing of any Interconnection Request with an equal or later Queue priority date (Material Modification); or
- iii. Transmission Owner or Transmission Provider determines that a Force Majeure event prevents construction of a Network Upgrade.

5.17 Taxes.

5.17.1 HILLGA Customer Payments Not Taxable. The Parties intend that all payments or property transfers made by HILLGA Customer to Transmission Owner for the installation of Transmission Owner's Interconnection Facilities and the Network Upgrades **will** 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 **will** 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, HILLGA Customer represents and covenants that (i) ownership of the electricity generated at the 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 Owner for Transmission Owner's Interconnection Facilities will be capitalized by HILLGA 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 Owner'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 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 Owner's request, HILLGA Customer **will** provide Transmission Owner with a report from an independent engineer confirming its representation in clause (iii), above. Transmission Owner represents and covenants that the cost of Transmission Owner's Interconnection Facilities paid for by HILLGA 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 Owner. Notwithstanding Article 5.17.1, HILLGA Customer **will** protect, indemnify and hold harmless Transmission Owner from the cost consequences of any current tax liability imposed against Transmission Owner as the result of payments or property transfers made by HILLGA Customer to Transmission Owner under this HILLGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Transmission Owner.

Transmission Owner **will** not include a gross-up for the cost consequences of any current tax liability in the amounts it charges HILLGA Customer under this GIA unless (i) Transmission Owner has determined, in good faith, that the payments or property transfers made by HILLGA Customer to Transmission Owner should be reported as income subject to taxation or (ii) any Governmental Authority directs Transmission Owner to report payments or property as income subject to taxation; provided, however, that Transmission Owner may require HILLGA Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Transmission Owner (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. HILLGA Customer **must** reimburse Transmission Owner 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 Owner of the amount due, including detail about how the amount was calculated.

The indemnification obligation **will** 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 Owner 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. HILLGA Customer's liability for the cost consequences of any current tax liability under this Article 5.17 **will** be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the Parties, this means that HILLGA Customer will pay Transmission Owner, in addition to the amount paid for the Interconnection Facilities, and Network Upgrades, an amount equal to (1) the current taxes imposed on Transmission Owner ("Current Taxes") on the excess of (a) the gross income realized by Transmission Owner as a result of payments or property transfers made by HILLGA Customer to Transmission Owner under this GIA (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 Owner 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 **will** be computed based on Transmission Owner's composite federal and state tax rates at the time the payments or property transfers are received and Transmission Owner 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 **will** be computed by discounting Transmission Owner's anticipated tax depreciation deductions as a result of such payments or property transfers by Transmission Owner's current weighted average cost of capital. Thus, the formula for calculating HILLGA Customer's liability to Transmission Owner pursuant to this Article 5.17.4 can be expressed as follows: $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$. HILLGA Customer's estimated tax liability in the event taxes are imposed **will** 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 HILLGA Customer's request and expense, Transmission Owner **will** 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 HILLGA Customer to Transmission Owner under this GIA are subject to federal income taxation. HILLGA 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 HILLGA Customer's knowledge. Transmission Owner and HILLGA Customer **must** cooperate in good faith with respect to the submission of such request.

Transmission Owner **must** keep HILLGA Customer fully informed of the status of such request for a private letter ruling and **must** execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes

HILLGA Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. Transmission Owner **must** allow HILLGA Customer to attend all meetings with IRS officials about the request and **must** permit HILLGA Customer to prepare the initial drafts of any follow-up letters in connection with the request.

5.17.6 Subsequent Taxable Events. If, within **ten (10)** years from the date on which the relevant Transmission Owner's Interconnection Facilities are placed in service, (i) HILLGA 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 HILLGA terminates and Transmission Owner retains ownership of the Interconnection Facilities and Network Upgrades, HILLGA Customer **must** pay a tax gross-up for the cost consequences of any current tax liability imposed on Transmission Owner, 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 Owner's receipt of payments or property constitutes income that is subject to taxation, Transmission Owner **must** notify HILLGA Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by HILLGA Customer and at HILLGA Customer's sole expense, Transmission Owner may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon HILLGA Customer's written request and sole expense, Transmission Owner 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 Owner 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 Owner **must** keep HILLGA Customer informed, **must** consider in good faith suggestions from HILLGA Customer about the conduct of the contest, and **must** reasonably permit HILLGA Customer or an HILLGA Customer representative to attend contest proceedings.

HILLGA Customer **must** pay to Transmission Owner on a periodic basis, as invoiced by Transmission Owner, Transmission Owner's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Transmission Owner may agree to a settlement either with HILLGA Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Transmission Owner, but reasonably acceptable to HILLGA Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. HILLGA Customer's obligation **will** be based on the amount of the settlement agreed to by HILLGA 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 **will** be calculated on a fully

grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without HILLGA Customer's consent or such written advice will relieve HILLGA Customer from any obligation to indemnify Transmission Owner 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 Owner which holds that any amount paid or the value of any property transferred by HILLGA Customer to Transmission Owner under the terms of this GIA 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 Owner in good faith that any amount paid or the value of any property transferred by HILLGA Customer to Transmission Owner under the terms of this GIA is not taxable to Transmission Owner, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by HILLGA Customer to Transmission Owner are not subject to federal income tax, or (d) if Transmission Owner receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by HILLGA Customer to Transmission Owner pursuant to this GIA, Transmission Owner **must** promptly refund to HILLGA Customer the following:

- (i) any payment made by HILLGA 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 amount paid by HILLGA Customer to Transmission Owner for such taxes which Transmission Owner 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 HILLGA Customer to the date Transmission Owner refunds such payment to HILLGA Customer, and
- (iii) with respect to any such taxes paid by Transmission Owner, any refund or credit Transmission Owner 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 Owner for such overpayment of taxes (including any reduction in interest otherwise payable by Transmission Owner to any Governmental Authority resulting from an offset or credit); provided, however, that Transmission Owner will remit such amount promptly to HILLGA Customer only after and to the extent that Transmission Owner has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Transmission Owner'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 HILLGA Customer, and at HILLGA Customer's sole expense, Transmission Owner may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Transmission Owner for which HILLGA Customer may be required to reimburse Transmission Owner under the terms of this GIA. HILLGA Customer **must** pay to Transmission Owner on a periodic basis, as invoiced by Transmission Owner, Transmission Owner's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. HILLGA Customer and Transmission Owner **must** 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 **will** be payable by HILLGA Customer to Transmission Owner 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, HILLGA Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Transmission Owner.

5.18 Tax Status. All Parties **must** cooperate with each other to maintain their tax status. Nothing in this GIA is intended to adversely affect any Party'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. Each Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect another Party's facilities, that Party **must** provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information **will** be deemed to be confidential hereunder and **will** include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Generating Facility. The Party desiring to perform such work **must** provide the relevant drawings, plans, and specifications to the other Parties 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 **will** not unreasonably be withheld, conditioned or delayed.

In the case of Generating Facility Modifications that do not require HILLGA Customer to submit an Interconnection Request, Transmission Owner **must** 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 Owner's Interconnection Facilities or Network Upgrades necessitated by such HILLGA 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 **must** be designed, constructed and operated in accordance with this HILLGA and Good Utility Practice.

5.19.3 Modification Costs. HILLGA Customer **will** not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Owner makes to Transmission Owner's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Owner's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. HILLGA Customer **will** 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.

5.20 Delays. If a Network Upgrade(s) identified in Appendix A is delayed during the construction process and the Commercial Operation Date for the Generating Facility identified in Appendix B is no longer feasible, the Commercial Operation Date in Appendix B may be modified to no later than six (6) months following the in-service date for the last Network Upgrade identified in Appendix A.

Article 6. Testing and Inspection

6.1 Pre-Commercial Operation Date Testing and Modifications. Prior to the Commercial Operation Date, Transmission Owner **will** test Transmission Owner's Interconnection Facilities and Network Upgrades and HILLGA Customer **will** test the 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 **must** make any modifications to its facilities that are found to be necessary as a result of such testing. HILLGA Customer **must** bear the cost of all such testing and modifications. HILLGA Customer **will** generate test energy at the 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 **will** 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 Generating Facility with the Transmission System in a safe and reliable manner. Each Party **will** 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 **must** notify the other Parties in advance of its performance of tests of its Interconnection Facilities. The other Parties have the right, at its own expense, to observe such testing.

6.4 Right to Inspect. Each Party **will** have the right, but **will** have no obligation to: (i) observe another Parties' 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 Parties' System Protection Facilities and other protective equipment; and (iii) review another Parties' maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. Any Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Parties. The exercise or non-exercise by another Party of any such rights **will** 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 any Party obtains through the exercise of any of its rights under this Article 6.4 **will** be deemed to be Confidential Information and treated pursuant to Article 22 of this HILLGIA.

Article 7. Metering

7.1 General. Each Party **must** comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Owner **must** install Metering Equipment at the Point of Interconnection prior to any operation of the Generating Facility and **will** own, operate, test and maintain such Metering Equipment. Power flows to and from the Generating Facility **will** be measured at or, at Transmission Owner's option, compensated to, the Point of Interconnection. Transmission Owner **must** provide metering quantities, in analog and/or digital form, to HILLGA Customer and Transmission Provider on a same-time basis using communication as provided in Article 8. HILLGA Customer **will** bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

7.2 Check Meters. HILLGA 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 Owner's meters. Such check meters **will** be for check purposes only and **will** not be used for the measurement of power flows for purposes of this GIA, except as provided in Article 7.4 below. The check meters **will** be subject at all reasonable times to inspection and examination by Transmission Owner or its designee. The installation, operation and maintenance thereof **must** be performed entirely by HILLGA Customer in accordance with Good Utility Practice.

7.3 Standards. Transmission Owner **must** install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.

7.4 Testing of Metering Equipment. Transmission Owner **must** inspect and test all Transmission Owner-owned Metering Equipment upon installation and at least once every two (2) years thereafter. If requested to do so by HILLGA Customer, Transmission Owner **must**, at HILLGA Customer's expense, inspect or test Metering Equipment more frequently than every two (2) years. Transmission Owner **must** give reasonable notice of the time when any inspection or test **will** take place, and HILLGA Customer may have representatives present at the test or inspection. If at any time Metering Equipment is found

to be inaccurate or defective, it **must** be adjusted, repaired or replaced at HILLGA Customer's expense, in order to provide accurate metering, unless the inaccuracy or defect is due to Transmission Owner's failure to maintain, then Transmission Owner **must** pay. If Metering Equipment fails to register, or if the measurement made by Metering Equipment during a test varies by more than two percent (2%) from the measurement made by the standard meter used in the test, Transmission Owner **must** adjust the measurements by correcting all measurements for the period during which Metering Equipment was in error by using HILLGA Customer's check meters, if installed. If no such check meters are installed or if the period cannot be reasonably ascertained, the adjustment **will** 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 HILLGA Customer's expense, the metered data **will** be telemetered to one or more locations designated by Transmission Owner and one or more locations designated by HILLGA Customer. Such telemetered data **will** be used, under normal operating conditions, as the official measurement of the amount of energy delivered from the Generating Facility to the Point of Interconnection.

Article 8. Communications

8.1 HILLGA Customer Obligations. HILLGA Customer **must** maintain satisfactory operating communications with Transmission Owner's Transmission System dispatcher or representative designated by Transmission Owner. HILLGA Customer **must** provide standard voice line, dedicated voice line and facsimile communications at its 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. HILLGA Customer **must** also provide the dedicated data circuit(s) necessary to provide HILLGA Customer data to Transmission Owner as set forth in Appendix D, Security Arrangements Details. The data circuit(s) **must** extend from the Generating Facility to the location(s) specified by Transmission Owner. Any required maintenance of such communications equipment **must** be performed by HILLGA Customer. Operational communications **must** 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 Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, **will** be installed by HILLGA Customer, or by Transmission Owner at HILLGA Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Owner 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) **will** be specified by Transmission Owner. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Owner.

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 **must** 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 **will** 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 HILLGA Customer whose Generating Facility is a Variable Energy Resource **must** 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 HILLGA Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with (i) site-specific meteorological data including: temperature, wind speed, wind direction, relative humidity and atmospheric pressure and (ii) site specific geographic data including location (latitude and longitude) of the Variable Energy Resource and location (latitude and longitude) and height of the facility that will contain the equipment necessary to provide the meteorological data for such resource. The HILLGA 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 HILLGA Customer whose Generating Facility is a Variable Energy Resource **will** mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The HILLGA Customer whose Generating Facility is a Variable Energy Resource also **must** 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 HILLGA Customer to the Transmission Provider, including the frequency and timing of data submittals, **must** 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, geographical and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological, geographical and forced outage data are set forth in Appendix C, Interconnection Details, of this HILLGIA, as they may change from time to time.

8.5 Phasor Measurement Unit (PMU) Recording Equipment. Prior to the Initial Synchronization Date of a Generating Facility having a Generating Facility Capacity equal to or greater than 50 MW, phasor measurement recording and communications equipment **will** be installed by the Transmission Owner at HILLGA Customer's expense that is capable of gathering phasor measurements as specified in the PMU Communications Handbook. To the extent similar quality equipment is being added or already exists, such as relays or digital fault recorders, that can collect data at least at the same rate as PMUs

and which data is synchronized via a high-accuracy satellite clock, such equipment can be utilized to satisfy this requirement if the equipment is located on the Transmission Owner's side of the Point of Change of Ownership and if mutually agreed to by the Parties. The phasor measurement equipment **must** be installed at the Transmission Owner's side of the Point of Change of Ownership and become part of the Transmission Owner Interconnection Facilities. Phasor measurements **must** be streamed in IEEE C37.118 or equivalent format and be provided to the Transmission Provider. This data **must** at least be sufficient to determine (i) positive-sequence voltage magnitude and angle, (ii) positive-sequence current magnitude and angle, (iii) frequency, and (iv) rate of change of frequency. Such data **must** be transmitted over the data circuit(s) as indicated in Article 8.1.

Each Party will promptly advise the other Parties 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 applicable Party. The Party owning such equipment **must** correct such error or malfunction as soon as reasonably feasible.

Article 9. Operations

9.1 General. Each Party **must** comply with the Applicable Reliability Council requirements. Each Party **must** provide to the other Parties all information that may reasonably be required by the other Parties to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

9.2 Control Area Notification. At least three **(3)** months before Initial Synchronization Date, HILLGA Customer **must** notify Transmission Provider and Transmission Owner in writing of the Control Area in which the Generating Facility will be located. If HILLGA Customer elects to locate the Generating Facility in a Control Area other than the Control Area in which the 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 HILLGIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, **must** be executed and implemented prior to the placement of the Generating Facility in the other Control Area.

9.3 Transmission Provider and Transmission Owner Obligations. Transmission Provider and Transmission Owner **will** cause the Transmission System and Transmission Owner's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this HILLGIA. Transmission Provider or Transmission Owner may provide operating instructions to HILLGA Customer consistent with this GIA and Transmission Owner's operating protocols and procedures as they may change from time to time. Transmission Provider and Transmission Owner will consider changes to its operating protocols and procedures proposed by HILLGA Customer.

9.4 HILLGA Customer Obligations. HILLGA Customer **will** at its own expense operate, maintain and control the Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA. HILLGA Customer **must** operate the 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 HILLGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Any Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this HILLGIA.

9.5 Start-Up and Synchronization. Consistent with the Parties' mutually acceptable procedures, the HILLGA Customer is responsible for the proper synchronization of the Generating Facility to the Transmission System.

9.6 Reactive Power and Primary Frequency Response.

9.6.1 Power Factor Design Criteria.

9.6.1.1 Synchronous Generation. HILLGA Customer **must** design the 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 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. HILLGA Customer **must** design the Generating Facility to maintain a 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 **will** 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 **will** only apply to newly interconnecting non-synchronous generators that had not executed an interconnection facilities study agreement as of September 21, 2016.

9.6.2 Voltage Schedules. Once HILLGA Customer has synchronized the Generating Facility with the Transmission System, Transmission Provider and/or Transmission Owner **will** require HILLGA Customer to operate the Generating Facility to produce or absorb reactive power within the design limitations of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Owner's voltage schedules **must** treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Owner **must** exercise Reasonable Efforts to provide HILLGA 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. HILLGA Customer **must** operate the Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations

of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If HILLGA Customer is unable to maintain the specified voltage or power factor, it **must** promptly notify the Transmission Owner.

9.6.2.1 Voltage Regulators. Whenever the Generating Facility is operated in parallel with the Transmission System and voltage regulators are capable of operation, HILLGA Customer **must** operate the Generating Facility with its voltage regulators in automatic operation. If the Generating Facility's speed governors and voltage regulators are not capable of such automatic operation, the HILLGA Customer **must** immediately notify Transmission Owner's system operator, or its designated representative, and ensure that such Generating Facility's reactive power production or absorption (measured in Mvars) are within the design capability of the Generating Facility's generating unit(s) and steady state stability limits. HILLGA Customer **will** not cause its Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Generating Facility for an under or over frequency condition in accordance with Good Utility Practice and Applicable Reliability Standards.

9.6.3 Payment for Reactive Power. Transmission Provider is required to pay HILLGA Customer for reactive power that HILLGA Customer provides or absorbs from the Generating Facility when Transmission Owner requests HILLGA Customer to operate its Generating Facility outside the range specified in Article 9.6.1. Payments **will** be pursuant to Article 11.8 or such other agreement to which the Parties have otherwise agreed; provided however, to the extent the Tariff contains a provision providing for such compensation, that Tariff provision **will** control.

9.6.4 Primary Frequency Response. HILLGA Customer **must** ensure the primary frequency response capability of its Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein **will** 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 Generating Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. HILLGA Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent **(5%)** droop and ± 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 **will** be: (1) based on the nameplate capacity of the Generating Facility, and **will** 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 **will** be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent

controls is not expected to adjust the Generating Facility's real power output in response to frequency deviations. The deadband **must** 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 Generating Facility's real power output in response to frequency deviations **will** 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. HILLGA Customer **must** notify Transmission Provider that the primary frequency response capability of the Generating Facility has been tested and confirmed during commissioning. Once HILLGA Customer has synchronized the Generating Facility with the Transmission System, HILLGA Customer **must** operate the 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 **will** apply to both synchronous and non-synchronous Generating Facilities.

9.6.4.1 Governor or Equivalent Controls. Whenever the Generating Facility is operated in parallel with the Transmission System, HILLGA Customer **must** operate the Generating Facility with its governor or equivalent controls in service and responsive to frequency. HILLGA Customer **must**: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of ± 0.036 Hz and set the droop parameter to a maximum of 5 percent (**5%**); or (2) implement the relevant droop and deadband settings from an approved NERC Reliability Standard that provides for equivalent or more stringent parameters. HILLGA Customer **will** 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 HILLGA Customer needs to operate the Generating Facility with its governor or equivalent controls not in service, HILLGA Customer **must** 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. HILLGA Customer **must** make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. HILLGA Customer **must** make Reasonable Efforts to keep outages of the Generating Facility's governor or equivalent controls to a minimum whenever the Generating Facility is operated in parallel with the Transmission System.

9.6.4.2 Timely and Sustained Response. HILLGA Customer **must** ensure that the

Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and **will** begin immediately after frequency deviates outside of the deadband, and to the extent the Generating Facility has operating capability in the direction needed to correct the frequency deviation. HILLGA Customer **must** not block or otherwise inhibit the ability of the governor or equivalent controls to respond and **must** 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 Generating Facility **must** 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 **will** supersede the above requirements.

9.6.4.3 Exemptions. Generating Facilities that are regulated by the United States Nuclear Regulatory Commission **will** be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this Agreement. 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) **will** be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but **will** 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. HILLGA Customer interconnecting an electric storage resource **must** establish an operating range in Appendix C of its GIA 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 **will** specify whether the operating range is static or dynamic, and **will** 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 HILLGA 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.

HILLGA 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 HILLGA 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. HILLGA 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 all Parties. In all circumstances, any Party planning to remove such facility(ies) from service must use Reasonable Efforts to minimize the effect on the other Parties of such removal.

9.7.1.2 Outage Schedules. Transmission Provider will post scheduled outages of its transmission facilities on the OASIS. HILLGA Customer must submit its planned maintenance schedules for the Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. HILLGA Customer must update its planned maintenance schedules as necessary. Transmission Provider may request HILLGA Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply will not be a criterion in determining Transmission System reliability. Transmission Provider must compensate HILLGA Customer for any additional direct costs that HILLGA 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 HILLGA Customer would have incurred absent Transmission Provider's request to reschedule maintenance. HILLGA Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, HILLGA 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 another Party's operations or facilities, the Party that owns or controls the facility that is out of service **must** 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 **must** provide the other Parties, 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 **must** 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 and/or Transmission Owner may require HILLGA Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's and/or Transmission Owner's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The following provisions **will** apply to any interruption or reduction permitted under this Article 9.7.2:

9.7.2.1 The interruption or reduction **will** continue only for so long as reasonably necessary under Good Utility Practice;

9.7.2.2 Any such interruption or reduction **must** 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 or Transmission Owner **must** notify HILLGA Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification **must** 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 or Transmission Owner **will** notify HILLGA Customer in advance regarding the timing of such scheduling and further notify HILLGA Customer of the expected duration. Transmission Provider or Transmission Owner **will** coordinate with HILLGA Customer using

Good Utility Practice to schedule the interruption or reduction during periods of least impact to HILLGA Customer and Transmission Owner;

9.7.2.5 The Parties **must** cooperate and coordinate with each other to the extent necessary in order to restore the 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. HILLGA Customer **must** implement under-frequency and over-frequency relay set points for the Generating Facility as required by the Applicable Reliability Council to ensure "ride through" capability of the Transmission System. Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, **must** be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein **will** 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.

9.7.3.1 Frequency Ride Through and Voltage Ride Through for a Generating Facility no larger than 20 MW. For Generating Facilities no larger than 20 MW, the HILLGA Customer **must** ensure "frequency ride through" capability and "voltage ride through" capability of its Generating Facility. The HILLGA Customer **must** enable these capabilities such that its Generating Facility **will** not disconnect automatically or instantaneously from the system or equipment of the Transmission Provider and any Affected Systems for a defined under-frequency or over-frequency condition, or an under-voltage or over-voltage condition, as tested pursuant to Article 6.1 of this agreement. The defined conditions **must** be in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. The Generating Facility's protective equipment settings **must** comply with the Transmission Provider's automatic load-shed program. The Transmission Provider **will** review the protective equipment settings to confirm compliance with the automatic load-shed program. The term "ride through" as used herein **will** mean the ability of a Generating Facility to stay connected to and synchronized with the system or equipment of the Transmission Provider and any Affected Systems during system disturbances within a range of conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. The term "frequency ride through" as used herein **will** mean the ability of a Generating Facility to stay connected

to and synchronized with the system or equipment of the Transmission Provider and any Affected Systems during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. The term “voltage ride through” as used herein will mean the ability of a Generating Facility to stay connected to and synchronized with the system or equipment of the Transmission Provider and any Affected Systems during system disturbances within a range of under-voltage and over-voltage conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis.

9.7.4 System Protection and Other Control Requirements.

9.7.4.1 System Protection Facilities. HILLGA Customer must, at its expense, install, operate and maintain System Protection Facilities as a part of the Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Owner must install at HILLGA Customer's expense any System Protection Facilities that may be required on Transmission Owner's Interconnection Facilities or the Transmission System as a result of the interconnection of the Generating Facility and the Interconnection Customer's Interconnection Facilities.

9.7.4.2 Each Party's protection facilities must be designed and coordinated with other systems in accordance with Good Utility Practice.

9.7.4.3 Each Party will be responsible for protection of its facilities consistent with Good Utility Practice.

9.7.4.4 Each Party's protective relay design must 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 HILLGA 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 must 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 must 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, HILLGA Customer **must** provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Owner's equipment, such that the removal of the fault contribution **must** be coordinated with the protective requirements of the Transmission System. Such protective equipment **must** include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. HILLGA Customer **will** be responsible for protection of the Generating Facility and HILLGA 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. HILLGA Customer **will** be solely responsible to disconnect the Generating Facility and HILLGA Customer's other equipment if conditions on the Transmission System could adversely affect the Generating Facility.

9.7.6 Power Quality. No Party's facilities **may** 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, **will** control.

9.8 Switching and Tagging Rules. Each Party **must** provide the other Parties a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules **must** be developed on a non-discriminatory basis. The Parties **must** 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 **must** be constructed for the sole purpose of interconnecting the Generating Facility to the Transmission System and **must** 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 Owner's Interconnection Facilities, or any part thereof, HILLGA 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 Owner, all third party users, and HILLGA 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 HILLGA Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Owner, all third party users, and HILLGA 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 will 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 Generating Facility or the 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 Owner Obligations. Transmission Owner must maintain the Transmission System and Transmission Owner's Interconnection Facilities in a safe and reliable manner and in accordance with this HILLGIA.

10.2 HILLGA Customer Obligations. HILLGA Customer must maintain the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this HILLGIA.

10.3 Coordination. The Parties will confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Generating Facility and the Interconnection Facilities.

10.4 Secondary Systems. Each Party must cooperate with the others 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 another Party. Each Party must provide advance notice to the other Parties 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, HILLGA Customer **will** be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing HILLGA Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Owner's Interconnection Facilities.

Article 11. Performance Obligation

11.1 Interconnection Customer Interconnection Facilities. HILLGA Customer **will** design, procure, construct, install, own and/or control Interconnection Customer's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

11.2 Generating Facility. HILLGA Customer **must** install the Generating Facilities described in Appendix C no later than the Commercial Operation Date(s) specified in Appendix B. Additionally, for Electric Storage Resource provide to the Transmission Provider:

Operating Assumptions for Generating Facility

Check box if applicable []

Operating Assumptions:

[insert operating assumptions that reflect the charging behavior of the Generating Facility that includes at least one electric storage resource]

· HILLGA Customer is limited to _____ MW of energy withdrawal during off-peak system conditions as set forth in the applicable Energy Storage Resource-Load Assessment report.

· HILLGA Customer may remove this limit as set forth in Transmission Provider's Business Practice 7250.

· During certain system conditions, a resource that is registered as a Market Storage Resource (MSR) may receive a Dispatch Instruction from the Transmission Provider that requires HILLGA Customer to withdraw energy in excess of the limit set forth above and Interconnection Customer's performance consistent with that Dispatch Instruction **will** not be considered a breach of this GIA. Any such physical limitations identified in the load assessment study are required to be implemented by HILLGA Customer prior to energization of the Generating Facility. In the

event HILLGA Customer fails to comply with the requirements identified in the applicable load assessment study, HILLGA Customer **must** not take energy from the Transmission System.

In the event Transmission Provider provides a Dispatch Instruction to the HILLGA Customer to charge the Generating Facility batteries, the energy required for charging the Generating Facility batteries **will** be taken at wholesale from the Transmission System. In any event, HILLGA Customer will not engage in "Self Charging" of the Generating Facility batteries unless the Interconnection Customer obtains Transmission Service

pursuant to the Tariff prior to charging from the Transmission System. The power and energy discharged from the Generating Facility batteries **will** be delivered at wholesale to the Transmission System.

11.3 Transmission Owner's Interconnection Facilities. Transmission Owner **will** design, procure, construct, install, own and/or control the Transmission Owner's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the HILLGA Customer.

11.4 Network Upgrades and Distribution Upgrades. All Network Upgrades and Distribution Upgrades described in Appendix A **must** be constructed in accordance with the process set forth in Section VI of Attachment O. Transmission Owner **must** design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades that are associated with that Transmission Owner's system. The Distribution Upgrades and Network Upgrades described in Appendix A **will** be solely funded by HILLGA Customer unless Transmission Owner elects to fund the capital for the Distribution Upgrades or Network Upgrades.

11.4.1 Agreement to Fund Shared Network Upgrades. HILLGA Customer agrees to fund Shared Network Upgrades, as determined by Transmission Provider. Where applicable, payments to fund Shared Network Upgrade(s) that are made to Transmission Provider by HILLGA Customer will be disbursed by Transmission Provider to the appropriate entities that are constructing the Shared Network Upgrades in accordance with Attachment O of the Tariff. In the event that HILLGA Customer fails to meet its obligation to fund Shared Network Upgrades, Transmission Owner and Transmission Provider **will** not be responsible for the HILLGA Customer's funding obligation.

11.4.2 Contingencies Affecting Network Upgrades, System Protection Facilities and Distribution Upgrades. Network Upgrades, System Protection Facilities and Distribution Upgrades that are required to accommodate the Generating Facility may be modified because (a) a higher queued Interconnection Request withdrew or was deemed to have withdrawn, (b) the HILLGA associated with a higher queued Interconnection Request was terminated, or (c) changes occur in equipment design standards or reliability criteria giving rise to the need for restudy. The higher queued Interconnection Requests that could impact the Network Upgrades, System Protection Facilities and Distribution Upgrades required to accommodate the Generating Facility, and possible modifications that may result from the above listed events affecting the higher queued Interconnection Requests, to the extent such modifications are reasonably known and can be determined, and estimates of the costs associated with

such required Network Upgrades, System Protection Facilities and Distribution Upgrades, will be provided in Appendix A.

11.4.3 Agreement to Restudy. The HILLGA Customer agrees to allow the Transmission Provider to perform a restudy in accordance with Sections 8.8 and 8.13 of Attachment BB of the Tariff if the Transmission Provider determines a restudy is required because one or more of the contingencies in Article 11.4.2 occurred. If a restudy is required, the Transmission Provider will provide notice to HILLGA Customer. The Parties agree to amend Appendix A to this HILLGIA in accordance with Article 30.10 to reflect the results of the restudy.

11.5 Transmission Credits.

11.5.1 Credits for Amounts Advanced for Network Upgrades. HILLGA Customer will be entitled to compensation in accordance with Attachment Z2 of the Tariff for any Network Upgrades including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to HILLGA Customer pursuant to Article 5.17.8.

11.5.2 Special Provisions for Affected Systems. Unless Transmission Provider provides, under the HILLGIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, HILLGA Customer and Affected System Operator must enter into an agreement that provides for such repayment. The agreement will specify the terms governing payments to be made by HILLGA Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

11.5.3 Notwithstanding any other provision of this HILLGIA, nothing herein will 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 HILLGA Customer, will 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 transmission credits for transmission service that is not associated with the Generating Facility.

11.6 Initial Payment.

HILLGA Customer must make an initial payment (“Initial Payment”) equal to the greater of a) twenty (20) percent of the total cost of Network Upgrades (excluding JTIQ Upgrade costs), Shared Network Upgrades, Transmission Owner Interconnection Facilities and/or Distribution Upgrades listed in Appendix A or b) \$4,000/MW of the size of the Generating Facility. Any financial security provided in Section 8.2 of Attachment BB will be applied to this requirement. The Initial Payment must be provided to Transmission Owner or Transmission Provider as required in Appendix B by HILLGA Customer pursuant to this

Article 11.6 within the later of a) thirty (30) days of the execution of the HILLGIA by all Parties, or b) thirty (30) days of acceptance by FERC if the HILLGIA is filed unexecuted and the payment is being protested by HILLGA Customer, or c) thirty (30) days of the filing if the HILLGIA is filed unexecuted and the Initial Payment is not being protested by HILLGA Customer. If this HILLGIA is terminated, then the Initial Payment **must** be refunded with accrued interest calculated from the date of the receipt of the Initial Payment to the date of the refund, if any, to the HILLGA Customer less:

- a. any costs that have been incurred for the construction of the facilities specified in Appendix A;
- b. any funds necessary for the construction of those Shared Network Upgrades, or Network Upgrades, that would be assigned to another interconnection customer where such upgrade costs would not have been assigned but for the termination of the HILLGIA; and
- c. any costs that have been incurred for the construction of those Shared Network Upgrades, or Network Upgrades, that are no longer required due to the termination of the HILLGIA that were paid for by another interconnection customer.

11.7A Provision of Security. At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades as defined in Appendix A of this HILLGIA, HILLGA Customer **must** provide Transmission Provider, at HILLGA 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 **must** be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades as defined in Appendix A of this HILLGIA and **will** be reduced on a dollar-for-dollar basis for payments made to Transmission Provider or Transmission Owner for these purposes. If HILLGA Customer requests suspension pursuant to Article 5.16, HILLGA Customer may be required to provide Transmission Provider security in the form described above for its allocated share of Network Upgrade(s) costs as calculated pursuant to Section 4.2.2 of Attachment BB of the Tariff and defined in Appendix A of this HILLGIA.

In addition:

11.7A.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 HILLGA Customer, up to an agreed-to maximum amount.

11.7A.2 The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.7A.3 The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.7B Provision of Security for JTIQ Upgrades. If the Transmission Provider determines, pursuant to Section 3.6.4(A) of Attachment BB of the Tariff that the Interconnection Request impacts one or more of the JTIQ Upgrades, HILLGA Customer is required to provide security in accordance with Appendix I to this HILLGIA.

11.8 HILLGA Customer Compensation. If Transmission Provider or Transmission Owner requests or directs HILLGA Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this HILLGIA, Transmission Provider **must** compensate HILLGA Customer in accordance with HILLGA Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to the Tariff. HILLGA Customer **must** serve Transmission Provider 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 HILLGA Customer is required to provide or absorb any Reactive Power under this HILLGIA, Transmission Provider agrees to compensate HILLGA Customer in such amount as would have been due HILLGA 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.

11.8.1 HILLGA Customer Compensation for Actions During Emergency Condition. Transmission Provider **must** compensate HILLGA Customer for its provision of real and reactive power and other Emergency Condition services that HILLGA Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.8.

Article 12. Invoice

The terms of this Article 12 apply to billing between the Parties for construction and operation and maintenance charges. All other billing will be handled according to the Tariff.

12.1 General. Each Party **will** submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice **must** 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 HILLGIA, including interest payments or credits, **must** be netted so that only the net amount remaining due **must** be paid by the owing Party.

12.2 Final Invoice. Within six months after completion of the construction of Interconnection Facilities and the Network Upgrades, the HILLGA Customer **will** receive an invoice of the final cost due under this HILLGIA, including any applicable cost due to termination, which **will** set forth such costs in sufficient detail to enable HILLGA Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. HILLGA Customer **will** receive a refund of any amount by which the actual

payment by HILLGA 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 **will** be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice **must** pay the invoice within thirty (30) Calendar Days of receipt. All payments **must** 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 HILLGIA.

12.4 Disputes. In the event of a billing dispute between the Parties, Transmission Owner, and Transmission Provider **will** continue to provide Interconnection Service under this HILLGIA as long as HILLGA Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Owner or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If HILLGA Customer fails to meet these two requirements for continuation of service, then Transmission Owner may provide notice to HILLGA 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 **must** pay the amount due with interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii).

Article 13. Emergencies

13.1 Definition. "Emergency Condition" **will** 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 the Transmission System, or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Transmission Owner, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, Transmission Owner's Interconnection Facilities; or (4) that, in the case of HILLGA 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 **will** be considered Emergency Conditions; provided that HILLGA Customer is not obligated by the HILLGIA to possess black start capability.

13.2 Obligations. Each Party **must** comply with the Emergency Condition procedures of NERC, the Applicable Reliability Council, Transmission Provider, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.

13.3 Notice. Transmission Provider or Transmission Owner **will** notify HILLGA Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Owner's Interconnection Facilities or the Transmission System that may reasonably be expected to affect HILLGA Customer's operation of the Generating Facility or Interconnection Customer's Interconnection Facilities. HILLGA Customer **must** notify

Transmission Provider and Transmission Owner promptly when it becomes aware of an Emergency Condition that affects the Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Transmission System or Transmission Owner's Interconnection Facilities. To the extent information is known, the notification **must** describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of HILLGA Customer's or Transmission Owner's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice **must** be followed as soon as practicable with written notice.

13.4 Immediate Action. Unless, in HILLGA Customer's reasonable judgment, immediate action is required, HILLGA Customer **must** obtain the consent of Transmission Owner, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or Transmission Owner or otherwise regarding the Transmission System.

13.5 Transmission Provider and Transmission Owner Authority.

13.5.1 General. Transmission Provider and/or Transmission Owner may take whatever actions or inactions with regard to the Transmission System or Transmission Owner'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 Owner's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider and Transmission Owner **must** use Reasonable Efforts to minimize the effect of such actions or inactions on the Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider and/or Transmission Owner may, on the basis of technical considerations, require the 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 HILLGA Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing HILLGA Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Generating Facility and Interconnection Customer's Interconnection Facilities. HILLGA Customer **must** comply with all of Transmission Provider's and Transmission Owner's operating instructions concerning Generating Facility real power and reactive power output within the manufacturer's design limitations of the 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 and/or Transmission Owner may reduce Interconnection Service or disconnect the 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 and/or Transmission Owner can schedule the reduction or disconnection in advance, Transmission Provider and/or Transmission Owner **must** notify HILLGA Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider and/or Transmission Owner **must** coordinate with HILLGA Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to HILLGA Customer, Transmission Provider and/or Transmission Owner. Any reduction or disconnection **will** continue only for so long as reasonably necessary under Good Utility Practice. The Parties **will** cooperate with each other to restore the 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 HILLGA Customer Authority. Consistent with Good Utility Practice and the HILLGIA and Attachment BB of the Tariff, HILLGA Customer may take actions or inactions with regard to the 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 Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. HILLGA Customer **must** use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Owner's Interconnection Facilities. Transmission Provider and/or Transmission Owner **will** use Reasonable Efforts to assist HILLGA Customer in such actions.

13.7 Limited Liability. Except as otherwise provided in Article 11.8.1 of this HILLGIA, no Party **will** be liable to the other Parties 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 HILLGIA **will** 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 **must** in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this HILLGIA **will** require HILLGA 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 2005, or the Public Utility Regulatory Policies Act of 1978 as amended by the 2005 Energy Policy Act.

14.2 Governing Law.

14.2.1 The validity, interpretation and performance of this GIA and each of its provisions will 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 HILLGIA 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 HILLGIA, any notice, demand or request required or permitted to be given by any Party to another and any instrument required or permitted to be tendered or delivered by any Party in writing to another will 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.

Any Party may change the notice information in this HILLGIA by giving five (5) Business Days written notice prior to the effective date of the change.

15.2 Billings and Payments. Billings and payments must 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 any Party to another 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 must notify the other Parties 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 No Party will 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 must give notice and the full particulars of such Force Majeure to the other Parties 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 must be confirmed in writing as soon as reasonably possible and must 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 **must** exercise due diligence to remove such disability with reasonable dispatch, but **will** 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 **will** exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this HILLGIA or the result of an act or omission of another Party. Upon a Breach, the non-breaching Party **must** give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party **will** 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 **must** 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 **will** 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 **will** have the right to declare a Default and terminate this HILLGIA 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 HILLGIA, 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 HILLGIA.

Article 18. Indemnity, Consequential Damages and Insurance

18.1 Indemnity. Each Party **will** indemnify and hold harmless the other Parties, and the other Parties' officers, shareholders, stakeholders, members, managers, representatives, directors, agents and employees, and Affiliates, from and against any and all loss, liability, damage, cost or expense to third parties, including damage and liability for bodily injury to or death of persons, or damage to property or persons (including reasonable attorneys' fees and expenses, litigation costs, consultant fees, investigation fees, sums paid in settlements of claims, penalties or fines imposed under Applicable Laws and Regulations, and any such fees and expenses incurred in enforcing this indemnity or collecting any sums due hereunder) (collectively, "Loss") to the extent arising out of, in connection with, or resulting from (i) the indemnifying Party's breach of any of the representations or warranties made in, or failure of the indemnifying Party or any of its subcontractors to perform any of its obligations under, this HILLGIA, or (ii) the negligence or willful misconduct of the indemnifying Party or its contractors; provided, however, that no Party **will** have any indemnification obligations under this Section 18.1 in respect of any Loss to

the extent the Loss results from the negligence or willful misconduct of the Party seeking indemnity.

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 **will** 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 **must** notify the indemnifying Party of such fact. Any failure of or delay in such notification **will** not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnified Person **must** cooperate with the indemnifying Party with respect to the matter for which indemnification is claimed. The Indemnifying Party **will** 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 **will** 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 **will** 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 **will** 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) **will** 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 **must** pay the reasonable expenses of the indemnified person, and (ii) **must** not settle or consent to the entry of any judgment in any action,

suit or proceeding without the consent of the indemnified person, which **will** not be reasonably withheld, conditioned or delayed.

18.2 Consequential Damages. Except as otherwise provided in this Article 18 and other than Liquidated Damages heretofore described, the liability of a Party under this HILLGIA **will** be limited to direct actual damages, and all other damages at law are waived. Under no circumstances **will** any Party or its Affiliates, directors, officers, employees and agents, or any of them, be liable to another Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary or consequential damages, including lost profits. The limitations on damages specified in this Section 18.2 are without regard to the cause or causes related thereto, including the negligence of any Party, whether such negligence be sole, joint or concurrent, or active or passive. This limitation on damages **will** not affect any Party's rights to obtain equitable relief as otherwise provided in this HILLGIA. The provisions of this Section 18.2 **will** survive the termination or expiration of this HILLGIA.

18.3 Insurance. HILLGA Customer and Transmission Owner **must** at their own expense, maintain in force throughout the period of this HILLGIA, and until released by all other Parties, 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. The minimum limits for the Employers' Liability insurance **will** be One Million Dollars (\$1,000,000) each accident bodily injury by accident, One Million Dollars (\$1,000,000) each employee bodily injury by disease, and One Million Dollars (\$1,000,000) policy limit bodily injury by disease.

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 (if applicable), independent contractors coverage, coverage for pollution (if exposure is present) and punitive or exemplary damages, with minimum limits of One Million Dollars (\$1,000,000) each occurrence/Two Million Dollars (\$2,000,000) general aggregate and Two Million Dollars (\$2,000,000) products and completed operations 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 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) each occurrence/Twenty Million Dollars (\$20,000,000) general aggregate.

18.3.5 The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies **must** 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 **must** contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this GIA 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 **must** contain provisions that specify that the policies are primary and **will** apply to such extent without consideration for other policies separately carried and **must** state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability **may** not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party **will** 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, **must** be maintained in full force and effect for two (2) years after termination of this HILLGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed to by all Parties.

18.3.8 The requirements contained herein as to the types and limits of all insurance to be maintained by the HILLGA Customer and Transmission Owner are not intended to and **will** not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this Agreement.

18.3.9 Within ten (10) days following execution of this HILLGIA, 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, HILLGA Customer and Transmission Owner **must** provide certification of all insurance required in this HILLGIA, executed by each insurer or by an authorized representative of each insurer to the Other Party Group.

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 **must**

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 **must** 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 HILLGIA.

Article 19. Assignment

19.1 Assignment. This HILLGIA may be assigned by any Party only with the written consent of the other Parties; provided that any Party may assign this HILLGIA without the consent of the other Parties 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 HILLGIA; and provided further that HILLGA Customer **will** have the right to assign this HILLGIA, without the consent of Transmission Provider or Transmission Owner, for collateral security purposes to aid in providing financing for the Generating Facility, provided that HILLGA Customer will promptly notify Transmission Provider and Transmission Owner of any such assignment. Any financing arrangement entered into by the HILLGA 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 and Transmission Owner 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 11.7 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this HILLGIA **will** not relieve a Party of its obligations, nor **will** 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 HILLGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination **will** not invalidate, void or make unenforceable any other provision, agreement or covenant of this HILLGIA; provided that if HILLGA Customer (or any third party, but only if such third party is not acting at the direction of Transmission Owner) seeks and obtains such a final determination with respect to any provision of the Negotiated Option (Article 5.1.3), then none of these provisions **will** thereafter have any force or effect and the Parties' rights and obligations **will** 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 **will** include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to another prior to the execution of this HILLGIA.

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 any Party, a Party **must** 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 **will** be responsible for the costs associated with affording confidential treatment to its information.

22.1.1 Term. During the term of this HILLGIA, and for a period of three (3) years after the expiration or termination of this HILLGIA, except as otherwise provided in this Article 22, each Party **must** hold in confidence and **must** not disclose to any person Confidential Information.

