The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.

7.3 **Standards.** Transmission Owner shall install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.

7.4 **Testing of Metering Equipment.** Transmission Owner shall 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 Interconnection Customer, Transmission Owner shall, at Interconnection Customer's expense, inspect or test Metering Equipment more frequently than every two (2) years. Transmission Owner shall give reasonable notice of the time when any inspection or test shall take place, and Interconnection Customer may have representatives present at the test or inspection. If at any time Metering Equipment is found to be inaccurate or defective, it shall be adjusted, repaired or replaced at Interconnection Customer's expense, in order to provide accurate metering, unless the inaccuracy or defect is due to Transmission Owner's failure to maintain, then Transmission Owner shall pay. If Metering Equipment fails to register, or if the measurement made by Metering Equipment during a test varies by more than two percent from the measurement made by the standard meter used in the test, Transmission Owner shall adjust the measurements by correcting all measurements for the period during which Metering Equipment was in error by using Interconnection Customer's check meters, if installed. If no such check meters are installed or if the period cannot be reasonably ascertained, the adjustment shall be for the period immediately preceding the test of the Metering Equipment equal to one-half the time from the date of the last previous test of the Metering Equipment.

7.5 **Metering Data.** At Interconnection Customer's expense, the metered data shall be telemetered to one or more locations designated by Transmission Owner and one or more locations designated by Interconnection Customer. Such telemetered data shall be used, under normal operating conditions, as the official measurement of the amount of energy delivered from the Generating Facility to the Point of Interconnection.

ARTICLE 8. COMMUNICATIONS

8.1 **Interconnection Customer Obligations.** Interconnection Customer shall maintain satisfactory operating communications with Transmission Owner's Transmission System dispatcher or representative designated by Transmission Owner. Interconnection Customer shall 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. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Transmission Owner as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Generating Facility to the location(s) specified by Transmission Owner. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system

paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

8.2 **Remote Terminal Unit.** Prior to the Initial Synchronization Date of the Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Transmission Owner at Interconnection 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) shall 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 shall correct such error or malfunction as soon as reasonably feasible.

8.3 **No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

8.4 **Provision of Data from a Variable Energy Resource**. The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the Transmission Provider to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with (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 Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The Transmission Provider and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation

resource adequacy and transmission system reliability in its area. All requirements for meteorological, 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 GIA, as they may change from time to time.

ARTICLE 9. OPERATIONS

9.1 General. Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other 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 months before Initial Synchronization Date, Interconnection Customer shall notify Transmission Provider and Transmission Owner in writing of the Control Area in which the Generating Facility will be located. If Interconnection 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 GIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Generating Facility in the other Control Area.

9.3 Transmission Provider and Transmission Owner Obligations. Transmission Provider and Transmission Owner shall 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 GIA. Transmission Provider or Transmission Owner may provide operating instructions to Interconnection 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 Interconnection Customer.

9.4 Interconnection Customer Obligations. Interconnection Customer shall 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. Interconnection Customer shall 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 GIA. 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 GIA.

9.5 Start-Up and Synchronization. Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of the Generating Facility to the Transmission System.

9.6 Reactive Power.

9.6.1 Power Factor Design Criteria.

9.6.1.1 Synchronous Generation. Interconnection Customer shall 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. Interconnection Customer shall 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 shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. This requirement shall only apply to newly interconnecting non-synchronous generators that that have not yet executed a Facilities Study Agreement as of September 21, 2016.

9.6.2 Voltage Schedules. Once Interconnection Customer has synchronized the Generating Facility with the Transmission System, Transmission Provider and/or Transmission Owner shall require Interconnection 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 shall treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Owner shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Transmission System. Interconnection Customer shall operate the 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 Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the Transmission Owner.

9.6.2.1 Governors and Regulators. Whenever the Generating Facility is operated in parallel with the Transmission System and the speed governors (if installed on the generating unit pursuant to Good Utility Practice) and voltage regulators are capable of operation, Interconnection Customer shall operate the Generating Facility with its speed governors and voltage regulators in automatic operation. If the Generating Facility's speed

governors and voltage regulators are not capable of such automatic operation, the Interconnection Customer shall 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. Interconnection Customer shall 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 Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Generating Facility when Transmission Owner requests Interconnection Customer to operate its Generating Facility outside the range specified in Article 9.6.1. Payments shall 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 shall control.