22.1.2 Scope. Confidential Information **will** 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 HILLGIA; or (6) is required, in accordance with Article 22.1.7 of the HILLGIA, 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 HILLGIA. 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. No Party **may** 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 HILLGA Customer, or to potential purchasers or assignees of HILLGA Customer, on a need-to-know basis in connection with this HILLGIA, 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 **will** 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 another Party. The disclosure by any Party to another Party of Confidential Information **will** not be deemed a waiver by the disclosing 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, no Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to another 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 **must** 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 another Party under this HILLGIA or its regulatory requirements.

22.1.7 Order of Disclosure. If a court or a Governmental Authority or entity with the right, power, and apparent authority to do so requests or requires a Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party **must** provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this HILLGIA. 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 HILLGIA for any reason, each Party **must**, within ten (10) Calendar Days of receipt of a written request from another 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. In the instance where Transmission Owner is a Federal Power Agency, as specified in the opening paragraph of this Agreement, then this Section 22.1.9 **will** not apply to Transmission Owner. The Parties agree that monetary damages

would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties **will** 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 **will** be granted without bond or proof of damages, and the receiving Party **may** not plead in defense that there would be an adequate remedy at law. Such remedy **will** not be deemed an exclusive remedy for the Breach of this Article 22, but **will** 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, **will** 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 C.F.R. 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 HILLGIA, the Party **must** 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 C.F.R. 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 another Party to this HILLGIA prior to the release of the Confidential Information to FERC or its staff. The Party **must** notify the other Parties to the HILLGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. Section 388.112. Requests from a state regulatory body conducting a confidential investigation **must** 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 HILLGIA ("Confidential Information") **must** not be disclosed by another 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 HILLGIA 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 **must** 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.

22.1.12 This provision **will** not apply to any information that was or is hereafter in the public domain (except as a result of a Breach of this provision).

Article 23. Environmental Releases

23.1 Each Party **must** 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 Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party **must**: (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 HILLGA Customer **must** 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 **must** occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and **will** include Transmission System information necessary to allow HILLGA 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 **will** provide HILLGA 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.

Article 25. Information Access and Audit Rights

25.1 Information Access. Each Party (the "disclosing Party") **must** make available to the other Parties information that is in the possession of the disclosing Party and is necessary in order for the other Parties to: (i) verify the costs incurred by the disclosing Party for which the other Parties are responsible under this HILLGIA; and (ii) carry out its obligations and responsibilities under this HILLGIA. The Parties **must** not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this HILLGIA.

25.2 Reporting of Non-Force Majeure Events. Each Party (the "notifying Party") **must** notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this GIA 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 **will** not entitle the Parties receiving such notification to allege a cause for anticipatory breach of this HILLGIA.

25.3 Audit Rights. Subject to the requirements of confidentiality under Article 22 of this HILLGIA, each Party **will** have the right, during normal business hours, and upon prior reasonable notice to another Party, to audit at its own expense that other Party's accounts and records pertaining to either Party's performance or either Party's satisfaction of obligations under this HILLGIA. Such audit rights **will** 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 **will** be performed at the offices where such accounts and records are maintained and **will** be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this HILLGIA. Each Party **must** 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 Owner's Interconnection Facilities, and Network Upgrades **will** be subject to audit for a period of twenty-four **(24)** months following Transmission Owner'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 any Party's performance or satisfaction of all obligations under this HILLGIA other than those described in Article 25.4.1 **will** be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period **will** be twenty-four **(24)** 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 **will** be twenty-four **(24)** 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 **must** 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 HILLGIA **will** prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this HILLGIA; provided, however, that each Party **must** require its subcontractors to comply with all applicable terms and conditions of this HILLGIA in providing such services and each Party **will** remain primarily liable to the other Parties for the performance of such subcontractor.

26.2 Responsibility of Principal. The creation of any subcontract relationship **will** not relieve the hiring Party of any of its obligations under this HILLGIA. The hiring Party **will** be fully responsible to the other Parties 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 **will** Transmission Owner be liable for the actions or inactions of HILLGA Customer or its subcontractors with respect to obligations of HILLGA Customer under Article 5 of this HILLGIA. Any applicable obligation imposed by this HILLGIA upon the hiring Party **will** be equally binding upon, and **will** 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 any Party has a dispute, or asserts a claim, that arises out of or in connection with this GIA or its performance, the Parties agree to resolve such dispute using the dispute resolution procedures of the Generator Interconnection Procedures.

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 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 HILLGIA 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 HILLGIA.

28.1.2 Authority. Such Party has the right, power and authority to enter into this HILLGIA, to become a Party hereto and to perform its obligations hereunder. This HILLGIA 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 HILLGIA 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 HILLGIA 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 HILLGIA, and it will provide to any Governmental Authority notice of any actions under this HILLGIA that are required by Applicable Laws and Regulations.

Article 29. Joint Operating Committee

29.1 Joint Operating Committee. At least six (6) months prior to the expected Initial Synchronization Date, HILLGA Customer, Transmission Owner and Transmission Provider **will** each appoint one representative and one alternate to the Joint Operating Committee. Each Party **must** notify the other Parties of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee **will** meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee **will** hold a meeting at the request of any Party, at a time and place agreed upon by the representatives. The Joint Operating Committee **will** perform all of its duties consistent with the provisions of this HILLGIA. All Parties **must** 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, **must** be evidenced in writing. The duties of the Joint Operating Committee **will** 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 Owner's and HILLGA Customer's facilities at the Point of Interconnection.

29.1.4 Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Generating Facility and other facilities that impact the normal operation of the interconnection of the 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 HILLGIA and the rights and obligations hereof, will be binding upon and will 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 HILLGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this HILLGIA will prevail and be deemed the final intent of the Parties.

30.3 Rules of Interpretation. This HILLGIA, unless a clear contrary intention appears, will 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 HILLGIA, 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 HILLGIA), 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 HILLGIA or such Appendix to this GIA, or such Section to Attachment BB or such Appendix to Attachment BB, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import will be deemed references to this HILLGIA 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 HILLGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, among the Parties with respect to the subject matter of this HILLGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, a Party's compliance with its obligations under this HILLGIA.

30.5 No Third Party Beneficiaries. This HILLGIA 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 HILLGIA to insist, on any occasion, upon strict performance of any provision of this HILLGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by a Party of its rights with respect to this HILLGIA will 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 HILLGIA. Termination or Default of this GIA for any reason by HILLGA Customer will not constitute a waiver of HILLGA Customer's legal rights to obtain an interconnection from Transmission Provider. Any waiver of this HILLGIA must, if requested, be provided in writing.

30.7 Headings. The descriptive headings of the various Articles of this GIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this HILLGIA.

30.8 Multiple Counterparts. This HILLGIA may be executed in three 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 HILLGIA by a written instrument duly executed by each of the Parties.

30.10 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this HILLGIA by a written instrument duly executed by the Parties. Such amendment will become effective and a part of this HILLGIA upon satisfaction of all Applicable Laws and Regulations.

30.11 Reservation of Rights. Transmission Provider will have the right to make a unilateral filing with FERC to modify this HILLGIA 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 HILLGA Customer will have the right to make a unilateral filing with FERC to modify this HILLGIA 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 will have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this HILLGIA will 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 HILLGIA will not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party will 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, another Party.

IN WITNESS WHEREOF, the Parties have caused this HILLGIA to be executed by their respective authorized officials, and copies delivered to each Party, to become effective as of the Effective Date.

SOUTHWEST POWER POOL, INC.

By: _____

Printed Name: _____

Title: _____

Date: _____

[Insert name of Transmission Owner]

By: _____

Printed Name: _____

Title: _____

Date: _____

[Insert name of HILLGA Customer]

By: _____

Printed Name: _____

Title: _____

Date: _____

APPENDIX A TO GIA

Interconnection Facilities, Network Upgrades and Distribution Upgrades

1. Interconnection Facilities:

(a) [insert Interconnection Customer's Interconnection Facilities]:

(b) [insert Transmission Owner's Interconnection Facilities]:

2. Network Upgrades:

(a) [insert Stand Alone Network Upgrades]:

(b) [insert Shared Network Upgrades]:

(c) [insert Contingent Facilities]:

3. Distribution Upgrades:

4. Type and Amount of Interconnection Service:

(a) Maximum Injection Capability at the POI: _____ MW

(b) Type ~~(check only one)~~

~~/ /~~ Load Limited Resource Interconnection Service

~~/ /~~ Network Resource Interconnection Service

~~Network Resource Deliverability at the POI: _____ MW~~

~~Deliverability Area associated with Network Resource Deliverability:~~

5. Construction Option Selected by Customer:

6. Permits, Licenses, and Authorizations:

7. Description of the Point of Change of Ownership:

8. Description of the Point of Interconnection:

9. Higher-Queued Interconnection Customers:

10. Candidate Incremental Long-Term Congestion Rights:

* Source _____

* Sink _____

* Candidate Incremental LTRC MW _____

* Term (years from in-service date of Network Upgrade) _____

11. JTIQ Upgrades

[To be included in GIA if HILLGA Customer is responsible for a portion of a portfolio of JTIQ Upgrades] HILLGA Customer is subject to the JTIQ Generator Charge in accordance with Attachment AV of the SPP Tariff and Appendix I of this GIA.

JTIQ Security amount:

A. Transmission Provider:

B. MISO:

APPENDIX B TO HILLGIA

Milestones

APPENDIX C TO HILLGIA

Interconnection Details

1. Description of Generating Facility:

(a) Nameplate Capacity (AC MW)

Wind Generating Facility Output Reduction

To protect the reliability of the Transmission System, a Generating Facility that is a wind plant must be capable of reducing its generation output in increments of no more than fifty (50) MW in five (5) minute intervals. The requirements may be met by using: (a) SCADA control of circuit breakers protecting wind farm collector distribution circuits, (b) automatic control of wind turbine power output, or (c) a combination of (a) and (b).

Inverter-Based Resource EMT Study Results Mitigations

If an Electromagnetic Transient Study is determined to be required by the Transmission Provider and the study results reveal an Adverse System Impact to the Transmission System, mitigation(s) will be the responsibility of the HILLGA Customer and must be implemented prior to the injection of power into the Transmission System.

APPENDIX D TO HILLGIA

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 HILLGA 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 HILLGIA

Commercial Operation Date

[Date]

_____,
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

[Transmission Owner Address]

Re: _____ Generating Facility

Dear _____:

On [Date] [HILLGA Customer] has completed Trial Operation of Unit No. _____. This letter confirms that [HILLGA Customer] commenced Commercial Operation of Unit No. _____ at the Generating Facility, effective as of [Date plus one day].

Thank you.

[Signature]

[HILLGA Customer Representative]

APPENDIX F TO HILLGIA

Addresses for Delivery of Notices And Billings

Notices:

Transmission Provider:

_____,
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

Billings and Payments: [Specify addresses for construction invoices, O&M invoices and settlement of ancillary services]

Transmission Provider:

_____,
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

Alternative Forms of Delivery of Notices (telephone, facsimile or email):

Transmission Provider:

_____,
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Phone: _____

Facsimile: 501-482-2022

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

Operational Communications: [Identify contacts for operations]

Transmission Provider:

Southwest Power Pool, Inc.

201 Worthen Drive

Little Rock, AR 72223-4936

Phone:

Facsimile: 501-482-2022

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

APPENDIX G TO HILLGIA

Requirements Of Generators Relying On Newer Technologies

Appendix G sets forth requirements and provisions specific to a wind generating plant. All other requirements of this GIA continue to apply to wind generating plant interconnections.

A. Technical Standards Applicable to a Wind Generating Plant

i. Low Voltage Ride-Through (LVRT) Capability

The following reactive power requirements apply only to a newly interconnecting wind generating plant that has executed a facilities study agreement as of September 21, 2016. A wind generating plant to which this provision applies must 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 will be required to withstand for a three-phase fault will 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 Transmission System 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 will be required to withstand for a three phase fault will 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 must 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 Transmission System 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)

A wind generating plant **must** 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 GIA, 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 HILLGA Customer **may** not disable power factor equipment while the wind plant is in operation. Wind plants **must** 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 **must** provide SCADA capability to transmit data and receive instructions from the Transmission Provider to protect system reliability. The Transmission Provider and the wind plant HILLGA Customer **will** 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 HILLGIA

Reserved for future use

APPENDIX I TO HILLGIA

Cost Responsibility for Portion of Costs for a Portfolio of JTIQ Upgrades

This Appendix I to this HILLGIA is only applicable if an HILLGA Customer is assigned responsibility for a portion of costs for a portfolio of JTIQ Upgrades, as specified in Appendix A to this GIA.

A. Rate

The HILLGA Customer is required to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff.

B. Security

a. The HILLGA Customer is required to provide security in an amount equal to the portion of the total engineering and construction cost of the JTIQ Upgrades that serves as the basis for the JTIQ Generator Charge to the HILLGA Customer for those JTIQ Upgrades authorized for construction by the Transmission Provider (“JTIQ Upgrade Cost Responsibility”), as specified in Appendix A to this HILLGIA (“JTIQ Security”). The JTIQ Security will be provided to Transmission Provider and JTIQ Transmission Owner(s) in the MISO Region as follows:

i. The JTIQ Security portion for the JTIQ Upgrades authorized for construction by Transmission Provider must be provided to Transmission Provider within the later of: (a) thirty (30) Calendar Days of the execution of this HILLGIA by all Parties; (b) thirty (30) Calendar Days of acceptance of this HILLGIA by FERC if this GIA is filed unexecuted at FERC and the JTIQ Security amount is being protested by HILLGA Customer; or (c) thirty (30) Calendar Days of the filing if the HILLGIA is filed unexecuted and the JTIQ Security amount is not being protested by HILLGA Customer. The JTIQ Security, or any reduced amount applicable to this Interconnection Request, will remain with Transmission Provider for the remaining term of the JTIQ Generator Charge for each JTIQ Upgrade authorized for construction by the Transmission Provider. At HILLGA Customer’s request, such JTIQ Security may be reduced to reflect decreased

remaining JTIQ Upgrade Cost Responsibility applicable to each JTIQ Upgrade authorized for construction by the Transmission Provider on the first anniversary of the In-Service Date of that upgrade and may continue to be reduced to reflect decreased remaining balance of JTIQ Upgrade Cost Responsibility each year over the term of the JTIQ Generator Charge for that JTIQ Upgrade.

1. The following forms of security are acceptable to the Transmission Provider:
 - a. Letter of credit as specified in Appendix C to Attachment X of the Tariff,
 - b. Cash;
 - c. Surety bond issued by an insurer and acceptable to the Transmission Provider; or
 - d. Guaranty in a form consistent with Appendix D of Attachment X of the Tariff.
 - ii. The JTIQ Security portion for the JTIQ Upgrades authorized for construction by MISO **must** be provided by the HILLGA Customer to JTIQ Transmission Owner(s) in the MISO Region pursuant to the terms of the security agreement(s) entered into between the JTIQ Transmission Owner(s) and HILLGA Customer.
 - b. In the event that the JTIQ Upgrade Cost Responsibility of the HILLGA Customer subsequently increases, HILLGA Customer will be required to provide additional security associated with this increase to SPP within thirty (30) Calendar days of SPP's request for additional security.
 - c. In the event the HILLGA Customer fails to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff and Section 7 of the Tariff, Transmission Provider **will** be entitled to draw on the portion of the JTIQ Security posted by the HILLGA Customer for the JTIQ Upgrades authorized for construction by Transmission Provider in the amount of missed payments.
 - d. JTIQ Security **will** remain in place for the duration of the JTIQ Generator Charge applicable for each JTIQ Upgrade in accordance with Attachment AV of the Tariff

and in accordance with the MISO Tariff. Any JTIQ Security provided by HILLGA Customer must be kept active and must be available to the Transmission Provider and JTIQ Transmission Owner(s) in the MISO Region in the event that HILLGA Customer fails to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff and in accordance with the MISO Tariff. Any fees or costs associated with the provision of the JTIQ Security are the responsibility of the HILLGA Customer.

C. Default

Default of the HILLGA Customer under Section 7 of the Tariff will be considered a default under this GIA. Default of the HILLGA Customer of the JTIQ security agreement with JTIQ Transmission Owner(s) in the MISO Region will be considered a default under this HILLGIA.

D. Billing and Payment

For administration of billing and related activities associated with the JTIQ Generator Charge for the JTIQ Upgrade Cost Responsibility, Section 7 of the Tariff will be applicable. HILLGA Customer will be treated as a Transmission Customer for the limited purpose of billing and related activities under Section 7 of the Tariff.

E. Termination

Termination of this HILLGIA will not relieve the HILLGA Customer of its obligation to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff.

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HIGH IMPACT LARGE LOAD ASSESSMENT GENERATOR INTERCONNECTION
AGREEMENT (HILLGIA)

(For use when a WAPA-Division is a Party to the GIA, as the Transmission Owner)

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HIGH IMPACT LARGE LOAD GENERATOR INTERCONNECTION AGREEMENT

THIS HIGH IMPACT LARGE LOAD GENERATOR INTERCONNECTION AGREEMENT

(“Agreement” or “HILLGIA”) is made and entered into this day of 20 , by and among , a organized and existing under the laws of the State/Commonwealth of (“HILLGA Customer” with a Generating Facility), Southwest Power Pool, Inc., a corporation organized and existing under the laws of the State of Arkansas (“Transmission Provider”) and Western Area Power Administration-Upper Great Plains Region (“Western-UGP”), a Federal power marketing agency organized under the United States Department of Energy (“Transmission Owner”). HILLGA Customer, Transmission Provider and Transmission Owner each may be referred to as a “Party” or collectively as the “Parties.”

Recitals

WHEREAS, Transmission Provider functionally controls the operation of the Transmission System; and,

WHEREAS, HILLGA Customer intends to own, lease and/or control and operate the Generating Facility identified as a Generating Facility in Appendix C to this Agreement; and,

WHEREAS, HILLGA Customer’s Generating Facility will be supporting a High Impact Large Load that is associated with a request through Attachment AQ, AX or BA of the Tariff; and,

WHEREAS, Transmission Owner owns facilities to which the Generating Facility is to be interconnected and may be constructing facilities to allow the interconnection; and,

WHEREAS, HILLGA Customer, Transmission Provider and Transmission Owner have agreed to enter into this Agreement for the purpose of interconnecting the 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 Agreement, terms with initial capitalization that are not defined in Article 1 will have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

Article 1. Definitions

Affected System will mean an electric system other than the Transmission System that may be affected by the proposed interconnection.

Affected System Operator will mean the entity that operates an Affected System.

Affiliate will 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.

Applicable Laws and Regulations will 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 will mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

Applicable Reliability Standards will 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 will mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider.

Breach will mean the failure of a Party to perform or observe any material term or condition of the HILLGIA or Load Limited HILLGIA, as applicable.

Breaching Party will mean a Party that is in Breach of the HILLGIA or Load Limited HILLGIA, as applicable.

Business Day will mean Monday through Friday, excluding Federal Holidays.

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

Commercial Operation will 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 will mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the HILLGIA or Load Limited HILLGIA, as applicable.

Conditional High-Impact Large Load (CHILL) will have the meaning in Part I of the Tariff.

Confidential Information will 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 will 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 restudies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing. Contingent Facilities are identified in Appendix A of the HILLGIA or Load Limited HILLGIA, as applicable.

Control Area will 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.

Default will mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of the HILLGIA or Load Limited HILLGIA, as applicable.

Definitive Interconnection System Impact Study (DISIS) will have the meaning of Attachment V of the Tariff.

Deliverability Area will mean a portion of the Transmission System in which a generator can reliably deliver all or a portion of its output capability.

Dispute Resolution will mean the procedure in Section 13.5 of this Attachment BB for resolution of a dispute between the Parties in which they will first attempt to resolve the dispute on an informal basis.

Distribution System will mean the Transmission Owner's facilities and equipment that are not included in the Transmission System. The voltage levels at which Distribution Systems operate differ among areas.

Distribution Upgrades will mean the additions, modifications, and upgrades to the 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 will mean the date on which the HILLGIA 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 Load Assessment (ESR-LA) Will mean a study conducted by the Transmission Provider to evaluate the impacts of an Electric Storage Resource (ESR) withdrawing energy from the Transmission System. The ESR-LA will consist of, but is not limited to, dynamic and voltage stability analyses in accordance with NERC reliability standards.

Electromagnetic Transient Study or EMT Study will mean an analysis to determine the electromagnetic transient response of the electric power system due to system disturbances.

Emergency Condition will 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 the Transmission System, or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Transmission Owner, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Owner's Interconnection Facilities; or (4) 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 will be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the HILLGIA to possess black start capability.

Engineering & Procurement (E&P) Agreement will mean an agreement that authorizes the Transmission Owner 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 will mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

Environmental Review will mean a study conducted by the WesternAPA-Division, as the Transmission Owner, that contains a review of the proposed interconnection to the WesternAPA-Division's transmission facilities, pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. §4321, et seq., as amended, and setting forth Interconnection Customer's responsibilities in connection with such review of the interconnection.

Existing Generating Facility will mean a Generating Facility that is currently interconnected to the Transmission System of the Transmission Provider.

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

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

Financial Security will mean the security deposits required of the HILLGA Customer to enter the HILLGA.

Force Majeure will 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 will mean HILLGA Customer's device for the production and/or storage for later injection of electricity identified in the HILLGA Request, but will not include the Interconnection Customer's Interconnection Facilities and will not include a Storage as Transmission Only Asset as defined in Section 1 of the Tariff. A Generating Facility consists of one or more generating unit(s) and/or storage device(s) which usually can operate independently and be brought online or taken offline individually.

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

Generating Facility Modification will mean modification to an Existing Generating Facility, including comparable replacement of only a portion of the equipment at the Existing Generating Facility.

Good Utility Practice will 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 will 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, Transmission Owner or any Affiliate thereof.

Hazardous Substances will 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.

High Impact Large Load (HILL) will have the meaning in Part I of the Tariff.

High Impact Large Load Generation Assessment (HILLGA) will mean an engineering process that evaluates the impact of the proposed interconnection on the safety and reliability of Transmission System and, if applicable, an Affected System. The HILLGA is part of CHILL and HILL processes that study: 1) the proposed load, 2) the proposed Generating Facility to follow the

proposed load, and 3) the combination of the supported proposed load and proposed Generating Facility to follow the proposed load.

High Impact Large Load Generation Assessment Customer (HILLGA Customer, HILLGAC) will mean an Interconnection Customer that proposes to interconnect its Generating Facility with the Transmission System pursuant to the High Impact Large Load Generation Assessment.

High Impact Large Load Interconnection Service (HILL Interconnection Service) will mean a HILLGA Request, in the form of Appendix 1 to the High Impact Large Load Generation Assessment Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of an Existing Generating Facility that is interconnected with the Transmission System.

High Impact Large Load Generation Assessment Deliverability Area (HILLGA-DA) will mean a HILL generator connected to the local Deliverability Area where the HILL is located in accordance with Section 3.1.1(5)a of this Attachment BB.

High Impact Large Load Generation Assessment Local Interconnection (HILLGA-Local) will mean a HILL generator connected to the Transmission System in close proximity to the HILL in accordance with Section 3.1.1(5)b of this Attachment BB.

High Impact Large Load Generation Assessment Request (HILLGA Request) will mean an Interconnection Request submitted, in the form specified in Appendix 1 to this Attachment BB, pursuant to the High Impact Large Load Generation Assessment Study Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of an Existing Generating Facility that is interconnected with the Transmission System.

High Impact Large Load Generation Assessment Study Agreement (HILLGA Study Agreement) will mean the study agreement for the High Impact Large Load Generation Assessment in Appendix 1 to this Attachment BB.

High Impact Large Load Generation Assessment System Impact Study (HILLGA System Impact Study, SIS) will mean the system impact study that identifies and details the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, or that may be caused by the withdrawal or addition of an Interconnection Request, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in this Attachment BB.

High Impact Large Load Generator Interconnection Agreement (HILLGIA) will mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Generating Facility that is included in Appendix 2 to this Attachment BB or in Appendix 3 when Western-UGP is a Party as the Transmission Owner to the HILLGIA.

Initial Queue Position will have the meaning as defined in Attachment V of the Tariff.

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

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

Interconnection Customer will have the meaning of Attachment V of the Tariff.

HILLGA Customer's Interconnection Facilities will mean all facilities and equipment, as identified in Appendix A of the HILLGA or Load Limited HILLGA, as applicable, 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 System. Interconnection Customer's Interconnection Facilities are sole use facilities.

Interconnection Facilities will mean the Transmission Owner'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 System. Interconnection Facilities are sole use facilities and will not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Request will mean an Interconnection Customer's request, in the form of Appendix 3 or Appendix 5 to the Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, to interconnect a Replacement Generating Facility, increase the capacity of, or make a Material Modification to the operating characteristics of, an Existing Generating Facility that is interconnected with the Transmission System.

Interconnection Service will mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the 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 HILLGA and, if applicable, the Tariff.

Interconnection Study will mean any of the following studies: the Replacement Impact Study, the Reliability Assessment Study, the Definitive Interconnection System Impact Study, the HILLGA System Impact Study, and the Interconnection Facilities Study described in the Generator Interconnection Procedures.

IRS will mean the Internal Revenue Service.

Joint Operating Agreement between the Midcontinent Independent System Operator, Inc. and Southwest Power Pool, Inc. ("MISO-SPP JOA"): will have the meaning as defined in Section 1 of the Tariff.

Joint Operating Committee will be a group made up of representatives from Interconnection Customer, Transmission Owner and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

Joint Targeted Interconnection Queue (“JTIO”) will have the meaning as defined in Section 1 of the Tariff.

JTIO Upgrade will have the meaning as defined in Section 1 of the Tariff.

Load Limited Resource Interconnection Service (LLRIS) will mean an Interconnection Service that allows the Interconnection Customer to integrate its Generating Facility with the Transmission System with injection rights limited to the HILL for which it is supporting. LLRIS in and of itself does not convey transmission service.

Loss will 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 another Party's performance, or non-performance of its obligations under the HILLGIA or Load Limited HILLGIA, as applicable, on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party. The term “Loss” as used in this Section 1 will apply only to the use of the term in Section 9.1.2 of the Generator Interconnection Study Agreement and Section 10.1.2 of the Interim Availability Interconnection System Impact Study Agreement.

Maximum Injection Capability will mean the maximum amount of real power that may be injected by a Generating Facility at the Point of Interconnection.

Metering Equipment will mean all metering equipment installed or to be installed at the Generating Facility pursuant to the HILLGIA or Load Limited HILLGIA, as applicable, 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.

MISO will have the meaning as defined in Section 1 of the Tariff.

Nameplate Capacity will mean the maximum real power rating listed on the nameplate of the Generating Facility measured in alternating current megawatts (AC MW), or the sum of all such ratings of a Generating Facility where it includes multiple energy production devices.

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

Network Resource will 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 Deliverability will mean the amount of real power that can be delivered to the aggregate of Network Load within a Deliverability Area by a Generating Facility, as measured at the Point of Interconnection. Network Resource Deliverability in and of itself does not convey transmission service.

Network Resource Interconnection Service (NRIS) will have the meaning in Attachment V of the Tariff.

Network Upgrades will mean the additions, modifications, and upgrades to the Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission System to accommodate the interconnection of the Generating Facility to the Transmission System.

Notice of Dispute will mean a written notice of a dispute or claim that arises out of or in connection with the HILLGIA or Load Limited HILLGIA, as applicable, or its performance.

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

Permissible Technological Advancement will mean an advancement to turbines, inverters, plant supervisory controls or other technological advancements that do not increase the Interconnection Customer's requested Interconnection Service or cause any reliability concerns. A Permissible Technological Advancement does 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), nor does it include changes in generation technology type or fuel type.

Point of Change of Ownership will mean the point, as set forth in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Owner's Interconnection Facilities.

Point of Interconnection will mean the point, as set forth in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, where the Interconnection Facilities connect to the Transmission System.

Queue will mean the Definitive Interconnection System Impact Study Queue or the Interconnection Facilities Study Queue, as applicable.

Reasonable Efforts will mean, with respect to an action required to be attempted or taken by a Party under the HILLGIA or Load Limited HILLGIA, as applicable, 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.

Scoping Meeting will mean the meeting between representatives of the HILLGA Customer, Transmission Owner and Transmission Provider conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such

interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Shared Network Upgrade will mean a Network Upgrade listed in Appendix A of the HILLGIA that is needed for the interconnection of multiple Interconnection Customers' Generating Facilities where such Interconnection Customers share the cost.

Site Control will mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size for the purpose of constructing the Generating Facility or Generating Facility's tie line; (2) an option to purchase or acquire a leasehold site of sufficient size for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site of sufficient size for such purpose.

Stand Alone Network Upgrades will mean Network Upgrades that are not part of an Affected Systems that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. The Transmission Provider, Transmission Owner and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable. If the Transmission Provider, Transmission Owner and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Owner must provide the Interconnection Customer a written technical explanation outlining why the Transmission Owner does not consider the Network Upgrade to be a Stand Alone Network Upgrade within fifteen (15) days of its determination.

System Protection Facilities will mean the equipment, including necessary protection signal communications equipment, required to protect (1) the 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 System or on other delivery systems or other generating systems to which the Transmission System is directly connected.

Tariff will 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 will 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 HILLGIA to the extent necessary.

Transmission Provider will 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 Owner's Interconnection Facilities will mean all facilities and equipment owned, controlled, or operated by the Transmission Owner from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the HILLGIA or Load Limited HILLGIA, as applicable, including any modifications, additions or upgrades to such facilities and equipment. Transmission Owner's Interconnection Facilities are sole use facilities and will not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

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

Western Area Power Administration-Upper Great Plains Region ("Western-UGP") will mean a division of the Western Area Power Administration, a Federal Power Marketing Agency, and Transmission Owner, that markets and transmits Federal power over Federal transmission facilities that have been transferred to the functional control of the Transmission Provider.

Article 2. Effective Date, Term, and Termination

2.1 Effective Date. This HILLGIA will 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 will promptly file this HILLGIA 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 HILLGIA will remain in effect for a period of five (5) years from the Commercial Operation Date of the Generating Facility.

2.3 Termination Procedures.

2.3.1 Written Notice. This HILLGIA may be terminated by HILLGA Customer after giving Transmission Provider and Transmission Owner ninety (90) Calendar Days advance written notice, or by Transmission Provider notifying FERC after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Failure to Achieve Commercial Operation. If the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date specified in Appendix B, this HILLGIA may be terminated by the Transmission Provider after giving the HILLGA Customer ninety (90) Calendar Days advance written notice. Where a portion of the Generating Facility fails to achieve Commercial Operation by the Commercial Operation Date specified in Appendix B, the Transmission Provider will issue a revised GIA to reflect the amount of the Generating Facility

Capacity that achieved Commercial Operation. The revised HILLGIA will be consistent with the Attachment BB of the Tariff in effect on the Effective Date of the HILLGIA.

2.3.3 Default. Any Party may terminate this HILLGIA in accordance with Article 17.

2.3.4 Notice to FERC. Notwithstanding Articles 2.3.1, 2.3.2 and 2.3.3, no termination will 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 HILLGIA, which notice has been accepted for filing by FERC.

2.3.5 Paired HILL Fails to Connect to the Transmission System. If the HILL specified in Appendix J as supported by the Generating Facility fails to connect to the Transmission System within five (5) years from the Effective Date of this HILLGIA this HILLGIA will be terminated by the Transmission Provider after giving the HILLGA Customer ninety (90) Calendar Days advance written notice.

2.4 Termination Costs. If a Party elects to terminate this Agreement pursuant to Article 2.3 above, HILLGA Customer and Transmission Owner must pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by any other Party, as of the date of such Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this HILLGIA. In the event of termination by any Party, all Parties must use Commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this HILLGIA, unless otherwise ordered or approved by FERC:

2.4.1 With respect to any portion of Transmission Owner's Interconnection Facilities that have not yet been constructed or installed, Transmission Owner must to the extent possible and with HILLGA 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 HILLGA Customer elects not to authorize such cancellation, HILLGA Customer will assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Owner must deliver such material and equipment, and, if necessary, assign such contracts, to HILLGA Customer as soon as practicable, at HILLGA Customer's expense. To the extent that HILLGA Customer has already paid Transmission Owner for any or all such costs of materials or equipment not taken by HILLGA Customer, Transmission Owner must promptly refund such amounts to HILLGA Customer, less any costs, including penalties incurred by Transmission Owner to cancel any pending orders of or return such materials, equipment, or contracts.

If an HILLGA Customer terminates this HILLGIA, it will be responsible for all costs incurred in association with that HILLGA 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 Owner has incurred expenses and has not been reimbursed by HILLGA Customer and the HILLGA Customer's allocated share of Network Upgrade(s) costs as calculated pursuant to Section 4.2.5 of the HILLGIP and as listed in Appendix A of this HILLGIA which are required for service to other HILLGA Customer(s).

2.4.2 Transmission Owner may, at its option, retain any portion of such materials, equipment, or facilities that HILLGA Customer chooses not to accept delivery of, in which case Transmission Owner will 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 HILLGIA, HILLGA Customer will 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 HILLGIA, the Parties will take all appropriate steps to disconnect the Generating Facility from the Transmission System. All costs required to effectuate such disconnection will be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this HILLGIA or such non-terminating Party otherwise is responsible for these costs under this HILLGIA.

2.6 Survival. This HILLGIA will 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 HILLGIA; to permit payments for any credits under this HILLGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this HILLGIA was in effect; and to permit each Party to have access to the lands of another Party pursuant to this HILLGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

Article 3. Regulatory Filings

3.1 Filing. Transmission Provider will file this HILLGIA (and any amendment hereto) with the appropriate Governmental Authority, if required. HILLGA Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If HILLGA Customer has executed this HILLGIA, or any amendment thereto, HILLGA Customer must 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. The type of Interconnection Service selected by HILLGA Customer is specified in Appendix A of this HILLGIA.

4.1.1 Load Limited Resource Interconnection Service.

4.1.1.1 The Product. Load Limited Resource Interconnection Service allows HILLGA Customer to connect the Generating Facility to the Transmission System and be eligible to deliver the Generating Facility's Maximum Injection Capability no more than two substations away from the HILL(s) Local Delivery Facilities ("HILLGA-Local"). A HILL Generating Facility may be supporting multiple HILL's if no more than 5 substations are involved in the supporting and no more than two existing transmission line segments are utilized. **A HILL Generating Facility connecting to 765 kV transmission is limited to one bus distance to be considered local.**

4.1.1.2 Transmission Delivery Service Implications. Under Load Limited Resource Interconnection Service, HILLGA Customer would only be eligible to deliver the Generating Facility's Maximum Injection Capability no more than two substations away from the HILL(s) Local Delivery Facilities ("HILLGA-Local"). A HILL Generating Facility may be supporting multiple HILL's if no more than 5 substations are involved in the supporting and no more than two existing transmission line segments are utilized; and The HILLGA Customer's ability to inject its Generating Facility output beyond the Point of Interconnection, therefore, would only be allowed under emergency conditions per Attachment AE. The provision of Firm Point-To-Point Transmission Service or Network Integration Transmission Service may require the construction of additional Network Upgrades. **A HILL Generating Facility connecting to 765 kV transmission is limited to one bus distance to be considered local**

4.1.2—Network Resource Interconnection Service:

4.1.2.1 The Product. ~~Transmission Provider must conduct the necessary studies and the Transmission Owner must construct the Network Upgrades needed to integrate the Generating Facility in the same manner as all other Network Resources. To the extent HILLGA Customer wants to receive Network Resource Interconnection Service, Transmission Owner must construct the facilities identified in Appendix A to this HILLGA.~~

4.1.2.2 Transmission—Delivery—Service—Implications. ~~Network—Resource Interconnection Service allows HILLGA Customer's Generating Facility to be designated by any Network Customer under the Tariff on the Transmission System as a Network Resource, up to the Generating Facility's full Network Resource Deliverability, on the same basis as existing Network Resources interconnected to the 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 HILLGA Customer's Generating Facility in the same manner as it accesses Network Resources. A 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 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 HILLGA Customer's 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 HILLGA Customer with the capability to physically deliver the output of its Generating Facility to any particular load on the Transmission System without incurring congestion costs. In the event of transmission constraints on the Transmission System, HILLGA Customer's Generating Facility will 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 HILLGA Customer's Generating Facility be designated as a Network Resource by a Network Service Customer under the Tariff or that HILLGA Customer identify a specific buyer (or sink). To the extent a Network Customer does designate the Generating Facility as a Network Resource, it must do so pursuant to Transmission Provider's Tariff.

Once an HILLGA Customer satisfies the requirements for obtaining Network Resource Interconnection Service, any future transmission service request for delivery from the Generating Facility within the 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 Generating Facility be undertaken, regardless of whether or not such Generating Facility is ever designate**

by a Network Customer as a Network Resource and regardless of changes in ownership of the 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 HILLGA Customer enters into an arrangement for long-term transmission service for deliveries from the Generating Facility outside the

~~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 will provide Interconnection Service for the Generating Facility at the Point of Interconnection.

4.3 Performance Standards. Each Party will perform all of its obligations under this HILLGIA 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 will not be deemed to be in Breach of this HILLGIA for its compliance therewith. If such Party is a Transmission Provider or Transmission Owner, then that Party must amend the HILLGIA and submit the amendment to FERC for approval.

4.4 No Transmission Delivery Service. The execution of this HILLGIA 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 HILLGA Customer Provided Services. The services provided by HILLGA Customer under this GIA are set forth in Article 9.6 and Article 13.5.1. HILLGA Customer will be paid for such services in accordance with Article 11.8.

4.6 Limitations on HILLGA Interconnection Service

The HILLGA Interconnection Service will be subject to the limitations specified in Appendix J to this HILLGIA.

Article 5. Interconnection Facilities Engineering, Procurement, and Construction

5.1 Options. Unless otherwise mutually agreed to between the Parties, HILLGA Customer will select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Option To Build as described under Article 5.1.2 or the Negotiated Option described under Article 5.1.3, and such dates and selected option, as applicable, will be set forth in Appendix B, Milestones. At the same time, HILLGA Customer will indicate whether it elects to exercise the Option to Build set forth in Article 5.1.2 below. If the dates designated by HILLGA Customer are not acceptable to Transmission Owner, Transmission Owner must so notify HILLGA Customer within thirty (30) Calendar Days. Upon receipt of the notification that HILLGA Customer's designated dates are not acceptable to Transmission Owner, the HILLGA Customer must notify Transmission Owner 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 Owner must design, procure, and construct Transmission Owner's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Owner's Interconnection Facilities and Network Upgrades by the dates set forth in Appendix B, Milestones.

Transmission Owner will 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 Owner reasonably expects that it will not be able to complete Transmission Owner's Interconnection Facilities, and Network Upgrades by the specified dates, Transmission Owner must promptly provide written notice to HILLGA Customer and must undertake Reasonable Efforts to meet the earliest dates thereafter.

5.1.2 Option to Build. HILLGA Customer will have the option to assume responsibility for the design, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.1. Transmission Owner and HILLGA 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, HILLGA Customer will have no right to construct Network Upgrades under this option.

5.1.3 Negotiated Option. If the dates designated by HILLGA Customer are not acceptable to Transmission Owner, the Parties will 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 Owner's Interconnection Facilities and Stand Alone Network Upgrades if the HILLGA Customer elects to exercise the Option to Build under Article 5.1.2). If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1(Standard Option), Transmission Owner will assume responsibility for the design, procurement and construction of all facilities other than Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades if the HILLGA Customer elects the Option to Build.

5.2 General Conditions Applicable to Option to Build. If HILLGA Customer assumes responsibility for the design, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades,

(1) HILLGA Customer must engineer, procure equipment, and construct Transmission Owner'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 Owner;

(2) HILLGA Customer's engineering, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades must comply with all requirements of law to which Transmission Provider would be subject in the engineering, procurement or construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades;

- (3) Transmission Owner will review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) Prior to commencement of construction, HILLGA Customer must provide to Transmission Provider and Transmission Owner a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and must promptly respond to requests for information from Transmission Provider and Transmission Owner;
- (5) At any time during construction, Transmission Owner will have the right to gain unrestricted access to Transmission Owner'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 Owner, HILLGA Customer will be obligated to remedy deficiencies in that portion of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades;
- (7) HILLGA Customer must indemnify Transmission Provider and Transmission Owner for claims arising from HILLGA Customer's construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;
- (8) The HILLGA Customer must transfer control of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;
- (9) Unless Parties otherwise agree, HILLGA Customer must transfer ownership of Transmission Owner's Interconnection Facilities and Stand-Alone Network Upgrades to Transmission Owner not later than the Commercial Operation Date;
- (10) Transmission Owner must approve and accept for operation and maintenance Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and
- (11) HILLGA Customer must deliver to Transmission Owner "as-built" drawings, information, and any other documents that are reasonably required by Transmission Owner to assure that the Interconnection Facilities and Stand- Alone Network Upgrades are built to the standards and specifications required by Transmission Provider;
- (12) If HILLGA Customer exercises the Option to Build pursuant to Article 5.1.2, HILLGA Customer must pay Transmission Owner the agreed upon amount of [\$ PLACEHOLDER] for Transmission Owner to execute the responsibilities

enumerated to Transmission Owner under Article 5.2. Transmission Owner will invoice HILLGA Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

5.3 Liquidated Damages. The actual damages to HILLGA Customer, in the event Transmission Owner's Interconnection Facilities or Network Upgrades are not completed by the dates designated by HILLGA Customer and accepted by Transmission Owner pursuant to subparagraph 5.1.3, above, may include HILLGA 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 Owner to HILLGA Customer in the event that Transmission Owner does not complete any portion of Transmission Owner's Interconnection Facilities or Network Upgrades by the applicable dates, will be an amount equal to ½ of 1 percent per day of the actual cost of Transmission Owner's Interconnection Facilities and Network Upgrades, in the aggregate, for which Transmission Owner has assumed responsibility to design, procure and construct.

However, in no event will the total liquidated damages exceed twenty percent (20%) of the actual cost of Transmission Owner's Interconnection Facilities and Network Upgrades for which Transmission Owner has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Transmission Owner to HILLGA Customer as just compensation for the damages caused to HILLGA 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 HILLGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Transmission Owner's failure to meet its schedule.

No liquidated damages will be paid to HILLGA Customer if: (1) HILLGA Customer is not ready to commence use of Transmission Owner's Interconnection Facilities or Network Upgrades to take the delivery of power for the Generating Facility's Trial Operation or to export power from the Generating Facility on the specified dates, unless HILLGA Customer would have been able to commence use of Transmission Owner's Interconnection Facilities or Network Upgrades to take the delivery of power for Generating Facility's Trial Operation or to export power from the Generating Facility, but for Transmission Owner's delay; (2) Transmission Owner's failure to meet the specified dates is the result of the action or inaction of HILLGA Customer or any other HILLGA Customer who has entered into a HILLGIA with Transmission Owner or any cause beyond Transmission Owner's reasonable control or reasonable ability to cure; (3) the HILLGA Customer has assumed responsibility for the design, procurement and construction of Transmission Owner's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

5.4 Power System Stabilizers. The HILLGA Customer must 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 Generating Facility. If the Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, HILLGA Customer must immediately notify Transmission Owner's system operator, or its designated representative. The requirements of this paragraph will not apply to non-synchronous generators.

5.5 Equipment Procurement. If responsibility for construction of Transmission Owner's Interconnection Facilities or Network Upgrades is to be borne by Transmission Owner, then Transmission Owner will commence design of Transmission Owner'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 Interconnection Facilities Study pursuant to the HILLGA Study Agreement;

5.5.2 Transmission Owner has received written authorization to proceed with design and procurement from HILLGA Customer by the date specified in Appendix B, Milestones; and

5.5.3 HILLGA Customer has provided security to Transmission Provider in accordance with Article 11.7 by the dates specified in Appendix B, Milestones.

5.6 Construction Commencement. Transmission Owner must commence construction of Transmission Owner'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 Owner's Interconnection Facilities and Network Upgrades;

5.6.3 Transmission Owner has received written authorization to proceed with construction from HILLGA Customer by the date specified in Appendix B, Milestones; and

5.6.4 HILLGA Customer has provided security to Transmission Provider in accordance with Article 11.7 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. Parties may, at any time, request a progress report from other Parties. If, at any time, HILLGA Customer determines that the completion of Transmission Owner's Interconnection Facilities and Network Upgrades will not be required until after the specified In-Service Date, HILLGA Customer will provide written notice to Transmission Provider and Transmission Owner of such later

date upon which the completion of Transmission Owner's Interconnection Facilities and Network Upgrades will be required.

5.8 Information Exchange. As soon as reasonably practicable after the Effective Date, the Parties will exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with the Transmission System, and will work diligently and in good faith to make any necessary design changes.

5.9 Limited Operation. If any of Transmission Owner's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Generating Facility, Transmission Provider will, upon the request and at the expense of HILLGA Customer, perform operating studies on a timely basis to determine the extent to which the Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Owner's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this GIA ("Limited Operation"). Transmission Owner will permit HILLGA Customer to operate the Generating Facility and Interconnection Customer's Interconnection Facilities under Limited Operation in accordance with the results of such studies performed by Transmission Provider.

5.10 Interconnection Customer's Interconnection Facilities ('ICIF'). Interconnection Customer will, 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. HILLGA Customer must submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Owner 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 Owner must review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Owner and comment on such specifications within thirty (30) Calendar Days of HILLGA Customer's submission. All specifications provided hereunder will be deemed confidential.

5.10.2 Transmission Owner's Review. Transmission Owner's review of HILLGA Customer's final specifications will not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Generating Facility, or the ICIF. HILLGA Customer must make such changes to the ICIF as may reasonably be required by Transmission Owner, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Owner.

5.10.3 ICIF Construction. The ICIF must 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, HILLGA Customer must deliver to Transmission Owner "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the 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 HILLGA Customer's step-up transformers, the facilities connecting the 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 Generating Facility. The HILLGA Customer must provide Transmission Owner specifications for the excitation system, automatic voltage regulator, Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

5.10.4 Updated Information Submission by HILLGA Customer. The updated information submission by the HILLGA Customer, including manufacturer information, must occur no later than one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date. HILLGA Customer must submit a completed copy of the Generating Facility data requirements contained in Attachment A to Appendix 1 to Attachment BB of the Tariff. It must also include any additional information provided to Transmission Provider for the Interconnection Facilities Studies. Information in this submission must be the most current Generating Facility design or expected performance data. Information submitted for stability models must be compatible with Transmission Provider standard models. If there is no compatible model, the HILLGA Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the HILLGA Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the HILLGA Study Agreement between Transmission Provider and HILLGA Customer, then Transmission Provider will conduct appropriate studies to determine the impact on the Transmission System based on the actual data submitted pursuant to this Article 5.10.4. The HILLGA Customer may not begin Trial Operation until such studies are completed.

5.10.5 Information Supplementation. Prior to the Commercial Operation Date, or as soon as possible thereafter, the Parties must supplement their information submissions described above in this Article 5 with any and all "as-built" Generating Facility information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The HILLGA Customer must conduct tests on the Generating Facility as required by Good Utility Practice such as an open circuit "step voltage" test on the

Generating Facility to verify proper operation of the Generating Facility's automatic voltage regulator.

Unless otherwise agreed, the test conditions will include: (1) Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5%) change in Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage. HILLGA Customer must provide validated test recordings showing the responses of 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 Generating Facility's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Generating Facility terminal or field voltages is provided. Generating Facility testing must be conducted and results provided to the Transmission Provider for each individual generating unit in a station.

Subsequent to the Commercial Operation Date, the HILLGA Customer must provide Transmission Owner and Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Owner must provide the HILLGA Customer and Transmission Provider any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Owner-owned substation that may affect the HILLGA Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties must provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

5.11 Transmission Owner's Interconnection Facilities Construction. Transmission Owner's Interconnection Facilities and Network Upgrades must 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 Owner must deliver to HILLGA Customer the following "as-built" drawings, information and documents for Transmission Owner's Interconnection Facilities and Network Upgrades [include appropriate drawings and relay diagrams].

Transmission Owner will obtain control of Transmission Owner'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") will furnish at no cost to any 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 Generating Facility with the Transmission System; (ii) operate and maintain the 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 HILLGIA. In exercising such licenses, rights of way and easements, the Access Party must not unreasonably disrupt or interfere with normal operation of the Granting Party's business and must 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 Owner's Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than HILLGA Customer or Transmission Owner, Transmission Owner must at HILLGA 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 Owner's Interconnection Facilities and/or Network Upgrades upon such property.

5.14 Permits. Transmission Provider or Transmission Owner and HILLGA Customer must 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 will provide permitting assistance to HILLGA Customer comparable to that provided to Transmission Provider's own, or an Affiliate's generation.

5.15 Early Construction of Base Case Facilities. HILLGA Customer may request Transmission Owner to construct, and Transmission Owner must construct, using Reasonable Efforts to accommodate HILLGA Customer's In-Service Date, all or any portion of any Network Upgrades required for HILLGA Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for HILLGA Customer, and which also are required to be constructed for another HILLGA Customer, but where such construction is not scheduled to be completed in time to achieve HILLGA Customer's In-Service Date.

5.16 Suspension.

5.16.1 Suspension by HILLGA Customer. HILLGA Customer, upon written notice to Transmission Provider and Transmission Owner, may suspend, for a period not to exceed eighteen (18) months, work by Transmission Owner associated with the construction and installation of Transmission Owner's Interconnection Facilities and/or Network Upgrades required under this HILLGIA under the following terms and conditions.

- i. Construction of Network Upgrades that are required to provide Interconnection Service to other Generating Facilities and for which HILLGA Customer shares cost responsibility cannot be suspended pursuant to this Article 5.16.
- ii. If the suspension period begins later than or extends beyond six (6) months following the Effective Date of the HILLGIA, the HILLGA Customer must provide to the Transmission Provider security in the form described under Article 11.7 in an amount equal to the greater of:
 - a. the HILLGA Customer's allocated share of Network Upgrade(s) as calculated pursuant to Section 4.2.2 of Attachment BB of the Tariff and as identified in Appendix A of this GIA unless previously provided under Section 8.9 of this Attachment BB of the Tariff; or
 - b. \$5,000,000 if the Generating Facility is greater than or equal to 100 MW; or
 - c. \$2,500,000 if the Generating Facility is greater than or equal to 50 MW and less than 100 MW; or
 - d. \$1,000,000 if the Generating Facility is less than 50 MW; or
 - e. \$500,000 if the Generating Facility is less than or equal to 2 MW.
- iii. In the event that this HILLGIA is terminated under this Article 5.16, the Transmission Provider will retain the security provided pursuant to Article 5.16.1.ii in the amount required to meet HILLGA Customer's obligations pursuant to this GIA. Any difference between the security provided and HILLGA Customer's obligations will be settled pursuant to Article 12.
- iv. In the event HILLGA Customer suspends work by Transmission Owner required under this HILLGIA pursuant to this Article 5.16 and has not requested Transmission Owner to resume the work required under this HILLGIA on or before the expiration of eighteen (18) months from the date of suspension, this HILLGIA will be deemed terminated unless Article 16 applies.
- v. In the event HILLGA Customer suspends work by Transmission Owner required under this HILLGIA pursuant to this Article 5.16 and has not complied requirements of Article 5.16.1.ii on or before the later of the expiration of six (6) months following the effective date of the GIA or the date the suspension is requested, this HILLGIA will be deemed terminated by the HILLGA Customer.
- vi. In the event HILLGA Customer suspends work by Transmission Owner required under this HILLGIA pursuant to this Article 5.16, the Transmission System must be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Owner's safety and reliability criteria. HILLGA Customer will be responsible for all reasonable and necessary costs which Transmission Owner and Transmission Provider (i) have incurred pursuant to this HILLGIA prior to the

suspension and (ii) incur 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 Owner cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Owner must obtain HILLGA Customer's authorization to do so. Transmission Owner and Transmission Provider will invoice HILLGA Customer for such costs pursuant to Article 12 and must use due diligence to minimize its costs.

vii. In the event HILLGA Customer provides written notice to resume work for those facilities for which work has been suspended pursuant to this Article 5.16.1, the HILLGA Customer will receive a refund, including interest, of any payments provided in accordance with Article 5.16.1.ii in excess of the sum of HILLGA Customer's allocated share of Network Upgrade(s) costs and any costs incurred under Article 5.16.1.vi within thirty (30) days of the date of such notice.

5.16.2 Exemptions. The HILLGA Customer will be exempt from the payments described under Article 5.16.1.ii.b, 5.16.1.ii.c and 5.16.1.ii.d if the following occurs or Suspension is requested for the following reasons:

- i. Construction of a Network Upgrade or the Generating Facility is prevented by order of a Governmental Authority; or
- ii. Transmission Provider determines through an Interconnection Study that the Suspension does not qualify as a modification that has an impact on the cost or timing of any Interconnection Request with an equal or later Queue priority date (Material Modification); or
- iii. Transmission Owner or Transmission Provider determines that a Force Majeure event prevents construction of a Network Upgrade.

5.17 Taxes.

5.17.1 HILLGA Customer Payments Not Taxable. The Parties intend that all payments or property transfers made by HILLGA Customer to Transmission Owner for the installation of Transmission Owner's Interconnection Facilities and the Network Upgrades will 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 will 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, HILLGA Customer represents and covenants that (i) ownership of the electricity generated at the 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 Owner for Transmission Owner's Interconnection Facilities will be capitalized by HILLGA 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 Owner'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 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 Owner's request, HILLGA Customer will provide Transmission Owner with a report from an independent engineer confirming its representation in clause (iii), above. Transmission Owner represents and covenants that the cost of Transmission Owner's Interconnection Facilities paid for by HILLGA 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 Owner. Notwithstanding Article 5.17.1, HILLGA Customer will protect, indemnify and hold harmless Transmission Owner from the cost consequences of any current tax liability imposed against Transmission Owner as the result of payments or property transfers made by HILLGA Customer to Transmission Owner under this HILLGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Transmission Owner.

Transmission Owner will not include a gross-up for the cost consequences of any current tax liability in the amounts it charges HILLGA Customer under this GIA unless (i) Transmission Owner has determined, in good faith, that the payments or property transfers made by HILLGA Customer to Transmission Owner should be reported as income subject to taxation or (ii) any Governmental Authority directs Transmission Owner to report payments or property as income subject to taxation; provided, however, that Transmission Owner may require HILLGA Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Transmission Owner (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. HILLGA Customer must reimburse Transmission Owner 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 Owner of the amount due, including detail about how the amount was calculated.

The indemnification obligation will 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 Owner 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. HILLGA Customer's liability for the cost consequences of any current tax liability under this Article 5.17 will be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the Parties, this means that HILLGA Customer will pay Transmission Owner, in addition to the amount paid for the Interconnection Facilities, and Network Upgrades, an amount equal to (1) the current taxes imposed on Transmission Owner ("Current Taxes") on the excess of (a) the gross income realized by Transmission Owner as a result of payments or property transfers made by HILLGA Customer to Transmission Owner under this GIA (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 Owner 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 will be computed based on Transmission Owner's composite federal and state tax rates at the time the payments or property transfers are received and Transmission Owner 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 will be computed by discounting Transmission Owner's anticipated tax depreciation deductions as a result of such payments or property transfers by Transmission Owner's current weighted average cost of capital. Thus, the formula for calculating HILLGA Customer's liability to Transmission Owner pursuant to this Article 5.17.4 can be expressed as follows: $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$. HILLGA Customer's estimated tax liability in the event taxes are imposed will 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 HILLGA Customer's request and expense, Transmission Owner will 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 HILLGA Customer to Transmission Owner under this GIA are subject to federal income taxation. HILLGA 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 HILLGA Customer's knowledge. Transmission Owner and HILLGA Customer must cooperate in good faith with respect to the submission of such request.

Transmission Owner must keep HILLGA Customer fully informed of the status of such request for a private letter ruling and must execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes

HILLGA Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. Transmission Owner must allow HILLGA Customer to attend all meetings with IRS officials about the request and must permit HILLGA Customer to prepare the initial drafts of any follow-up letters in connection with the request.

5.17.6 Subsequent Taxable Events. If, within ten (10) years from the date on which the relevant Transmission Owner's Interconnection Facilities are placed in service, (i) HILLGA 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 HILLGA terminates and Transmission Owner retains ownership of the Interconnection Facilities and Network Upgrades, HILLGA Customer must pay a tax gross-up for the cost consequences of any current tax liability imposed on Transmission Owner, 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 Owner's receipt of payments or property constitutes income that is subject to taxation, Transmission Owner must notify HILLGA Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by HILLGA Customer and at HILLGA Customer's sole expense, Transmission Owner may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon HILLGA Customer's written request and sole expense, Transmission Owner 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 Owner 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 Owner must keep HILLGA Customer informed, must consider in good faith suggestions from HILLGA Customer about the conduct of the contest, and must reasonably permit HILLGA Customer or an HILLGA Customer representative to attend contest proceedings.

HILLGA Customer must pay to Transmission Owner on a periodic basis, as invoiced by Transmission Owner, Transmission Owner's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Transmission Owner may agree to a settlement either with HILLGA Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Transmission Owner, but reasonably acceptable to HILLGA Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. HILLGA Customer's obligation will be based on the amount of the settlement agreed to by HILLGA 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 will be calculated on a fully

grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without HILLGA Customer's consent or such written advice will relieve HILLGA Customer from any obligation to indemnify Transmission Owner 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 Owner which holds that any amount paid or the value of any property transferred by HILLGA Customer to Transmission Owner under the terms of this GIA 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 Owner in good faith that any amount paid or the value of any property transferred by HILLGA Customer to Transmission Owner under the terms of this GIA is not taxable to Transmission Owner, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by HILLGA Customer to Transmission Owner are not subject to federal income tax, or (d) if Transmission Owner receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by HILLGA Customer to Transmission Owner pursuant to this GIA, Transmission Owner must promptly refund to HILLGA Customer the following:

- (i) any payment made by HILLGA 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 amount paid by HILLGA Customer to Transmission Owner for such taxes which Transmission Owner 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 HILLGA Customer to the date Transmission Owner refunds such payment to HILLGA Customer, and
- (iii) with respect to any such taxes paid by Transmission Owner, any refund or credit Transmission Owner 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 Owner for such overpayment of taxes (including any reduction in interest otherwise payable by Transmission Owner to any Governmental Authority resulting from an offset or credit); provided, however, that Transmission Owner will remit such amount promptly to HILLGA Customer only after and to the extent that Transmission Owner has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Transmission Owner'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 HILLGA Customer, and at HILLGA Customer's sole expense, Transmission Owner may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Transmission Owner for which HILLGA Customer may be required to reimburse Transmission Owner under the terms of this GIA. HILLGA Customer must pay to Transmission Owner on a periodic basis, as invoiced by Transmission Owner, Transmission Owner's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. HILLGA Customer and Transmission Owner must 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 will be payable by HILLGA Customer to Transmission Owner 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, HILLGA Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Transmission Owner.

5.18 Tax Status. All Parties must cooperate with each other to maintain their tax status. Nothing in this GIA is intended to adversely affect any Party'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. Each Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect another Party's facilities, that Party must provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information will be deemed to be confidential hereunder and will include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Generating Facility. The Party desiring to perform such work must provide the relevant drawings, plans, and specifications to the other Parties 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 will not unreasonably be withheld, conditioned or delayed.

In the case of Generating Facility Modifications that do not require HILLGA Customer to submit an Interconnection Request, Transmission Owner must 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 Owner's Interconnection Facilities or Network Upgrades necessitated by such HILLGA 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 must be designed, constructed and operated in accordance with this HILLGA and Good Utility Practice.

5.19.3 Modification Costs. HILLGA Customer will not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Owner makes to Transmission Owner's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Owner's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. HILLGA Customer will 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.

5.20 Delays. If a Network Upgrade(s) identified in Appendix A is delayed during the construction process and the Commercial Operation Date for the Generating Facility identified in Appendix B is no longer feasible, the Commercial Operation Date in Appendix B may be modified to no later than six (6) months following the in-service date for the last Network Upgrade identified in Appendix A.

Article 6. Testing and Inspection

6.1 Pre-Commercial Operation Date Testing and Modifications. Prior to the Commercial Operation Date, Transmission Owner will test Transmission Owner's Interconnection Facilities and Network Upgrades and HILLGA Customer will test the 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 must make any modifications to its facilities that are found to be necessary as a result of such testing. HILLGA Customer must bear the cost of all such testing and modifications. HILLGA Customer will generate test energy at the 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 will 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 Generating Facility with the Transmission System in a safe and reliable manner. Each Party will 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 must notify the other Parties in advance of its performance of tests of its Interconnection Facilities. The other Parties have the right, at its own expense, to observe such testing.

6.4 Right to Inspect. Each Party will have the right, but will have no obligation to: (i) observe another Parties' 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 Parties' System Protection Facilities and other protective equipment; and (iii) review another Parties' maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. Any Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Parties. The exercise or non-exercise by another Party of any such rights will 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 any Party obtains through the exercise of any of its rights under this Article 6.4 will be deemed to be Confidential Information and treated pursuant to Article 22 of this HILLGIA.

Article 7. Metering

7.1 General. Each Party must comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Owner must install Metering Equipment at the Point of Interconnection prior to any operation of the Generating Facility and will own, operate, test and maintain such Metering Equipment. Power flows to and from the Generating Facility will be measured at or, at Transmission Owner's option, compensated to, the Point of Interconnection. Transmission Owner must provide metering quantities, in analog and/or digital form, to HILLGA Customer and Transmission Provider on a same-time basis using communication as provided in Article 8. HILLGA Customer will bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

7.2 Check Meters. HILLGA 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 Owner's meters. Such check meters will be for check purposes only and will not be used for the measurement of power flows for purposes of this GIA, except as provided in Article 7.4 below. The check meters will be subject at all reasonable times to inspection and examination by Transmission Owner or its designee. The installation, operation and maintenance thereof must be performed entirely by HILLGA Customer in accordance with Good Utility Practice.

7.3 Standards. Transmission Owner must install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.

7.4 Testing of Metering Equipment. Transmission Owner must inspect and test all Transmission Owner-owned Metering Equipment upon installation and at least once every two (2) years thereafter. If requested to do so by HILLGA Customer, Transmission Owner must, at HILLGA Customer's expense, inspect or test Metering Equipment more frequently than every two (2) years. Transmission Owner must give reasonable notice of the time when any inspection or test will take place, and HILLGA Customer may have representatives present at the test or inspection. If at any time Metering Equipment is found

to be inaccurate or defective, it must be adjusted, repaired or replaced at HILLGA Customer's expense, in order to provide accurate metering, unless the inaccuracy or defect is due to Transmission Owner's failure to maintain, then Transmission Owner must pay. If Metering Equipment fails to register, or if the measurement made by Metering Equipment during a test varies by more than two percent (2%) from the measurement made by the standard meter used in the test, Transmission Owner must adjust the measurements by correcting all measurements for the period during which Metering Equipment was in error by using HILLGA Customer's check meters, if installed. If no such check meters are installed or if the period cannot be reasonably ascertained, the adjustment will 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 HILLGA Customer's expense, the metered data will be telemetered to one or more locations designated by Transmission Owner and one or more locations designated by HILLGA Customer. Such telemetered data will be used, under normal operating conditions, as the official measurement of the amount of energy delivered from the Generating Facility to the Point of Interconnection.

Article 8. Communications

8.1 HILLGA Customer Obligations. HILLGA Customer must maintain satisfactory operating communications with Transmission Owner's Transmission System dispatcher or representative designated by Transmission Owner. HILLGA Customer must provide standard voice line, dedicated voice line and facsimile communications at its 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. HILLGA Customer must also provide the dedicated data circuit(s) necessary to provide HILLGA Customer data to Transmission Owner as set forth in Appendix D, Security Arrangements Details. The data circuit(s) must extend from the Generating Facility to the location(s) specified by Transmission Owner. Any required maintenance of such communications equipment must be performed by HILLGA Customer. Operational communications must 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 Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, will be installed by HILLGA Customer, or by Transmission Owner at HILLGA Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Owner 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) will be specified by Transmission Owner. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Owner.

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 must 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 will 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 HILLGA Customer whose Generating Facility is a Variable Energy Resource must 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 HILLGA Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with (i) site-specific meteorological data including: temperature, wind speed, wind direction, relative humidity and atmospheric pressure and (ii) site specific geographic data including location (latitude and longitude) of the Variable Energy Resource and location (latitude and longitude) and height of the facility that will contain the equipment necessary to provide the meteorological data for such resource. The HILLGA 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 HILLGA Customer whose Generating Facility is a Variable Energy Resource will mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The HILLGA Customer whose Generating Facility is a Variable Energy Resource also must 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 HILLGA Customer to the Transmission Provider, including the frequency and timing of data submittals, must 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, geographical and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological, geographical and forced outage data are set forth in Appendix C, Interconnection Details, of this HILLGIA, as they may change from time to time.

8.5 Phasor Measurement Unit (PMU) Recording Equipment. Prior to the Initial Synchronization Date of a Generating Facility having a Generating Facility Capacity equal to or greater than 50 MW, phasor measurement recording and communications equipment will be installed by the Transmission Owner at HILLGA Customer's expense that is capable of gathering phasor measurements as specified in the PMU Communications Handbook. To the extent similar quality equipment is being added or already exists, such as relays or digital fault recorders, that can collect data at least at the same rate as PMUs

and which data is synchronized via a high-accuracy satellite clock, such equipment can be utilized to satisfy this requirement if the equipment is located on the Transmission Owner's side of the Point of Change of Ownership and if mutually agreed to by the Parties. The phasor measurement equipment must be installed at the Transmission Owner's side of the Point of Change of Ownership and become part of the Transmission Owner Interconnection Facilities. Phasor measurements must be streamed in IEEE C37.118 or equivalent format and be provided to the Transmission Provider. This data must at least be sufficient to determine (i) positive-sequence voltage magnitude and angle, (ii) positive-sequence current magnitude and angle, (iii) frequency, and (iv) rate of change of frequency. Such data must be transmitted over the data circuit(s) as indicated in Article 8.1.

Each Party will promptly advise the other Parties 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 applicable Party. The Party owning such equipment must correct such error or malfunction as soon as reasonably feasible.

Article 9. Operations

9.1 General. Each Party must comply with the Applicable Reliability Council requirements. Each Party must provide to the other Parties all information that may reasonably be required by the other Parties to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

9.2 Control Area Notification. At least three (3) months before Initial Synchronization Date, HILLGA Customer must notify Transmission Provider and Transmission Owner in writing of the Control Area in which the Generating Facility will be located. If HILLGA Customer elects to locate the Generating Facility in a Control Area other than the Control Area in which the 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 HILLGIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, must be executed and implemented prior to the placement of the Generating Facility in the other Control Area.

9.3 Transmission Provider and Transmission Owner Obligations. Transmission Provider and Transmission Owner will cause the Transmission System and Transmission Owner's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this HILLGIA. Transmission Provider or Transmission Owner may provide operating instructions to HILLGA Customer consistent with this GIA and Transmission Owner's operating protocols and procedures as they may change from time to time. Transmission Provider and Transmission Owner will consider changes to its operating protocols and procedures proposed by HILLGA Customer.

9.4 HILLGA Customer Obligations. HILLGA Customer will at its own expense operate, maintain and control the Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA. HILLGA Customer must operate the 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 HILLGA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Any Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this HILLGA.

9.5 Start-Up and Synchronization. Consistent with the Parties' mutually acceptable procedures, the HILLGA Customer is responsible for the proper synchronization of the Generating Facility to the Transmission System.

9.6 Reactive Power and Primary Frequency Response.

9.6.1 Power Factor Design Criteria.

9.6.1.1 Synchronous Generation. HILLGA Customer must design the 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 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. HILLGA Customer must design the Generating Facility to maintain a 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 will 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 will only apply to newly interconnecting non-synchronous generators that had not executed an interconnection facilities study agreement as of September 21, 2016.

9.6.2 Voltage Schedules. Once HILLGA Customer has synchronized the Generating Facility with the Transmission System, Transmission Provider and/or Transmission Owner will require HILLGA Customer to operate the Generating Facility to produce or absorb reactive power within the design limitations of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Owner's voltage schedules must treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Owner must exercise Reasonable Efforts to provide HILLGA 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. HILLGA Customer must operate the Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations

of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If HILLGA Customer is unable to maintain the specified voltage or power factor, it must promptly notify the Transmission Owner.

9.6.2.1 Voltage Regulators. Whenever the Generating Facility is operated in parallel with the Transmission System and voltage regulators are capable of operation, HILLGA Customer must operate the Generating Facility with its voltage regulators in automatic operation. If the Generating Facility's speed governors and voltage regulators are not capable of such automatic operation, the HILLGA Customer must immediately notify Transmission Owner's system operator, or its designated representative, and ensure that such Generating Facility's reactive power production or absorption (measured in Mvars) are within the design capability of the Generating Facility's generating unit(s) and steady state stability limits. HILLGA Customer will not cause its Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Generating Facility for an under or over frequency condition in accordance with Good Utility Practice and Applicable Reliability Standards.

9.6.3 Payment for Reactive Power. Transmission Provider is required to pay HILLGA Customer for reactive power that HILLGA Customer provides or absorbs from the Generating Facility when Transmission Owner requests HILLGA Customer to operate its Generating Facility outside the range specified in Article 9.6.1. Payments will be pursuant to Article 11.8 or such other agreement to which the Parties have otherwise agreed; provided however, to the extent the Tariff contains a provision providing for such compensation, that Tariff provision will control.

9.6.4 Primary Frequency Response. HILLGA Customer must ensure the primary frequency response capability of its Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein will 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 Generating Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. HILLGA Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent (5%) droop and ± 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 will be: (1) based on the nameplate capacity of the Generating Facility, and will 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 will be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent

controls is not expected to adjust the Generating Facility's real power output in response to frequency deviations. The deadband must 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 Generating Facility's real power output in response to frequency deviations will 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. HILLGA Customer must notify Transmission Provider that the primary frequency response capability of the Generating Facility has been tested and confirmed during commissioning. Once HILLGA Customer has synchronized the Generating Facility with the Transmission System, HILLGA Customer must operate the 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 will apply to both synchronous and non-synchronous Generating Facilities.

9.6.4.1 Governor or Equivalent Controls. Whenever the Generating Facility is operated in parallel with the Transmission System, HILLGA Customer must operate the Generating Facility with its governor or equivalent controls in service and responsive to frequency. HILLGA Customer must: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of ± 0.036 Hz and set the droop parameter to a maximum of 5 percent (5%); or (2) implement the relevant droop and deadband settings from an approved NERC Reliability Standard that provides for equivalent or more stringent parameters. HILLGA Customer will 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 HILLGA Customer needs to operate the Generating Facility with its governor or equivalent controls not in service, HILLGA Customer must 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. HILLGA Customer must make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. HILLGA Customer must make Reasonable Efforts to keep outages of the Generating Facility's governor or equivalent controls to a minimum whenever the Generating Facility is operated in parallel with the Transmission System.

9.6.4.2 Timely and Sustained Response. HILLGA Customer must ensure that the

Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and will begin immediately after frequency deviates outside of the deadband, and to the extent the Generating Facility has operating capability in the direction needed to correct the frequency deviation. HILLGA Customer must not block or otherwise inhibit the ability of the governor or equivalent controls to respond and must 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 Generating Facility must 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 will supersede the above requirements.

9.6.4.3 Exemptions. Generating Facilities that are regulated by the United States Nuclear Regulatory Commission will be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this Agreement. 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) will be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but will 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. HILLGA Customer interconnecting an electric storage resource must establish an operating range in Appendix C of its GIA 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 will specify whether the operating range is static or dynamic, and will 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 HILLGA 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.

HILLGA 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 HILLGA 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. HILLGA 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 all Parties. In all circumstances, any Party planning to remove such facility(ies) from service must use Reasonable Efforts to minimize the effect on the other Parties of such removal.

9.7.1.2 Outage Schedules. Transmission Provider will post scheduled outages of its transmission facilities on the OASIS. HILLGA Customer must submit its planned maintenance schedules for the Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. HILLGA Customer must update its planned maintenance schedules as necessary. Transmission Provider may request HILLGA Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply will not be a criterion in determining Transmission System reliability. Transmission Provider must compensate HILLGA Customer for any additional direct costs that HILLGA 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 HILLGA Customer would have incurred absent Transmission Provider's request to reschedule maintenance. HILLGA Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, HILLGA 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 another Party's operations or facilities, the Party that owns or controls the facility that is out of service must 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 must provide the other Parties, 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 must 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 and/or Transmission Owner may require HILLGA Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's and/or Transmission Owner's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The following provisions will apply to any interruption or reduction permitted under this Article 9.7.2:

9.7.2.1 The interruption or reduction will continue only for so long as reasonably necessary under Good Utility Practice;

9.7.2.2 Any such interruption or reduction must 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 or Transmission Owner must notify HILLGA Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification must 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 or Transmission Owner will notify HILLGA Customer in advance regarding the timing of such scheduling and further notify HILLGA Customer of the expected duration. Transmission Provider or Transmission Owner will coordinate with HILLGA Customer using

Good Utility Practice to schedule the interruption or reduction during periods of least impact to HILLGA Customer and Transmission Owner;

9.7.2.5 The Parties must cooperate and coordinate with each other to the extent necessary in order to restore the 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. HILLGA Customer must implement under-frequency and over-frequency relay set points for the Generating Facility as required by the Applicable Reliability Council to ensure "ride through" capability of the Transmission System. Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, must be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein will 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.

9.7.3.1 Frequency Ride Through and Voltage Ride Through for a Generating Facility no larger than 20 MW. For Generating Facilities no larger than 20 MW, the HILLGA Customer must ensure "frequency ride through" capability and "voltage ride through" capability of its Generating Facility. The HILLGA Customer must enable these capabilities such that its Generating Facility will not disconnect automatically or instantaneously from the system or equipment of the Transmission Provider and any Affected Systems for a defined under-frequency or over-frequency condition, or an under-voltage or over-voltage condition, as tested pursuant to Article 6.1 of this agreement. The defined conditions must be in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. The Generating Facility's protective equipment settings must comply with the Transmission Provider's automatic load-shed program. The Transmission Provider will review the protective equipment settings to confirm compliance with the automatic load-shed program. The term "ride through" as used herein will mean the ability of a Generating Facility to stay connected to and synchronized with the system or equipment of the Transmission Provider and any Affected Systems during system disturbances within a range of conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority on a comparable basis. The term "frequency ride through" as used herein will mean the ability of a Generating Facility to stay connected

to and synchronized with the system or equipment of the Transmission Provider and any Affected Systems during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. The term "voltage ride through" as used herein will mean the ability of a Generating Facility to stay connected to and synchronized with the system or equipment of the Transmission Provider and any Affected Systems during system disturbances within a range of under-voltage and over-voltage conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis.

9.7.4 System Protection and Other Control Requirements.

9.7.4.1 System Protection Facilities. HILLGA Customer must, at its expense, install, operate and maintain System Protection Facilities as a part of the Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Owner must install at HILLGA Customer's expense any System Protection Facilities that may be required on Transmission Owner's Interconnection Facilities or the Transmission System as a result of the interconnection of the Generating Facility and the Interconnection Customer's Interconnection Facilities.

9.7.4.2 Each Party's protection facilities must be designed and coordinated with other systems in accordance with Good Utility Practice.

9.7.4.3 Each Party will be responsible for protection of its facilities consistent with Good Utility Practice.

9.7.4.4 Each Party's protective relay design must 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 HILLGA 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 must 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 must 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, HILLGA Customer must provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Owner's equipment, such that the removal of the fault contribution must be coordinated with the protective requirements of the Transmission System. Such protective equipment must include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. HILLGA Customer will be responsible for protection of the Generating Facility and HILLGA 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. HILLGA Customer will be solely responsible to disconnect the Generating Facility and HILLGA Customer's other equipment if conditions on the Transmission System could adversely affect the Generating Facility.

9.7.6 Power Quality. No Party's facilities may 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, will control.

9.8 Switching and Tagging Rules. Each Party must provide the other Parties a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules must be developed on a non-discriminatory basis. The Parties must 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 must be constructed for the sole purpose of interconnecting the Generating Facility to the Transmission System and must 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 Owner's Interconnection Facilities, or any part thereof, HILLGA 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 Owner, all third party users, and HILLGA 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 HILLGA Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Owner, all third party users, and HILLGA 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 will 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 Generating Facility or the 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 Owner Obligations. Transmission Owner must maintain the Transmission System and Transmission Owner's Interconnection Facilities in a safe and reliable manner and in accordance with this HILLGIA.

10.2 HILLGA Customer Obligations. HILLGA Customer must maintain the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this HILLGIA.

10.3 Coordination. The Parties will confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Generating Facility and the Interconnection Facilities.

10.4 Secondary Systems. Each Party must cooperate with the others 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 another Party. Each Party must provide advance notice to the other Parties 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, HILLGA Customer will be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing HILLGA Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Owner's Interconnection Facilities.

Article 11. Performance Obligation

11.1 Interconnection Customer Interconnection Facilities. HILLGA Customer will design, procure, construct, install, own and/or control Interconnection Customer's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

11.2 Generating Facility. HILLGA Customer must install the Generating Facilities described in Appendix C no later than the Commercial Operation Date(s) specified in Appendix B. Additionally, for Electric Storage Resource provide to the Transmission Provider:

Operating Assumptions for Generating Facility

Check box if applicable ☐

Operating Assumptions:

[insert operating assumptions that reflect the charging behavior of the Generating Facility that includes at least one electric storage resource]

· HILLGA Customer is limited to _____ MW of energy withdrawal during off-peak system conditions as set forth in the applicable Energy Storage Resource-Load Assessment report.

· HILLGA Customer may remove this limit as set forth in Transmission Provider's Business Practice 7250.

· During certain system conditions, a resource that is registered as a Market Storage Resource (MSR) may receive a Dispatch Instruction from the Transmission Provider that requires Customer to withdraw energy in excess of the limit set forth above and Interconnection Customer's performance consistent with that Dispatch Instruction will not be considered a breach of this GIA. Any such physical limitations identified in the load assessment study are required to be implemented by HILLGA Customer prior to energization of the Generating Facility. In the

event HILLGA Customer fails to comply with the requirements identified in the applicable load assessment study, HILLGA Customer may not take energy from the Transmission System.

In the event Transmission Provider provides a Dispatch Instruction to the HILLGA Customer to charge the Generating Facility batteries, the energy required for charging the Generating Facility batteries will be taken at wholesale from the Transmission System. In any event, HILLGA Customer will not engage in "Self Charging" of the Generating Facility batteries unless the Interconnection Customer obtains Transmission Service

pursuant to the Tariff prior to charging from the Transmission System. The power and energy discharged from the Generating Facility batteries will be delivered at wholesale to the Transmission System.

11.3 Transmission Owner's Interconnection Facilities. Transmission Owner will design, procure, construct, install, own and/or control the Transmission Owner's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the HILLGA Customer.

11.4 Network Upgrades and Distribution Upgrades. All Network Upgrades and Distribution Upgrades described in Appendix A must be constructed in accordance with the process set forth in Section VI of Attachment O. Transmission Owner must design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades that are associated with that Transmission Owner's system. The Distribution Upgrades and Network Upgrades described in Appendix A will be solely funded by HILLGA Customer unless Transmission Owner elects to fund the capital for the Distribution Upgrades or Network Upgrades.

11.4.1 Agreement to Fund Shared Network Upgrades. HILLGA Customer agrees to fund Shared Network Upgrades, as determined by Transmission Provider. Where applicable, payments to fund Shared Network Upgrade(s) that are made to Transmission Provider by HILLGA Customer will be disbursed by Transmission Provider to the appropriate entities that are constructing the Shared Network Upgrades in accordance with Attachment O of the Tariff. In the event that HILLGA Customer fails to meet its obligation to fund Shared Network Upgrades, Transmission Owner and Transmission Provider will not be responsible for the HILLGA Customer's funding obligation.

11.4.2 Contingencies Affecting Network Upgrades, System Protection Facilities and Distribution Upgrades. Network Upgrades, System Protection Facilities and Distribution Upgrades that are required to accommodate the Generating Facility may be modified because (a) a higher queued Interconnection Request withdrew or was deemed to have withdrawn, (b) the HILLGA associated with a higher queued Interconnection Request was terminated, or (c) changes occur in equipment design standards or reliability criteria giving rise to the need for restudy. The higher queued Interconnection Requests that could impact the Network Upgrades, System Protection Facilities and Distribution Upgrades required to accommodate the Generating Facility, and possible modifications that may result from the above listed events affecting the higher queued Interconnection Requests, to the extent such modifications are reasonably known and can be determined, and estimates of the costs associated with

such required Network Upgrades, System Protection Facilities and Distribution Upgrades, will be provided in Appendix A.

11.4.3 Agreement to Restudy. The HILLGA Customer agrees to allow the Transmission Provider to perform a restudy in accordance with Sections 8.8 and 8.13 of Attachment BB of the Tariff if the Transmission Provider determines a restudy is required because one or more of the contingencies in Article 11.4.2 occurred. If a restudy is required, the Transmission Provider will provide notice to HILLGA Customer. The Parties agree to amend Appendix A to this HILLGIA in accordance with Article 30.10 to reflect the results of the restudy.

11.5 Transmission Credits.

11.5.1 Credits for Amounts Advanced for Network Upgrades. HILLGA Customer will be entitled to compensation in accordance with Attachment Z2 of the Tariff for any Network Upgrades including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to HILLGA Customer pursuant to Article 5.17.8.

11.5.2 Special Provisions for Affected Systems. Unless Transmission Provider provides, under the HILLGIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, HILLGA Customer and Affected System Operator must enter into an agreement that provides for such repayment. The agreement will specify the terms governing payments to be made by HILLGA Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

11.5.3 Notwithstanding any other provision of this HILLGIA, nothing herein will 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 HILLGA Customer, will 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 transmission credits for transmission service that is not associated with the Generating Facility.

11.6 Initial Payment.

HILLGA Customer must make an initial payment ("Initial Payment") equal to the greater of a) twenty (20) percent of the total cost of Network Upgrades (excluding JTIQ Upgrade costs), Shared Network Upgrades, Transmission Owner Interconnection Facilities and/or Distribution Upgrades listed in Appendix A or b) \$4,000/MW of the size of the Generating Facility. Any financial security provided in Section 8.2 of Attachment BB will be applied to this requirement. The Initial Payment must be provided to Transmission Owner or Transmission Provider as required in Appendix B by HILLGA Customer pursuant to this

Article 11.6 within the later of a) thirty (30) days of the execution of the HILLGIA by all Parties, or b) thirty (30) days of acceptance by FERC if the HILLGIA is filed unexecuted and the payment is being protested by HILLGA Customer, or c) thirty (30) days of the filing if the HILLGIA is filed unexecuted and the Initial Payment is not being protested by HILLGA Customer. If this HILLGIA is terminated, then the Initial Payment must be refunded with accrued interest calculated from the date of the receipt of the Initial Payment to the date of the refund, if any, to the HILLGA Customer less:

- a. any costs that have been incurred for the construction of the facilities specified in Appendix A;
- b. any funds necessary for the construction of those Shared Network Upgrades, or Network Upgrades, that would be assigned to another interconnection customer where such upgrade costs would not have been assigned but for the termination of the HILLGIA; and
- c. any costs that have been incurred for the construction of those Shared Network Upgrades, or Network Upgrades, that are no longer required due to the termination of the HILLGIA that were paid for by another interconnection customer.

11.7A Provision of Security. At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades as defined in Appendix A of this HILLGIA, HILLGA Customer must provide Transmission Provider, at HILLGA 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 must be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades as defined in Appendix A of this HILLGIA and will be reduced on a dollar-for-dollar basis for payments made to Transmission Provider or Transmission Owner for these purposes. If HILLGA Customer requests suspension pursuant to Article 5.16, HILLGA Customer may be required to provide Transmission Provider security in the form described above for its allocated share of Network Upgrade(s) costs as calculated pursuant to Section 4.2.2 of Attachment BB of the Tariff and defined in Appendix A of this HILLGIA.

In addition:

11.7A.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 HILLGA Customer, up to an agreed-to maximum amount.

11.7A.2 The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.7A.3 The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.7B Provision of Security for JTIQ Upgrades. If the Transmission Provider determines, pursuant to Section 3.6.4(A) of Attachment BB of the Tariff that the Interconnection Request impacts one or more of the JTIQ Upgrades, HILLGA Customer is required to provide security in accordance with Appendix I to this HILLGIA.

11.8 HILLGA Customer Compensation. If Transmission Provider or Transmission Owner requests or directs HILLGA Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this HILLGIA, Transmission Provider must compensate HILLGA Customer in accordance with HILLGA Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to the Tariff. HILLGA Customer must serve Transmission Provider 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 HILLGA Customer is required to provide or absorb any Reactive Power under this HILLGIA, Transmission Provider agrees to compensate HILLGA Customer in such amount as would have been due HILLGA 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.

11.8.1 HILLGA Customer Compensation for Actions During Emergency Condition. Transmission Provider must compensate HILLGA Customer for its provision of real and reactive power and other Emergency Condition services that HILLGA Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.8.

Article 12. Invoice

The terms of this Article 12 apply to billing between the Parties for construction and operation and maintenance charges. All other billing will be handled according to the Tariff.

12.1 General. Each Party will submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice must 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 HILLGIA, including interest payments or credits, must be netted so that only the net amount remaining due must be paid by the owing Party.

12.2 Final Invoice. Within six months after completion of the construction of Interconnection Facilities and the Network Upgrades, the HILLGA Customer will receive an invoice of the final cost due under this HILLGIA, including any applicable cost due to termination, which will set forth such costs in sufficient detail to enable HILLGA Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. HILLGA Customer will receive a refund of any amount by which the actual

payment by HILLGA 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 will be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice must pay the invoice within thirty (30) Calendar Days of receipt. All payments must 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 HILLGIA.

12.4 Disputes. In the event of a billing dispute between the Parties, Transmission Owner, and Transmission Provider will continue to provide Interconnection Service under this HILLGIA as long as HILLGA Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Owner or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If HILLGA Customer fails to meet these two requirements for continuation of service, then Transmission Owner may provide notice to HILLGA 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 must pay the amount due with interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii).

Article 13. Emergencies

13.1 Definition. "Emergency Condition" will 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 the Transmission System, or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Transmission Owner, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, Transmission Owner's Interconnection Facilities; or (4) that, in the case of HILLGA 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 will be considered Emergency Conditions; provided that HILLGA Customer is not obligated by the HILLGIA to possess black start capability.

13.2 Obligations. Each Party must comply with the Emergency Condition procedures of NERC, the Applicable Reliability Council, Transmission Provider, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.

13.3 Notice. Transmission Provider or Transmission Owner will notify HILLGA Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Owner's Interconnection Facilities or the Transmission System that may reasonably be expected to affect HILLGA Customer's operation of the Generating Facility or Interconnection Customer's Interconnection Facilities. HILLGA Customer must notify

Transmission Provider and Transmission Owner promptly when it becomes aware of an Emergency Condition that affects the Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Transmission System or Transmission Owner's Interconnection Facilities. To the extent information is known, the notification must describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of HILLGA Customer's or Transmission Owner's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice must be followed as soon as practicable with written notice.

13.4 Immediate Action. Unless, in HILLGA Customer's reasonable judgment, immediate action is required, HILLGA Customer must obtain the consent of Transmission Owner, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or Transmission Owner or otherwise regarding the Transmission System.