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 shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

9.7.1.2 Outage Schedules. Transmission Provider shall post scheduled outages of its transmission facilities on the OASIS. Interconnection Customer shall submit its planned maintenance schedules for the Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Transmission Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply shall not be a criterion in determining Transmission System reliability. Transmission Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule

maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Transmission Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities.

9.7.1.3 Outage Restoration. If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other 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 shall be followed up as soon as practicable with written notice explaining the nature of the outage.

9.7.2 Interruption of Service. If required by Good Utility Practice to do so, Transmission Provider and/or Transmission Owner may require Interconnection 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 shall apply to any interruption or reduction permitted under this Article 9.7.2:

9.7.2.1 The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

9.7.2.2 Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Transmission System;

9.7.2.3 When the interruption or reduction must be made under circumstances which do not allow for advance notice, Transmission Provider or Transmission Owner shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;

9.7.2.4 Except during the existence of an Emergency Condition, when the interruption or reduction can be scheduled without advance notice, Transmission Provider or Transmission Owner shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Transmission Provider or Transmission Owner shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or

reduction during periods of least impact to Interconnection Customer and Transmission Owner;

9.7.2.5 The Parties shall 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. Interconnection Customer shall 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, shall be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a generating facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

9.7.3.1 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 Interconnection Customer shall ensure "frequency ride through" capability and "voltage ride through" capability of its Generating Facility. The Interconnection Customer shall enable these capabilities such that its Generating Facility shall 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 shall 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 shall comply with the Transmission Provider's automatic load-shed program. The Transmission Provider shall review the protective equipment settings to confirm compliance with the automatic load-shed program. The term "ride through" as used herein shall 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 shall 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 shall 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. Interconnection Customer shall, 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 shall install at Interconnection 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 shall be designed and coordinated with other systems in accordance with Good Utility Practice.

9.7.4.3 Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.

9.7.4.4 Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.

9.7.4.5 Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice.

9.7.4.6 Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit.

These tests do, however, require that all protective relays and lockout contacts be activated.

9.7.5 Requirements for Protection. In compliance with Good Utility Practice, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the 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 shall be coordinated with the protective requirements of the Transmission System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Generating Facility and Interconnection 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 shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard. In the event of a conflict between ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, ANSI Standard C84.1-1989, or the applicable superseding electric industry standard, shall control.

9.8 Switching and Tagging Rules. Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

9.9 Use of Interconnection Facilities by Third Parties.

9.9.1 Purpose of Interconnection Facilities. Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Generating Facility to the Transmission System and shall be used for no other purpose.

9.9.2 Third Party Users. If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Transmission Owner's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for

the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Transmission Owner, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Owner, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

9.10 Disturbance Analysis Data Exchange. The Parties will cooperate with one another in the analysis of disturbances to either the 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 shall maintain the Transmission System and Transmission Owner's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.

10.2 Interconnection Customer Obligations. Interconnection Customer shall maintain the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.

10.3 Coordination. The Parties shall 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 shall 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 shall 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, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning,

operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Owner's Interconnection Facilities.

ARTICLE 11. PERFORMANCE OBLIGATION

11.1 Interconnection Customer Interconnection Facilities. Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.

11.2 Generating Facility. Interconnection Customer shall install the Generating Facilities described in Appendix C within three (3) years of the Commercial Operation Date(s) specified in Appendix B.

11.3 Transmission Owner's Interconnection Facilities. Transmission Owner shall 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 Interconnection Customer.

11.4 Network Upgrades and Distribution Upgrades. All Network Upgrades and Distribution Upgrades described in Appendix A shall be constructed in accordance with the process set forth in Section VI of Attachment O. Transmission Owner shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades that are associated with that Transmission Owner's system. The Distribution Upgrades and Network Upgrades described in Appendix A shall be solely funded by Interconnection 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. Interconnection 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 Interconnection 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 Interconnection Customer fails to meet its obligation to fund Shared Network Upgrades, Transmission Owner and Transmission Provider shall not be responsible for the Interconnection 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 GIA 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, shall be provided in Appendix A.

11.4.3 Agreement to Restudy. The Interconnection Customer agrees to allow the Transmission Provider to perform a restudy in accordance with Sections 8.8 and 8.13 of the GIP 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 shall provide notice to Interconnection Customer. The Parties agree to amend Appendix A to this GIA 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. Interconnection Customer shall 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 Interconnection Customer pursuant to Article 5.17.8.