13.5 Transmission Provider and Transmission Owner Authority.

13.5.1 General. Transmission Provider and/or Transmission Owner may take whatever actions or inactions with regard to the Transmission System or Transmission Owner'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 Owner's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider and Transmission Owner must use Reasonable Efforts to minimize the effect of such actions or inactions on the Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider and/or Transmission Owner may, on the basis of technical considerations, require the 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 HILLGA Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing HILLGA Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Generating Facility and Interconnection Customer's Interconnection Facilities. HILLGA Customer must comply with all of Transmission Provider's and Transmission Owner's operating instructions concerning Generating Facility real power and reactive power output within the manufacturer's design limitations of the 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 and/or Transmission Owner may reduce Interconnection Service or disconnect the 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 and/or Transmission Owner can schedule the reduction or disconnection in advance, Transmission Provider and/or Transmission Owner must notify HILLGA Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider and/or Transmission Owner must coordinate with HILLGA Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to HILLGA Customer, Transmission Provider and/or Transmission Owner. Any reduction or disconnection will continue only for so long as reasonably necessary under Good Utility Practice. The Parties will cooperate with each other to restore the 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 HILLGA Customer Authority. Consistent with Good Utility Practice and the HILLGIA and Attachment BB of the Tariff, HILLGA Customer may take actions or inactions with regard to the 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 Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. HILLGA Customer must use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Owner's Interconnection Facilities. Transmission Provider and/or Transmission Owner will use Reasonable Efforts to assist HILLGA Customer in such actions.

13.7 Limited Liability. Except as otherwise provided in Article 11.8.1 of this HILLGIA, no Party will be liable to the other Parties 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 HILLGIA will 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 must in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this HILLGIA will require HILLGA 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 2005, or the Public Utility Regulatory Policies Act of 1978 as amended by the 2005 Energy Policy Act.

14.2 Governing Law.

14.2.1 The validity, interpretation and performance of this GIA and each of its provisions will 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 HILLGIA 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 HILLGIA, any notice, demand or request required or permitted to be given by any Party to another and any instrument required or permitted to be tendered or delivered by any Party in writing to another will 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.

Any Party may change the notice information in this HILLGIA by giving five (5) Business Days written notice prior to the effective date of the change.

15.2 Billings and Payments. Billings and payments must 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 any Party to another 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 must notify the other Parties 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 No Party will 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 must give notice and the full particulars of such Force Majeure to the other Parties 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 must be confirmed in writing as soon as reasonably possible and must 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 must exercise due diligence to remove such disability with reasonable dispatch, but will 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 will exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this HILLGIA or the result of an act or omission of another Party. Upon a Breach, the non-breaching Party must give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party will 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 must 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 will 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 will have the right to declare a Default and terminate this HILLGIA 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 HILLGIA, 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 HILLGIA.

Article 18. Indemnity, Consequential Damages and Insurance

18.1 Indemnity. Each Party will indemnify and hold harmless the other Parties, and the other Parties' officers, shareholders, stakeholders, members, managers, representatives, directors, agents and employees, and Affiliates, from and against any and all loss, liability, damage, cost or expense to third parties, including damage and liability for bodily injury to or death of persons, or damage to property or persons (including reasonable attorneys' fees and expenses, litigation costs, consultant fees, investigation fees, sums paid in settlements of claims, penalties or fines imposed under Applicable Laws and Regulations, and any such fees and expenses incurred in enforcing this indemnity or collecting any sums due hereunder) (collectively, "Loss") to the extent arising out of, in connection with, or resulting from (i) the indemnifying Party's breach of any of the representations or warranties made in, or failure of the indemnifying Party or any of its subcontractors to perform any of its obligations under, this HILLGIA, or (ii) the negligence or willful misconduct of the indemnifying Party or its contractors; provided, however, that no Party will have any indemnification obligations under this Section 18.1 in respect of any Loss to

the extent the Loss results from the negligence or willful misconduct of the Party seeking indemnity.

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 will 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 must notify the indemnifying Party of such fact. Any failure of or delay in such notification will not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnified Person must cooperate with the indemnifying Party with respect to the matter for which indemnification is claimed. The Indemnifying Party will 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 will 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 will 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 will 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) will 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 must pay the reasonable expenses of the indemnified person, and (ii) must not settle or consent to the entry of any judgment in any action,

suit or proceeding without the consent of the indemnified person, which will not be reasonably withheld, conditioned or delayed.

18.2 Consequential Damages. Except as otherwise provided in this Article 18 and other than Liquidated Damages heretofore described, the liability of a Party under this HILLGIA will be limited to direct actual damages, and all other damages at law are waived. Under no circumstances will any Party or its Affiliates, directors, officers, employees and agents, or any of them, be liable to another Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary or consequential damages, including lost profits. The limitations on damages specified in this Section 18.2 are without regard to the cause or causes related thereto, including the negligence of any Party, whether such negligence be sole, joint or concurrent, or active or passive. This limitation on damages will not affect any Party's rights to obtain equitable relief as otherwise provided in this HILLGIA. The provisions of this Section 18.2 will survive the termination or expiration of this HILLGIA.

18.3 Insurance. HILLGA Customer and Transmission Owner must at their own expense, maintain in force throughout the period of this HILLGIA, and until released by all other Parties, 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. The minimum limits for the Employers' Liability insurance will be One Million Dollars (\$1,000,000) each accident bodily injury by accident, One Million Dollars (\$1,000,000) each employee bodily injury by disease, and One Million Dollars (\$1,000,000) policy limit bodily injury by disease.

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 (if applicable), independent contractors coverage, coverage for pollution (if exposure is present) and punitive or exemplary damages, with minimum limits of One Million Dollars (\$1,000,000) each occurrence/Two Million Dollars (\$2,000,000) general aggregate and Two Million Dollars (\$2,000,000) products and completed operations 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 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) each occurrence/Twenty Million Dollars (\$20,000,000) general aggregate.

18.3.5 The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies must 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 must contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this GIA 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 must contain provisions that specify that the policies are primary and will apply to such extent without consideration for other policies separately carried and must state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability may not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party will 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, must be maintained in full force and effect for two (2) years after termination of this HILLGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed to by all Parties.

18.3.8 The requirements contained herein as to the types and limits of all insurance to be maintained by the HILLGA Customer and Transmission Owner are not intended to and will not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this Agreement.

18.3.9 Within ten (10) days following execution of this HILLGIA, 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, HILLGA Customer and Transmission Owner must provide certification of all insurance required in this HILLGIA, executed by each insurer or by an authorized representative of each insurer to the Other Party Group.

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 must

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 must 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 HILLGIA.

Article 19. Assignment

19.1 Assignment. This HILLGIA may be assigned by any Party only with the written consent of the other Parties; provided that any Party may assign this HILLGIA without the consent of the other Parties 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 HILLGIA; and provided further that HILLGA Customer will have the right to assign this HILLGIA, without the consent of Transmission Provider or Transmission Owner, for collateral security purposes to aid in providing financing for the Generating Facility, provided that HILLGA Customer will promptly notify Transmission Provider and Transmission Owner of any such assignment. Any financing arrangement entered into by the HILLGA 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 and Transmission Owner 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 11.7 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this HILLGIA will not relieve a Party of its obligations, nor will 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 HILLGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination will not invalidate, void or make unenforceable any other provision, agreement or covenant of this HILLGIA; provided that if HILLGA Customer (or any third party, but only if such third party is not acting at the direction of Transmission Owner) seeks and obtains such a final determination with respect to any provision of the Negotiated Option (Article 5.1.3), then none of these provisions will thereafter have any force or effect and the Parties' rights and obligations will 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 will include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to another prior to the execution of this HILLGIA.

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 any Party, a Party must 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 will be responsible for the costs associated with affording confidential treatment to its information.

22.1.1 Term. During the term of this HILLGIA, and for a period of three (3) years after the expiration or termination of this HILLGIA, except as otherwise provided in this Article 22, each Party must hold in confidence and must not disclose to any person Confidential Information.

22.1.2 Scope. Confidential Information will 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 HILLGIA; or (6) is required, in accordance with Article 22.1.7 of the HILLGIA, 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 HILLGIA. 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. No Party may 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 HILLGA Customer, or to potential purchasers or assignees of HILLGA Customer, on a need-to-know basis in connection with this HILLGIA, 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 will 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 another Party. The disclosure by any Party to another Party of Confidential Information will not be deemed a waiver by the disclosing 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, no Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to another 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 must 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 another Party under this HILLGIA or its regulatory requirements.

22.1.7 Order of Disclosure. If a court or a Governmental Authority or entity with the right, power, and apparent authority to do so requests or requires a Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party must provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this HILLGIA. 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 HILLGIA for any reason, each Party must, within ten (10) Calendar Days of receipt of a written request from another 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. In the instance where Transmission Owner is a Federal Power Agency, as specified in the opening paragraph of this Agreement, then this Section 22.1.9 will not apply to Transmission Owner. The Parties agree that monetary damages

would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties will 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 will be granted without bond or proof of damages, and the receiving Party may not plead in defense that there would be an adequate remedy at law. Such remedy will not be deemed an exclusive remedy for the Breach of this Article 22, but will 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, will 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 C.F.R. 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 HILLGIA, the Party must 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 C.F.R. 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 another Party to this HILLGIA prior to the release of the Confidential Information to FERC or its staff. The Party must notify the other Parties to the HILLGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. Section 388.112. Requests from a state regulatory body conducting a confidential investigation must 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 HILLGIA ("Confidential Information") must not be disclosed by another 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 HILLGIA 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 must 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.

22.1.12 This provision will not apply to any information that was or is hereafter in the public domain (except as a result of a Breach of this provision).

Article 23. Environmental Releases

23.1 Each Party must 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 Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party must: (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 HILLGA Customer must 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 must occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and will include Transmission System information necessary to allow HILLGA 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 will provide HILLGA 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.

Article 25. Information Access and Audit Rights

25.1 Information Access. Each Party (the "disclosing Party") must make available to the other Parties information that is in the possession of the disclosing Party and is necessary in order for the other Parties to: (i) verify the costs incurred by the disclosing Party for which the other Parties are responsible under this HILLGIA; and (ii) carry out its obligations and responsibilities under this HILLGIA. The Parties must not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this HILLGIA.

25.2 Reporting of Non-Force Majeure Events. Each Party (the "notifying Party") must notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this GIA 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 will not entitle the Parties receiving such notification to allege a cause for anticipatory breach of this HILLGIA.

25.3 Audit Rights. Subject to the requirements of confidentiality under Article 22 of this HILLGIA, each Party will have the right, during normal business hours, and upon prior reasonable notice to another Party, to audit at its own expense that other Party's accounts and records pertaining to either Party's performance or either Party's satisfaction of obligations under this HILLGIA. Such audit rights will 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 will be performed at the offices where such accounts and records are maintained and will be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this HILLGIA. Each Party must 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 Owner's Interconnection Facilities, and Network Upgrades will be subject to audit for a period of twenty-four (24) months following Transmission Owner'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 any Party's performance or satisfaction of all obligations under this HILLGIA other than those described in Article 25.4.1 will be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period will be twenty-four (24) 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 will be twenty-four (24) 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 must 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 HILLGIA will prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this HILLGIA; provided, however, that each Party must require its subcontractors to comply with all applicable terms and conditions of this HILLGIA in providing such services and each Party will remain primarily liable to the other Parties for the performance of such subcontractor.

26.2 Responsibility of Principal. The creation of any subcontract relationship will not relieve the hiring Party of any of its obligations under this HILLGIA. The hiring Party will be fully responsible to the other Parties 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 will Transmission Owner be liable for the actions or inactions of HILLGA Customer or its subcontractors with respect to obligations of HILLGA Customer under Article 5 of this HILLGIA. Any applicable obligation imposed by this HILLGIA upon the hiring Party will be equally binding upon, and will 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 any Party has a dispute, or asserts a claim, that arises out of or in connection with this GIA or its performance, the Parties agree to resolve such dispute using the dispute resolution procedures of the Generator Interconnection Procedures.

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 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 HILLGIA 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 HILLGIA.

28.1.2 Authority. Such Party has the right, power and authority to enter into this HILLGIA, to become a Party hereto and to perform its obligations hereunder. This HILLGIA 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 HILLGIA 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 HILLGIA 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 HILLGIA, and it will provide to any Governmental Authority notice of any actions under this HILLGIA that are required by Applicable Laws and Regulations.

Article 29. Joint Operating Committee

29.1 Joint Operating Committee. At least six (6) months prior to the expected Initial Synchronization Date, HILLGA Customer, Transmission Owner and Transmission Provider will each appoint one representative and one alternate to the Joint Operating Committee. Each Party must notify the other Parties of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee will meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee will hold a meeting at the request of any Party, at a time and place agreed upon by the representatives. The Joint Operating Committee will perform all of its duties consistent with the provisions of this HILLGIA. All Parties must 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, must be evidenced in writing. The duties of the Joint Operating Committee will 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 Owner's and HILLGA Customer's facilities at the Point of Interconnection.

29.1.4 Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Generating Facility and other facilities that impact the normal operation of the interconnection of the 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 HILLGIA and the rights and obligations hereof, will be binding upon and will 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 HILLGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this HILLGIA will prevail and be deemed the final intent of the Parties.

30.3 Rules of Interpretation. This HILLGIA, unless a clear contrary intention appears, will 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 HILLGIA, 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 HILLGIA), 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 HILLGIA or such Appendix to this GIA, or such Section to Attachment BB or such Appendix to Attachment BB, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import will be deemed references to this HILLGIA 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 HILLGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, among the Parties with respect to the subject matter of this HILLGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, a Party's compliance with its obligations under this HILLGIA.

30.5 No Third Party Beneficiaries. This HILLGIA 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 HILLGIA to insist, on any occasion, upon strict performance of any provision of this HILLGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by a Party of its rights with respect to this HILLGIA will 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 HILLGIA. Termination or Default of this GIA for any reason by HILLGA Customer will not constitute a waiver of HILLGA Customer's legal rights to obtain an interconnection from Transmission Provider. Any waiver of this HILLGIA must, if requested, be provided in writing.

30.7 Headings. The descriptive headings of the various Articles of this GIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this HILLGIA.

30.8 Multiple Counterparts. This HILLGIA may be executed in three 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 HILLGIA by a written instrument duly executed by each of the Parties.

30.10 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this HILLGIA by a written instrument duly executed by the Parties. Such amendment will become effective and a part of this HILLGIA upon satisfaction of all Applicable Laws and Regulations.

30.11 Reservation of Rights. Transmission Provider will have the right to make a unilateral filing with FERC to modify this HILLGIA 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 HILLGA Customer will have the right to make a unilateral filing with FERC to modify this HILLGIA 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 will have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this HILLGIA will 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 HILLGIA will not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party will 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, another Party.

IN WITNESS WHEREOF, the Parties have caused this HILLGIA to be executed by their respective authorized officials, and copies delivered to each Party, to become effective as of the Effective Date.

SOUTHWEST POWER POOL, INC.

By: _____

Printed Name: _____

Title: _____

Date: _____

[Insert name of Transmission Owner]

By: _____

Printed Name: _____

Title: _____

Date: _____

By: _____

Printed Name: _____

Title: _____

Date: _____

APPENDIX A TO GIA

Interconnection Facilities, Network Upgrades and Distribution Upgrades

1. Interconnection Facilities:

(a) [insert Interconnection Customer's Interconnection Facilities]:

(b) [insert Transmission Owner's Interconnection Facilities]:

2. Network Upgrades:

(a) [insert Stand Alone Network Upgrades]:

(b) [insert Shared Network Upgrades]:

(c) [insert Contingent Facilities]:

3. Distribution Upgrades:

4. Type and Amount of Interconnection Service:

(a) Maximum Injection Capability at the POI: _____ MW

(b) Type ~~(check only one)~~

☒ Load Limited Resource Interconnection Service

☐ Network Resource Interconnection Service

~~Network Resource Deliverability at the POI: _____ MW~~

~~Deliverability Area associated with Network Resource Deliverability:~~

5. Construction Option Selected by Customer:

6. Permits, Licenses, and Authorizations:

7. Description of the Point of Change of Ownership:

8. Description of the Point of Interconnection:

9. Higher-Queued Interconnection Customers:

10. Candidate Incremental Long-Term Congestion Rights:

* Source

* Sink

* Candidate Incremental LTCR MW

* Term (years from in-service date of Network Upgrade)

11. JTIO Upgrades

[To be included in GIA if HILLGA Customer is responsible for a portion of a portfolio of JTIO Upgrades] HILLGA Customer is subject to the JTIO Generator Charge in accordance with Attachment AV of the SPP Tariff and Appendix I of this GIA.

JTIO Security amount:

A. Transmission Provider:

B. MISO:

APPENDIX B TO HILLGIA

Milestones

APPENDIX C TO HILLGIA

Interconnection Details

1. Description of Generating Facility:

(a) Nameplate Capacity (AC MW)

Wind Generating Facility Output Reduction

To protect the reliability of the Transmission System, a Generating Facility that is a wind plant must be capable of reducing its generation output in increments of no more than fifty (50) MW in five (5) minute intervals. The requirements may be met by using: (a) SCADA control of circuit breakers protecting wind farm collector distribution circuits, (b) automatic control of wind turbine power output, or (c) a combination of (a) and (b).

Inverter-Based Resource EMT Study Results Mitigations

If an Electromagnetic Transient Study is determined to be required by the Transmission Provider and the study results reveal an Adverse System Impact to the Transmission System, mitigation(s) will be the responsibility of the HILLGA Customer and must be implemented prior to the injection of power into the Transmission System.

APPENDIX D TO HILLGIA

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 HILLGA 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 HILLGIA

Commercial Operation Date

[Date]

Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

[Transmission Owner Address]

Re: Generating Facility

Dear :

On [Date] [HILLGA Customer] has completed Trial Operation of Unit No. . This letter confirms that [HILLGA Customer] commenced Commercial Operation of Unit No. at the Generating Facility, effective as of [Date plus one day].

Thank you.

[Signature]

[HILLGA Customer Representative]

APPENDIX F TO HILLGIA

Addresses for Delivery of Notices And Billings

Notices:

Transmission Provider:

Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

Billings and Payments: [Specify addresses for construction invoices, O&M invoices and settlement of ancillary services]

Transmission Provider:

Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

Alternative Forms of Delivery of Notices (telephone, facsimile or email):

Transmission Provider:

Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Phone:

Facsimile: 501-482-2022

[REDACTED]
Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

Operational Communications: [Identify contacts for operations]

Transmission Provider:

[REDACTED]
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936
Phone: [REDACTED]
Facsimile: 501-482-2022

Transmission Owner:

[To be supplied.]

HILLGA Customer:

[To be supplied.]

APPENDIX G TO HILLGIA

Requirements Of Generators Relying On Newer Technologies

Appendix G sets forth requirements and provisions specific to a wind generating plant. All other requirements of this GIA continue to apply to wind generating plant interconnections.

A. Technical Standards Applicable to a Wind Generating Plant

i. Low Voltage Ride-Through (LVRT) Capability

The following reactive power requirements apply only to a newly interconnecting wind generating plant that has executed a facilities study agreement as of September 21, 2016. A wind generating plant to which this provision applies must 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 will be required to withstand for a three-phase fault will 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 Transmission System 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 will be required to withstand for a three phase fault will 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 must 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 Transmission System 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)

A wind generating plant must 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 GIA, 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 HILLGA Customer may not disable power factor equipment while the wind plant is in operation. Wind plants must 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 must provide SCADA capability to transmit data and receive instructions from the Transmission Provider to protect system reliability. The Transmission Provider and the wind plant HILLGA Customer will 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 HILLGIA

Reserved for future use

APPENDIX I TO HILLGIA

Cost Responsibility for Portion of Costs for a Portfolio of JTIQ Upgrades

This Appendix I to this HILLGIA is only applicable if a HILLGA Customer is assigned responsibility for a portion of costs for a portfolio of JTIQ Upgrades, as specified in Appendix A to this GIA.

A. Rate

The HILLGA Customer is required to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff.

B. Security

a. The HILLGA Customer is required to provide security in an amount equal to the portion of the total engineering and construction cost of the JTIQ Upgrades that serves as the basis for the JTIQ Generator Charge to the HILLGA Customer for those JTIQ Upgrades authorized for construction by the Transmission Provider (“JTIQ Upgrade Cost Responsibility”), as specified in Appendix A to this HILLGIA (“JTIQ Security”). The JTIQ Security will be provided to Transmission Provider and JTIQ Transmission Owner(s) in the MISO Region as follows:

i. The JTIQ Security portion for the JTIQ Upgrades authorized for construction by Transmission Provider must be provided to Transmission Provider within the later of: (a) thirty (30) Calendar Days of the execution of this HILLGIA by all Parties; (b) thirty (30) Calendar Days of acceptance of this HILLGIA by FERC if this GIA is filed unexecuted at FERC and the JTIQ Security amount is being protested by HILLGA Customer; or (c) thirty (30) Calendar Days of the filing if the HILLGIA is filed unexecuted and the JTIQ Security amount is not being protested by HILLGA Customer. The JTIQ Security, or any reduced amount applicable to this Interconnection Request, will remain with Transmission Provider for the remaining term of the JTIQ Generator Charge for each JTIQ Upgrade authorized for construction by the Transmission Provider. At HILLGA Customer’s request, such JTIQ Security may be reduced to reflect decreased

remaining JTIQ Upgrade Cost Responsibility applicable to each JTIQ Upgrade authorized for construction by the Transmission Provider on the first anniversary of the In-Service Date of that upgrade and may continue to be reduced to reflect decreased remaining balance of JTIQ Upgrade Cost Responsibility each year over the term of the JTIQ Generator Charge for that JTIQ Upgrade.

i. The following forms of security are acceptable to the Transmission Provider:

a. Letter of credit as specified in Appendix C to Attachment X of the Tariff.

b. Cash;

c. Surety bond issued by an insurer and acceptable to the Transmission Provider; or

d. Guaranty in a form consistent with Appendix D of Attachment X of the Tariff.

ii. The JTIQ Security portion for the JTIQ Upgrades authorized for construction by MISO must be provided by the HILLGA Customer to JTIQ Transmission Owner(s) in the MISO Region pursuant to the terms of the security agreement(s) entered into between the JTIQ Transmission Owner(s) and HILLGA Customer.

b. In the event that the JTIQ Upgrade Cost Responsibility of the HILLGA Customer subsequently increases, HILLGA Customer will be required to provide additional security associated with this increase to SPP within thirty (30) Calendar days of SPP's request for additional security.

c. In the event the HILLGA Customer fails to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff and Section 7 of the Tariff, Transmission Provider will be entitled to draw on the portion of the JTIQ Security posted by the HILLGA Customer for the JTIQ Upgrades authorized for construction by Transmission Provider in the amount of missed payments.

d. JTIQ Security will remain in place for the duration of the JTIQ Generator Charge applicable for each JTIQ Upgrade in accordance with Attachment AV of the Tariff

and in accordance with the MISO Tariff. Any JTIQ Security provided by HILLGA Customer must be kept active and must be available to the Transmission Provider and JTIQ Transmission Owner(s) in the MISO Region in the event that HILLGA Customer fails to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff and in accordance with the MISO Tariff. Any fees or costs associated with the provision of the JTIQ Security are the responsibility of the HILLGA Customer.

C. Default

Default of the HILLGA Customer under Section 7 of the Tariff will be considered a default under this GIA. Default of the HILLGA Customer of the JTIQ security agreement with JTIQ Transmission Owner(s) in the MISO Region will be considered a default under this HILLGIA.

D. Billing and Payment

For administration of billing and related activities associated with the JTIQ Generator Charge for the JTIQ Upgrade Cost Responsibility, Section 7 of the Tariff will be applicable. HILLGA Customer will be treated as a Transmission Customer for the limited purpose of billing and related activities under Section 7 of the Tariff.

E. Termination

Termination of this HILLGIA will not relieve the HILLGA Customer of its obligation to pay the JTIQ Generator Charge in accordance with Attachment AV of the Tariff.

APPENDIX J TO HILLGA

HILLGA Requirements

1. Description of HILL supported with Generating Facility

2.. Limitations on Generating Facility

APPENDIX 4 TO ATTACHMENT BB

INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

Appendix 4 sets forth procedures specific to a wind generating plant. All other requirements of this Attachment BB of the Tariff continue to apply to wind generating plant interconnections.

A. Special Procedures Applicable to Wind Generators

The wind plant Interconnection Customer, in completing the HILLGA Request required by Section 3.4 of the Attachment BB of the Tariff, 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 HILLGA Request conditions, the wind plant may enter the study and receive the base case data as provided for in this Attachment BB of the Tariff.

Before returning the HILLGA Study Agreement, the wind plant HILLGA 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 HILLGA.

MARKET PROTOCOLS

Glossary

Conditional High-Impact Large Load

As defined in Part 1 of the Tariff.

Conditional High-Impact Large Load Service

As defined in Part 1 of the Tariff.

High Impact Large Load

As defined in Part 1 of the Tariff.

Non-Conforming Load

As defined in Attachment AE of the Tariff.

4.1.2.1.2 Non-Conforming Load

Non-Conforming Load, as described in Section 0, is more process driven and is separated from the load forecast application because it does not follow the normal predictable patterns. Load that is modeled to represent the charging capabilities of ESRs not registered as an MSR must be considered a Non-Conforming Load. In addition, all HILLs must follow the requirements for are considered Non-Conforming Loads.

Market Participants with registered Non-Conforming Load or HILLs must submit hourly load forecasts for the HILL or the Non-Conforming Load consumption to SPP before SPP begins the Day-Ahead RUC process for the Operating Day and for six (6) days following the Operating Day. After the initial submission is received before SPP begins the Day Ahead RUC process, Market Participants are allowed to submit hourly load forecasts for Non-Conforming Load after SPP begins the Day-Ahead RUC process up to thirty minutes before the Operating Hour.

Market Participants are encouraged to submit a forecast of each registered Non-Conforming Load for two (2) hours following the current interval for each 15-minute interval that the forecast deviates from the hourly profile by 10% or 25 MW, whichever is greater. For HILLs, this forecast submission is mandatory. If the 15-minute forecast is unavailable, SPP will interpolate using the submitted hourly Non-Conforming Load forecast.

Market Participants must also submit a 5-minute forecast updated on a 5-minute rolling 15-minute ahead basis. The submitted HILL or Non-Conforming Load will be combined with the conforming load forecasts to create the total SPP Forecast Area forecast. Market Participants are required to submit actual HILL or Non-Conforming Load data for each HILL or Non-Conforming Load for which metering is available or estimates of HILL or Non-Conforming Load for which metering is not available (submitted forecast value can be used as actual).

4.2.1 Must-Offer Requirement

Market Participants are required to offer available Resources to the Day-Ahead Market, RUC, and RTBM as described in this section below.

4.2.1.1 Day-Ahead Market

(A) Each Market Participant with registered load must satisfy the must offer obligation for each Asset Owner associated with that registered load as set forth in Section 4.2.1.1 based on the following criteria:

- (1) A Market Participant's load for an Asset Owner for purposes of this section must be equal to the Market Participant's maximum hourly Reported Load for that Asset Owner for the Operating Day. When an Asset Owner selling power under a bilateral contract has registered the load of the Asset Owner that is buying power under the bilateral contract as described under Section 6.2.8, the buyer's Reported Load must be reduced by the amount of the buyer's load registered by the seller and the seller's Reported Load must be increased by the amount of the buyer's load registered by the seller. If an MSR is Self-Charging during the maximum Reported Load hour, a Market Participant's available generation that is used to satisfy the must offer obligation for an Asset Owner is reduced by the Self-Charging MW for that hour.

A Market Participant's daily Operating Reserve obligation for an Asset Owner must be equal to the sum of that Market Participant's maximum daily Regulation-Up Service, Regulation-Down Service, Contingency Reserve, Ramp Capability Up, Ramp Capability Down, and Uncertainty Reserve obligation for that Asset Owner as calculated by SPP as described in Section **Error! Reference source not found.**(4).

- (2) Resources submitted with a Commitment Status of Market, Self or Reliability may be used to satisfy this requirement.
- (3) A load-serving Market Participant's net Resource capacity, for an Asset Owner for purposes of this section must include:
 - (a) Offered capacity by Resources identified in (3) above less the Operating Reserve obligation identified in (2) above; and
 - (b) Firm Power purchases less the Firm Power sales, except that, if the seller has registered the buyer's load associated with a firm power sale, such firm power sale will not act to increase the buyer's net Resource capacity or act to reduce the seller's net Resource capacity.
 - (i) For purposes of this Section 4.2.1.1, firm power purchases and firm power sales will mean sales and purchases that are deliverable with service comparable to Firm Point-To-Point Transmission Service or Firm Network Integration Transmission Service with the supplier assuming the obligation to provide both capacity and energy. Additionally, firm power purchases will include an Asset Owner's share of a Jointly Owned Unit to the extent that such shares have not been registered as separate Resources either under

the JOU Individual Resource Option as described under Section **Error! Reference source not found.**, or using Combined Interest Resource modeling as described under Section **Error! Reference source not found.** In order to verify firm power purchases and firm power sales, supporting documentation must be provided to the Market Monitor upon request. Market Participants have the option to input information regarding firm power purchases and firm power sales into the Market Monitor website. If no information is input into this website, the Market Monitor will contact the Market Participant for that information. The Market Monitor may confirm the firm purchase or sale with the counterparty and will include the transacted MWs to calculate net Resource capacity for both purchaser and seller. If one of the parties dispute the firm purchase or sale to the Market Monitor, then the firm purchase or sale will not be used in the calculation of either the purchaser's or seller's net Resource capacity.

(B) A Market Participant's compliance with the must-offer obligation for an Asset Owner is as follows:

(1) A Market Participant that has offered all of its available Resources for an Asset Owner with a Commitment Status of Market, Self, or Reliability for an hour of the Operating Day is deemed to be compliant with the must-offer requirement for that Asset Owner for that hour regardless of its maximum hourly Reported Load and/or Operating Reserve obligation.

(a) A Market Participant that does not have any registered Resources for an Asset Owner has met the must-offer requirement for that Asset Owner because it does not have any Resources with a Commitment Status of Not Participating for that Asset Owner.

(2) A Market Participant that does not meet the condition described in (B)(1) above for an Asset Owner for an hour of the Operating Day, but has net Resource capacity for that Asset Owner for that hour greater than or equal to 90% of its load for that Asset Owner, as described in (A)(1) above, is deemed to be compliant with the must-offer requirement for that Asset Owner for that hour.

~~(2)(3) A Market Participant with a Resource supporting HLLs must be made available up to the lesser of the HLL Demand Bid or the Resource's applicable GIA Interconnection Service limit with a commitment status of Market, Self, or Reliability, for each hour of the Operating Day with a corresponding HLL Demand Bid. A Resource supporting CHLLs must be made available up to the lesser of the CHLL Demand Bid or the Resource's applicable GIA Interconnection Service limit with a commitment status described in Market or Self, for each hour of the Operating Day with a corresponding CHLL Demand Bid.~~

~~(3)(4)~~ To the extent a Market Participant does not meet the conditions for an Asset Owner described in either Section (B)(1) and (2) ~~or Section (B)(3) for Market Participants with Resources~~

supporting a BILL or CHILL, the Market Participant will be deemed noncompliant with the must-offer requirement for that Asset Owner for that hour and will be assessed a penalty for that Asset Owner for that hour as described in Section **Error! Reference source not found.**

~~(4)~~(5) Resources used as the source of a GFA Carve Out must be offered, if available, with a sufficient capacity to cover the GFA Carve Out Schedule. GFA Carve Out treatment is only available to the extent that the Resources are offered into the DA Market using a Commitment Status of Market, Self or Reliability. To the extent the source is external, an Import Interchange Transaction must be submitted in the DA Market with a sufficient capacity to cover the GFA Carve Out Schedule.

- (C) The Market Monitor will monitor a Market Participant's load, Operating Reserve obligation, offered Resources and net Resource capacity, for an Asset Owner for each hour of the Operating Day to determine whether the Market Participant has complied with the must offer obligation for that Asset Owner set forth in Section 4.2.1.1 B.

4.3.1.2 DA Market Execution

SPP clears the Day-Ahead Market for each hour of the upcoming Operating Day based on the inputs described above. A simultaneous co-optimization methodology, utilizing the SCUC and SCED algorithms is employed to simultaneously perform the following tasks:

- (1) Commit offered Resources, Import Interchange Transaction Offers and Virtual Energy Offers using the SCUC algorithm to meet the Demand Bids, Virtual Energy Bids, Export Interchange Transactions Bids, Instantaneous Load Capacity requirements and Operating Reserve requirements at least cost throughout the projected upcoming Operating Day while respecting Resource operating constraints and transmission constraints;
 - (a) The DA Market SCUC algorithm will initially consider commitment of Resources with a Commit Status of Market and Self, including Resources committed in the Multi-Day Reliability Assessment process, only including capacity up to the Resources' Maximum Economic Capacity Operating Limit (or Maximum Regulation Capacity Operating Limit if selected for Regulation-Up Service and/or Regulation-Down Service), Maximum Discharge Limit, or down to Minimum Charge Limit and down to the Resources Minimum Economic Capacity Operating Limit (or Minimum Regulation Capacity Operating Limit if selected for Regulation-Down Service and/or Regulation-Up Service), Minimum Discharge Limit, or up to Maximum Charge Limit. In addition, MCRs that have registered under the option described under Section **Error! Reference source not found.** are not eligible for regulation selection in any hour in which they are transitioning from one configuration to another.
 - (i) If this capacity is not sufficient to meet the fixed Demand Bids, fixed Export Interchange Transaction Bids, the upper bound of the Instantaneous Load Capacity

requirements and Operating Reserve requirements on a system-wide basis, the DA Market SCUC algorithm will, in priority order ~~until the capacity shortage is eliminated~~: (1) curtail non-firm fixed Export Interchange Transaction Bids ~~until the capacity shortage is eliminated~~; and (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limit, Maximum Emergency Discharge Limit, and down to Minimum Emergency Charge Limit as applicable, commit Resources' with a Commit Status of Reliability, and/or de-commit Self-Charging MSRs on an economic basis until the capacity shortage is eliminated while attempting to maintain the Regulation-Up requirement to the extent possible. Capacity incorporated by the Day-Ahead Market SCUC will be available to the Day-Ahead Market SCED. This includes emergency limits where applicable. ~~The Transmission Provider may, as needed, cap or limit fixed CHILL Demand Bids forecast in order to manage system reliability under capacity shortfall conditions.~~

- (ii) If there is a capacity surplus on a system-wide basis calculated as the sum of self-committed capacity at minimum output, fixed Import Interchange Transaction Offers, the lower bound of the Instantaneous Load Capacity requirement and the Regulation-Down requirement that is in excess of the sum of Fixed Demand Bids and fixed Export Interchange Transaction Bids, the DA Market SCUC algorithm will, in priority order: (1) curtail non-firm fixed Import Interchange Transaction Offers until the capacity surplus is eliminated; and (2) incorporate capacity down to Resources' Minimum Emergency Capacity Operating Limit, Minimum Emergency Discharge Limit, Maximum Emergency Charge Limit, and/or commit any MSR available for charging with a Commit Status of Reliability on an economic basis until the capacity surplus is eliminated while attempting to maintain the Regulation-Down requirement to the extent possible. Capacity incorporated by the Day-Ahead Market SCUC will be available to the Day-Ahead Market SCED. This includes emergency limits where applicable.
- (a) To the extent that a particular security constraint impacting only the Transmission System cannot be directly addressed within the DA Market SCUC algorithm and is not a Local Reliability Issue, SPP may manually commit Resources and/or manually decommit Resources, including Resources with a Commitment Status of Self, to alleviate that Transmission System security constraint in accordance with its authority as Reliability Coordinator. Such manual commitments will be selected by SPP in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of Attachment AE to the Tariff. Additionally, such manual commitments will be selected by SPP to ensure that commitment costs are minimized while adhering to Transmission System security constraints and the Resource operating parameter constraints submitted as part of the Day-Ahead Market Offers. The recovery of the compensation paid by SPP for such committed Resources under Section **Error! Reference**

source not found. will be collected by SPP regionally as described under Section **Error! Reference source not found.**

- (b) A Local Reliability Issue or a Local Emergency Condition may need to be addressed during the Day-Ahead Market process. Local Reliability Issues, either initially recognized directly as part of the Day-Ahead Market process or previously recognized **and committed** as part of any RUC process, may require **(1)** out of merit commitment or, decommitment of one or more Resources ~~or (2) reductions in applicable local CHILL demand bids forecast~~ in the Day-Ahead Market to recognize or continue to recognize such Local Reliability Issues. A Local Emergency Condition previously recognized **and committed** as part of any RUC process may require **(1)** out of merit commitment or decommitment of one or more Resources ~~or (2) reductions in applicable local CHILL demand bids forecast~~ in the Day-Ahead Market to continue to recognize the Local Emergency Condition. In the case where a Local Reliability Issue Commitment is initiated directly as part of the Day-Ahead Market process, SPP will issue or the local transmission operator will request SPP to issue such instructions and any commitment ~~or reduction in applicable local CHILL demand bids forecast~~ by SPP will be selected **by SPP** in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of Attachment AE to the Tariff. To the extent that SPP, at the request of a local transmission operator, initially issues or continues to issue instructions to a Resource to address a Local Reliability Issue or continues to issue instructions to a Resource to address a Local Emergency Condition, such Resource will be eligible for compensation in the same manner as any other Resource. The recovery of the compensation paid by SPP for such committed Resources under Section **Error! Reference source not found.** will be collected by SPP locally as described under Section **Error! Reference source not found.**(1).
 - (c) SPP, the local transmission operator, and the Resource owners will develop operating guides to be applied to manual commitments made by SPP, including such commitments made at the request of the local transmission operator to relieve known and recurring Local Reliability Issues in the Day-Ahead Market. Such Resources will be compensated in the same manner as any other Resource. The recovery of such compensation paid by SPP for such committed Resources under Section **Error! Reference source not found.** will be collected by SPP locally as described under Section **Error! Reference source not found.**(1).
 - (d) SPP will re-run the Day-Ahead SCUC algorithm after any manual commitments, time permitting, if such manual commitments were not included in the initial run and will notify the Market Participants that units were manually committed.
- (2) Using the commitment results from the SCUC, clear Resource Offers and Import Interchange Transaction Offers to meet Demand Bids, Virtual Energy Bids, Export Interchange Transaction Bids and Operating Reserve requirements at minimum cost for each hour of the upcoming

Operating Day using the SCED algorithm while respecting Resource operating constraints and transmission constraints as described in Section 3.1.1.

- (a) The SCED algorithm includes marginal loss sensitivity factors which approximate the change in marginal system losses for a change in Energy dispatch. Inclusion of these factors further optimizes the Energy dispatch and reduces overall production costs.
- (b) In certain situations, enforcing constraints may result in a solution that is not feasible at a Shadow Price less than an appropriately priced VRL. In such cases, SPP must apply Violation Relaxation Limits (VRLs) in SCED as described under Section **Error! Reference source not found..**
- (c) To ensure that Market Participants are indifferent as to whether they are cleared for Energy or Operating Reserve, the co-optimization logic will provide through the Shadow Price calculation Market Clearing Prices for Operating Reserve that include any lost opportunity costs incurred as a result of Operating Reserve clearing.
- (d) MCRs that have registered under the option described under Section **Error! Reference source not found.** with Transition Times greater than 30 minutes are not eligible to clear Contingency Reserve in any hour in which they are transitioning from one configuration to another.

4.3.2.2 Day-Ahead RUC Execution

Using the inputs described above, SPP performs a capacity adequacy analysis for the upcoming Operating Day using the SCUC algorithm. The capacity adequacy analysis provides advisory information to the SPP Operators.

- (1) The objective of the SCUC is to commit Resources to meet the SPP Mid-Term Load Forecast, Export Interchange Transactions, Instantaneous Load Capacity requirements and Operating Reserve requirements less Import Interchange Transactions over the Operating Day such that commitment costs are minimized while adhering to transmission system security constraints and the Resource operating parameter constraints submitted as part of the RTBM Offers;
- (2) Commitment costs are defined as Start-Up Offer, No-Load Offer and incremental cost to operate at minimum output as defined in the submitted Energy Offer Curve. Incremental Energy costs above minimum output and Operating Reserve Offers are not considered by the RUC SCUC in making commitment decisions;
- ~~(3)~~—The SCUC algorithm will initially consider commitment of Resources with a Commit Status of Market or Self only including capacity up to the Resources' Maximum Economic Capacity Operating Limit, Maximum Discharge Limit, or Minimum Charge Limit (or Maximum Regulation Capacity Operating Limit if selected for Regulation-Up Service and/or Regulation-Down Service) and down to the Resources Minimum Economic Capacity Operating Limit, Minimum Discharge Limit, or Maximum Charge Limit (or Minimum Regulation Capacity Operating Limit if selected for Regulation-Down Service and/or Regulation-Up Service). In addition, MCRs that have

registered under the option described under Section **Error! Reference source not found.** are not eligible for regulation selection in any hour in which they are transitioning from one configuration to another.

- (a) If this capacity plus Import Interchange Transactions is not sufficient to meet the system-wide SPP Mid-Term Load Forecast, Export Interchange Transactions, the upper bound of Instantaneous Load Capacity requirements and Operating Reserve requirements, the SCUC algorithm study will, in priority order until the capacity shortage is eliminated: (1) curtail non-firm Export Interchange Transactions until the capacity shortage is eliminated; and (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limit, Maximum Emergency Discharge Limit, or Minimum Emergency Charge Limit, commit Resources' with a Commit Status of Reliability, (3) de-commit charging Resources that were committed in the DA Market with a Commit Status of Market, and/or (4) de-commit self-committed charging Resources until the capacity shortage is eliminated. The Transmission Provider may, as needed, cap or limit fixed CHILL Demand Bids forecast in order to manage system reliability under capacity shortfall conditions.
- (b) If the sum of self-committed capacity at minimum output, Import Interchange Transactions, the lower bound of Instantaneous Load Capacity requirement, the system-wide Regulation-Down requirement, and the Ramp Capability Down requirement is in excess of the sum of the SPP system-wide Mid-Term Load Forecast and Export Interchange Transactions, the RUC SCUC algorithm study will, in priority order: (1) curtail non-firm fixed Import Interchange Transactions until the capacity surplus is eliminated; and (2) incorporate capacity down to Resources' Minimum Emergency Capacity Operating Limit, Minimum Emergency Discharge Limit, or Maximum Emergency Charge Limit; (3) commit any available Resource with a Commit Status of Reliability that is capable of charging; (4) de-commit Resources that were committed in the DA Market with a Commit Status of Market; and (5) de-commit self-committed Resources until the capacity surplus is eliminated.
- i. If there is a transmission constraint within a Reserve Zone occurring simultaneously with a Reserve Zone excess capacity event, SCUC may commit additional Resources and/or de-commit Resources to relieve the constraints provided that any commitment changes do not aggravate the excess capacity situation.
- (c) To the extent that a particular Transmission System reliability issue cannot be directly addressed within the SCUC algorithm and is not a Local Reliability Issue, SPP may manually commit Resources, including Resources with a Commit Status of Reliability, and de-commit Resources, including Resources with a Commit Status of Self, to alleviate such reliability issues in accordance with its authority as Reliability Coordinator. Such manual commitments will be selected by SPP in a non-discriminatory manner, as determined by the Market Monitor through the process described under Section 6.1.2.1 of Attachment AE to the Tariff. Additionally, such manual commitments will be selected by SPP such that commitment costs are minimized while adhering to Transmission System security constraints and the Resource operating parameter constraints submitted as part of

the RTBM Offers. The recovery of any compensation paid by SPP under Section **Error! Reference source not found.** to such committed Resources will be collected by SPP regionally as described under Section **Error! Reference source not found.**.