11.5.2 Special Provisions for Affected Systems. Unless Transmission Provider provides, under the GIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, Interconnection Customer and Affected System Operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by Interconnection Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

11.5.3 Notwithstanding any other provision of this GIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that Interconnection Customer, shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain transmission credits for transmission service that is not associated with the Generating Facility.

11.6 Initial Payment.

Interconnection Customer shall make an initial payment ("Initial Payment") equal to the greater of a) twenty (20) percent of the total cost of Network Upgrades, 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 remaining milestone deposits provided in Section 8.2 and Section 8.9 of the GIP will be applied to this requirement. The Initial Payment shall be provided to Transmission Owner or Transmission Provider as required in Appendix B by Interconnection Customer pursuant to this Article 11.6 within the later of a) thirty (30) days of the execution of the GIA by all Parties, or b) thirty (30) days of acceptance by FERC if the GIA is filed unexecuted and the payment is being protested by Interconnection Customer, or c) thirty (30) days of the filing if the GIA is filed unexecuted and the Initial Payment is not being protested by Interconnection Customer. If this GIA is terminated, then the Initial Payment shall 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 Interconnection 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 GIA; 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 GIA that were paid for by another interconnection customer.

11.7 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 GIA, Interconnection Customer shall provide Transmission Provider, at Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of Interconnection Facilities, Network Upgrades, or Distribution Upgrades as defined in Appendix A of this GIA and shall be reduced on a dollar-for-dollar basis for payments made to Transmission Provider or Transmission Owner for these purposes. If Interconnection Customer requests suspension pursuant to Article 5.16, Interconnection 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 4.2.5 of the GIP and defined in Appendix A of this GIA.

In addition:

11.7.1 The guarantee must be made by an entity that meets the creditworthiness requirements of Transmission Provider, and contain terms and conditions that

guarantee payment of any amount that may be due from Interconnection Customer, up to an agreed-to maximum amount.

11.7.2 The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.7.3 The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.8 Interconnection Customer Compensation. If Transmission Provider or Transmission Owner requests or directs Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this GIA, Transmission Provider shall compensate Interconnection Customer in accordance with Interconnection Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to the Tariff. Interconnection Customer shall 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 Interconnection Customer is required to provide or absorb any Reactive Power under this GIA, Transmission Provider agrees to compensate Interconnection Customer in such amount as would have been due Interconnection Customer had the rate schedule been in effect at the time service commenced; provided, however, that such rate schedule must be filed at FERC or other appropriate Governmental Authority within sixty (60) Calendar Days of the commencement of service.

11.8.1 Interconnection Customer Compensation for Actions During Emergency Condition. Transmission Provider shall compensate Interconnection Customer for its provision of real and reactive power and other Emergency Condition services that Interconnection Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.8.

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 shall submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this GIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party.

12.2 Final Invoice. Within six months after completion of the construction of Interconnection Facilities and the Network Upgrades, the Interconnection Customer shall receive an invoice of the final cost due under this GIA, including any applicable cost due to termination, which shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Interconnection Customer shall receive a refund of any amount

by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.

12.3 Payment. Invoices shall be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice shall pay the invoice within thirty (30) Calendar Days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by either Party will not constitute a waiver of any rights or claims either Party may have under this GIA.

12.4 Disputes. In the event of a billing dispute between the Parties, Transmission Owner, and Transmission Provider shall continue to provide Interconnection Service under this GIA as long as Interconnection 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 Interconnection Customer fails to meet these two requirements for continuation of service, then Transmission Owner may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with the methodology set forth in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii).

ARTICLE 13. EMERGENCIES

13.1 Definition. "Emergency Condition" shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to 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 shall be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the Generator Interconnection Agreement to possess black start capability.

13.2 Obligations. Each Party shall 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 shall notify Interconnection 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 Interconnection Customer's operation of the Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection

Customer shall 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 shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection 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 shall be followed as soon as practicable with written notice.

13.4 Immediate Action. Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Transmission 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 shall 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 Interconnection 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 Interconnection 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. Interconnection Customer shall 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 shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider and/or Transmission Owner shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer, Transmission Provider and/or Transmission Owner. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Generating Facility, the Interconnection Facilities, and the Transmission System to their normal operating state as soon as practicable consistent with Good Utility Practice.

13.6 Interconnection Customer Authority. Consistent with Good Utility Practice and the GIA and the GIP, Interconnection 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. Interconnection Customer shall 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 shall use Reasonable Efforts to assist Interconnection Customer in such actions.