- (d) A Local Reliability Issue may arise within the operating area of a local transmission operator. Such Local Reliability Issues may require (1) out of merit commitment, decommitment or dispatch instructions to be issued to one or more Resources ~~-or (2) reductions in applicable local CHILL Demand Bids~~ to resolve the Local Reliability Issue. In such cases, SPP will issue or the local transmission operator will request SPP to issue such instructions and SPP shall commit the most applicable Resource, ~~or reduce the applicable CHILL Demand Bids~~ using the same process it would use to manually commit a Resource without the request of a local transmission operator. To the extent that SPP, at the request of a local transmission operator, commits a Resource to address a Local Reliability Issue such Resource will be eligible for compensation in the same manner as any other Resource. The recovery of such compensation paid by SPP will be collected locally as described under Section **Error! Reference source not found.**.
- (e) SPP, the local transmission operator, and Resource owners shall develop operating guides to be applied to manual commitments made by SPP, including such commitments made at the request of the local transmission operator to relieve known and recurring Local Reliability Issues in the Day-Ahead RUC. Such Resources will be compensated in the same manner as any other Resource. The recovery of such compensation paid by SPP for such committed Resources under Section **Error! Reference source not found.** will be collected by SPP locally as described under Section **Error! Reference source not found.**.

Any curtailment of schedules, use of Reliability Status Resources or use of Emergency operating limits by the RUC algorithms will only be advisory information to the SPP RUC Operators. Day-Ahead RUC and Intra-Day RUC Operators will determine which of these options should be acted on and when as described in the Day-Ahead and Intra-Day RUC Results sections.

4.4.1.3 Intra-Day RUC Execution

Using the inputs described above, SPP performs a capacity adequacy analysis for the upcoming Operating Day and throughout the Operating Day using a SCUC algorithm. The capacity adequacy analysis provides advisory information to the SPP Operators.

- (1) The objective of the SCUC is to commit Resources to meet the SPP Load Forecast, Export Interchange Transactions, Instantaneous Load Capacity requirements and Operating Reserve requirements less Import Interchange Transactions over the Operating Day such that commitment costs are minimized while adhering to transmission system security constraints and the Resource operating parameter constraints submitted as part of the RTBM Offers;
- (2) Commitment costs are defined as Start-Up Offer, No-Load Offer and incremental cost to operate at minimum output as defined on the submitted Energy Offer Curve. Incremental Energy costs

above minimum output and Operating Reserve Offers are not considered by the RUC SCUC in making commitment decisions;

- (3) The SCUC algorithm will initially consider commitment of Resources with a Commit Status of Market or Self only including capacity up to the Resources' Maximum Economic Capacity Operating Limit (or Maximum Regulation Capacity Operating Limit if selected for Regulation-Up Service and/or Regulation-Down Service), Maximum Discharge Limit, or Minimum Charge Limit and down to the Resources Minimum Economic Capacity Operating Limit (or Minimum Regulation Capacity Operating Limit if selected for Regulation-Down Service and/or Regulation-Up Service), Minimum Discharge Limit, or Maximum Charge Limit. In addition, MCRs that have registered under the option described under Section **Error! Reference source not found..1** are not eligible for regulation selection in any hour in which they are transitioning from one configuration to another.

— If this capacity plus Import Interchange Transactions is not sufficient to meet the system-wide SPP Load Forecast, Export Interchange Transactions, the upper bound of Instantaneous Load Capacity requirements and Operating Reserve requirements, the SCUC algorithm study will, in priority order until the capacity shortage is eliminated: (1) curtail non-firm Export Interchange Transactions until the capacity shortage is eliminated; and (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limit, Maximum Emergency Discharge Limit, or Minimum Emergency Charge Limit, commit Resources' with a Commit Status of Reliability; (3) de-commit charging Resources that were committed in the DA Market with a Commit Status of Market, and (4) de-commit self-committed charging Resources until the capacity shortage is eliminated.

The Transmission Provider may, as needed, cap or limit fixed CHILL Demand Bids forecast in order to manage system reliability under capacity shortfall conditions.

(a)

- (b) If the sum of self-committed capacity at minimum output, Import Interchange Transactions, the lower bound of Instantaneous Load Capacity requirements and the system-wide Regulation-Down requirement is in excess of the sum of the SPP system-wide Mid-Term Load Forecast and Export Interchange Transactions, the SCUC algorithm study will, in priority order: (1) curtail non-firm fixed Import Interchange Transactions until the capacity surplus is eliminated; and (2) incorporate capacity down to Resources' Minimum Emergency Capacity Operating Limit, Minimum Emergency Discharge Limit, or Maximum Emergency Charge Limit; (3) commit any available Resource with a Commit Status of Reliability that is capable of charging; (4) de-commit Resources that were committed in the DA Market with a Commit Status of Market, and (5) de-commit self-committed Resources that were committed following the Day-Ahead RUC process until the capacity surplus is eliminated.

- (i) If there is a transmission constraint within a Reserve Zone occurring simultaneously with a Reserve Zone excess capacity event, SCUC may commit additional Resources to relieve the constraints provided that the additional commitment does not aggravate the excess capacity situation.
- (c) To the extent that a particular reliability issue impacting only the Transmission System cannot be directly addressed within the SCUC algorithm and is not a Local Reliability Issue, SPP may manually commit Resources, including Resources with a Commit Status of Reliability, and de-commit Resources, including Resources with a Commit Status of Self, to alleviate such Transmission System reliability issues. Such manual commitments will be selected in a non-discriminatory manner, as determined by the Market Monitor through the process described under Section 6.1.2.1 of Attachment AE to the Tariff. Additionally, such manual commitments will be selected by SPP such that commitment costs are minimized while adhering to Transmission System security constraints and the Resource operating parameter constraints submitted as part of the RTBM Offers. The recovery of the compensation paid by SPP for such committed Resources under Section **Error! Reference source not found.** will be collected by SPP regionally as described under Section **Error! Reference source not found.**.
- (d) A Local Reliability Issue may arise that may require out of merit commitment, decommitment or dispatch instructions to be issued by SPP to one or more Resources or the reduction of applicable local CHILL Demand Bids forecast to resolve the Local Reliability Issue. Time permitting, the local transmission operator will request SPP to issue such instructions and any commitment or reduction in CHILL Demand Bids forecast by SPP will be selected by SPP in a non-discriminatory manner, which will be verified by the Market Monitor through the process described under Section 6.1.2.1 of Attachment AE to the Tariff. To the extent SPP issues instructions to a Resource at the request of a local transmission operator to resolve a Local Reliability Issue, the Resource will be eligible for compensation in the same manner as any other Resource. The recovery of the compensation paid by SPP for such committed Resources under Section **Error! Reference source not found.** will be collected by SPP locally as described under Section **Error! Reference source not found.**. To the extent time does not permit, the local transmission operator may issue such instructions to the Resource in accordance with its authorities as a reliability entity if the Local Reliability Issue is a Local Emergency Condition. In such cases, the following will take place:
 - (i) If initial instructions are issued by a local transmission operator, the Transmission Operator will notify SPP of the instructions given to the Resource.
 - (ii) The Transmission Operator and SPP will coordinate to ensure subsequent instructions are provided by SPP.

- (iii) SPP will log such instructions as manual commitment, decommitment or Out of Merit Dispatch instruction, as appropriate, as if it gave such instruction to the Resource.
- (iv) The Resource will be eligible to receive the compensation for such instructions in the same manner as if it had been committed by SPP, except that, if the Market Monitor determines that the Resource was selected in a discriminatory manner and the Resource was an affiliated Resource, such Resource will not be eligible to receive compensation under Section **Error! Reference source not found.**. For purposes of making such determination by the Market Monitor, the standards and procedures applicable to Resource selection in the Intra-Day Reliability Unit Commitment process as described in Section 6.1.2.1 of Attachment AE to the Tariff, apply. Recovery of any compensation will be collected by SPP locally as described under Section **Error! Reference source not found.**.
- (v) SPP, the local transmission operator, and Resource owners will develop operating guides to be applied to manual commitments made by SPP including such commitments made at the request of the local transmission operator or manual commitments made by the local transmission operator during a Local Emergency Condition to relieve known and recurring Local Reliability Issues in the Intra-Day RUC. Such Resources will be compensated in the same manner as any other Resource. The recovery of the compensation paid by SPP under Section **Error! Reference source not found.** will be collected by SPP locally as described under Section **Error! Reference source not found.**.

6.1.1.7 Load Limited Resources

The Maximum Economic Capacity Operating Limit Offer for a Resource with a Load Limited Generation Interconnection Agreement Offers may be no greater than the MW value of the forecast for the HILL they support. If a Market Participant updates a HILL forecast, corresponding updates may be needed to the Load Limited Resource Offer to maintain compliance.

6.2.2 Non-Conforming Load

Each Market Participant must identify any Non-Conforming Load asset **that the Asset Owner specifically forecasts** and the PNode or Aggregate PNode (APNode) at which it resides. A Non-Conforming Load may only be represented by an APNode if the load is in the same location (e.g. a single industrial process served by more than one bus). For the purposes of this registration requirement, any Non-Conforming Load of 50 MW or greater **and all HILLs** must be identified.

6.2.9 High Impact Large Load

High Impact Large Loads ~~are Non-Conforming Loads and~~ must submit a forecast in accordance with Section 4.1.2.1.2 of the Protocols.

A load may be considered a High Impact Large Load if the point of interconnection kV level is (1) 69kV or below and the HILL peak demand is 10MWs or greater or (2) greater than 69kV and the HILL peak demand is 50MWs or greater. New or modified loads meeting (1) or (2) above will be classified as HILL if a request is submitted to the Transmission Provider pursuant to Attachment AQ, Attachment AX, or Attachment BA on or after the initial effective date of Attachment BA of the Tariff.

HILLs must:

1. Be identified during registration.
2. Follow the load requirements outlined in Section 6.2.1 of the Protocols.
4. Follow the requirements outlined in Section 2.21 of the Tariff.
- 2.3.
4. Provide Real-Time MW to SPP via ICCP with a 10-second scan rate. Any registered behind-the-meter generation must be separately metered and telemetered and may not be netted with the HILL.
3. Follow the ride-through requirement guidelines established in SPP HILL Ride-Through Requirements.
- 5.

In the case these requirements are not followed and the reliability of the Transmission System is at risk as a result, SPP may take action to mitigate risk including, but not limited, to capping, curtailing, or instructing disconnection of HILLs.

6.2.9.1 Conditional High Impact Large Load

(a) Conditional High Impact Large Loads must follow the requirements applicable to other loads, Non-Conforming Loads, and High Impact Large Loads.

~~(b) In addition to the above, the Market Participant representing a CHILL must be able to receive curtailment operating instructions from SPP and be able to curtail load in accordance with those instructions.~~

~~(n)(c) Each Market Participant must identify any Conditional High Impact Large Load asset and the PNode at which it resides. A Conditional High Impact Large Load cannot be a part of an Aggregated PNode.~~

SPP OPERATING CRITERIA

3.6 SPP Reliability Coordinator EOP Reviews

This section is a set of guidelines that will be applicable for all Emergency Operating Plans (EOPs). The goal of this section is to give criteria that in addition to the NERC standard requirements are recommended for consideration to be included in TOP/BA EOPs.

1. Provisions for Operator-controlled load shedding that at regular intervals the load that is being shed is rotated between different areas in the TOP's footprint, especially when load shedding is needed for extended periods.

2. Prioritize critical natural gas loads in order to protect these critical loads from manual and automatic load shedding.

~~2.3. Provisions for identification and curtailment of Conditional High Impact Large Load.~~

5.2 Node Connectivity Requirement

SPP operates Inter-Control Center Communications Protocol (ICCP) nodes at both the primary and backup sites. Both the primary and backup site ICCP nodes feed real-time data to their primary and backup site Energy Management Systems concurrently. To ensure maximum availability of ICCP data required for reliability, the following connectivity requirements are required for entities registered with NERC as a GOP or TOP within the SPP RC Area:

All TOPs are required to configure their ICCP nodes to connect to the SPP primary and backup sites concurrently and to make the same Block 1 and Block 2 data available to both nodes.

All TOPs and GOPs are required to configure two ICCP nodes so that, in the event of a failure of their active ICCP node, their alternate ICCP node reconnects to SPP's ICCP nodes within 240 seconds.

If the TOP or GOP has a third-party contract for their ICCP connections, then the third party should be able to reconnect within 240 seconds.

All GOPs with more than 1500 MW of net aggregate generation or fifteen capacity resources [or generation supporting High Impact Large Loads](#) in the SPP BA Area are required to configure two ICCP nodes to read their Integrated Marketplace resource set point instructions from both SPP's primary and secondary ICCP nodes concurrently.

In the event of an outage on ICCP Nodes:
Planned maintenance outages should comply with the Outage Scheduling Information of the RDS (Telemetry and Control System Status). For forced or unplanned outages, the TOP or GOP should contact SPP and follow the Outage Scheduling Information of the RDS (Telemetry and Control System Status).

SPP PLANNING CRITERIA

5.1 CONCEPTS

For the purposes of Section 5 of the SPP Criteria the transmission system shall be defined as facilities under the functional control of the SPP Open Access Transmission Tariff (OATT) or the Bulk Electric System (BES). The transmission system shall be capable of performing reliably under a wide variety of expected system conditions while continuing to operate within equipment and electric system thermal, voltage, and stability limits. The transmission system, at a minimum, shall be planned to withstand all single element contingencies and maintenance outages over the load conditions of all applicable seasonal models as required for each planning process. Extreme event contingencies which measure the robustness of the electric systems should be evaluated for risks and consequences. The NERC Reliability Standards define specific requirements where adherence provides a measurable degree of reliability for the BES. SPP provides additional coordinated regional transmission planning requirements to promote reliability through this Criterion and related "Transmission Planning Process" (Attachment O) in the OATT. As recognized in Attachment O, SPP is responsible for assessing requests for interconnection of generation facilities to the transmission system (Attachment V [and Attachment BB](#) of the OATT) and for assessing upgrades (ITP), retirement (Attachment AB of the OATT), replacement (Attachment V of the OATT), or establishment of delivery points (Attachment AQ, [or Attachment AX](#) ~~or Attachment BA~~ of the OATT).

5.2 DEFINITIONS

All capitalized terms shall have their meaning as defined in the SPP OATT or NERC's Glossary of Terms (and as used in the NERC Reliability Standards), unless defined below or noted within this document.

The definition of Transmission Material Modification is used for purposes of evaluating changes to existing non-radial facilities placed under the functional control of the SPP Regional Transmission Organization (non-radial Transmission System facility) and any additional BES interconnections of a transmission facility. The definition will be used for any tariff process that references Transmission Material Modification. The definition of Qualified Change is used for purposes of compliance with the requirements of NERC's mandatory reliability standard FAC-002-04¹, or any other NERC mandatory reliability standard that refers to a "qualified change." If one or more Transmission Material Modification or Qualified Change criterion are met, SPP shall analyze these changes to meet the requirements of SPP OATT processes as the Transmission Provider and of any NERC mandatory reliability standard as the Planning Coordinator. Any change outside of

this definition may be submitted to the Planning Coordinator for evaluation.

Nominal Voltage – The root-mean-square, phase-to-phase voltage by which the system is designated and to which certain operating characteristics of the system are related. Examples of nominal voltages are 500 kV, 345 kV, 230 kV, 161 kV, 138 kV, 115 kV and 69 kV.

Qualified Change – A permanent change (that is typically greater than 12 months in duration) to an existing BES interconnections of transmission, generation, or electricity end-user Facility, pursuant to the following criteria:

1) *Transmission Qualified Change* – A “Transmission Material Modification,” as defined in this Section 5.2 of the SPP Planning Criteria, and further described in Sections 5.4 and 5.5 of this SPP Planning Criteria.

2) *Generation Qualified Change* – A change to existing generation or a Generator Interconnection Request or its Interconnection Facilities, pursuant to Attachment V [and Attachment BB](#) of the SPP OATT. Any changes studied and deemed a “Material Modification,” as defined in Section 1 of Attachment V of the SPP OATT are subject to the requirements of Attachment V [or Attachment BB, respectively](#).

3) *Electricity End-User Qualified Change* – A change in delivery point facilities, to upgrade, retire, replace or establish a delivery point, including metering or other facilities at such location, or for unexpected step load changes at an existing delivery point at the discretion of the host Transmission Owners in accordance with Attachment AQ [or Attachment AX](#) ~~and Attachment BA~~ of the SPP OATT.

Transmission Material Modification- A permanent change (that is typically greater than 12 months) to BES transmission or SPP OATT facilities. These permanent changes include:

- Reduction to a non-radial Transmission System facility or BES transmission facility’s normal rating or emergency rating greater than 20% (derate);
- Proportional changes to the magnitude of the non-radial Transmission System facility or BES facility’s impedance that is greater than +/- 30% from its original positive sequence impedance value;
- Changes in operating voltage of a non-radial Transmission System or BES transmission facility;
- Changes in system configuration including the connection of new non-radial Transmission facilities or BES facilities or disconnection of existing non-radial Transmission facilities or BES facilities;
- Changes in system protection that would reduce fault-interrupting capability or fault-clearing expediency for events that are included in the SPP Annual data request.

5.6 Electromagnetic Transient (EMT) Screening and Studies for High Impact Large Loads

- All High Impact Large Loads (HILL) as defined in the SPP Tarif will require a short-circuit ratio and critical clearing time (SCRCCT) analysis to determine if detailed EMT analysis is needed.
 - If detailed EMT analysis is needed SPP may take into account the following:
 - HILL frequency response and damping.
 - Control instability and sub synchronous interactions.
 - Interaction with grid-following or grid-forming inverter based resources.
 - Harmonic interactions.
 - Transients such as Fault-Induced Delayed Voltage Recovery (FIDVR).

SPP BUSINESS PRACTICES

Business Practice 7250

6.3 SYSTEM STUDIES FOR NON-JURISDICTIONAL FACILITIES

Generator interconnections that are not subject to the SPP OATT or the open access transmission tariff of neighboring transmission owners may still require studies to assess their impact on SPP's transmission system or that of the directly connected Transmission Owner.

The Transmission Owner will notify SPP of interconnection requests meeting the following criteria:

- Individual units of 5 MW or more

This applies to interconnection requests submitted directly to the Transmission Owner due to exemptions in this business practice or as required by the Transmission Owner's processes for study under SPP's study process.

Additionally, the Transmission Owner must notify SPP of modifications to existing or planned/approved generation facilities, regardless of size, if they may materially impact the SPP Transmission System.

SPP and/or the Transmission Owner will evaluate interconnection requests that are not subject to OATT requirements and determine whether the interconnection study will be performed by SPP and/or the Transmission Owner.

Transmission Owner is not required to notify SPP of generation below 5 MW individually if it determines there is no impact on facilities under the SPP Tariff.

Generator interconnections, not subject to the OATT, may still require studies to identify impacts on SPP's or the directly connected Transmission Owner's transmission system. The Transmission Owner will notify SPP of interconnection requests of 5 MW or more of existing and proposed ~~that are submitted directly~~

~~to the Transmission Owner because they fall under the exemptions in this business practice; or are otherwise required by the Transmission Owner's processes to be studied pursuant to SPP's study process. , regardless of size SPP and/or the Transmission Owner will evaluate each interconnection request not subject to OATT requirements and will make the final determination whether the interconnection study will be performed by SPP and/or by the Transmission Owner. In instances where the individual generation is greater than 10 MW, or 5 MW or more with injection to Transmission System or further study is warranted, such studies will be performed by the Transmission Owner or SPP, at the direction of the Transmission Owner. In instances where the individual generation is over 10MW and injection of more than 1 MW under normal system intact configuration is possible to the Transmission System, the studies will be with a queue priority in the affected systems portion of DISIS. Otherwise, the SPP performed studies will be a non-queue priority based study for reliability. Non-jurisdictional generator interconnection customers may be required to enter into the appropriate study agreements with SPP to facilitate an affected system study agreement. Additionally, requests for non-jurisdictional generator interconnections may be required to be coordinated with SPP in accordance with NERC standards.~~

Specific to HILLGA Requests, the Transmission Owner can request that SPP perform stability analysis as required in Section 8 of this Business Practice. SPP would perform the analysis within 90 days.

Although such studies may be performed within SPP's GIP for planning purposes, the non-jurisdictional generator interconnection customer will not be subject to the OATT.

In such instances, the following shall apply Transmission Owner and SPP responsibilities:

1. When notified by customer or by distribution provider, ~~the~~ Transmission Owner is responsible for conducting any required studies to determine if the request may impact the Transmission System. Transmission Owner should determine if, and how much, real power will flow onto the Transmission System under normal system intact configuration.
2. Should the Transmission Owner determine that the generator interconnection may impact the Transmission System or, is greater than or equal to 5 MW, the Transmission Owner shall notify SPP of such impacts and provide ~~to~~ SPP any system impact studies that detail such impacts.
 - Transmission Owner system impact studies will include thermal, voltage, and short circuit. In cases where generating facilities would exceed nameplate capacity of 10 MW while connecting to facilities below 100kV or exceed 50MW, Transmission Owner studies will also include stability evaluations
 - a) In cases where generation might inject onto the Transmission System or would exceed the nameplate capacity detailed in this subsection (a):
 - i. Transmission Owner should use the most recent ITP model set (MDAG/TPL for stability), excluding existing issues, problems, and constraints not affected by study generation when comparing base case to study case. Transmission Owner will have discretion to choose the seasonality of the case.
 - ii. Thermal, voltage, and stability studies should evaluate NERC TPL-001 contingencies in P0, P1, and P2 categories within 2 transmission buses.

3. As an impacted system, SPP will evaluate Transmission Owner's study and determine what additional studies will be required to coordinate the impacts, up to and including studying the impact in the Definitive Interconnection System Impact Studies. Generation 5 MW and over with injection, and generation over 10MW will be evaluated with an Affected Systems study lasting no longer than 90 days by SPP. For generation over 10MW with 1MW or more of injection to the Transmission System where the power meets the SPP Tariff facilities the project will be given a queue priority within DISIS for the Affected Systems study. The Transmission Owner/distribution provider shall require as a condition of interconnection with the interconnection customer that all SPP required studies be completed. The Transmission Owner/distribution provider shall have the option to enter into the applicable Affected System study agreements and to be financially responsible for such studies, or as a condition of interconnection, to require the interconnection customer to submit a request to enter the Definitive Interconnection System Impact Study process or other SPP study process as applicable.¹

2.4. The Transmission Owner's study should indicate whether a non-jurisdictional generator interconnection request includes plans to register a Battery Energy Storage System as a Market Storage Resource.

3.5. It shall remain the Transmission Owner's responsibility to complete any generator interconnection agreements in accordance with the Transmission Owner's generator interconnection procedures regarding the completion of Network Upgrades required on the Distribution System and on the Transmission Owner's transmission system.

4.6. If SPP's studies or Transmission Owner studies show that Network Upgrades are required on the Transmission System, the Transmission Owner/distribution provider shall have the option to enter into a facilities agreement with SPP or require, as a condition of interconnection, the interconnection customer to enter into a facilities agreement with SPP and any affected Transmission Owner(s)/distribution provider(s) to complete the Network Upgrades required on their Transmission System.

5.7. All Network Upgrades must be completed prior to operation of the Generating Facility, unless other mitigations have been approved by SPP before the Network Upgrades are completed.

Summary of Responsibilities

Transmission Owner

The Transmission Owner receives new generation requests from customer or distribution provider. The Transmission Owner may require the customer or distribution provider to enter Affected System Study Agreement with SPP. The Transmission Owner may require the customer or distribution provider to submit with specifications for new generation resources, including whether the resource is a Battery Energy Storage System and if it is intended to be registered as a Market Storage Unit. Transmission Owner

¹ The Transmission Owner(s)/distribution provider(s) has the ability to pass-through the Interconnection Study costs to its customer.

may require customer or distribution provider to enter into an Affected System Study Agreement with SPP, fund studies and pay for identified upgrades on the Transmission System.

The Transmission owner will evaluate size, characteristics, and specifications for new or modified generation. Perform evaluation and studies as appropriate or as guided within this Business Practice 7250. Provide notification to SPP for generation that impacts Transmission System or is larger than 5 MW individually. Complete agreements that obligate customer for identified funding or reliability responsibilities.

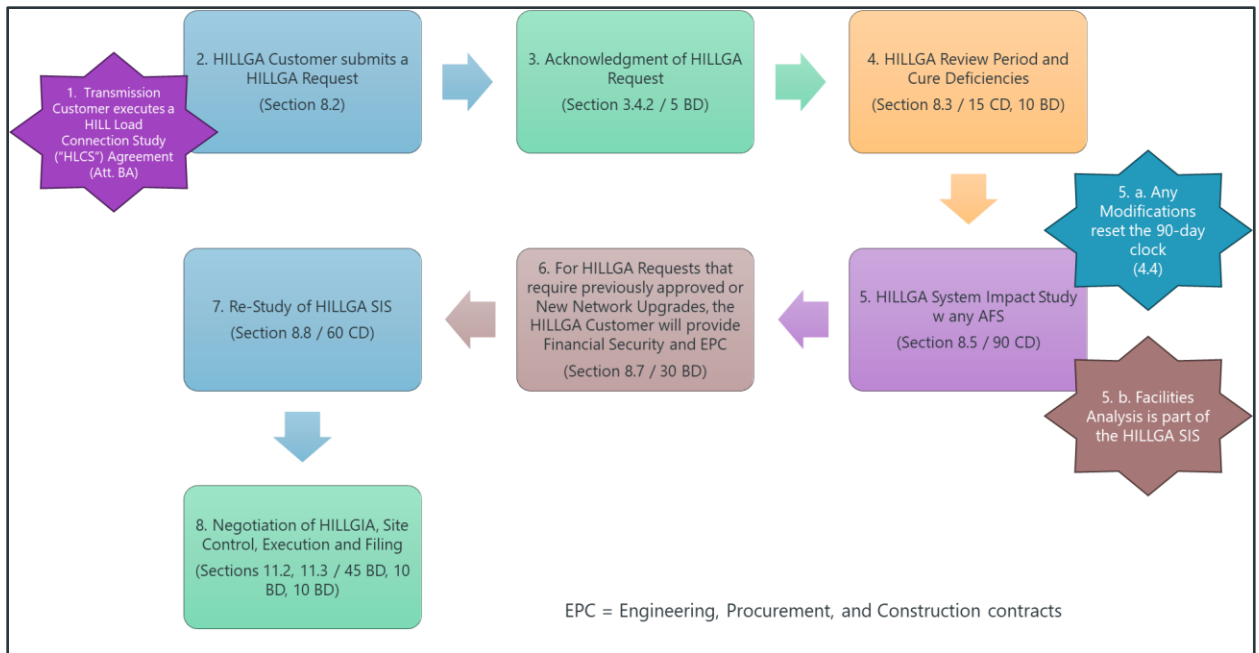
SPP

Perform evaluations and studies as required. In situations where upgrades to the Transmission System are identified, SPP will perform Facility Study and facilitate agreements with customers to fund identified upgrades. Specific to HILLGA, SPP will at the request of the Transmission Owner, perform stability analysis as described in Section 8 of this Business Practice 7250 within 90-day timeframe.

8. HIGH IMPACT LARGE LOAD GENERATION ASSESSMENT SPECIAL STUDIES

This section describes procedures for processing and evaluating interconnection requests for generation associated with HILL under SPP's High Impact Large Load Generation Assessment (HILLGA) Interconnection Procedures (HILLGAIP). HILL and HILLGA Network Upgrade requirements will be optimized as appropriate. HILLGA Network HILL Network Upgrades will initially not be included for HILLGA studies. The Initial Queue Position of each HILLGA Request will determine the order in which HILLGA Requests are processed either serially or in parallel. HILLGA Requests and respective HILL requests will be studied serially if HILLGA Requests are Electrically-Equivalent. HILLGA Requests and respective HILL requests will be studied in parallel if HILLGA requests are not Electrically-Equivalent.

HILLGA Special Studies Diagram (Placeholder)



Section references are to Attachment BB

8.1 SPECIAL STUDIES BASE MODEL SET

Analyses for HILLGA special studies are performed on final HILL **Base** and **Change Models** sets. Preliminary analysis may be performed on initial HILL Base and Change Models sets as needed to meet study timelines. The assumptions and methodologies will be consistent with the HILL model set's used with exceptions noted in the respective study's section of this manual. Analyses for HILLGA special studies are performed on the respective final HILL request **Base** and **Change Models** sets. Preliminary analysis may be performed on the respective initial HILL request Base and Change Models sets as needed to meet study timelines. These HILLGA request HILL models will be updated to include and dispatch as necessary Electrically-Equivalent ITP Non-Legacy, generation with GIAs, prior queued HILLGA requests to their requested Maximum Injection Capability, in accordance with Attachment BB Section 4.1.1 and Section 8.4.1. The prior queue generation with GIAs includes GIAs that have occurred prior to the commencement of the study and subsequent to the publishing of the ITP models that are the basis for the HILL models. Additionally, these HILLGA request HILL stability models will incorporate affected system generation with GIAs for NRIS, or with firm deliverability rights, at expected dispatch levels within the boundaries of the bus-level criteria used to identify stability fault events. This ensures that impactful changes to the affected system occurring after the ITP models were published are captured as part of the basis for the HILL and HILLGA models, in accordance with Attachment BB, Section 8.4.1. The assumptions and methodologies will be consistent with the HILL model set's used with exceptions noted in the respective study's section of this manual.

8.2 LOAD LIMITED HILLGA

8.2.1 Objective

Load limited HILLGA studies (LLHILLGA) are performed to determine a HILLGA request steady-state violations, transient instabilities, and short-circuit impacts and upgrades to HILL local load connection facilities and local transmission system within the limitations of what constitutes a local area allowable for LLHILLGA within Attachment BB of the SPP Tariff as well as identifying broader transient instabilities and short-circuit impacts and upgrades to transmission system. Additionally, a non-binding Network Resource Interconnection Service within the Deliverability Area (DA) will be performed to determine steady-state violations, transient instabilities, and short-circuit impacts and upgrades as informational purposes. The assignment of Interconnection Facilities, Network Upgrades, or cost allocation will be evaluated for each. These study procedures apply to non-jurisdiction Behind-The-Meter Generation as well consistent with BP7250 Section 6.

8.2.2 Applicability

In order for a Load limited HILLGA to be evaluated, an HILLGA request must be submitted in Accordance with Attachment BA and Attachment BB.

8.2.3 Study Request Modifications

Modifications are allowable to the extent described under Attachment BA and Attachment BB modifications to a study request and may affect the timing of study completion.

8.2.4 Steady-State Analysis

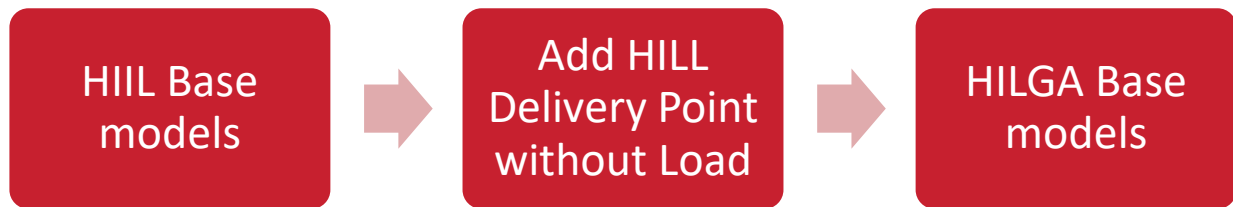
The Load limited HILLGA steady-state analysis involves development of powerflow models, identification of non-convergent conditions, voltage constraints, thermal constraints and cost allocation. The process generally uses the same procedures used for the ITP base reliability analysis including a common model set and contingency set, with exceptions as described in the following sections.

8.2.4.1 Model Development

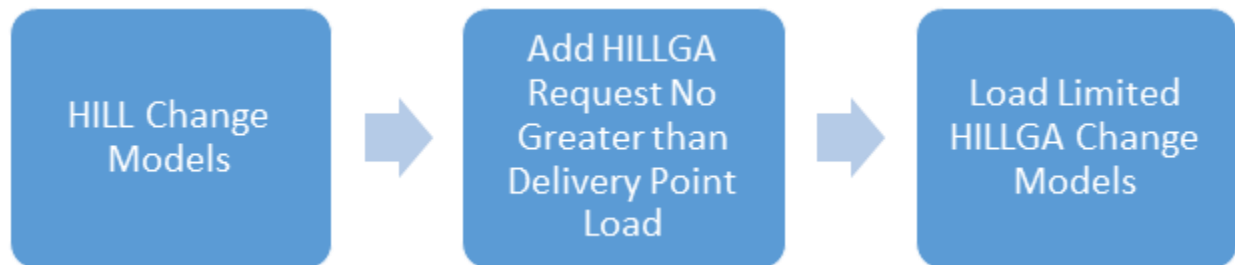
The HILLGA steady-state analysis uses the following years and seasons from the HILL model set:

- Year 5
 - Summer Peak
 - Winter Peak

Modifications to HILL Base Models to HILLGA Base Models

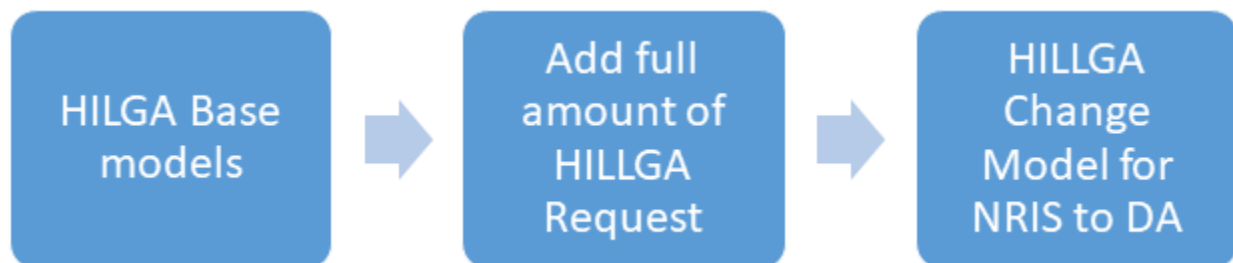


Modifications to HILL Change Case Models to Load Limited HILGA Change Models



[2](#)

Modifications to HILGA Base Model to HILGA Change Models for NRIS to DA



[2](#)

SPP will post [HILGA Base Models](#), [Load limited HILGA Change Models](#), and [HILGA Change Case Models](#) for NRIS to DA for HILGA for Transmission Customers, HILGA Interconnection Customers, and Host Transmission Owners for review and Interconnection Facility Study [Analysis](#).

8.2.4.1.1 GENERATOR DISPATCH

The [HILL Change model](#) is modified to create a [Load Limited HILGA Change model](#) set by reversing the [HILL Change model](#) dispatching of existing Transmission Customer firm resources to include provisional service resources as part of the HILL application and adding and dispatching the HILGA request. When the provisional service resource overlaps with the HILGA request, the provisional service resource will be dispatched to equal the load. When there are two or more HILGA requests, the HILGA requests will be proportionally dispatched based on Maximum Injection Capacity to be no greater than the HILL request.

The **HILLGA Base model** is modified to create a **HILLGA Change model for NRIS to DA** set by adding HILL delivery point without the HILL request Load and dispatch the HILLGA up to the Maximum Injection Capacity by sinking the resource to the interconnection Deliverability Area.

8.2.4.1.1.1 SOURCE GENERATION AND SOURCE DEFINITIONS

Source generation will be the load limited HILLGA request(s).

In order to calculate a TDF for **Load Limited HILLGA** to identify impacts HILL local load connection facilities and local transmission system and cost allocate upgrades to include non-converged events and contingent upgrades, the source definition will be the load limited HILLGA requests proportionally dispatched based on Maximum Injection Capacity to be no greater than the HILL request.

In order to calculate a TDF for **HILLGA requests to NRIS to DA** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA) as informational purposes, the source definition will be the load limited HILLGA request(s).

8.2.4.1.1.2 SINK GENERATION AND SINK DEFINITIONS

Sink generation will be Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area sink. A proportional, uniform scaling will utilized for sinking generators. Generators labeled as must run as identified in the completed ITP Base Reliability and Economic dispatch methodologies, including but not limited to hydroelectric, cogeneration facilities, landfill gas and nuclear units, are excluded from consideration for sinking generation.

In order to calculate a TDF for **Load Limited HILLGA** to identify impacts HILL local load connection facilities and local transmission system and cost allocate upgrades to include non-converged events and contingent upgrades, the HILL request as a load will define sink definition

In order to calculate a TDF for **HILLGA requests to NRIS to DA** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA) as informational purposes, the sink definition will be the Deliverability Area sink generators.

8.2.4.2 Contingency Analysis

After the study models are developed, SPP performs a contingency analysis on the **HILLGA Base, Load Limited HILLGA Change Model**, and **HILLGA Change model for NRIS to DA** model sets to identify potential non-convergent conditions, voltage constraints and thermal constraints. The ITP contingency, subsystem, and monitored element files are used as the base auxiliary files. Lastly, subsystem files include a system to be used to account for generation and/or load imbalances introduced by contingencies to prevent the system swing from accounting for these imbalances.

Consistent with the ITP, contingencies evaluated for **HILLGA** include those events listed in North American Electric Reliability Corporation (NERC) standard TPL-001-4 Table 1 that do not permit loss of non-consequential load or interruption of firm transmission service. P3 events (loss of a generator followed by a second contingency event) are not evaluated for HILLGA service. P3 events (loss of a generator followed by a second contingency event) are not evaluated for interconnection service because the standard permits the adjustment of generation prior to the second event, which for interconnection studies would result in duplication of a P1 (single contingency) event. The ITP contingencies may be modified as needed to reflect topology changes introduced by the addition of generating facilities and upgrades.

Network constraints are found by performing AC contingency calculation analysis. There may be constraints that exist in the **HILLGA Base** that also are identified in the **Load Limited HILLGA Change model** and **HILLGA Change model for NRIS to DA**. These constraints may be the result of different dispatches or system conditions that did not allow for these constraints to exist or identified in the HILL study. As such, HILLGA projects are assigned to these constraints if they meet the applicable criteria.

The following solution parameters are used for both the initial development of the study models as well as the contingency analysis:

- Fixed Slope Decoupled Newton-Raphson
- Tap Adjustment – Stepping
- Switch Shunt Adjustments – Enable All
- Adjust Phase Shift
- Adjust DC Taps
- VAR Limits – Apply Immediately

For the study model build, area interchange control is enabled via tie lines and loads. For contingency analysis, the following table details the area interchange option based on the event type.

Table 4: Area Interchange Settings

EVENT TYPE	AREA INTERCHANGE CONTROL
MODEL BUILD/SYSTEM INTACT	ENABLED (TIE LINES AND LOADS)
GENERATOR	DISABLED ²
TRANSMISSION CIRCUIT	DISABLED
TRANSFORMER	DISABLED
SHUNT DEVICE	DISABLED
LOSS OF MULTIPLE ELEMENTS (EXCLUDING GENERATOR)	DISABLED
LOSS OF MULTIPLE ELEMENTS (INCLUDING GENERATOR)	DISABLED ³

8.2.4.2.1 NON-CONVERGED CONDITIONS

Identification of non-convergence is a process to ensure identified issues are not associated with tool limitations or methods, but rather are true system deficiencies. A first pass analysis is used to identify an initial list of contingencies that may result in a non-converged or blown-up state. These contingencies are further tested to attempt to reach a converged state. Examples of further tests include, but is not limited to:

- Ensuring toggling reactive devices or transformer taps are not preventing a converged state. This can be done programmatically by limiting the number of devices allowed to adjust at a given time or manually checked by locking devices.
- Testing the contingency in multiple tools/software to see if a different solution engine yields a converged state.
- Relaxing some solution parameters that may be causing numerical instability.
- Reviewing reactive devices for locked devices that may be contributing to convergence issues or prevented from offering system support.
- Reviewing Interconnection Projects for data errors or improper modeling causing solution problems.

² See minutes of TWG meeting Feb. 28 – Mar. 1, 2022: SPP Reserve Group (all generation excluding Wind, Solar, and Hydro) is dispatched to make up for generation outage.

³ SPP Reserve Group (all generation excluding Wind, Solar, and Hydro) is dispatched to make up for generation outage.

Following the iterative review of problematic contingencies, remaining non-converged contingencies are determined to be attributable to the HILL request. Appropriate transmission support will be identified to mitigate the constraint(s).

Upgrades required to mitigate non-converged conditions will be assigned to HILLGA request having a Power Transfer Distribution Factor (PTDF) impact of at least 3% on the contingent element monitored in the direction of system intact MW flow causing non-convergence.

In the case of system intact non-convergence, upgrades in the form of reactive devices are identified to allow the system to reach a converged state. Note, these upgrades are not intended to fully mitigate system deficiencies such as overloads or low voltage conditions, but only added to achieve a solved state. These upgrades may become unnecessary as other Networks Upgrades are identified and added to the system. In these cases, the system intact non-converged upgrades will be removed from the case and not assigned.

8.2.4.2.2 THERMAL OVERLOADS

Every element in the SPP planning models has a normal (Rate A) and emergency (Rate B) rating. Thermal overloads are identified when the flow across a monitored element exceeds either its normal rating under System-Intact conditions or its emergency rating under contingency conditions. Thermal overloads are identified using the **Load Limited HILLGA Change model** and **HILLGA Change model for NRIS to DA** model sets.

Upon identifying thermal overloads, HILLGA request impact on those thermal overloads is determined by a Transfer Distribution Factor (TDF) analysis. The TDF impact on each overloaded facility is calculated utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.2.4.1.1.1 and 8.2.4.1.1.2. The following TDF threshold criteria:

- At least 3% TDF impact, where the constraint is identified under System-Intact conditions,
- At least 3% TDF impact, where the constraint is identified under contingency conditions

8.2.4.2.3 VOLTAGE VIOLATIONS

After all non-converged contingency and thermal overload mitigations are determined, any remaining voltage violations are checked to determine applicability to the HILLGA. The following voltage performance guidelines are used in accordance with the Transmission Owner local area planning criteria.⁴

⁴ See each Transmission Owner's local area planning criteria posted on SPP OASIS <http://www.oasis.oati.com/> (requires certificate to access)

SPP voltage criteria⁵ is applicable to all SPP facilities 69 kV and greater in the absence of more stringent criteria.

Per Unit voltages must change by at least 2% from the **HILLGA Base models** to the **Load Limited HILLGA Change model** models to be assigned to the **Load limited HILLGA**. Per Unit voltages must change by at least 2% from the **HILLGA Base models** to the **HILLGA Change model for NRIS to DA** models to be assigned to the **HILLGA for NRIS to DA**. For constraints meeting this criteria, HILLGA request impact on those voltage violations is determined by a Transfer Distribution Factor (TDF) analysis. The TDF impact calculated utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.2.4.1.1.1 and 8.2.4.1.1.2 must have at least 3% PTDF on the contingent element monitored in the direction of system intact MW flow causing voltage constraints will be identified for mitigation the voltage issue(s). For system intact voltage constraints, PTDFs of at least 3% on the line with **largest system intact MW flow** into the bus experiencing the voltage constraint is used to assign responsibility.

8.2.4.2.4 FIRST-TIER EXTERNAL AREAS FACILITIES 69 KV AND GREATER

Consistent with the ITP, first-tier areas will be monitored to identify potential reliability needs. SPP coordinates the contingency definitions and monitoring criteria with the external area.⁶

8.2.4.3 Solution Process and Methodology

When conducting constraint analysis, solutions and/or mitigations are used to resolve the identified issues. Upgrades approved for construction through Board of Director approval or execution of an agreement from other planning processes during the HILLGA process may be considered as solutions to mitigate constraints identified during the HILLGA study. During the mitigation analysis, upgrades that have been identified are added to the models in sequential order as shown in **Error! Reference source not found.**⁵ below. This is done as a holistic approach to use common, previously identified mitigations to aid in the mitigation of constraints that are identified later in the analysis process.

⁵ See SPP Planning Criteria Section 5.4

⁶ See SPP ITP Manual Section 4.2.4

Table 5: Solution Set Implementation

1. Scenario	2. Description
3. S0	4. No upgrades (except for temporary reactive elements as described below)
5. S1	6. Upgrades mitigating non-converged contingencies
7. S2	8. Upgrades mitigating non-converged contingencies and thermal violations
9. S3	10. Upgrades mitigating non-converged contingencies, thermal and voltage violations

For S0, powerflow cases may be in a severely stressed condition and require system support to be able to solve and achieve a stable state. To that end, temporary reactive elements may be added to the model to reach this state. These elements are only added in the event that existing reactive equipment is insufficient. A list of these temporary reactive devices is provided with the study models.