13.7 Limited Liability. Except as otherwise provided in Article 11.8.1 of this GIA, no Party shall 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 GIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this GIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act the Public Utility Holding Company Act of 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 shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

14.2.2 This GIA 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 GIA, 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 shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

Any Party may change the notice information in this GIA by giving five (5) Business Days written notice prior to the effective date of the change.

15.2 Billings and Payments. Billings and payments shall be sent to the addresses set out in Appendix F.

15.3 Alternative Forms of Notice. Any notice or request required or permitted to be given by 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 shall 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 shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other 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 shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due

diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

ARTICLE 17. DEFAULT

17.1 Default.

17.1.1 General. No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this GIA or the result of an act or omission of another Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

17.1.2 Right to Terminate. If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this GIA 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 GIA, 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 GIA.

ARTICLE 18. INDEMNITY, CONSEQUENTIAL DAMAGES AND INSURANCE

18.1 Indemnity. The Parties shall at all times indemnify, defend, and hold the other Parties 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 GIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

18.1.1 Indemnified Person. If an indemnified person is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

18.1.2 Indemnifying Party. If an indemnifying Party is obligated to indemnify and hold any indemnified person harmless under this Article 18, the amount owing to the

indemnified person shall be the amount of such indemnified person's actual Loss, net of any insurance or other recovery.

18.1.3 Indemnity Procedures. Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the indemnified person shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such indemnifying Party and reasonably satisfactory to the indemnified person. If the defendants in any such action include one or more indemnified persons and the indemnifying Party and if the indemnified person reasonably concludes that there may be legal defenses available to it and/or other indemnified persons which are different from or additional to those available to the indemnifying Party, the indemnified person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an indemnified person or indemnified persons having such differing or additional legal defenses.

The indemnified person shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the indemnifying Party. Notwithstanding the foregoing, the indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the indemnified person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the indemnified person, or there exists a conflict or adversity of interest between the indemnified person and the indemnifying Party, in such event the indemnifying Party shall pay the reasonable expenses of the indemnified person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the indemnified person, which shall not be reasonably withheld, conditioned or delayed.

18.2 Consequential Damages. Other than the Liquidated Damages heretofore described, in no event shall any Party be liable to any other Party under any provision of this GIA 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 any Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

18.3 Insurance. Interconnection Customer and Transmission Owner shall at their own expense, maintain in force throughout the period of this GIA, 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 shall 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 shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this 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 shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each

insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.

18.3.7 The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this GIA, 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 Interconnection Customer and Transmission Owner are not intended to and shall 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 GIA, 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, Interconnection Customer and Transmission Owner shall provide certification of all insurance required in this GIA, 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 shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

18.3.11 The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this GIA.

ARTICLE 19. ASSIGNMENT

19.1 **Assignment.** This GIA may be assigned by any Party only with the written consent of the other Parties; provided that any Party may assign this GIA 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 GIA; and provided further that Interconnection Customer shall have the right to

assign this GIA, without the consent of Transmission Provider or Transmission Owner, for collateral security purposes to aid in providing financing for the Generating Facility, provided that Interconnection Customer will promptly notify Transmission Provider and Transmission Owner of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Transmission Provider 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 GIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

ARTICLE 20. SEVERABILITY

20.1 Severability. If any provision in this GIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this GIA; provided that if Interconnection 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 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

ARTICLE 21. COMPARABILITY

21.1 Comparability. The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

ARTICLE 22. CONFIDENTIALITY

22.1 Confidentiality. Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to another prior to the execution of this GIA.

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 shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party

shall be responsible for the costs associated with affording confidential treatment to its information.

22.1.1 Term. During the term of this GIA, and for a period of three (3) years after the expiration or termination of this GIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

22.1.2 Scope. Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this GIA; or (6) is required, in accordance with Article 22.1.7 of the GIA, 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 GIA. 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 shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with this GIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

22.1.4 Rights. Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to another Party. The disclosure by any Party to another Party of Confidential Information shall 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 shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to another Party under this GIA 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 shall 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 GIA. 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 GIA for any reason, each Party shall, 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 shall 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 shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

22.1.10 Disclosure to FERC, its Staff, or a State. Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 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 GIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the

information to FERC or its staff, the Party must, consistent with 18 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 GIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties 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 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 shall be treated in a similar manner, if consistent with the applicable state rules and regulations.

22.1.11 Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this GIA ("Confidential Information") shall 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 GIA or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

22.1.12 This provision shall 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 shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

ARTICLE 24. INFORMATION REQUIREMENTS

24.1 Information Acquisition. Transmission Provider and Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

24.2 Information Submission by Transmission Provider. The initial information submission by Transmission Provider shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include Transmission System information necessary to allow Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Parties. On a monthly basis Transmission Provider shall provide Interconnection Customer a status report on the construction and installation of Transmission Provider's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

ARTICLE 25. INFORMATION ACCESS AND AUDIT RIGHTS

25.1 Information Access. Each Party (the "disclosing Party") shall 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 GIA; and (ii) carry out its obligations and responsibilities under this GIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this GIA.

25.2 Reporting of Non-Force Majeure Events. Each Party (the "notifying Party") shall 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 shall not entitle the Parties receiving such notification to allege a cause for anticipatory breach of this GIA.

25.3 Audit Rights. Subject to the requirements of confidentiality under Article 22 of this GIA, each Party shall 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 GIA. Such audit rights shall include audits of the other Party's costs, calculation of invoiced amounts, Transmission Provider's efforts to allocate responsibility for the provision of reactive support to the Transmission System, Transmission Provider's efforts to allocate responsibility for interruption or reduction of generation on the Transmission System, and each Party's actions in an Emergency Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party's performance and satisfaction of obligations under this GIA. Each Party shall keep such

accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

25.4 Audit Rights Periods.

25.4.1 Audit Rights Period for Construction-Related Accounts and Records. Accounts and records related to the design, engineering, procurement, and construction of Transmission Owner's Interconnection Facilities, and Network Upgrades shall be subject to audit for a period of twenty-four 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 GIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

25.5 Audit Results. If an audit by a Party determines that an overpayment or an underpayment has occurred, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which support such determination.

ARTICLE 26. SUBCONTRACTORS

26.1 General. Nothing in this GIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this GIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this GIA in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

26.2 Responsibility of Principal. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this GIA. The hiring Party shall 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 shall Transmission Owner be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this GIA. Any applicable obligation imposed by this GIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

26.3 No Limitation by Insurance. The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

ARTICLE 27. DISPUTES

27.1 Submission. In the event 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 Tariff.

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 GIA 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 GIA.

28.1.2 Authority. Such Party has the right, power and authority to enter into this GIA, to become a Party hereto and to perform its obligations hereunder. This GIA 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 GIA 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 GIA 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 GIA, and it will provide to any Governmental Authority notice of any actions under this GIA 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, Interconnection Customer, Transmission Owner and Transmission Provider shall each appoint one representative and one alternate to the Joint Operating Committee. Each Party shall notify the other Parties of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee shall meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee shall hold a meeting at the

request of any Party, at a time and place agreed upon by the representatives. The Joint Operating Committee shall perform all of its duties consistent with the provisions of this GIA. All Parties shall cooperate in providing to the Joint Operating Committee all information required in the performance of the Joint Operating Committee's duties. All decisions and agreements, if any, made by the Joint Operating Committee, shall be evidenced in writing. The duties of the Joint Operating Committee shall include the following:

29.1.1 Establish data requirements and operating record requirements.

29.1.2 Review the requirements, standards, and procedures for data acquisition equipment, protective equipment, and any other equipment or software.

29.1.3 Annually review the one (1) year forecast of maintenance and planned outage schedules of Transmission Owner's and Interconnection Customer's facilities at the Point of Interconnection.

29.1.4 Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the 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 GIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

30.2 Conflicts. In the event of a conflict between the body of this GIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this GIA shall prevail and be deemed the final intent of the Parties.

30.3 Rules of Interpretation. This GIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this GIA, 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 GIA), 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 GIA or such Appendix to this GIA, or such Section to the GIP or such Appendix to the GIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this GIA 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 GIA, 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 GIA. 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 GIA.

30.5 No Third Party Beneficiaries. This GIA 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 GIA to insist, on any occasion, upon strict performance of any provision of this GIA 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 GIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this GIA. Termination or Default of this GIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer's legal rights to obtain an interconnection from Transmission Provider. Any waiver of this GIA shall, 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 GIA.

30.8 Multiple Counterparts. This GIA 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 GIA 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 GIA by a written instrument duly executed by the Parties. Such

amendment shall become effective and a part of this GIA upon satisfaction of all Applicable Laws and Regulations.