For the S1 portion of the mitigation process, solutions are used to solve non-converged constraints and, if applicable, remove temporary reactive elements. Temporary reactive devices may also be deemed appropriate solutions to non-convergence and be used as mitigations and will be assigned and cost allocated accordingly.

During the process of constraint analysis, multiple alternate solutions are determined through the process, but only one is chosen as the final solution. The final solution set is first and foremost reliable. All constraints both System-Intact and N-n are to be resolved for system reliability to be considered achieved. Next, the least-cost solution is chosen. Minimization of cost is considered. Solutions are subject to change based on feedback from the respective Transmission Owner (limiting equipment ratings, feasibility, etc.). All projects assigned to constraints mitigated by these solutions will be assigned cost responsibility.

A final reliability assessment is performed to verify that the solutions solved all constraints and did not cause any new constraints. The new constraints are not restricted to the TDF and electrically close criteria described in Sections 8.2.4.1.1.1 and 8.2.4.1.1.2.

During the HILLGA Study, S0 and S3 are represented in model sets and are posted for TC and TO review.

8.2.5 Stability and Short-Circuit Study

8.2.5.1 Modeling

8.2.5.1.1 STABILITY MODEL SET

The HILLGA stability analysis uses the following years and seasons from the HILL model set:

- Year 5
 - Summer Peak
 - Winter Peak

SPP will post models along with the report.

DESCRIPTION	YEAR 5	TOTAL
<u>HILLGA Base Model</u>	<u>Summer, Winter</u>	<u>2</u>
<u>Load Limited HILLGA Change Model</u>	<u>Summer, Winter</u>	<u>2</u>
<u>HILLGA Change model for NRIS to DA</u>	<u>Summer, Winter</u>	<u>2</u>
<u>TOTAL</u>		<u>6</u>

8.2.5.1.2 SHORT CIRCUIT MODEL SET

The Year 2 Summer Peak ITP Short Circuit model from a completed ITP with an approved construction plan is used for short circuit analysis. The HILL Short-Circuit model is used for short circuit analysis.

8.2.5.1.3 HIGH IMPACT LARGE LOAD AND LOAD CONNECTION FACILITIES

The High Impact Large Load and Load Connection Facilities is represented in the dynamic stability, steady-state, and short-circuit models with an acceptable dynamic load characteristic model for the dynamic models at the requested service amount. For High Impact Large Load directly connected to the transmission system, equivalent modeling will include main power transformer(s) and transmission lead line(s) impedances are for dynamic stability analysis. Dynamic stability models provided by Transmission Customers are assumed to properly represent their facilities. Model tuning for interconnection facilities is not performed HILL process. Additional modeling may be required based on scoping calls.

8.2.5.1.4 GENERATING FACILITY AND INTERCONNECTION FACILITIES

Each Generating Facility is represented in the dynamic stability models as an equivalent generator dispatched at the applicable percentage of the requested service amount. The facility modeling includes representation of equivalent GSU and main power transformer(s), with impedance data and power factor capability provided in the interconnection request. Equivalent collector system(s) and transmission lead line(s) impedances are also explicitly modeled for dynamic stability analysis. Dynamic stability models provided by interconnection customers are assumed to properly represent their facilities. Model tuning for interconnection facilities is not performed during the HILLGA process.

8.2.5.1.5 STABILITY MODEL DISPATCH

The Stability model dispatch follows the same process as the Steady-State model..

8.2.5.1.5.1 SOURCE GENERATION AND SOURCE DEFINITIONS

The source generation and source definitions follows the same process as the Steady-State model with exception to utilizing MDAG dispatch procedures.

8.2.5.1.5.2 SINK GENERATION AND SINK DEFINITIONS

The sink generation and sink definitions follows the same process as the Steady-State model with exception to utilizing MDAG dispatch procedures.

8.2.5.2 Stability Analysis

8.2.5.2.1 STABILITY FAULT EVENTS

For all stability models developed, a transient stability analysis will be performed to determine HILL and HILLGA and Existing and Planned Generation response due to fault events on the system.

For the stability analysis, unstable conditions will be addressed for transmission reinforcement for contingencies specified in the dynamic stability assessment for TPL-001 contingencies equivalent to P0, P1, P2.1-2.3, P4, and P5 as identified by SPP and the Transmission Owners. Higher depth contingencies (P3, P6, and P7) will be evaluated as necessary for the location of the HILL for mitigations. Unsuccessful reclosing will be evaluated for the faulted loss of elements, excluding transformers, for a P1 and P6 event.

The transient stability analysis will evaluate:

- System stability in response to fault events
- Compliance of HILLGA Requests with FERC Order 661-A
- Adherence to the SPP Disturbance Performance Requirements
- Post event voltage recovery within the SPP voltage criteria

Fault events will include P1 events involving each network circuit segment connected within three levels of each HILL request delivery points and HILLGA request POI for **Load Limited HILLGA** and only HILLGA

request POI for **HILLGA for NRIS to DA**, as well as P4 and P6 events involving each network circuit connected within two levels of each HILL request delivery points and HILLGA request POI for **Load Limited HILLGA**, and only HILLGA request POI for **HILLGA for NRIS to DA**⁷. A network circuit is comprised of each segment of sectionalized single (or double) circuits from substations or buses to accommodate generation and radial load. Each level includes all substations on the remote end of all network circuits. (i.e., 0 levels away from a line tap delivery points or POI includes substations with at last 3 connected circuits on either end of the tapped circuit) Additionally, P1, P3, P4, and P6 events on relevant regional or tie line facilities applicable to the HILL and HILLGA model area will be evaluated. Each event should remove from service all elements that are expected to automatically disconnect for each event.

When system transient stability issues are identified, investigative analysis is first used to identify the cause of instability. Changed system conditions may uncover data/modeling issues with generator models of existing and planned generators. Dynamic model parameter review in conjunction with block diagrams is used to ensure there are no logic errors near the identified system constraint. Generators may also be temporarily replaced with constant power devices (no dynamic response) to see if a generator model is the cause of the stability issue. This is to ensure that any identified issue is due to system deficiencies as opposed to data quality issues.

For verified system deficiencies, the HILL and HILLGA request that is found to materially impact verified system deficiencies will be included for cost-allocation for applicable mitigations. Material impact is evaluated by comparing system response with and without relevant HILL and HILLGA request for **Load Limited HILLGA** -and with and without only HILLGA request POI for **HILLGA for NRIS to DA**-. If a material impact cannot be determined for studied generation due to deficiencies that are pre-existing, such as system collapse/ instability, then a less severe fault will be applied to determine said impact. Fictitious mitigations, such as VAR support, may be used to assist in evaluating a HILL and HILLGA request impact on pre-existing system deficiencies.

8.2.5.2.2 MITIGATIONS

Mitigation of stability issues, not also observed as a steady-state issue, will evaluate reduced fault duration and removal of reclose from the fault definition. Actual equipment settings and capabilities may provide reduced clearing times.

Evaluation of reduced clearing times and removal of reclose may be used to identify and determine whether mitigation is provided by existing equipment and settings or may be provided by a Network Upgrade to fault interrupting equipment (i.e., breakers and relays).

⁷ SPP reserves the right to include/exclude additional contingencies regardless of their level away from the request's point of interconnection.

|

8.2.5.3 Short-Circuit Ratio Analysis

8.2.5.3.1 SHORT-CIRCUIT RATIO CALCULATION

SPP calculates the short-circuit ratio using this formula and reports the results.

$$SCR_{POI} = \frac{SCMVA_{POI}}{MW_{VER}}$$

8.2.5.3.2 SHORT-CIRCUIT FAULT CURRENT CALCULATION

~~Short Circuit Fault Current Calculation will be performed in accordance with SPP ITP Manual Short Circuit Analysis.~~ Short-Circuit Fault Current Calculation will be performed consistent with HILL Short-Circuit Analysis. Results are refined in the Interconnection Facility Study/Analysis with any additional required directly assigned upgrades and cost assignment.

8.2.5.4 SCRCCT Analysis

~~HILLGA Short-circuit models serve as the starting point for the SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included.~~ HILL models utilized for HILL SCRCCT analysis serve as the starting point for the HILLGA SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included.

A short-circuit ratio (SCR) check is used to assess the voltage strength of the system. For HILLGA studies, standard SCR, composite SCR (CSCR), and weighted SCR (WCSR) are analyzed to determine if additional analysis will be required. The Short Circuit Ratios are defined as:

$$SCR = \frac{Ssc}{MW}$$

$$CSCR = \frac{CSCMVA}{MW_n}$$

$$WSCR = \frac{\sum_i^N SCMVA * MW_i}{\sum_i^N MW_i}$$

Ssc: Maximum Available Short Circuit Power (MVA) before connection of the resource.

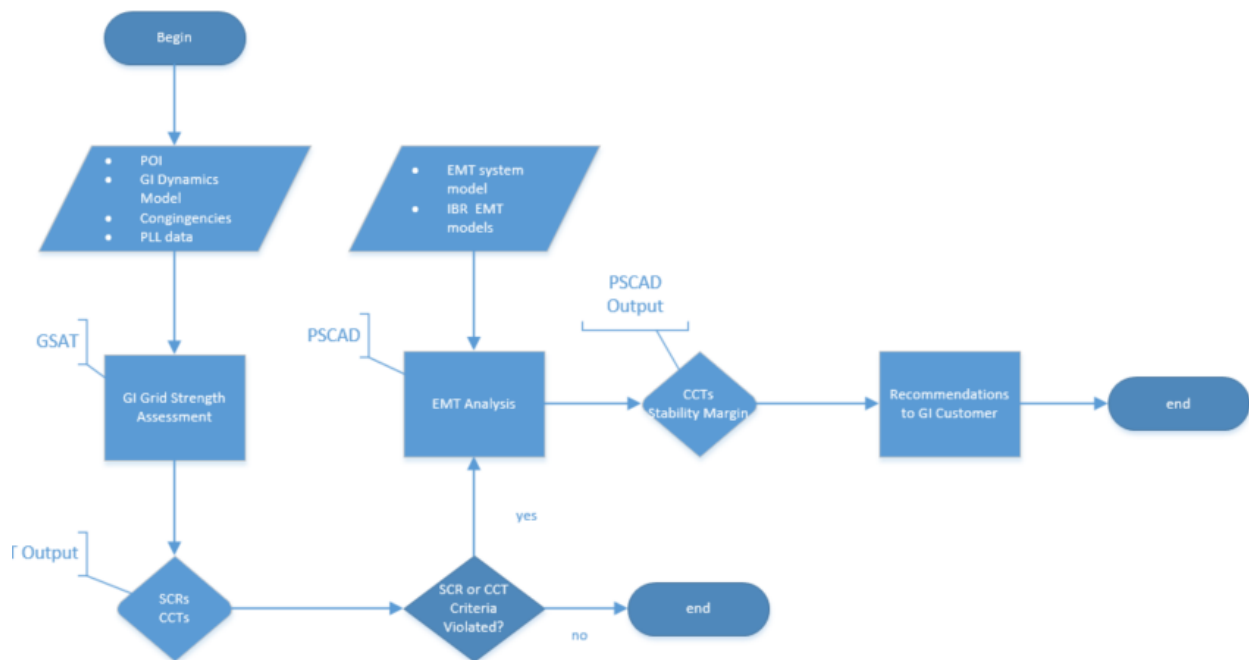
MW: Power Rating (MW) of resource to be connected.

If any of the SCR calculations (SCR, CSCR, or WSCR) are below 6.0, project(s) will be deemed as failing the SCR check.

In addition to the SCRs, the critical clearing time (CCT) for faults near the POI of each project are screened. Critical Clearing Time is the maximum time a fault near the POI of an inverter-based resource is allowed to remain on the system such that the inverter-based resource remains stable. If the CCT for any project is below 0.15s (9 cycles), the project will be deemed as failing the CCT check.

The results of the SCRCCT and the WSCR are provided in the **HILLGA** report. For any projects not passing SCR or CTT screening, a detailed Electromagnetic Transient (EMT) study will be performed to ensure system reliability and mitigations will be developed as applicable. This process is detailed in the following flowchart:

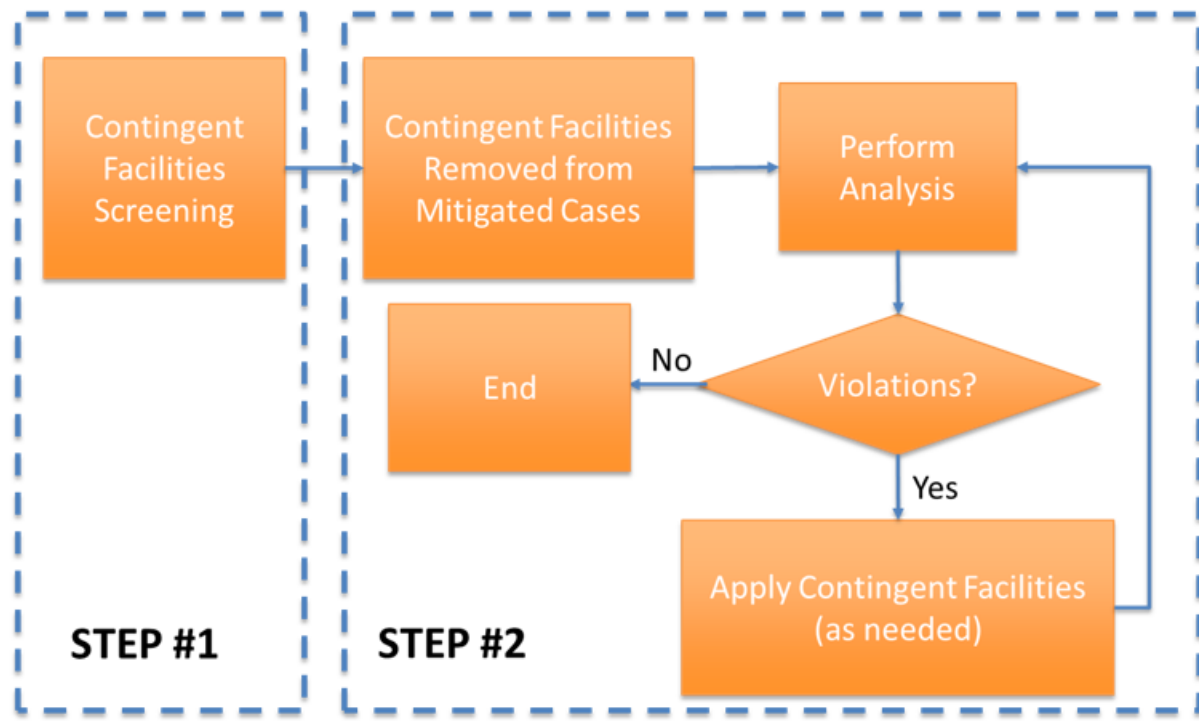
GI Inverter Based Resource (IBR) Studies



8.2.5 Identification of Contingent Facilities

To maintain Bulk Electric System (BES) reliability for HILLGA requests, contingent facilities for HILLGA requests will be identified utilizing the following two step methodology. Contingent facilities include Network Upgrades approved for construction as part of SPP Expansion Plan that are included the study models as planned upgrades that are not currently in-service and if delayed beyond their projected in-service date can pose a risk reliability of the BES.

Contingent Facilities Procedure Diagram (Placeholder)



Step 1: Perform contingent facilities screening by calculating TDF impact on contingent facilities included in the study model set utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.2.4.1.1.1 and 8.2.4.1.1.2. The transfer must have at least 3% PTDF Transmission Distribution Factor (TDF) and the contingent facility is within ten buses from the modified or established delivery point bus.

Step 2: Remove these screened upgrades from the Steady-State and Stability models then Determine if any new violations appear utilizing previously described Steady-State and Stability analysis methodologies. Solve mitigation with most effective solution using the previously described mitigation methodologies.

8.2.5 Limited Operation

As defined in the Attachment BB, Limited Operation is a quantification of the amount of interconnection capacity available to the Interconnection Customer without system overloads, voltage violations, instabilities, or breaker over-duty prior to the in-service date of all identified upgrades. Limited Operation amounts are calculated for each HILLGA and are listed in the report.

The minimum value across the analyses performed (i.e. steady-state, stability) and constraint types observed (e.g. non-converged contingency, thermal constraints, voltage violations) will be set as the LOIS value. If short-circuit upgrades are necessary, that may be used for further refinement of LOIS values.

A LOIS value will be determined for each season in report. Seasonal models will be mapped to corresponding operating date ranges according to

, which is based on the SPP Model Development Procedure Manual⁸, Section 3 Table 1.

If there are any non-converged contingencies, voltage constraints or system responses within the monitored system that do not meet the SPP Disturbance Performance Requirements on which the request has a sufficient TDF, the steady-state LOIS value will be set by reducing the HILLGA in 25% increments of the maximum capacity may be tested to determine if steady-state and stability is maintained at lesser values.

Table 1: Seasonal Model Results to Operational Date Mapping

<u>Operational Dates</u>	<u>Steady State</u>	<u>Stability</u>
<u>April 1 – May 31</u>	<u>Lower of Summer Peak and Winter Peak</u>	<u>Lower of Summer Peak and Winter Peak</u>
<u>June 1 – September 30</u>	<u>Summer Peak</u>	<u>Summer Peak</u>
<u>October 1 – November 30</u>	<u>Lower of Summer Peak and Winter Peak</u>	<u>Lower of Summer Peak and Winter Peak</u>
<u>December 1 – March 31</u>	<u>Winter Peak</u>	<u>Winter Peak</u>

8.2.6 Cost Allocation

Interconnection facilities will be directly assigned to the Transmission Customer. Network Upgrades to mitigate transmission system study constraints that are determined to be attributed to the HILLGA will be

⁸ SPP MDAG Reference Documents webpage (<https://spp.org/spp-documents-filings/?id=18607>)

assigned to the Transmission Customer in accordance with SPP Tariff Attachment BB. Costs assigned to each HILLGA are listed in the report.

When there are two or more HILLGA requests, the following procedures will be used for Cost Allocating Network Upgrades.

Cost allocation of Network Upgrades for two or more HILLGA Requests is determined using the summer peak model. Cost allocation for all network upgrades is performed as defined below, regardless of which part of the study identified the upgrade.

For transmission circuit upgrades, an analysis is performed to determine the System-Intact TDF, also known as a Power Transfer Distribution Factor (PTDF) that each HILLGA Request had on each new upgrade. The PTDF is calculated on the summer peak model. The impact each HILLGA Request had on each upgrade project is weighted by the size of each request. The size of the request is the Maximum Injection Capability not to exceed load for **Load limited HILLGA** requests. The size of the request is the Maximum Injection Capability for **HILLGA Change model for NRIS to DA** requests. Finally, the costs allocated to each HILLGA Request for a particular upgrade are then determined by allocating the portion of each request's impact over the impact of all affecting requests. The PTDF calculation uses the same source and sink methodology utilized in the Contingency Analysis Sections 8.2.4.1.1.1, 8.2.4.1.1.2, and 8.2.4.1.1.3. Individual HILLGA request impacts are determined.

For example, assume there are three HILLGA Requests: X, Y and Z, responsible for the costs of Upgrade 1. Given their respective PTDFs for the upgrade have been determined, the cost allocation for HILLGA Request X for Upgrade Project 1 is found by the following set of steps and formulas:

- Determine an impact factor on a given project for all responsible HILLGA requests:

-

- $Request\ X\ Impact\ Factor\ on\ Upgrade\ 1 = PTDF\ (\%)(X) * MW(X) = X1$

- $Request\ Y\ Impact\ Factor\ on\ Upgrade\ 1 = PTDF\ (\%)(Y) * MW(Y) = Y1$

- $Request\ Z\ Impact\ Factor\ on\ Upgrade\ 1 = PTDF\ (\%)(Z) * MW(Z) = Z1$

- Determine each request's allocation of cost for that particular project:

-

- $Request\ X's\ Upgrade\ 1\ Cost\ Allocation(\$) = \frac{Network\ Upgrade\ 1\ Cost\ (\$) \times X1}{X1 + Y1 + Z1}$

- Repeat previous for each responsible Current-Study Request for each project.

For substation specific upgrades, such as new reactive devices, reconfigurations, etc., PTDFs cannot be calculated on a bus or node basis. Therefore, the PTDFs are generally checked on either the worst-case contingent element in the direction of system intact flow or on all circuits connecting to the location where the upgrade is installed where the highest absolute value PTDF of all the circuits is used to calculate the MW impact for each interconnection request for solutions resolving system intact non-converged and voltage constraints. The process then proceeds in alignment with the transmission circuit allocation process.

The cost allocation of each necessary Network Upgrade is determined by the size of each request and its impact on the given upgrade. This allows for the most efficient and reasonable mechanism for sharing the costs of upgrades. Costs assigned to each HILLGA Request are listed in the report.

8.2.6.1 COST ESTIMATES

SPP requests feedback and cost estimates from TOs for all assigned upgrades in the HILLGA. All cost information submitted by TOs are incorporated into the study for accuracy. In the event that SPP does not receive a cost estimate, SPP-developed cost estimates based on historical data will be utilized.

8.2.6.2 INCREMENTAL LONG-TERM CONGESTION RIGHTS

The SPP OATT provides Incremental Long-Term Congestion Rights (ILTCR) as compensation for the directly assigned cost of Network Upgrades for mitigating transmission system constraints study.⁹

8.2.7 Affected Systems Coordination

SPP maintains agreements with most neighboring Transmission Providers that define how impacts from transmission service are coordinated between systems. References and links to the individual agreements are listed in the

8.3 NRIS HILLGA within the same DA

8.3.1 Objective

⁹ See SPP OATT Attachment J Section V (C). Generation Interconnection Related Network Upgrades

NRIS HILLGA within the same DA studies are performed to determine a HILLGA request steady-state violations, transient instabilities, and short circuit impacts and upgrades to transmission system. The assignment of Interconnection Facilities, Network Upgrades, or cost allocation will be evaluated. These study procedures apply to non-jurisdiction Behind-The-Meter Generation as well consistent with BP7250 Section 6. When HILLGA requests overlap with provision service, the HILLGA Network Upgrades will supersede provision Network Upgrades identified utilizing ITP GOF analysis.

8.3.2 Applicability

In order for a NRIS HILLGA within the same DA to be evaluated, an HILLGA request must be submitted in Accordance with Attachment BA and Attachment BB.

8.3.3 Study Request Modifications

Modifications are allowable to the extent described under Attachment BA and Attachment BB modifications to a study request and may affect the timing of study completion.

8.3.4 Steady State Analysis

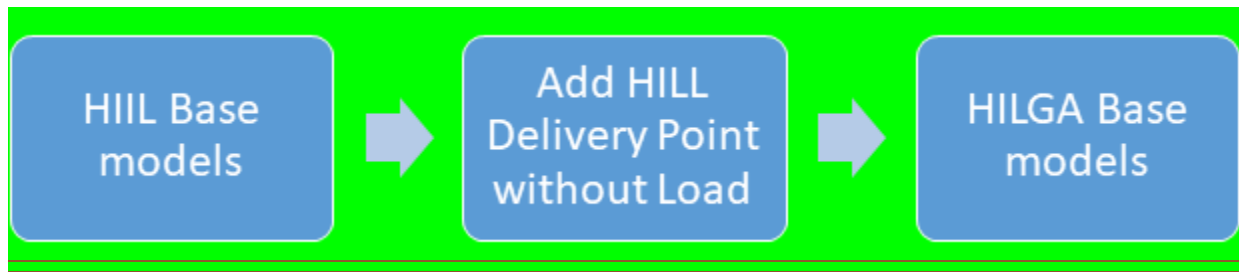
The NRIS HILLGA within the same DA steady-state analysis involves development of powerflow models, identification of non-convergent conditions, voltage constraints, thermal constraints and cost allocation. The process generally uses the same procedures used for the ITP base reliability analysis including a common model set and contingency set, with exceptions as described in the following sections.

8.3.4.1 Model Development

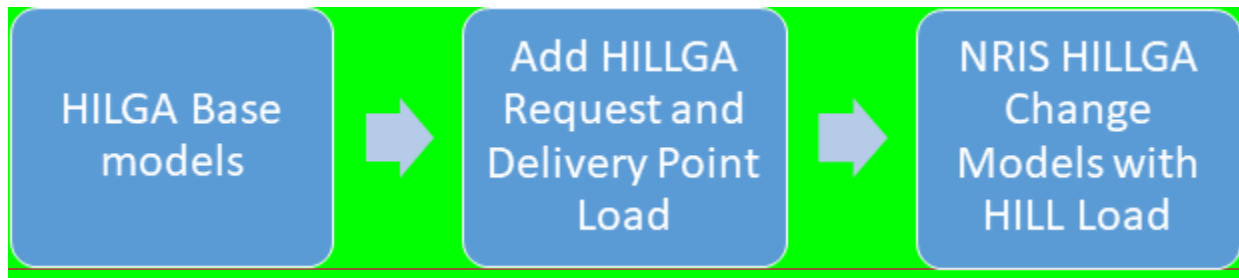
The HILLGA steady-state analysis uses the following years and seasons from the HILL model set:

- Year 5
- Summer Peak
- Winter Peak

Modifications to HILL Base Models to HILLGA Base Models



Modifications to HILLGA Base Models to NRIS HILLGA Change Models



Modifications to HILLGA Base Model to HILLGA Change Models for NRIS to DA



SPP will post HILLGA Base Models, NRIS HILLGA Change Models with HILL Load, and NRIS HILLGA Change Model without HILL Load for HILLGA for Transmission Customers, HILLGA Interconnection Customers, and Host Transmission Owners for review and Interconnection Facility Study/Analysis.

8.3.4.1.1 GENERATOR DISPATCH

The HILL Base Model is modified to create a HILLGA Base model by adding HILL delivery point without the HILL request Load.

The HILLGA Base model is modified to create a NRIS HILLGA Change Models with HILL Load by adding the HILL load and dispatching of the HILLGA request. When the HILL load exceeds the HILLGA request, the existing Transmission Customer firm resources to include provisional service resources as part of the HILL application will be dispatched. When the HILLGA request exceeds the HILL load, the Sink generation

will be Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area.—When the provisional service resource overlaps with the HILLGA request, the provisional service resource will be dispatched to HILLGA Maximum Injection Capacity.—When there are two or more HILLGA requests, the HILLGA requests will be dispatched to Maximum Injection Capacity.

The **HILLGA Base model** is modified to create a **NRIS HILLGA without HILL Load** set by dispatching of the HILLGA request to the Maximum Injection Capacity by sinking the resource to Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area.

8.3.4.1.1.4 SOURCE GENERATION AND SOURCE DEFINITIONS

Source generation will be the NRIS HILLGA request(s).

In order to calculate a TDF for **NRIS HILLGA with HILL Load** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA), the source definition will be the NRIS HILLGA request(s).

In order to calculate a TDF for **NRIS HILLGA without HILL Load** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA), the source definition will be the NRIS HILLGA request(s).

8.3.4.1.1.2 SINK GENERATION AND SINK DEFINITIONS

Sink generation will be Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area sink. A proportional, uniform scaling will be utilized for sinking generators.—Generators labeled as must run as identified in the completed ITP Base Reliability and Economic dispatch methodologies, including but not limited to hydroelectric, cogeneration facilities, landfill gas and nuclear units, are excluded from consideration for sinking generation.

In order to calculate a TDF for **NRIS HILLGA with HILL Load** to identify impacts HILL local load connection facilities and local transmission system and cost allocate upgrades to include non-converged events and contingent upgrades, the HILL request as a load will define sink definition.

In order to calculate a TDF for **NRIS HILLGA without HILL Load** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA), the sink definition will be the Deliverability Area sink generators.

8.3.4.2 Contingency Analysis

After the study models are developed, SPP performs a contingency analysis on the **HILLGA Base**, **NRIS HILLGA Change Models with HILL Load**, and **NRIS HILLGA Change Models without HILL Load** model sets to identify potential non-convergent conditions, voltage constraints and thermal constraints. The ITP contingency, subsystem, and monitored element files are used as the base auxiliary files. Lastly, subsystem files include a system to be used to account for generation and/or load imbalances introduced by contingencies to prevent the system swing from accounting for these imbalances.

Consistent with the ITP, contingencies evaluated for **HILLGA** include those events listed in North American Electric Reliability Corporation (NERC) standard TPL-001.4 Table 1 that do not permit loss of non-consequential load or interruption of firm transmission service. P3 events (loss of a generator followed by a second contingency event) are not evaluated for **HILLGA** service. P3 events (loss of a generator followed by a second contingency event) are not evaluated for interconnection service because the standard permits the adjustment of generation prior to the **second**

nd event, which for interconnection studies would result in duplication of a P1 (single contingency) event. The ITP contingencies may be modified as needed to reflect topology changes introduced by the addition of generating facilities and upgrades.

Network constraints are found by performing AC contingency calculation analysis. There may be constraints that exist in the **HILLGA Base** that also are identified in the **NRIS HILLGA Change Models with HILL Load** and **NRIS HILLGA Change Models without HILL Load**. These constraints may be the result of different dispatches or system conditions that did not allow for these constraints to exist or identified in the **HILL** study. As such, **HILLGA** projects are assigned to these constraints if they meet the applicable criteria.

The following solution parameters are used for both the initial development of the study models as well as the contingency analysis:

- Fixed Slope Decoupled Newton-Raphson
- Tap Adjustment—Stepping
- Switch Shunt Adjustments—Enable All
- Adjust Phase Shift
- Adjust DC Taps
- VAR Limits—Apply Immediately

For the study model build, area interchange control is enabled via tie lines and loads. For contingency analysis, the following table details the area interchange option based on the event type.

Table 4- Area Interchange Settings

EVENT TYPE	AREA INTERCHANGE CONTROL
MODEL BUILD/SYSTEM INTACT	ENABLED (TIE LINES AND LOADS)
GENERATOR	DISABLED
TRANSMISSION CIRCUIT	DISABLED
TRANSFORMER	DISABLED
SHUNT DEVICE	DISABLED
LOSS OF MULTIPLE ELEMENTS (EXCLUDING GENERATOR)	DISABLED
LOSS OF MULTIPLE ELEMENTS (INCLUDING GENERATOR)	DISABLED

8.3.4.2.1 NON-CONVERGED CONDITIONS

Identification of non-convergence is a process to ensure identified issues are not associated with tool limitations or methods, but rather are true system deficiencies. A first pass analysis is used to identify an initial list of contingencies that may result in a non-converged or blown-up state. These contingencies are further tested to attempt to reach a converged state. Examples of further tests include, but is not limited to:

- Ensuring toggling reactive devices or transformer taps are not preventing a converged state. This can be done programmatically by limiting the number of devices allowed to adjust at a given time or manually checked by locking devices.
- Testing the contingency in multiple tools/software to see if a different solution engine yields a converged state.
- Relaxing some solution parameters that may be causing numerical instability.
- Reviewing reactive devices for locked devices that may be contributing to convergence issues or prevented from offering system support.
- Reviewing Interconnection Projects for data errors or improper modeling causing solution problems.

Following the iterative review of problematic contingencies, remaining non-converged contingencies are determined to be attributable to the HILL request. Appropriate transmission support will be identified to mitigate the constraint(s).

Upgrades required to mitigate non-converged conditions will be assigned to HILLGA request having a Power Transfer Distribution Factor (PTDF) impact of at least 3% on the contingent element monitored in the direction of system intact MW flow causing non-convergence.

In the case of system intact non-convergence, upgrades in the form of reactive devices are identified to allow the system to reach a converged state. Note, these upgrades are not intended to fully mitigate system deficiencies such as overloads or low-voltage conditions, but only added to achieve a solved state. These upgrades may become unnecessary as other Networks Upgrades are identified and added to the system. In these cases, the system intact non-converged upgrades will be removed from the case and not assigned.

8.3.4.2.2 THERMAL OVERLOADS

Every element in the SPP planning models has a normal (Rate-A) and emergency (Rate-B) rating. Thermal overloads are identified when the flow across a monitored element exceeds either its normal rating under System-Intact conditions or its emergency rating under contingency conditions. Thermal overloads are identified using the ~~NRIS-HILLGA-Change-Models-with-HILL-Load~~ and ~~NRIS-HILLGA-Change-Models-without-HILL-Load~~ model sets.

Upon identifying thermal overloads, HILLGA request impact on these thermal overloads is determined by a Transfer Distribution Factor (TDF) analysis. The TDF impact on each overloaded facility is calculated utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2. The following TDF threshold criteria:

- At least 3% TDF impact, where the constraint is identified under System-Intact conditions.
- At least 3% TDF impact, where the constraint is identified under contingency conditions

8.3.4.2.3 VOLTAGE VIOLATIONS

After all non-converged contingency and thermal overload mitigations are determined, any remaining voltage violations are checked to determine applicability to the HILLGA. The following voltage performance guidelines are used in accordance with the Transmission Owner local area planning criteria:

SPP voltage criteria is applicable to all SPP facilities 69 kV and greater in the absence of more stringent criteria.

Per Unit voltages must change by at least 2% from the **HILLGA Base models** to the **NRIS HILLGA Change Models with HILL Load** models to be assigned to the **NRIS HILLGA**. Per Unit voltages must change by at least 2% from the **HILLGA Base models** to the **HILLGA Change models without HILL Load** models to be assigned to the **NRIS HILLGA**. For constraints meeting this criteria, HILLGA request impact on those voltage violations is determined by a Transfer Distribution Factor (TDF) analysis. The TDF impact calculated utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2 must have at least 3% PTDF on the contingent element monitored in the direction of system intact MW flow causing voltage constraints will be identified for mitigation the voltage issue(s). For system intact voltage constraints, PTDFs of at least 3% on the line with largest system intact MW flow into the bus experiencing the voltage constraint is used to assign responsibility.

8.3.4.2.4 FIRST-TIER EXTERNAL AREAS FACILITIES 69 KV AND GREATER

Consistent with the ITP, first-tier areas will be monitored to identify potential reliability needs. SPP coordinates the contingency definitions and monitoring criteria with the external area.

8.3.4.3 Solution Process and Methodology

When conducting constraint analysis, solutions and/or mitigations are used to resolve the identified issues. Upgrades approved for construction through Board of Director approval or execution of an agreement from other planning processes during the HILLGA process may be considered as solutions to mitigate constraints identified during the HILLGA study. During the mitigation analysis, upgrades that have been identified are added to the models in sequential order as shown in **Error! Reference source not found.** 5 below. This is done as a holistic approach to use common, previously identified mitigations to aid in the mitigation of constraints that are identified later in the analysis process.

Table 5: Solution Set Implementation

11. Scenario	12. Description
13. S0	14. No upgrades (except for temporary reactive elements as described below)
15. S1	16. Upgrades mitigating non-converged contingencies
17. S2	18. Upgrades mitigating non-converged contingencies and thermal violations
19. S3	20. Upgrades—mitigating—non-converged—contingencies, thermal and voltage violations

For S0, powerflow cases may be in a severely stressed condition and require system support to be able to solve and achieve a stable state. To that end, temporary reactive elements may be added to the model to reach this state. These elements are only added in the event that existing reactive equipment is insufficient. A list of these temporary reactive devices is provided with the study models.

For the S1 portion of the mitigation process, solutions are used to solve non-converged constraints and, if applicable, remove temporary reactive elements. Temporary reactive devices may also be deemed appropriate solutions to non-convergence and be used as mitigations and will be assigned and cost allocated accordingly.

During the process of constraint analysis, multiple alternate solutions are determined through the process, but only one is chosen as the final solution. The final solution set is first and foremost reliable. All constraints both System-Intact and N-n are to be resolved for system reliability to be considered achieved. Next, the least cost solution is chosen. Minimization of cost is considered. Solutions are subject to change based on feedback from the respective Transmission Owner (limiting equipment ratings, feasibility, etc.). All projects assigned to constraints mitigated by these solutions will be assigned cost responsibility.

A final reliability assessment is performed to verify that the solutions solved all constraints and did not cause any new constraints. The new constraints are not restricted to the TDF and electrically close criteria described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2.

During the HILLGA Study, S0 and S3 are represented in model sets and are posted for IC and TO review.

8.3.5 Stability and Short-Circuit Study

8.3.5.1 Modeling

8.3.5.1.1 STABILITY MODEL SET

The HILLGA stability analysis uses the following years and seasons from the HILL model set:



SPP will post models along with the report.

DESCRIPTION	YEAR 5	TOTAL
HILLGA — Base Model	Summer Winter	19
NRIS — HILLGA Change Models with HILL Load	Summer Winter	2
NRIS — HILLGA Change model without HILL Load	Summer Winter	19
TOTAL		40

8.3.5.1.2 SHORT-CIRCUIT MODEL SET

The Year 2 Summer Peak ITP Short-Circuit model from a completed ITP with an approved construction plan is used for short circuit analysis. The HILL Short-Circuit model is used for short circuit analysis.

8.3.5.1.3 HIGH IMPACT LARGE LOAD AND LOAD CONNECTION FACILITIES

The High Impact Large Load and Load Connection Facilities is represented in the dynamic stability, steady-state, and short-circuit models with an acceptable dynamic load characteristic model for the dynamic models at the requested service amount. For High Impact Large Load directly connected to the transmission system, equivalent modeling will include main power transformer(s) and transmission lead line(s) impedances are for dynamic stability analysis. Dynamic stability models provided by Transmission Customers are assumed to properly represent their facilities. Model tuning for interconnection facilities is not performed HILL process. Additional modeling may be required based on scoping calls.

8.3.5.1.4 GENERATING FACILITY AND INTERCONNECTION FACILITIES

Each Generating Facility is represented in the dynamic stability models as an equivalent generator dispatched at the applicable percentage of the requested service amount. The facility modeling includes representation of equivalent GSU and main power transformer(s), with impedance data and power factor capability provided in the interconnection request. Equivalent collector system(s) and transmission load line(s) impedances are also explicitly modeled for dynamic stability analysis. Dynamic stability models provided by interconnection customers are assumed to properly represent their facilities. Model tuning for interconnection facilities is not performed during the HILLGA process.

8.3.5.1.5 STABILITY MODEL DISPATCH

The Stability model dispatch follows the same process as the Steady State model.

8.3.5.1.5.1 SOURCE GENERATION AND SOURCE DEFINITIONS

The source generation and source definitions follows the same process as the Steady State model with exception to utilizing MDAG dispatch procedures.

8.3.5.1.5.2 SINK GENERATION AND SINK DEFINITIONS

The sink generation and sink definitions follows the same process as the Steady State model with exception to utilizing MDAG dispatch procedures.

8.3.5.2 Stability Analysis

8.3.5.2.1 STABILITY FAULT EVENTS

For all stability models developed, a transient stability analysis will be performed to determine HILL and HILLGA and Existing and Planned Generation response due to fault events on the system.

For the stability analysis, unstable conditions will be addressed for transmission reinforcement for contingencies specified in the dynamic stability assessment for TPL-001 contingencies equivalent to P0, P1, P2.1-2.3, P4, and P5 as identified by SPP and the Transmission Owners. Higher depth contingencies (P3, P6, and P7) will be evaluated as necessary for the location of the HILL for mitigations. Unsuccessful reclosing will be evaluated for the faulted loss of elements, excluding transformers, for a P1 and P6 event.

The transient stability analysis will evaluate:

- System stability in response to fault events
- Compliance of HILLGA Requests with FERC Order 661-A
- Adherence to the SPP Disturbance Performance Requirements
- Post event voltage recovery within the SPP voltage criteria

Fault events will include P1 events involving each network circuit segment connected within three levels of each HILL request delivery points and HILLGA request POI for **NRIS HILLGA with HILL Load** and only HILLGA request POI for **NRIS HILLGA without HILL Load**, as well as P4 and P6 events involving each network circuit connected within two levels of each HILL request delivery points and HILLGA request POI.

for ~~NRIS HILLGA with HILL Load and only HILLGA request POI for NRIS HILLGA without HILL Load~~. A network circuit is comprised of each segment of sectionalized single (or double) circuits from substations or buses to accommodate generation and radial load. Each level includes all substations on the remote end of all network circuits. (i.e., 0 levels away from a line tap delivery points or POI includes substations with at least 3 connected circuits on either end of the tapped circuit) Additionally, P1, P3, P4, and P6 events on relevant regional or tie line facilities applicable to the HILL and HILLGA deliverability area will be evaluated. Each event should remove from service all elements that are expected to automatically disconnect for each event.

~~When system transient stability issues are identified, investigative analysis is first used to identify the cause of instability. Changed system conditions may uncover data/modeling issues with generator models of existing and planned generators. Dynamic model parameter review in conjunction with block diagrams is used to ensure there are no logic errors near the identified system constraint. Generators may also be temporarily replaced with constant power devices (no dynamic response) to see if a generator model is the cause of the stability issue. This is to ensure that any identified issue is due to system deficiencies as opposed to data quality issues.~~

~~For verified system deficiencies, the HILL and HILLGA request that is found to materially impact verified system deficiencies will be included for cost allocation for applicable mitigations. Material impact is evaluated by comparing system response with and without relevant HILL and HILLGA request for ~~NRIS HILLGA with HILL Load and with and without only HILLGA request POI for NRIS HILLGA without HILL Load~~. If a material impact cannot be determined for studied generation due to deficiencies that are pre-existing, such as system collapse/ instability, then a less severe fault will be applied to determine said impact. Fictitious mitigations, such as VAR support, may be used to assist in evaluating a HILL and HILLGA request impact on pre-existing system deficiencies.~~

3.3.5.2.2 MITIGATIONS

~~Mitigation of stability issues, not also observed as a steady-state issue, will evaluate reduced fault duration and removal of reclose from the fault definition. Actual equipment settings and capabilities may provide reduced clearing times.~~

~~Evaluation of reduced clearing times and removal of reclose may be used to identify and determine whether mitigation is provided by existing equipment and settings or may be provided by a Network Upgrade to fault interrupting equipment (i.e., breakers and relays).~~

8.3.5.3 Short-Circuit Ratio Analysis

8.3.5.3.1 SHORT-CIRCUIT RATIO CALCULATION

SPP calculates the short-circuit ratio using this formula and reports the results:

$$SCR_{POT} = \frac{SCMVA_{POT}}{MW_{POT}}$$

8.3.5.3.2 SHORT-CIRCUIT FAULT CURRENT CALCULATION

Short-Circuit Fault Current Calculation will be performed in accordance with SPP ITP Manual Short-Circuit Analysis. Short-Circuit Fault Current Calculation will be performed consistent with HILL Short-Circuit Analysis. Results are refined in the Interconnection Facility Study/Analysis with any additional required directly assigned upgrades and cost assignment.

8.3.5.4 SCRCCT Analysis

HILLGA Short-circuit models serve as the starting point for the SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included. HILL models utilized for HILL SCRCCT analysis serve as the starting point for the HILLGA SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included.

A short-circuit ratio (SCR) check is used to assess the voltage strength of the system. For HILLGA studies, standard SCR, composite SCR (CSCR), and weighted SCR (WSCR) are analyzed to determine if additional analysis will be required. The Short-Circuit Ratios are defined as:

$$SCR = \frac{S_{sc}}{MW}$$

$$CSCR = \frac{CSMVA}{MW_n}$$

$$WSCR = \frac{\sum_n^N SCMVA * MW_n}{\sum_n^N MW_n}$$

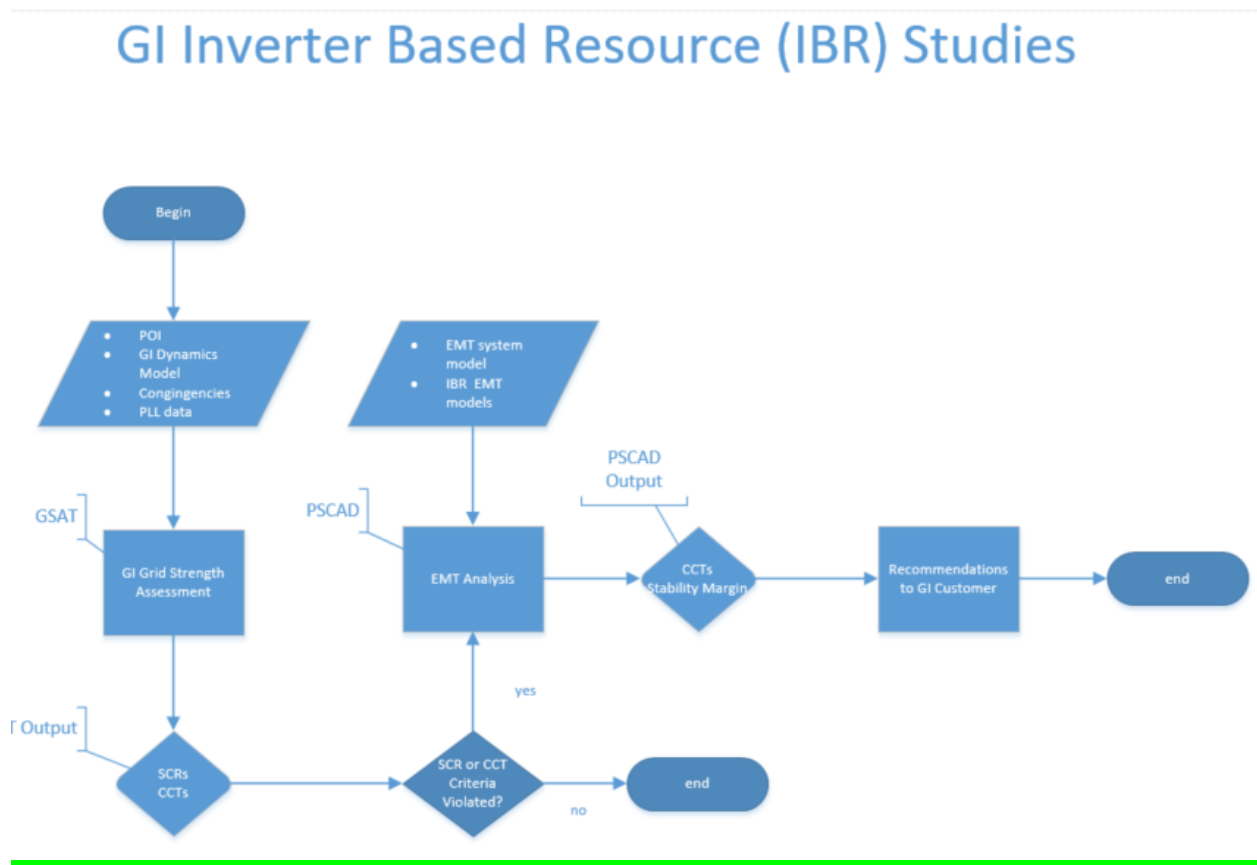
S_{sc} : Maximum Available Short-Circuit Power (MVA) before connection of the resource.

MW: Power Rating (MW) of resource to be connected.

If any of the SCR calculations (SCR, CSCR, or WSCR) are below 6.0, project(s) will be deemed as failing the SCR check.

In addition to the SCRs, the critical clearing time (CCT) for faults near the POI of each project are screened. Critical-Clearing Time is the maximum time a fault near the POI of an inverter-based resource is allowed to remain on the system such that the inverter-based resource remains stable. If the CCT for any project is below 0.15s (9 cycles), the project will be deemed as failing the CCT check.

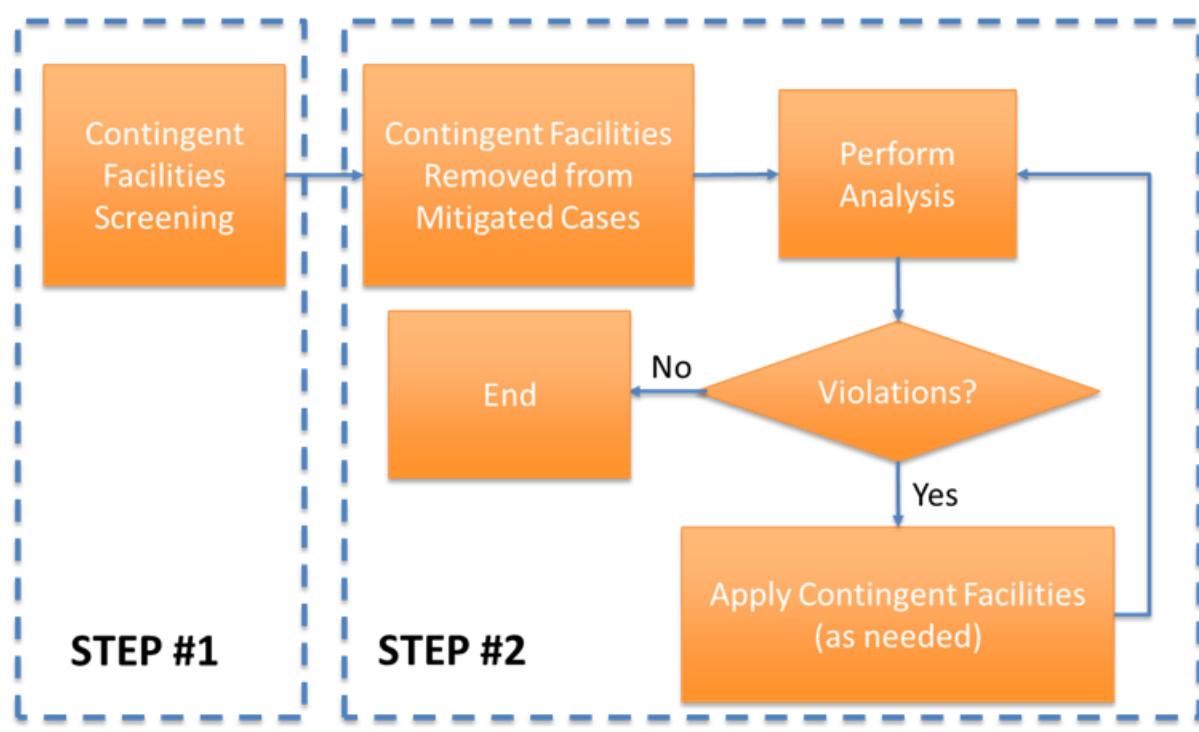
The results of the SCRCCT and the WSCR are provided in the HILLGA. For any projects not passing SCR or CCT screening, a detailed Electromagnetic Transient (EMT) study will be performed to ensure system reliability and mitigations will be developed as applicable. This process is detailed in the following flowchart:



8.3.5 Identification of Contingent Facilities

To maintain Bulk Electric System (BES) reliability for HILLGA requests, contingent facilities for HILLGA requests will be identified utilizing the following two-step methodology. Contingent facilities include Network Upgrades approved for construction as part of SPP Expansion Plan that are included the study models as planned upgrades that are not currently in-service and if delayed beyond their projected in-service date can pose a risk reliability of the BES.

Contingent Facilities Procedure Diagram (Placeholder)



Step 1: Perform contingent facilities screening by calculating TDF impact on contingent facilities included in the study model set utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2. The transfer must have at least 3% PTDF Transmission Distribution Factor (TDF) and the contingent facility is within ten buses from the modified or established delivery point bus.

Step 2: Remove these screened upgrades from the Steady State and Stability models then Determine if any new violations appear utilizing previously described Steady State and Stability analysis methodologies. Solve mitigation with most effective solution using the previously described mitigation methodologies.

8.3.5 Limited Operation

As defined in the Attachment BB, Limited Operation is a quantification of the amount of interconnection capacity available to the Interconnection Customer without system overloads, voltage violations, instabilities, or breaker over duty prior to the in-service date of all identified upgrades. Limited Operation amounts are calculated for each HILLGA and are listed in the report.

The minimum value across the analyses performed (i.e. steady state, stability) and constraint types observed (e.g. non-converged contingency, thermal constraints, voltage violations) will be set as the LOIS value. If short circuit upgrades are necessary, that may be used for further refinement of LOIS values.

A LOIS value will be determined for each season in report. Seasonal models will be mapped to corresponding operating date ranges according to

, which is based on the SPP Model Development Procedure Manual, Section 3 Table 1.

If there are any non-converged contingencies, voltage constraints or system responses within the monitored system that do not meet the SPP Disturbance Performance Requirements on which the request has a sufficient TDF, the steady-state LOIS value will be set by reducing the HILLGA in 25% increments of the maximum capacity may be tested to determine if steady state and stability is maintained at lesser values.

Table 2 Seasonal Model Results to Operational Date Mapping

Operational Dates	Steady State	Stability
April 1 – May 31	Lower of Summer Peak and Winter Peak	Lower of Summer Peak and Winter Peak
June 1 – September 30	Summer Peak	Summer Peak
October 1 – November 30	Lower of Summer Peak and Winter Peak	Lower of Summer Peak and Winter Peak
December 1 – March 31	Winter Peak	Winter Peak

8.3.6 Cost Allocation

Interconnection facilities will be directly assigned to the Transmission Customer. Network Upgrades to mitigate transmission system study constraints that are determined to be attributed to the HILLGA will be assigned to the Transmission Customer in accordance with SPP Tariff Attachment BB. Costs assigned to each HILLGA are listed in the report.

When there are two or more HILLGA requests, the following procedures will be used for Cost Allocating Network Upgrades.

Cost allocation of Network Upgrades for two or more HILLGA Requests is determined using the summer peak model. Cost allocation for all network upgrades is performed as defined below, regardless of which part of the study identified the upgrade.

For transmission circuit upgrades, an analysis is performed to determine the System-Intact TDF, also known as a Power Transfer Distribution Factor (PTDF) that each HILLGA Request had on each new upgrade. The PTDF is calculated on the summer peak model. The impact each HILLGA Request had on each upgrade project is weighted by the size of each request. The size of the request is the Maximum Injection Capability not to exceed load for NRIS HILLGA requests. The size of the request is the Maximum Injection Capability. Finally, the costs allocated to each HILLGA Request for a particular upgrade are then determined by allocating the portion of each request's impact over the impact of all affecting requests. The PTDF calculation uses the same source and sink methodology utilized in the Contingency Analysis Sections 8.3.4.1.1.1, 8.3.4.1.1.2, and 8.3.4.1.1.3. Individual HILLGA request impacts are determined.

For example, assume there are three HILLGA Requests: X, Y and Z, responsible for the costs of Upgrade 1. Given their respective PTDFs for the upgrade have been determined, the cost allocation for HILLGA Request X for Upgrade Project 1 is found by the following set of steps and formulas:

- Determine an impact factor on a given project for all responsible HILLGA requests:

-

- $\text{Request X Impact Factor on Upgrade 1} = \text{PTDF (\%)(X)} * \text{MW(X)} = X1$

- $\text{Request Y Impact Factor on Upgrade 1} = \text{PTDF (\%)(Y)} * \text{MW(Y)} = Y1$

- $\text{Request Z Impact Factor on Upgrade 1} = \text{PTDF (\%)(Z)} * \text{MW(Z)} = Z1$

- Determine each request's allocation of cost for that particular project:

-

- $\text{Request X's Upgrade 1 Cost Allocation(\$)} = \frac{\text{Network Upgrade 1 Cost}(\$)(\text{MW})}{X1 + Y1 + Z1}$

- Repeat previous for each responsible Current Study Request for each project.

For substation-specific upgrades, such as new reactive devices, reconfigurations, etc., PTDFs cannot be calculated on a bus or node basis. Therefore, the PTDFs are generally checked on either the worst-case contingent element in the direction of system-intact flow or on all circuits connecting to the location where the upgrade is installed where the highest absolute value PTDF of all the circuits is used to calculate the MW impact for each interconnection request for solutions resolving system-intact non-converged and

voltage constraints. The process then proceeds in alignment with the transmission circuit allocation process.

The cost allocation of each necessary Network Upgrade is determined by the size of each request and its impact on the given upgrade. This allows for the most efficient and reasonable mechanism for sharing the costs of upgrades. Costs assigned to each HILLGA Request are listed in the report.

8.3.6.1 COST ESTIMATES

SPP requests feedback and cost estimates from TOs for all assigned upgrades in the HILLGA. All cost information submitted by TOs are incorporated into the study for accuracy. In the event that SPP does not receive a cost estimate, SPP developed cost estimates based on historical data will be utilized.

8.3.6.2 INCREMENTAL LONG-TERM CONGESTION RIGHTS

The SPP OATT provides Incremental Long-Term Congestion Rights (ILTCR) as compensation for the directly assigned cost of Network Upgrades for mitigating transmission system constraints study.

8.3.7 Affected Systems Coordination

SPP maintains agreements with most neighboring Transmission Providers that define how impacts from transmission service are coordinated between systems. References and links to the individual agreements are listed in the **Error! Not a valid bookmark self reference.** section of this business practice. SPP coordinates with other Transmission Providers on a case-by-case basis. For interconnection to facilities owned by SPP Transmission Owners and other facility owners that are within the SPP Region, see Section 6 SPP as an Affected System.

When a neighboring entity studies HILLGA requests' impact to the neighboring system, according to JOAs found in the Appendix section, the neighboring entity provides their report to SPP. Therefore, at the end of HILLGA study a HILLGA request should have their SPP study report and any AFS result report, if applicable. In the event the neighboring entity study results are not available, SPP will communicate the delay and continue with the SPP HILLGA process regardless of AFS delay.

8.3.8 NRIS HILLGA Report

SPP will post a HILLGA results report to the Transmission Customer and Host Transmission Owner that provides HILLGA request information about models, constraints, upgrades, and costs associated with the

upgrades. Upgrades can be **contingent** (meaning, relies on a previous upgrade at no cost. **Interconnection Facility** costs for HILLGA request are reported as well.

SPP provides final study models along with the report that include the upgrade solutions and/or upgrade ideas.

8.3.9 Interconnection Facility Study/Analysis

~~Placeholder for Interconnection Facility Study. In accordance Attachment BB Section 3.4.4.2, the Interconnection Facility Study/Analysis will account for active or pending Request at the same Point of Interconnection at the time of the submission of a HILLGA Request.~~

8.3.10 Restudy/Sensitivities

~~Placeholder for Restudy/Sensitivities~~

8.3.11 SPP and Stakeholder Accountability

~~SPP and stakeholders will introduce steps to focus on accountability for timelines and milestones that consist of mechanisms designed to promote the timely exchanges of data, reviews, and approvals within the HILLGA study process.~~

8.3.11.1 Project Schedule

~~SPP will develop a project schedule for each cluster and successive study. This schedule will identify the timing, duration, and responsible parties for all data exchanges, reviews, and approvals required to complete the HILLGA study. SPP will coordinate with SPP stakeholders in the development of this schedule and provide stakeholder updates on a frequent basis.~~

This schedule will be maintained by SPP and regularly reviewed at appropriate SPP stakeholder meetings to keep affected parties informed of upcoming milestones to ensure the timely completion of the planning process.

8.3.11.2 Transmission Customer and Host Transmission Owner Reviews

1. Scoping Calls — SPP, Transmission Customer and Host Transmission Owner

- a. Transmission Customer and Host Transmission Owner are expected to coordinate prior to application submission.
- b. SPP receives the HILLGA application and schedules scoping calls with SPP, Transmission Customer and Transmission Owners to review the HILLGA request.
- c. Transmission Customers are expected to review application requirements and ensure their application data, one lines, DYRE files, etc. match each other at the time the request is submitted. There is a one-time cure period if deficiencies are identified.
- d. In cases where there is no viable date mutually agreed upon by the Transmission Customer, Host Transmission Owner, and SPP, email communications between these parties may be used to serve the purpose of a scoping call.

2. Model Review — SPP, Transmission Customer and Host Transmission Owner

- a. SPP will post BASE and Change models for review.
- b. Host Transmission Owner review ratings between latest planning model and HILLGA study models and sign off for completing the model review process.
- c. Transmission Customer and Host Transmission Owner review of load connection delivery points, configuration, topology, impedance, and parameters/models for the HILLGA requests and sign off for completing the model review process.
- d. Failure to provide appropriate feedback during the Model Review period could lead to delays in the study.

3. Draft Report Review — SPP, Transmission Customer and Host Transmission Owner

- a. SPP will post a draft report** and create a window where Transmission Customer can submit questions and feedback to SPP. SPP needs to provide responses/feedback to submitted questions in a timely fashion*. SPP will post the TDF values in the report.

4. SPP will use results calls to talk about the proposed solutions, explaining the constraints, contingencies, flows, thermal and voltage issues. However, this action is not intended to open a window for Transmission Customers and Host Transmission Owners to submit alternative mitigations to the constraints, as it would add an additional level of time and complexity to develop a final portfolio of projects.

*As the schedule permits

**The draft report is a courtesy to improve the HILL process

In all instances, SPP's Remedy Management System will be utilized to submit feedback or questions to SPP.

Note that TO work to directly support HILLGA tasks, such as attending scoping calls, responding to data requests, reviewing models, and developing cost estimates, are all study costs recoverable from respective HILLGA requests under Attachment BB of the SPP tariff.

8.4 Other Special Studies associated with HILLGA requests

HILLGA generation interconnections may be require other special studies to include but not limited to Electric Storage Resource Load Assessment, Limited Operation System Impact Study, Surplus Interconnection System Impact Study, and Modification Request Impact Study . These special studies will generally follow the stated objectives in BP7250 Section 7 and will use study models and study methods from respective HILL and associated HILLGA request studies.

section of this business practice. SPP coordinates with other Transmission Providers on a case-by-case basis. For interconnection to facilities owned by SPP Transmission Owners and other facility owners that are within the SPP Region, see BP7250 Section **Error! Reference source not found.** Error! Reference source not found.

When a neighboring entity studies HILLGA requests' impact to the neighboring system, according to JOAs found in the Appendix section, the neighboring entity provides their report to SPP. Therefore, at the end of HILLGA study a HILLGA request should have their SPP study report and any AFS result report, if applicable. In the event the neighboring entity study results are not available, SPP will communicate the delay and continue with the SPP HILLGA process regardless of AFS delay.

8.2.8 Load Limited HILLGA Report

SPP will post a HILLGA results report to the Transmission Customer and Host Transmission Owner that provides HILLGA request information about models, constraints, upgrades, and costs associated with the

upgrades. Upgrades can be **contingent** (meaning, relies on a previous upgrade at no cost. **Interconnection Facility** costs for HILLGA request are reported as well.

SPP provides final study models along with the report that include the upgrade solutions and/or upgrade idevs.

8.2.9 Interconnection Facility Study/Analysis

Placeholder for Interconnection Facility Study/Analysis. In accordance Attachment BB Section 3.4.4.2, the Interconnection Facility Study/Analysis will account for active or pending Request at the same Point of Interconnection at the time of the submission of a HILLGA Request.

8.2.10 Restudy/Sensitivities

Placeholder for Restudy/Sensitivities

8.2.11 SPP and Stakeholder Accountability

SPP and stakeholders will introduce steps to focus on accountability for timelines and milestones that consist of mechanisms designed to promote the timely exchanges of data, reviews, and approvals within the HILLGA study process.

8.2.11.1 Project Schedule

SPP will develop a project schedule for each **study cluster** and successive study. This schedule will identify the timing, duration, and responsible parties for all data exchanges, reviews, and approvals required to complete the HILLGA study. SPP will coordinate with SPP stakeholders in the development of this schedule and provide stakeholder updates on a frequent basis.

This schedule will be maintained by SPP and regularly reviewed at appropriate SPP stakeholder meetings to keep affected parties informed of upcoming milestones to ensure the timely completion of the planning process.

SPP will provide pre-notification to the Transmission Owner and HILLGA Customer in order to assess workload and resource availability before the 90-day HILLGA begins.

8.2.11.2 Transmission Customer and Host Transmission Owner Reviews

1. Scoping Calls – SPP, Transmission Customer and Host Transmission Owner

- a. Transmission Customer and Host Transmission Owner are expected to coordinate prior to application submission.
- b. SPP receives the HILLGA application and schedules scoping calls with SPP, Transmission Customer and Transmission Owners to review the HILLGA request.
- c. Transmission Customers are expected to review application requirements and ensure their application data, one-lines, DYRE files, etc. match each other at the time the request is submitted. There is a one-time cure period if deficiencies are identified.
- d. In cases where there is no viable date mutually agreed upon by the Transmission Customer, Host Transmission Owner, and SPP, email communications between these parties may be used to serve the purpose of a scoping call.

2. Model Review – SPP, Transmission Customer and Host Transmission Owner

- a. SPP will post BASE and Change models for review.
- b. Host Transmission Owner review ratings between latest planning model and HILLGA study models and sign off for completing the model review process.
- c. Transmission Customer and Host Transmission Owner review of load connection delivery points, configuration, topology, impedance, and parameters/models for the HILLGA requests and sign off for completing the model review process.
- d. Failure to provide appropriate feedback during the Model Review period could lead to delays in the study.

3. Draft Report Review – SPP, Transmission Customer and Host Transmission Owner

- a. SPP will post a draft report** and create a window where Transmission Customer can submit questions and feedback to SPP. SPP needs to provide responses/feedback to submitted questions in a timely fashion*. SPP will post the TDF values in the report.

4. SPP will use results calls to talk about the proposed solutions, explaining the constraints, contingencies, flows, thermal and voltage issues. However, this action is not intended to open a window for Transmission Customers and Host Transmission Owners to submit alternative mitigations to the constraints, as it would add an additional level of time and complexity to develop a final portfolio of projects.

*As the schedule permits

**The draft report is a courtesy to improve the HILLGA process

In all instances, SPP's Remedy Management System will be utilized to submit feedback or questions to SPP.

Note that TO work to directly support HILLGA tasks, such as attending scoping calls, responding to data requests, reviewing models, and developing cost estimates, are all study costs recoverable from respective HILLGA requests under Attachment BB of the SPP tariff.

8.3 NRIS HILLGA within the same DA

8.3.1 Objective

NRIS HILLGA within the same DA studies are performed to determine a HILLGA request steady-state violations, transient instabilities, and short-circuit impacts and upgrades to transmission system. The assignment of Interconnection Facilities, Network Upgrades, or cost allocation will be evaluated. These study procedures apply to non-jurisdiction Behind-The-Meter Generation as well consistent with BP7250 Section 6. When HILLGA requests overlap with provision service, the HILLGA Network Upgrades will supersede provision Network Upgrades identified utilizing ITP GOF analysis.

8.3.2 Applicability

In order for a NRIS HILLGA within the same DA to be evaluated, an HILLGA request must be submitted in Accordance with Attachment BA and Attachment BB.

8.3.3 Study Request Modifications

Modifications are allowable to the extent described under Attachment BA and Attachment BB modifications to a study request and may affect the timing of study completion.

8.3.4 Steady State Analysis

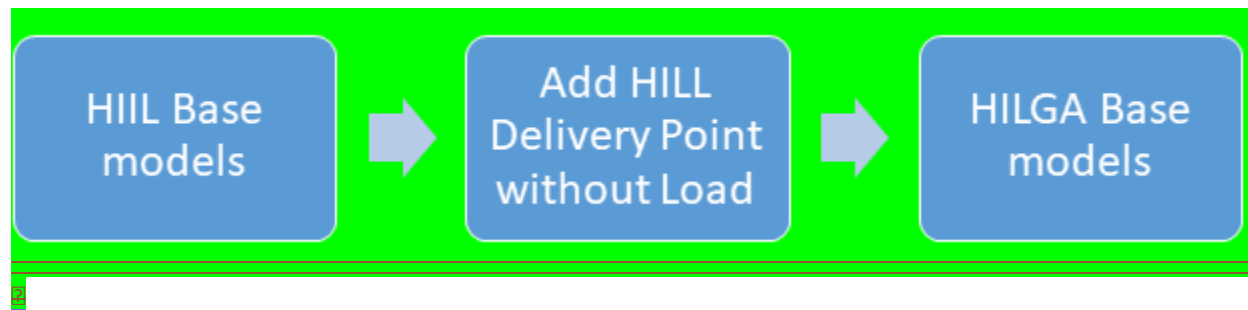
The NRIS HILLGA within the same DA steady-state analysis involves development of powerflow models, identification of non-convergent conditions, voltage constraints, thermal constraints and cost allocation. The process generally uses the same procedures used for the ITP base reliability analysis including a common model set and contingency set, with exceptions as described in the following sections.

8.3.4.1 Model Development

The HILLGA steady-state analysis uses the following years and seasons from the HILL model set:

- Year 5
- Summer Peak
- Winter Peak

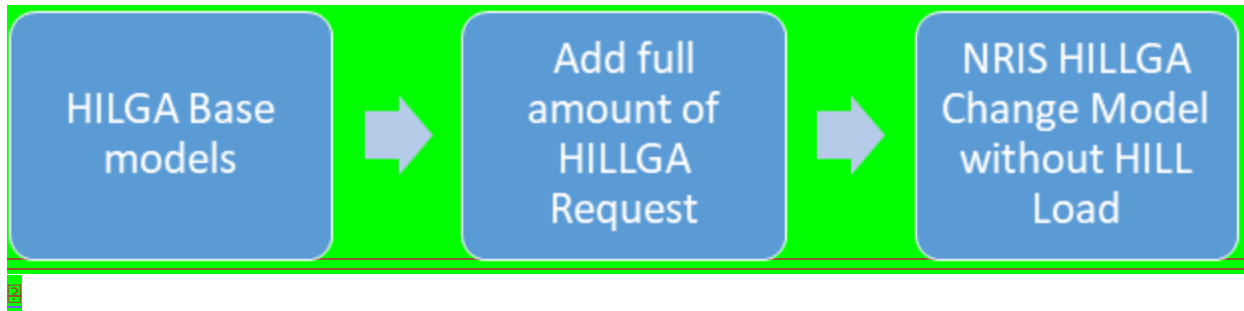
Modifications to HILL Base Models to HILLGA Base Models



Modifications to HILLGA Base Models to NRIS HILLGA Change Models



Modifications to HILLGA Base Model to HILLGA Change Models for NRIS to DA



SPP will post ~~HILGA Base Models~~, ~~NRIS HILLGA Change Models with HILL Load~~, and ~~NRIS HILLGA Change Model without HILL Load~~ for HILLGA for Transmission Customers, HILLGA Interconnection Customers, and Host Transmission Owners for review and Interconnection Facility Study/Analysis.

8.3.4.1.1 GENERATOR DISPATCH

The ~~HILL Base Model~~ is modified to create a ~~HILLGA Base model~~ by adding HILL delivery point without the HILL request Load.

The ~~HILLGA Base model~~ is modified to create a ~~NRIS HILLGA Change Models with HILL Load~~ by adding the HILL load and dispatching of the HILLGA request. When the HILL load exceeds the HILLGA request, the existing Transmission Customer firm resources to include provisional service resources as part of the HILL application will be dispatched. When the HILLGA request exceeds the HILL load, the Sink generation will be Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area. When the provisional service resource overlaps with the HILLGA request, the provisional service resource will be dispatched to HILLGA Maximum Injection Capacity. When there are two or more HILLGA requests, the HILLGA requests will be dispatched to Maximum Injection Capacity.

The ~~HILLGA Base model~~ is modified to create a ~~NRIS HILLGA without HILL Load~~ set by dispatching of the HILLGA request to the Maximum Injection Capacity by sinking the resource to Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area.

8.3.4.1.1.1 SOURCE GENERATION AND SOURCE DEFINITIONS

Source generation will be the NRIS HILLGA request(s).

In order to calculate a TDF for **NRIS HILLGA with HILL Load** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA), the source definition will be the NRIS HILLGA request(s).

In order to calculate a TDF for **NRIS HILLGA without HILL Load** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA), the source definition will be the NRIS HILLGA request(s).

8.3.4.1.1.2 SINK GENERATION AND SINK DEFINITIONS

Sink generation will be Deliverability Area sink generators first and when insufficient generation exists in the Deliverability Area the sink generation will be outside of the Deliverability Area sink. A proportional, uniform scaling will be utilized for sinking generators. Generators labeled as must run as identified in the completed ITP Base Reliability and Economic dispatch methodologies, including but not limited to hydroelectric, cogeneration facilities, landfill gas and nuclear units, are excluded from consideration for sinking generation.

In order to calculate a TDF for **NRIS HILLGA with HILL Load** to identify impacts HILL local load connection facilities and local transmission system and cost allocate upgrades to include non-converged events and contingent upgrades, the HILL request as a load will define sink definition.

In order to calculate a TDF for **NRIS HILLGA without HILL Load** to identify impacts to the transmission system and cost allocate upgrades for Network Resource Interconnection Service within the Deliverability Area (DA), the sink definition will be the Deliverability Area sink generators.

8.3.4.2 Contingency Analysis

After the study models are developed, SPP performs a contingency analysis on the **HILLGA Base**, **NRIS HILLGA Change Models with HILL Load**, and **NRIS HILLGA Change Models without HILL Load** model sets to identify potential non-convergent conditions, voltage constraints and thermal constraints. The ITP contingency, subsystem, and monitored element files are used as the base auxiliary files. Lastly, subsystem files include a system to be used to account for generation and/or load imbalances introduced by contingencies to prevent the system swing from accounting for these imbalances.

Consistent with the ITP, contingencies evaluated for **HILLGA** include those events listed in North American Electric Reliability Corporation (NERC) standard IPL-001-4 Table 1 that do not permit loss of non-

consequential load or interruption of firm transmission service. P3 events (loss of a generator followed by a second contingency event) are not evaluated for HILLGA service. P3 events (loss of a generator followed by a second contingency event) are not evaluated for interconnection service because the standard permits the adjustment of generation prior to the **event**.

nd event, which for interconnection studies would result in duplication of a P1 (single contingency) event. The ITP contingencies may be modified as needed to reflect topology changes introduced by the addition of generating facilities and upgrades.

Network constraints are found by performing AC contingency calculation analysis. There may be constraints that exist in the **HILLGA Base** that also are identified in the **NRIS HILLGA Change Models with HILL Load** and **NRIS HILLGA Change Models without HILL Load**. These constraints may be the result of different dispatches or system conditions that did not allow for these constraints to exist or identified in the HILL study. As such, HILLGA projects are assigned to these constraints if they meet the applicable criteria.

The following solution parameters are used for both the initial development of the study models as well as the contingency analysis:

- Fixed Slope Decoupled Newton-Raphson
- Tap Adjustment—Stepping
- Switch Shunt Adjustments—Enable All
- Adjust Phase Shift
- Adjust DC Taps
- VAR Limits—Apply Immediately

For the study model build, area interchange control is enabled via tie lines and loads. For contingency analysis, the following table details the area interchange option based on the event type.

Table 4: Area Interchange Settings

EVENT TYPE	AREA INTERCHANGE CONTROL
MODEL BUILD/SYSTEM INTACT	ENABLED (TIE LINES AND LOADS)
GENERATOR	DISABLED ¹⁰
TRANSMISSION CIRCUIT	DISABLED
TRANSFORMER	DISABLED
SHUNT DEVICE	DISABLED
LOSS OF MULTIPLE ELEMENTS (EXCLUDING GENERATOR)	DISABLED
LOSS OF MULTIPLE ELEMENTS (INCLUDING GENERATOR)	DISABLED ¹¹

8.3.4.2.1 NON-CONVERGED CONDITIONS

Identification of non-convergence is a process to ensure identified issues are not associated with tool limitations or methods, but rather are true system deficiencies. A first pass analysis is used to identify an initial list of contingencies that may result in a non-converged or blown-up state. These contingencies are further tested to attempt to reach a converged state. Examples of further tests include, but is not limited to:

- Ensuring toggling reactive devices or transformer taps are not preventing a converged state. This can be done programmatically by limiting the number of devices allowed to adjust at a given time or manually checked by locking devices.
- Testing the contingency in multiple tools/software to see if a different solution engine yields a converged state.
- Relaxing some solution parameters that may be causing numerical instability.
- Reviewing reactive devices for locked devices that may be contributing to convergence issues or prevented from offering system support.
- Reviewing Interconnection Projects for data errors or improper modeling causing solution problems.

¹⁰ See minutes of TWG meeting Feb. 28 – Mar. 1, 2022: SPP Reserve Group (all generation excluding Wind, Solar, and Hydro) is dispatched to make up for generation outage.

¹¹ SPP Reserve Group (all generation excluding Wind, Solar, and Hydro) is dispatched to make up for generation outage.

Following the iterative review of problematic contingencies, remaining non-converged contingencies are determined to be attributable to the HILL request. Appropriate transmission support will be identified to mitigate the constraint(s).

Upgrades required to mitigate non-converged conditions will be assigned to HILLGA request having a Power Transfer Distribution Factor (PTDF) impact of at least 3% on the contingent element monitored in the direction of system intact MW flow causing non-convergence.

In the case of system intact non-convergence, upgrades in the form of reactive devices are identified to allow the system to reach a converged state. Note, these upgrades are not intended to fully mitigate system deficiencies such as overloads or low-voltage conditions, but only added to achieve a solved state. These upgrades may become unnecessary as other Networks Upgrades are identified and added to the system. In these cases, the system intact non-converged upgrades will be removed from the case and not assigned.

8.3.4.2.2 THERMAL OVERLOADS

Every element in the SPP planning models has a normal (Rate A) and emergency (Rate B) rating. Thermal overloads are identified when the flow across a monitored element exceeds either its normal rating under System-Intact conditions or its emergency rating under contingency conditions. Thermal overloads are identified using the NRIS HILLGA Change Models with HILL Load and NRIS HILLGA Change Models without HILL Load model sets.

Upon identifying thermal overloads, HILLGA request impact on those thermal overloads is determined by a Transfer Distribution Factor (TDF) analysis. The TDF impact on each overloaded facility is calculated utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2. The following TDF threshold criteria:

- At least 3% TDF impact, where the constraint is identified under System-Intact conditions.
- At least 3% TDF impact, where the constraint is identified under contingency conditions.

8.3.4.2.3 VOLTAGE VIOLATIONS

After all non-converged contingency and thermal overload mitigations are determined, any remaining voltage violations are checked to determine applicability to the HILLGA. The following voltage performance guidelines are used in accordance with the Transmission Owner local area planning criteria.¹²

SPP voltage criteria¹³ is applicable to all SPP facilities 69 kV and greater in the absence of more stringent criteria.

Per Unit voltages must change by at least 2% from the ~~HILLGA Base models~~ to the **NRIS HILLGA Change Models with HILL Load** models to be assigned to the **NRIS HILLGA**. Per Unit voltages must change by at least 2% from the ~~HILLGA Base models~~ to the ~~HILLGA Change models without HILL Load~~ models to be assigned to the **NRIS HILLGA**. For constraints meeting this criteria, HILLGA request impact on those voltage violations is determined by a Transfer Distribution Factor (TDF) analysis. The TDF impact calculated utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2 must have at least 3% PTDF on the contingent element monitored in the direction of system intact MW flow causing voltage constraints will be identified for mitigation the voltage issue(s). For system intact voltage constraints, PTDFs of at least 3% on the line with **largest system intact MW flow** into the bus experiencing the voltage constraint is used to assign responsibility.

8.3.4.2.4 FIRST-TIER EXTERNAL AREAS FACILITIES 69 KV AND GREATER

Consistent with the ITP, first tier areas will be monitored to identify potential reliability needs. SPP coordinates the contingency definitions and monitoring criteria with the external area.¹⁴

8.3.4.3 Solution Process and Methodology

When conducting constraint analysis, solutions and/or mitigations are used to resolve the identified issues. Upgrades approved for construction through Board of Director approval or execution of an agreement from other planning processes during the HILLGA process may be considered as solutions to mitigate constraints identified during the HILLGA study. During the mitigation analysis, upgrades that have been identified are added to the models in sequential order as shown in **Error! Reference source not found.** 5 below. This is done as a holistic approach to use common, previously identified mitigations to aid in the mitigation of constraints that are identified later in the analysis process.

¹² See each Transmission Owner's local area planning criteria posted on SPP OASIS <http://www.oasis.oati.com/> (requires certificate to access)

¹³ See SPP Planning Criteria Section 5.4

¹⁴ See SPP ITP Manual Section 4.2.4

Table 5: Solution Set Implementation

21. Scenario	22. Description
23. S0	24. No upgrades (except for temporary reactive elements as described below)
25. S1	26. Upgrades mitigating non-converged contingencies
27. S2	28. Upgrades mitigating non-converged contingencies and thermal violations
29. S3	30. Upgrades—mitigating—non-converged—contingencies, thermal and voltage violations

For S0, powerflow cases may be in a severely stressed condition and require system support to be able to solve and achieve a stable state. To that end, temporary reactive elements may be added to the model to reach this state. These elements are only added in the event that existing reactive equipment is insufficient. A list of these temporary reactive devices is provided with the study models.

For the S1 portion of the mitigation process, solutions are used to solve non-converged constraints and, if applicable, remove temporary reactive elements. Temporary reactive devices may also be deemed appropriate solutions to non-convergence and be used as mitigations and will be assigned and cost allocated accordingly.

During the process of constraint analysis, multiple alternate solutions are determined through the process, but only one is chosen as the final solution. The final solution set is first and foremost reliable. All constraints both System-Intact and N-n are to be resolved for system reliability to be considered achieved. Next, the least cost solution is chosen. Minimization of cost is considered. Solutions are subject to change based on feedback from the respective Transmission Owner (limiting equipment ratings, feasibility, etc.). All projects assigned to constraints mitigated by these solutions will be assigned cost responsibility.

A final reliability assessment is performed to verify that the solutions solved all constraints and did not cause any new constraints. The new constraints are not restricted to the TDF and electrically close criteria described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2.

During the HILLGA Study, S0 and S3 are represented in model sets and are posted for IC and TO review.

8.3.5 Stability and Short Circuit Study

8.3.5.1 Modeling

8.3.5.1.1 STABILITY MODEL SET

The HILLGA stability analysis uses the following years and seasons from the HILL model set:



SPP will post models along with the report.

DESCRIPTION	YEAR 5	TOTAL
HILLGA — Base Model	Summer Winter	19
NRIS — HILLGA Change Models with HILL Load	Summer Winter	2
NRIS — HILLGA Change model without HILL Load	Summer Winter	19
TOTAL		40

8.3.5.1.2 SHORT-CIRCUIT MODEL SET

The Year 2 Summer Peak ITP Short-Circuit model from a completed ITP with an approved construction plan is used for short-circuit analysis. The HILL Short-Circuit model is used for short-circuit analysis. The Year 2 Summer Peak ITP Short-Circuit model from a completed ITP with an approved construction plan is used for short-circuit analysis.

8.3.5.1.3 HIGH-IMPACT LARGE LOAD AND LOAD CONNECTION FACILITIES

The High-Impact Large Load and Load Connection Facilities is represented in the dynamic stability, steady-state, and short-circuit models with an acceptable dynamic load characteristic model for the dynamic models at the requested service amount. For High-Impact Large Load directly connected to the transmission system, equivalent modeling will include main power transformer(s) and transmission lead line(s) impedances are for dynamic stability analysis. Dynamic stability models provided by Transmission

Customers are assumed to properly represent their facilities. Model tuning for interconnection facilities is not performed HILL process. Additional modeling may be required based on scoping calls.

8.3.5.1.4 GENERATING FACILITY AND INTERCONNECTION FACILITIES

Each Generating Facility is represented in the dynamic stability models as an equivalent generator dispatched at the applicable percentage of the requested service amount. The facility modeling includes representation of equivalent GSU and main power transformer(s), with impedance data and power factor capability provided in the interconnection request. Equivalent collector system(s) and transmission lead line(s) impedances are also explicitly modeled for dynamic stability analysis. Dynamic stability models provided by interconnection customers are assumed to properly represent their facilities. Model tuning for interconnection facilities is not performed during the HILLGA process.

8.3.5.1.5 STABILITY MODEL DISPATCH

The Stability model dispatch follows the same process as the Steady-State model.

8.3.5.1.5.1 SOURCE GENERATION AND SOURCE DEFINITIONS

The source generation and source definitions follows the same process as the Steady-State model with exception to utilizing MDAG dispatch procedures.

8.3.5.1.5.2 SINK GENERATION AND SINK DEFINITIONS

The sink generation and sink definitions follows the same process as the Steady-State model with exception to utilizing MDAG dispatch procedures.

8.3.5.2 Stability Analysis

8.3.5.2.1 STABILITY FAULT EVENTS

For all stability models developed, a transient stability analysis will be performed to determine HILL and HILLGA and Existing and Planned Generation response due to fault events on the system.

For the stability analysis, unstable conditions will be addressed for transmission reinforcement for contingencies specified in the dynamic stability assessment for TPL 001 contingencies equivalent to P0, P1, P2.1-2.3, P4, and P5 as identified by SPP and the Transmission Owners. Higher depth contingencies (P3, P6, and P7) will be evaluated as necessary for the location of the HILL for mitigations. Unsuccessful reclosing will be evaluated for the faulted loss of elements, excluding transformers, for a P1 and P6 event.

The transient stability analysis will evaluate:

- System stability in response to fault events
- Compliance of HILLGA Requests with FERC Order 661-A
- Adherence to the SPP Disturbance Performance Requirements
- Post event voltage recovery within the SPP voltage criteria

Fault events will include P1 events involving each network circuit segment connected within three levels of each HILL request delivery points and HILLGA request POI for **NRIS HILLGA with HILL Load** and only HILLGA request POI for **NRIS HILLGA without HILL Load**, as well as P4 and P6 events involving each network circuit connected within two levels of each HILL request delivery points and HILLGA request POI for **NRIS HILLGA with HILL Load** and only HILLGA request POI for **NRIS HILLGA without HILL Load**¹⁵. A network circuit is comprised of each segment of sectionalized single (or double) circuits from substations or buses to accommodate generation and radial load. Each level includes all substations on the remote end of all network circuits. (i.e., 0 levels away from a line tap delivery points or POI includes substations with at least 3 connected circuits on either end of the tapped circuit) Additionally, P1, P3, P4, and P6 events on relevant regional or tie line facilities applicable to the HILL and HILLGA deliverability area will be evaluated. Each event should remove from service all elements that are expected to automatically disconnect for each event.

When system transient stability issues are identified, investigative analysis is first used to identify the cause of instability. Changed system conditions may uncover data/modeling issues with generator models of existing and planned generators. Dynamic model parameter review in conjunction with block diagrams is used to ensure there are no logic errors near the identified system constraint. Generators may also be temporarily replaced with constant power devices (no dynamic response) to see if a generator model is the cause of the stability issue. This is to ensure that any identified issue is due to system deficiencies as opposed to data quality issues.

For verified system deficiencies, the HILL and HILLGA request that is found to materially impact verified system deficiencies will be included for cost allocation for applicable mitigations. Material impact is evaluated by comparing system response with and without relevant HILL and HILLGA request for **NRIS HILLGA with HILL Load** and with and without only HILLGA request POI for **NRIS HILLGA without HILL Load**. If a material impact cannot be determined for studied generation due to deficiencies that are pre-existing, such as system collapse/ instability, then a less severe fault will be applied to determine said impact. Fictitious mitigations, such as VAR support, may be used to assist in evaluating a HILL and HILLGA request impact on pre-existing system deficiencies.

8.3.5.2.2 MITIGATIONS

Mitigation of stability issues, not also observed as a steady-state issue, will evaluate reduced fault duration and removal of reclose from the fault definition. Actual equipment settings and capabilities may provide reduced clearing times.

¹⁵ SPP reserves the right to include/exclude additional contingencies regardless of their level away from the request's point of interconnection.

Evaluation of reduced clearing times and removal of reclose may be used to identify and determine whether mitigation is provided by existing equipment and settings or may be provided by a Network Upgrade to fault interrupting equipment (i.e., breakers and relays).

8.3.5.3 Short-Circuit Ratio Analysis

8.3.5.3.1 SHORT-CIRCUIT RATIO CALCULATION

SPP calculates the short-circuit ratio using this formula and reports the results:

$$SCR_{POT} = \frac{SCMVA_{POT}}{MW_{REF}}$$

8.3.5.3.2 SHORT-CIRCUIT FAULT CURRENT CALCULATION

Short-Circuit Fault Current Calculation will be performed in accordance with SPP ITP Manual Short-Circuit Analysis. Short-Circuit Fault Current Calculation will be performed consistent with HILL Short-Circuit Analysis. Results are refined in the Interconnection Facility Study/Analysis with any additional required directly assigned upgrades and cost assignment.

8.3.5.4 SCRCCT Analysis

HILLGA Short-circuit models serve as the starting point for the SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included. HILL models utilized for HILL SCRCCT analysis serve as the starting point for the HILLGA SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included.

HILLGA Short-circuit models serve as the starting point for the SCRCCT analysis. The Network Upgrades from the HILL and HILLGA study are not included.

A short-circuit ratio (SCR) check is used to assess the voltage strength of the system. For HILLGA studies, standard SCR, composite SCR (CSCR), and weighted SCR (WSCR) are analyzed to determine if additional analysis will be required. The Short-Circuit Ratios are defined as:

$$SCR = \frac{Ssc}{MW}$$

$$CSCR = \frac{CSMVA}{MW_{ref}}$$

$$WSCR = \frac{\sum_{i=1}^{n} SCMVA_i \cdot MW_i}{\sum_{i=1}^{n} MW_i}$$

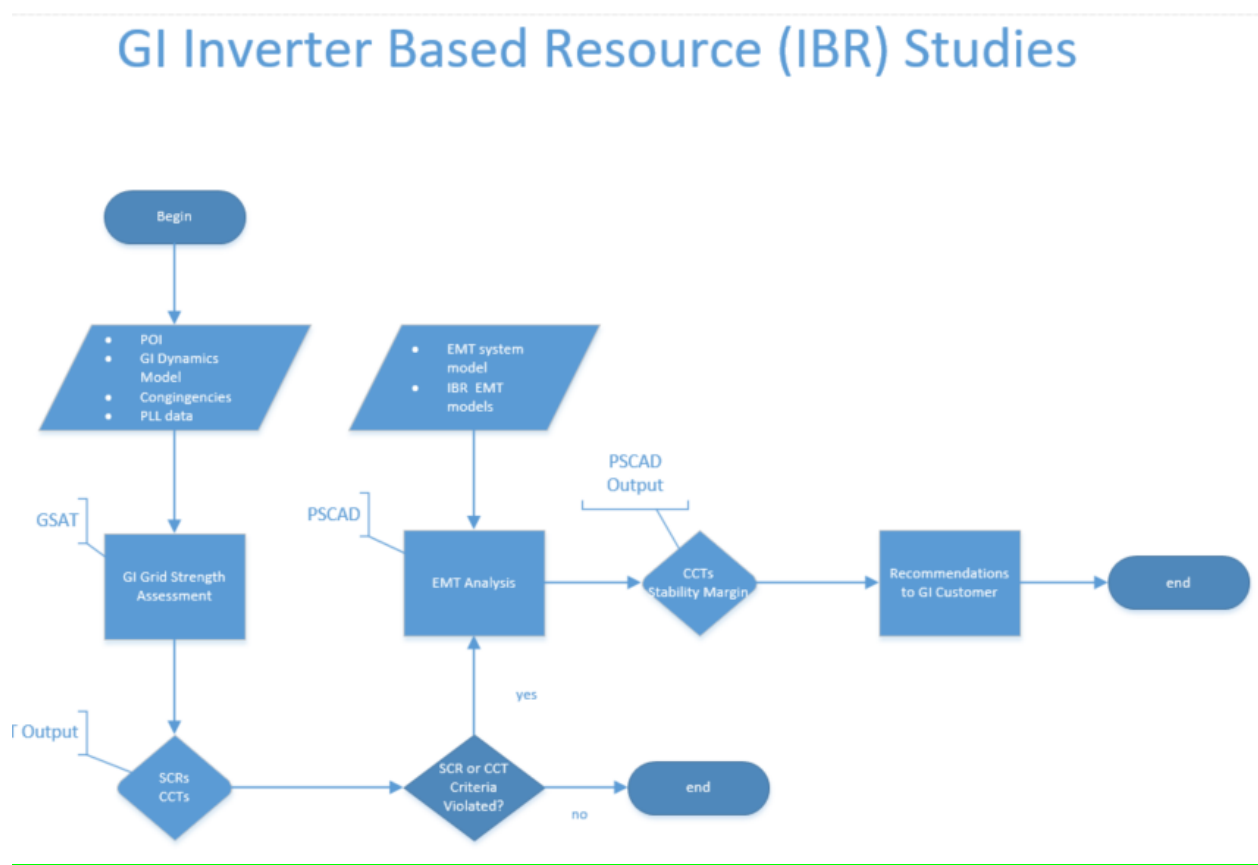
SC: Maximum Available Short Circuit Power (MVA) before connection of the resource.

MW: Power Rating (MW) of resource to be connected.

If any of the SCR calculations (SCR, CSCR, or WSCR) are below 6.0, project(s) will be deemed as failing the SCR check.

In addition to the SCRs, the critical clearing time (CCT) for faults near the POI of each project are screened. Critical Clearing Time is the maximum time a fault near the POI of an inverter-based resource is allowed to remain on the system such that the inverter-based resource remains stable. If the CCT for any project is below 0.15s (9 cycles), the project will be deemed as failing the CCT check.

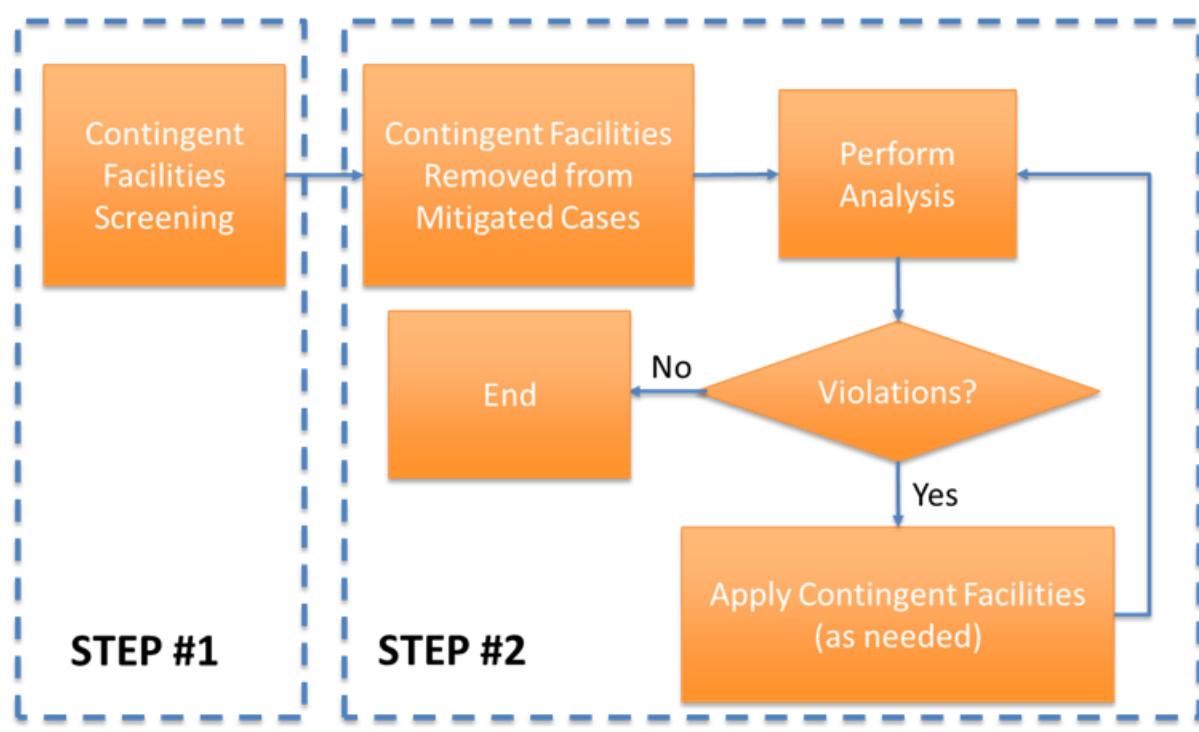
The results of the SCRCCT and the WSCR are provided in the HILLGA. For any projects not passing SCR or CCT screening, a detailed Electromagnetic Transient (EMT) study will be performed to ensure system reliability and mitigations will be developed as applicable. This process is detailed in the following flowchart:



8.3.5 Identification of Contingent Facilities

To maintain Bulk Electric System (BES) reliability for HILLGA requests, contingent facilities for HILLGA requests will be identified utilizing the following two-step methodology. Contingent facilities include Network Upgrades approved for construction as part of SPP Expansion Plan that are included the study models as planned upgrades that are not currently in-service and if delayed beyond their projected in-service date can pose a risk reliability of the BES.

Contingent Facilities Procedure Diagram (Placeholder)



Step 1: Perform contingent facilities screening by calculating TDF impact on contingent facilities included in the study model set utilizing a transfer from the Source Definition to Sink Definition previously described in Sections 8.3.4.1.1.1 and 8.3.4.1.1.2. The transfer must have at least 3% PTDF Transmission Distribution Factor (TDF) and the contingent facility is within ten buses from the modified or established delivery point bus.

Step 2: Remove these screened upgrades from the Steady State and Stability models then Determine if any new violations appear utilizing previously described Steady State and Stability analysis methodologies. Solve mitigation with most effective solution using the previously described mitigation methodologies.

8.3.5 Limited Operation

As defined in the Attachment BB, Limited Operation is a quantification of the amount of interconnection capacity available to the Interconnection Customer without system overloads, voltage violations, instabilities, or breaker over duty prior to the in-service date of all identified upgrades. Limited Operation amounts are calculated for each HILLGA and are listed in the report.

The minimum value across the analyses performed (i.e. steady state, stability) and constraint types observed (e.g. non-converged contingency, thermal constraints, voltage violations) will be set as the LOIS value. If short circuit upgrades are necessary, that may be used for further refinement of LOIS values.

A LOIS value will be determined for each season in report. Seasonal models will be mapped to corresponding operating date ranges according to

, which is based on the SPP Model Development Procedure Manual⁴⁶, Section 3 Table 1.

If there are any non-converged contingencies, voltage constraints or system responses within the monitored system that do not meet the SPP Disturbance Performance Requirements on which the request has a sufficient TDF, the steady-state LOIS value will be set by reducing the HILLGA in 25% increments of the maximum capacity may be tested to determine if steady state and stability is maintained at lesser values.

Table 2 Seasonal Model Results to Operational Date Mapping

Operational Dates	Steady State	Stability
April 1 – May 31	Lower of Summer Peak and Winter Peak	Lower of Summer Peak and Winter Peak
June 1 – September 30	Summer Peak	Summer Peak
October 1 – November 30	Lower of Summer Peak and Winter Peak	Lower of Summer Peak and Winter Peak
December 1 – March 31	Winter Peak	Winter Peak

8.3.6 Cost Allocation

Interconnection facilities will be directly assigned to the Transmission Customer. Network Upgrades to mitigate transmission system study constraints that are determined to be attributed to the HILLGA will be

⁴⁶ SPP MDAG Reference Documents webpage (<https://spp.org/spp-documents-filings/?id=18607>)

assigned to the Transmission Customer in accordance with SPP Tariff Attachment BB. Costs assigned to each HILLGA are listed in the report.

When there are two or more HILLGA requests, the following procedures will be used for Cost Allocating Network Upgrades:

Cost allocation of Network Upgrades for two or more HILLGA Requests is determined using the summer peak model. Cost allocation for all network upgrades is performed as defined below, regardless of which part of the study identified the upgrade.

For transmission circuit upgrades, an analysis is performed to determine the System-Intact TDF, also known as a Power Transfer Distribution Factor (PTDF) that each HILLGA Request had on each new upgrade. The PTDF is calculated on the summer peak model. The impact each HILLGA Request had on each upgrade project is weighted by the size of each request. The size of the request is the Maximum Injection Capability not to exceed load for **NRIS HILLGA** requests. The size of the request is the Maximum Injection Capability. Finally, the costs allocated to each HILLGA Request for a particular upgrade are then determined by allocating the portion of each request's impact over the impact of all affecting requests. The PTDF calculation uses the same source and sink methodology utilized in the Contingency Analysis Sections 8.3.4.1.1.1, 8.3.4.1.1.2, and 8.3.4.1.1.3. Individual HILLGA request impacts are determined.

For example, assume there are three HILLGA Requests: X, Y and Z, responsible for the costs of Upgrade 1. Given their respective PTDFs for the upgrade have been determined, the cost allocation for HILLGA Request X for Upgrade Project 1 is found by the following set of steps and formulas:

- Determine an impact factor on a given project for all responsible HILLGA requests:



$$\text{Request X Impact Factor on Upgrade 1} = \text{PTDF (\%)(X)} * \text{MW(X)} = X1$$

$$\text{Request Y Impact Factor on Upgrade 1} = \text{PTDF (\%)(Y)} * \text{MW(Y)} = Y1$$

$$\text{Request Z Impact Factor on Upgrade 1} = \text{PTDF (\%)(Z)} * \text{MW(Z)} = Z1$$

- Determine each request's allocation of cost for that particular project:



$$\text{Request X's Upgrade 1 Cost Allocation(\$)} = \frac{\text{Network Upgrade 1 Cost (\$)X1}}{X1+Y1+Z1}$$

- Repeat previous for each responsible Current Study Request for each project.

For substation specific upgrades, such as new reactive devices, reconfigurations, etc., PTDFs cannot be calculated on a bus or node basis. Therefore, the PTDFs are generally checked on either the worst-case

contingent element in the direction of system intact flow or on all circuits connecting to the location where the upgrade is installed where the highest absolute value PTDF of all the circuits is used to calculate the MW impact for each interconnection request for solutions resolving system intact non-converged and voltage constraints. The process then proceeds in alignment with the transmission circuit allocation process.

The cost allocation of each necessary Network Upgrade is determined by the size of each request and its impact on the given upgrade. This allows for the most efficient and reasonable mechanism for sharing the costs of upgrades. Costs assigned to each HILLGA Request are listed in the report.

8.3.6.1 COST ESTIMATES

SPP requests feedback and cost estimates from TOs for all assigned upgrades in the HILLGA. All cost information submitted by TOs are incorporated into the study for accuracy. In the event that SPP does not receive a cost estimate, SPP developed cost estimates based on historical data will be utilized.

8.3.6.2 INCREMENTAL LONG-TERM CONGESTION RIGHTS

The SPP OATT provides Incremental Long-Term Congestion Rights (ILTCR) as compensation for the directly assigned cost of Network Upgrades for mitigating transmission system constraints study.¹⁷

8.3.7 Affected Systems Coordination

SPP maintains agreements with most neighboring Transmission Providers that define how impacts from transmission service are coordinated between systems. References and links to the individual agreements are listed in the **Error! Not a valid bookmark self-reference.** section of this business practice. SPP coordinates with other Transmission Providers on a case-by-case basis. For interconnection to facilities owned by SPP Transmission Owners and other facility owners that are within the SPP Region, see Section **Error! Reference source not found. Error! Reference source not found.**

When a neighboring entity studies HILLGA requests' impact to the neighboring system, according to JOAs found in the Appendix section, the neighboring entity provides their report to SPP. Therefore, at the end of HILLGA study a HILLGA request should have their SPP study report and any AFS result report, if applicable. In the event the neighboring entity study results are not available, SPP will communicate the delay and continue with the SPP HILLGA process regardless of AFS delay.

¹⁷ See SPP OATT Attachment J Section V (C). Generation Interconnection Related Network Upgrades

8.3.8 NRIS HILLGA Report

SPP will post a HILLGA results report to the Transmission Customer and Host Transmission Owner that provides HILLGA request information about models, constraints, upgrades, and costs associated with the upgrades. Upgrades can be **contingent** (meaning, relies on a previous upgrade at no cost. **Interconnection Facility** costs for HILLGA request are reported as well.

SPP provides final study models along with the report that include the upgrade solutions and/or upgrade idexs.

8.3.9 Interconnection Facility Study/Analysis

~~Placeholder for Interconnection Facility Study. In accordance Attachment BB Section 3.4.4.2, the Interconnection Facility Study/Analysis will account for active or pending Request at the same Point of Interconnection at the time of the submission of a HILLGA Request.~~

~~Placeholder for Interconnection Facility Study/Analysis~~

8.3.10 Restudy/Sensitivities

~~Placeholder for Restudy/Sensitivities~~

8.3.11 SPP and Stakeholder Accountability

SPP and stakeholders will introduce steps to focus on accountability for timelines and milestones that consist of mechanisms designed to promote the timely exchanges of data, reviews, and approvals within the HILLGA study process.

8.3.11.1 Project Schedule

SPP will develop a project schedule for each cluster and successive study. This schedule will identify the timing, duration, and responsible parties for all data exchanges, reviews, and approvals required to

complete the HILLGA study, SPP will coordinate with SPP stakeholders in the development of this schedule and provide stakeholder updates on a frequent basis.

This schedule will be maintained by SPP and regularly reviewed at appropriate SPP stakeholder meetings to keep affected parties informed of upcoming milestones to ensure the timely completion of the planning process.

8.3.11.2 Transmission Customer and Host Transmission Owner Reviews

5.—Scoping Calls — SPP, Transmission Customer and Host Transmission Owner

a.—Transmission Customer and Host Transmission Owner are expected to coordinate prior to application submission.

b.—SPP receives the HILLGA application and schedules scoping calls with SPP, Transmission Customer and Transmission Owners to review the HILLGA request.

c.—Transmission Customers are expected to review application requirements and ensure their application data, one-lines, DYRE files, etc. match each other at the time the request is submitted. There is a one-time cure period if deficiencies are identified.

d.—In cases where there is no viable date mutually agreed upon by the Transmission Customer, Host Transmission Owner, and SPP, email communications between these parties may be used to serve the purpose of a scoping call.

6.—Model Review — SPP, Transmission Customer and Host Transmission Owner

a.—SPP will post BASE and Change models for review.

b.—Host Transmission Owner review ratings between latest planning model and HILLGA study models and sign off for completing the model review process.

c.—Transmission Customer and Host Transmission Owner review of load connection delivery points, configuration, topology, impedance, and parameters/models for the HILLGA requests and sign off for completing the model review process.

d.—Failure to provide appropriate feedback during the Model Review period could lead to delays in the study.

7.—Draft Report Review — SPP, Transmission Customer and Host Transmission Owner

a.—SPP will post a draft report* and create a window where Transmission Customer can submit questions and feedback to SPP. SPP needs to provide responses/feedback to submitted questions in a timely fashion*. SPP will post the TDF values in the report.

8.—SPP will use results calls to talk about the proposed solutions, explaining the constraints, contingencies, flows, thermal and voltage issues. However, this action is not intended to open a

~~window for Transmission Customers and Host Transmission Owners to submit alternative mitigations to the constraints, as it would add an additional level of time and complexity to develop a final portfolio of projects.~~

~~*As the schedule permits~~

~~**The draft report is a courtesy to improve the HILL process.~~

~~In all instances, SPP's Remedy Management System ~~sh~~will be utilized to submit feedback or questions to SPP.~~

~~Note that ~~TO~~ work to directly support HILLGA tasks, such as attending scoping calls, responding to data requests, reviewing models, and developing cost estimates, are all study costs recoverable from respective HILLGA requests under Attachment BB of the SPP tariff.~~

8.4 Other Special Studies associated with HILLGA requests

HILLGA generation interconnections may be require other special studies to include but not limited to Electric Storage Resource Load Assessment, Limited Operation System Impact Study, Surplus Interconnection System Impact Study, and Modification Request Impact Study . These special studies will generally follow the stated objectives in BP7250 Section 7 and will use study models and study methods from respective HILL and associated HILLGA request studies.

6.9. REFERENCE DOCUMENTS

Reference materials and links are available at the sites below:

- [SPP Open Access Transmission Tariff](#)¹⁸
 - Generator Interconnection Procedures (Attachment V)
- [SPP Business Practices](#)¹⁹
- [Seams Agreements](#)²⁰
 - Associated Electric Cooperatives, Inc.
 - California Independent System Operator Corporation
 - Electric Reliability Council of Texas
 - Midcontinent Independent System Operator, Inc
 - Peak
 - Public Service Company of Colorado
 - Saskatchewan Power Corporation
 - Southwestern Power Administration
 - Tennessee Valley Authority
- [SPP Disturbance Performance Requirements](#)²¹
- [SPP Quarterly Project Tracking Report](#)²²
- [Request Management System](#)²³
- [New Three Stage Interconnection Process](#)²⁴
- [ITP Manual location](#)²⁵
- [SPP Model Development Procedure Manual location](#)²⁶

¹⁸ <https://spp.etariff.biz:8443/viewer/viewer.aspx>

¹⁹ <https://www.spp.org/spp-documents-filings/?id=18162>

²⁰ <https://www.spp.org/spp-documents-filings/?id=18378>

²¹

[https://www.spp.org/documents/28859/spp%20disturbance%20performance%20requirements%20\(twg%20approved\).pdf](https://www.spp.org/documents/28859/spp%20disturbance%20performance%20requirements%20(twg%20approved).pdf)

²² <https://spp.org/spp-documents-filings/?id=18641>

²³ <https://spprms.issuetrak.com/login.asp>

²⁴ <https://opsportal.spp.org/documents/studies/SPP%20Three%20Stage%20Process%20Overview%202019-05-31.pdf>

²⁵ <https://www.spp.org/engineering/transmission-planning/>

²⁶ <https://spp.org/spp-documents-filings/?id=18607>

7.10. LIST OF ACRONYMS

Acronym	Term
DF	Distribution Factor
DP	Decision Point
ERIS	Energy Resource Interconnection Service
ESR	Energy Storage Resource
EHV	Extra-High Voltage (300kV or higher)
FCITC	First Contingency Incremental Transfer Capability
FERC	Federal Energy Regulatory Commission
FS	Financial Security
GI	Generator Interconnection
GIA	Generator Interconnection Agreement
GIP	Generator Interconnection Procedures
GIR	Generator Interconnection Request
GSU	Generator Step-Up
HV	High Voltage (300kV or lower)
HVER	High Variable Energy Resource
IC	Interconnection Customer
IFS	Interconnection Facilities Study
ITP	Integrated Transmission Planning
LVER	Low Variable Energy Resource
MUST	Managing and Utilizing System Transmission
NERC	North American Electric Reliability Corporation
NRIS	Network Resource Interconnection Service
NTC	Notification to Construct
OATT	Open Access Transmission Tariff
PCWG	Project Cost Working Group
POI	Point of Interconnection
PSS/E	Power System Simulator for Engineering
PTDF	Power Transfer Distribution Factor
RMS	Request Management System
SPP	Southwest Power Pool
TO	Transmission Owner
TPL	[NERC] Transmission System Planning Performance Requirement
VER	Variable Energy Resource

|

Business Practice 7850

Business Practice

The purpose of this Business Practice is to define the process for evaluating Delivery Point Additions, Delivery Point Modifications, and Delivery Point Retirements. This will provide clarity of the Attachment AQ, Attachment AX, [and Attachment BA](#) processes and how these processes interact with other study processes under the SPP Open Access Transmission Tariff (OATT).

Purpose of Attachment AQ

The Attachment AQ process is a planning process to assess the impacts of Delivery Point Additions, Delivery Point Modifications, and Delivery Point Retirements as described in Attachment AQ. The Attachment AQ process will identify any necessary upgrades required by Delivery Point Additions, Delivery Point Modifications, and Delivery Point Retirements.

Purpose of Attachment AX

The Attachment AX process is a planning process to assess the impact of Delivery Point Additions as described in Attachment AX. The Attachment AX process will use planned generation from the Transmission Customer to identify any necessary upgrades required by the Delivery Point Additions.

Purpose of Attachment BA

The Attachment BA adds additional study and data requirements for of High Impact Large Load (HILL). Attachment BA also includes the study process for Conditional High Impact Large Load (CHILL) Delivery Point Additions.

Definitions

The following terms are defined in this Business Practice but not currently defined in the SPP OATT. The definitions are included here to clarify the facility additions, modifications, and retirements that shall be evaluated through Attachment AQ, Attachment AX, [and Attachment BA](#).

Delivery Point: Point on the system where capacity and energy will be made available to the Transmission Customer.

Local Delivery Facilities: Any facility used for Network Integration Transmission Service (“NITS”) that is not part of the SPP Transmission System as defined under the SPP OATT.

Delivery Point Additions: Includes load addition at a new or existing Delivery Point.

Delivery Point Modifications: Includes the modification of Local Delivery Facilities such as the transfer of load from one Delivery Point to another, with no change in the total amount of load or Delivery Point Transmission Customer ownership; or the expansion or modification of existing Local Delivery Facilities but not included in the list in Section 2.0 of Attachment AQ.

Delivery Point Retirements: Includes the retirement of Delivery Points or Local Delivery Facilities such as an existing delivery point that will cease to serve load in the future, an existing delivery point that will be transferred outside the functional control of SPP, or Local Delivery Facilities that are being taken out of service. The terms of the NITS Agreement will govern if and how load can be removed from the agreement and those provisions shall supersede anything defined in this business practice.

Integrated Transmission Planning Assessment Evaluation

All requests for changes in Delivery Point Additions, Delivery Point Modifications, and Delivery Point Retirements shall be submitted through the Attachment AQ, Attachment AX, or Attachment BA processes to the Host Transmission Owner and Transmission Provider. In addition to the Attachment AQ and Attachment AX, ~~and Attachment BA~~ processes, requests may be subjected to further evaluation for impacts in the Integrated Transmission Planning Assessment, if it is determined that the Network Upgrade(s) will meet the study timeframe requirements pursuant to the standardized project timelines as provided in BP 7060, based on the SPP determined Network Upgrade(s) need date. ~~Requests for changes for CHILL through Attachment BA for CHILL DPNS upgrades are issued under a Conditional High-Impact Large Load Service Agreement (CHILL-SA) under Attachment BA and will not be subject to further evaluation under the HILL.~~ to the standardized project timelines as provided in BP 7060

Once a request has been reviewed by the Attachment AQ process, a Transmission Customer's NITS Agreement may be updated to reflect applicable changes in Delivery Points. The Transmission Customer is responsible for notifying SPP in order to update their NITS Agreement for the Delivery Point Addition, Delivery Point Modification, or Delivery Point Retirement.

Once a request has been reviewed by the Attachment AX process, a Transmission Customer's Provisional Load Process Agreement may be updated to reflect applicable Delivery Point Additions. The Transmission Customer is responsible for notifying SPP in order to update their Provisional Load Process Agreement for the Delivery Point Additions. Once the Transmission Customer is granted long-term firm service for the planned generation that was studied in accordance with Attachment AX, SPP will update the appropriate Service Agreements.

~~Once a request has been reviewed by the Attachment BA process for a CHILL, a Transmission Customer's or Network Customer's CHILL-SA may be updated to reflect applicable changes in CHILL Delivery Points. The Transmission Customer or Network Customer is responsible for notifying SPP in order to establish or update their CHILL-SA for the CHILL Delivery Point Addition, Delivery Point Modification, or Delivery Point Retirement.~~

Aggregation of Requests

When a Transmission Customer has multiple requests for changes in Delivery Points within relative proximity to each other, the requests may be aggregated into a single Delivery Point Addition request. These requests may be aggregated into a single Delivery Point Network Study ("DPNS") analysis if DPNS is required, or a single Provisional Load Process Study ("PLPS") analysis if PLPS is required, ~~or CHILL-DPNS analysis if CHILL-DPNS is required.~~ The Transmission Provider shall propose the aggregated study approach in order to use the aggregation. In such cases, the Transmission Provider shall propose the aggregated study approach to all Parties and evaluate any feedback before making a decision to aggregate the requests. If Network Upgrades are required, this approach allows for a more comprehensive approach for a more robust analysis of the SPP system. Additionally, if a request supplements a previous Attachment AQ or Attachment AX request for the same Delivery Point(s), then the overall change will be considered if the change is not yet in-service.

Aggregation of HILL Requests

When a Transmission Customer has multiple requests for HILL changes in Delivery Points within relative proximity to each other, the requests may be aggregated into a single HILL Delivery Point Study (HDPS) request. The Transmission Provider must deem the aggregation appropriate in order to use the aggregation. In such cases, the Transmission Provider will propose the aggregated study approach to all Parties and evaluate any feedback before making a decision to aggregate the requests. If Network Upgrades are required for request from Attachment AQ or Attachment AX, this approach allows for a more comprehensive approach for a more robust analysis of the SPP system. Additionally, if a request supplements a previous Attachment AQ or Attachment AX request, ~~Attachment HILL, or Attachment BA~~ request for the same Delivery Point(s), then the overall change will be considered if the change is not yet in service

Requests to be evaluated in the Attachment AQ process

The following examples shall be evaluated using the Attachment AQ process when the Transmission Customer has enough existing Designated Resources to serve the increased load plus losses:

- Any Delivery Point Addition, Delivery Point Modification (that may include changes to Local Delivery Facilities), or Delivery Point Retirement on the SPP Transmission System.

- Any change in a Delivery Point not physically interconnected with the SPP Transmission System in which transmission service has already been granted across the interface to the Delivery Point²⁷

The following examples do not meet the definitions of Delivery Point Additions, Modifications, or Retirements to be evaluated using the Attachment AQ process:

- Transfer of a Delivery Point from a Network Customer or Transmission Customer to another Network Customer or Transmission Customer, or from one Service Agreement to another Service Agreement with the same Network Customer or Transmission Customer.²⁸
- Any new Delivery Point Addition not physically interconnected with the SPP Transmission System in which transmission service has not been granted across the interface to the Delivery Point²⁹
- Change of Transmission Facilities³⁰ other than Local Delivery Facilities proposed by an entity.

Requests to be evaluated in the Attachment AX process

The following examples shall be evaluated using the Attachment AX process when the Transmission Customer does not have enough existing Designated Resources to serve the increased load plus losses:

- Any Delivery Point Addition (that may include changes to Local Delivery Facilities) on the SPP Transmission System.
- Any Delivery Point Addition not physically interconnected with the SPP Transmission System in which transmission service has already been granted across the interface to the Delivery Point³¹
- Transfer of a Delivery Point from a Transmission Customer to another Transmission Customer, or from one Service Agreement to another Service Agreement with the same Transmission Customer.

The following examples do not meet the definitions of Delivery Point Additions to be evaluated using the Attachment AX process:

- Any new Delivery Point Addition not physically interconnected with the SPP Transmission System in which transmission service has not been granted across the interface to the Delivery Point³²
- Change of Transmission Facilities³³ other than Local Delivery Facilities proposed by an entity.

Requests to be evaluated in the Attachment BA

The following examples shall be evaluated using the Attachment BA process or CHILL process under Attachment BA when the Transmission Customer does not have enough existing Designated Resources to serve the increased load plus losses or the current Transmission System cannot reliably service the Delivery Point:

- Any HILL Delivery Point Addition (that may include changes to Local Delivery Facilities) on the SPP Transmission System.
- Any HILL Delivery Point Addition not physically interconnected with the SPP Transmission System in which transmission service has already been granted across the interface to the Delivery Point³⁴
- Transfer of a Delivery Point from a Transmission Customer to another Transmission Customer, or from one Service Agreement to another Service Agreement with the same Transmission Customer.

²⁷ Section 31.4 states that this shall be addressed through the Attachment AQ or Attachment AX process.

²⁸ This shall be addressed through the Aggregate Transmission Service Study process defined in Attachment Z1.

²⁹ Section 31.4 states that this shall be addressed through the Aggregate Transmission Service Study process defined in Attachment Z1.

³⁰ Any facilities that meet the definition of Transmission Facilities as defined in Attachment AI.

³¹ Section 31.4 states that this shall be addressed through the Attachment AQ or Attachment AW process.

³² Section 31.4 states that this shall be addressed through the Aggregate Transmission Service Study process defined in Attachment Z1.

³³ Any facilities that meet the definition of Transmission Facilities as defined in Attachment AI.

³⁴ Section 31.4 states that this shall be addressed through the Attachment AQ or Attachment AW process.

The following examples do not meet the definitions of Delivery Point Additions to be evaluated using the Attachment AX process:

- Any new Delivery Point Addition not physically interconnected with the SPP Transmission System in which transmission service has not been granted across the interface to the Delivery Point³⁵
- Change of Transmission Facilities³⁶ other than Local Delivery Facilities proposed by an entity.

HILL additional data

The Transmission Customer or Network customer will need to complete the Additional HILL Characteristics Form and provide to the Transmission Provider for any request under Attachment AQ or Attachment AX if they relate to a HILL request. This data is needed to have accurate stability modeling data to perform required analysis.

“Additional HILL Characteristics Form”

<u>HILL Composition *</u>	
<u>Motor A</u> Percent of load consisting of 3-phase induction motors with low inertia (H=0.1 sec) driving constant torque loads. These motors are found in commercial/industrial air conditioning compressors and refrigeration systems (not National Electrical Manufacturer Association (NEMA), design B). • Smaller 5-15 hp compressor motors typical of rooftop air conditioning units commonly found at grocery stores, consumer products, and malls. • Larger 200-500 hp compressor motors typical of large commercial buildings' central cooling systems.	%
<u>Motor B</u> Percent of load consisting of 3-phase induction motors with high inertia (H=0.25-0.1 sec) driving loads whose torque is proportional to speed squared. These motors are found in commercial ventilation fans and air handling systems. • 5-25 hp fan motors which are normally NEMA, design B.	%
<u>Motor C</u> Percent of load consisting of 3-phase induction motors with low inertia (H=0.1-0.2 sec). This represents motors commonly found in commercial water circulation pumps in central cooling systems. • 5-25 hp pump motors which are usually NEMA, design B.	%
<u>Motor D</u> Percent of load consisting of 1-phase air conditioners. This represents motors commonly found residential single phase air conditioner.	%
<u>Electronic</u>	%

³⁵ Section 31.4 states that this shall be addressed through the Aggregate Transmission Service Study process defined in Attachment Z1.

³⁶ Any facilities that meet the definition of Transmission Facilities as defined in Attachment A1.

<u>Percent of load consisting of power electronic converters. These are constant active and reactive power loads that include, consumer electronics (Plasma and LED televisions, cell phones and tablets, clocks, radios, etc.), appliance (high efficiency appliances such as refrigerators, washing machines, etc.) and office equipment (printer, copy machines, servers, etc.).</u>	
<u>Static</u> <u>Percent of load will be static. This represents electric ovens, water heaters, incandescent lighting, and all other loads whose behavior changes with voltage magnitude.</u>	<u>%</u>
<u>Total Load Percent=</u>	<u>100 %</u>

- The listed load characteristics are parameters needed to perform simulations using the composite load model referenced in, “ NERC Technical Reference Document Dynamic Load Modeling, December 2016 ”.*

<u>Composite Load Model (CLM)</u>	
<u>Total installed load (kW)</u>	<u>kW</u>
<u>Total installed distributed generation (kW)</u>	<u>kW</u>
<u>Total installed low side capacitor bank demand (kVAr)</u>	<u>kVAr</u>
<u>Total synchronous motor load (kW)</u>	<u>kW</u>
<u>Motor start type</u>	
<u>Motor speed control method</u>	
<u>Data Center Load Information</u>	
<u>Total rated load including IT, power distribution and cooling (kW)</u>	<u>kW</u>
<u>Overall data center power factor (Lead/Lag)</u>	<u>(Lead/Lag)</u>

<u>Data Center Load Percentage</u>				
	<u>Summer Daytime</u>	<u>Summer nighttime</u>	<u>Winter Daytime</u>	<u>Winter Nighttime</u>
<u>Computing/ Server load</u>				
<u>Lighting Load</u>				
<u>Power Distribution losses</u>				
<u>Cooling Load</u>				

<u>Data Center Cooling System</u>		
<u>Forced Cooling System</u>	☐	<u>None</u>
	☐	<u>Computer Room Air Conditioners (CRACs) with internal compressors.</u>
	☐	<u>Computer Room Air Handlers (CRAHs) with chilled water.</u>
	☐	<u>Air-Handling Units (AHUs) dedicated to the data center space.</u>
	☐	<u>Other:</u>
<u>Cooling system motor driven components</u>	☐	<u>Single-speed motors that are operated across the line (Motors connected directly to the AC supply)</u>
	☐	<u>Motors controlled by variable/adjustable speed drives or electronically commuted motors (ECMs)</u>
	☐	<u>Other:</u>
<u>Data Center Voltage Performance</u>		
<u>Voltage sag level/duration at which the computer/server load disconnects from the utility system (these may transfer to a local UPS):</u>	<u>volts</u>	<u>sec</u>
<u>Voltage sag level/duration at which the cooling load disconnects from the system (these may transfer to an emergency generator or local power source):</u>	<u>volts</u>	<u>sec</u>
<u>How are voltage sag levels measured for the disconnect action?</u>	☐	<u>Per phase</u>
	☐	<u>3-phase RMS</u>
<u>Voltage swell level/duration at which the computer/server load disconnects from the utility system (these may transfer to a local UPS):</u>	<u>volts</u>	<u>sec</u>
<u>Voltage swell level/duration at which the cooling load disconnects from the system (these may transfer to an emergency generator or local power source):</u>	<u>volts</u>	<u>sec</u>
<u>How are voltage swell levels measured for disconnect action?</u>	☐	<u>Per phase</u>
	☐	<u>3-phase RMS</u>

<u>Data Center Frequency Performance</u>	
<u>The lowest frequency at which the data center will disconnect from the system:</u>	<u>Hz</u>

The highest frequency at which the data center will disconnect from the system:	Hz

<u>Data Center Reconnection Method After Automatic Disconnect from Service Provider System</u>				
<u>Manual</u>			☐	<u>Yes</u>
			☐	<u>No</u>
<u>Immediate Reconnect</u> (No deliberate Time Delay)		☐	<u>Yes</u>	<u>If Yes, Complete the below information.</u>
		☐	<u>No</u>	
<u>V_{high}: reconnect when voltage is below:</u>	<u>Volts</u>	<u>deadband</u>		<u>msec</u>
<u>V_{low}: reconnect when voltage is above:</u>	<u>Volts</u>	<u>deadband</u>		<u>msec</u>
<u>f_{high}: reconnect when frequency is below:</u>	<u>Hz</u>	<u>deadband</u>		<u>msec</u>
<u>f_{low}: reconnect when frequency is above:</u>	<u>Hz</u>	<u>deadband</u>		<u>msec</u>
<u>Delayed Reconnect</u> (No deliberate Time Delay)	☐	<u>Yes</u>	<u>If Yes, Complete the below information.</u>	
	☐	<u>No</u>		
<u>Time Delay after voltage is within acceptable limits to reconnect:</u>	<u>see</u>			
<u>V_{high}: reconnect when voltage is below:</u>	<u>Time Delay after voltage is within acceptable limits to reconnect:</u>	<u>sec</u>	<u>deadband</u>	<u>msec</u>
<u>V_{low}: reconnect when voltage is above:</u>	<u>Volts</u>	<u>deadband</u>		<u>msec</u>
<u>Time Delay after frequency is within acceptable limits to reconnect:</u>	<u>sec</u>			
<u>f_{high}: reconnect when frequency is below:</u>	<u>Hz</u>	<u>deadband</u>		<u>msec</u>

<u>flow: reconnect when frequency is above:</u>	<u>Hz</u>	<u>deadband</u>	<u>msec</u>

<u>Reconnect Loading Process</u>		
<u>Is all load reconnect at once</u>	☐	<u>Yes</u>
	☐	<u>No</u>
<u>Continuous ramp rate for ramping to reconnect:</u>	<u>kW/sec</u>	
<u>Number of steps for stepwise ramping to reconnect:</u>	<u>Step(s)</u>	
<u>Load increase per step for stepwise ramping to reconnect:</u>	<u>kW/step</u>	

<u>Data Center Emergency Backup Power System Details</u>		
<u>Emergency Generator (EG) capacity:</u>	<u>kW</u>	
<u>Duration of EG based on available fuel:</u>	<u>Hours</u>	
<u>Battery Energy Storage System (BESS) discharge Capacity</u>	<u>kW</u>	
<u>Duration of BESS discharge based on fully charged battery capacity</u>	<u>Hours</u>	
<u>Percent of Data Center load which can be carried by EG and/or BESS:</u>	<u>%</u>	
<u>Can the Data Center back up power system participate in demand response in a grid emergency or an ancillary service?</u>	☐	<u>Yes</u>
	☐	<u>No</u>
<u>In event of a planned or unplanned disconnection from the grid, can the Data Center be islanded and operate with EG and/or BESS?</u>	☐	<u>Yes</u>
	☐	<u>No</u>
<u>What percent of the server farm load could be redistributed to redundant server sites across the world?</u>		
<u>If the data center trips offline, what percent of the load will be transferred to other server farms?</u>		
<u>How fast can load transfer be completed?</u>		

Business Practice 8100

Resource Adequacy requirements for Demand Response Programs and Behind-The-Meter Generation

The purpose of this business practice is to further define the requirements for demand response programs and behind-the-meter generation less than 10 MW, and address whether each is treated as a modifier (offset) of an LRE's load or as resource capacity for purposes of meeting the Resource Adequacy Requirement and Winter Season Obligation in Attachment AA.

...

1.0 Demand Response Programs

Demand Response Programs are measurable load reduction program(s) capable of being controlled or dispatched by a Load Responsible Entity (LRE), a Market Participant, or the Transmission Provider. Conditional High Impact Large Loads (CHILL) that are receiving CHILL Service (CHILLS), as defined in Attachment BA of the Tariff, will be treated as a non-controllable and non-dispatchable Demand Response Programs.

Demand Response Programs shall meet the following requirements:

...

3.0 Non-Dispatchable or Non-Controllable Demand Response Programs/Behind-The-Meter Resources

1. Demand Response Programs deemed non-controllable and non-dispatchable may only be considered in the LRE's forecasted Peak Demand. This also includes Behind-The-Meter Generation resources that are non-controllable and non-dispatchable by the Transmission Provider or the LRE (e.g. roof top solar). Additionally, a CHILL that is receiving CHILLS are considered as non-controllable and non-dispatchable and may only be considered in the LRE's forecasted Peak Demand.
 - a. The Peak Demand that results after incorporation of non-controllable and/or non-dispatchable demand response programs should still be considered a 50-50 forecast, with a 50% probability of the Peak Demand forecast being too high and a 50% probability of the Peak Demand forecast being too low.
2. The seasonal demand reduction shall be determined using historical hourly demand data sufficient to establish the reduction in load associated with the demand response programs and may be augmented by an adequate system survey to further determine potential demand.

Each LRE must report the projected MW level of Peak Demand reduction as an informational line item in the Workbook.

INTEGRATED TRANSMISSION PLANNING (ITP) MANUAL

2.1.3 LOAD FORECASTS

The ITP assessment will require load forecasts for SPP TOs and stakeholders within the SPP footprint, as well as areas outside of the SPP footprint, for the corresponding study years. The load forecast will be submitted to SPP using the process described in the Model Development Procedure Manual.³⁷ The load will represent each individual load-serving entity's peak conditions without losses per season (i.e., non-coincident conditions for the SPP region).

Load forecasts for High Impact Large Loads (HILLs), as specified in Attachment BA of the Tariff, are eligible to be submitted if the Transmission Customer or Network Customer has executed a Service Agreement for the HILL Delivery Point under Attachment AQ and/or Attachment AX. If the HILL delivery point is only served by a Conditional High Impact Large Load Service Agreement, the load forecast is not eligible to be included, as that load is taking non-firm transmission service.

4.4 PERSISTENT OPERATIONAL NEEDS ASSESSMENT

Persistent operational needs may be either economic or reliability related. The criteria for identifying these needs are described in this section. The needs identified that are being impacted by load taking Conditional High Impact Large Load Service under the Tariff, will be evaluated by the ESWG and TWG for endorsement to be included. SPP may propose additional needs to account for operational issues not meeting the criteria thresholds or other problematic operational issues observed in operating the transmission system not fitting the given criteria. These additional needs will be presented to the ESWG and TWG for review and endorsement.

³⁷ [MDAG Model Development Procedure Manual: found on spp.org under MDAG Reference Documents.](#)