30.11 Reservation of Rights. Transmission Provider shall have the right to make a unilateral filing with FERC to modify this GIA with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under Section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this GIA pursuant to Section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this GIA shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

30.12 No Partnership. This GIA shall 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 shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

IN WITNESS WHEREOF, the Parties have caused this GIA 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: Carl Monroe

Title: EVP & COO

APPROVED TK BY

Date: 01/12/2018

OKLAHOMA GAS AND ELECTRIC COMPANY

PM TDH

By: _____

Printed Name: Jerry Peace

Title: VP

Date: 1/10/18

SUNDANCE WIND PROJECT, LLC

By: _____

Printed Name: ___ Derek Sunderman _____

Title: ____ Vice President _____

Date: _____

IN WITNESS WHEREOF, the Parties have caused this GIA 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: _____

OKLAHOMA GAS AND ELECTRIC COMPANY

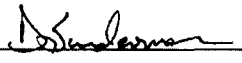
By: _____

Printed Name: _____

Title: _____

Date: _____

SUNDANCE WIND PROJECT, LLC

By: 

Printed Name: ___ Derek Sunderman _____

Title: ____ Vice President _____

Date: 1-3-2018

APPENDIX A TO GIA

Interconnection Facilities, Network Upgrades and Distribution Upgrades

NOTE: The facilities described in this Appendix are based on the studies conducted in response to the Interconnection Request, GEN-2015-048 also known as IFS-2015-002-11.

1. Interconnection Facilities:

(a) Interconnection Customer's Interconnection Facilities: Interconnection facilities to be designed, procured, constructed, installed, maintained, and owned by Interconnection Customer at its sole expense:

- 34.5 kV underground cable collection circuits;
- 34.5 kV to 138 kV transformation substation with associated 34.5 kV and 138 kV switchgear;
- One (1) 138/34.5kV 150/200/250 MVA (ONAN/ONAF/ONAF) step-up transformer to be owned and maintained by the Interconnection Customer at the Interconnection Customer's substation;
- A twenty (20) mile overhead 138kV line to connect the Interconnection Customer's substation to the Point of Interconnection ("POI") at the Transmission Owner's existing 138 kV substation ("Cleo Corner") to be owned and maintained by Transmission Owner;
- All transmission facilities required to connect the Interconnection Customer's substation to the POI;
- Equipment at the Interconnection Customer's substation necessary to maintain a power factor at the POI between 95% lagging and 95% leading, including approximately 20.3Mvars[1] of reactors to compensate for injection of reactive power into the transmission system under no/reduced generating conditions. The Interconnection Customer may use wind turbine manufacturing options for providing reactive power under no/reduced generation conditions. The Interconnection Customer will be required to provide documentation and design specifications demonstrating how the requirements are met; and,
- All necessary relay, protection, control and communication systems required to protect Interconnection Customer's Interconnection Facilities and Generating Facility and coordinate with Transmission Owner's relay, protection, control, and communication systems.

(b) Transmission Owner's Interconnection Facilities: Interconnection facilities that are to be designed, procured, constructed, installed, maintained, owned and/or controlled by Transmission Owner at Interconnection Customer's sole expense:

[1] This approximate minimum reactor amount is needed for the current configuration of the wind farm as studied in the DISIS-2015-001 Impact Study.

Description	Allocated Cost Estimate
Transmission Owner's Cleo Corner 138kV Substation: Construct one (1) 138 kV line terminal, line switches, dead end structure, line relaying, communications, revenue metering, line arrestor and all associated equipment and facilities necessary to accept transmission line from Interconnection Customer's Generating Facility.	$410,000
Total TOIF	**$410,000**

2. **Network Upgrades:**

(a) Stand Alone Network Upgrades: Network Upgrades 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. Stand Alone Network Upgrades that are to be designed, procured, constructed, installed and owned by Transmission Owner that are 100% cost responsibility of the Interconnection Customer:

Description	Allocated Cost Estimate
Cleo Corner – Cleo Plant Tap 138kV Circuit #1: Change current transformers tap setting and testing.	$61,890
Total Stand-Alone Network Upgrades	**$61,890**

(b) Network Upgrades constructed by Transmission Owner: Network Upgrades to be designed, procured, constructed, installed and owned by the Transmission Owner that are 100% cost responsibility of the Interconnection Customer:

Description	Allocated Cost Estimate
Transmission Owner's Cleo Corner 138kV Substation: Construct four (4) 2000 continuous ampacity breakers, control panel replacement, line relaying, disconnect switches, structures, foundations, conductors, insulators, and all other associated work and materials. Reroute transmission line to the south to open up the north terminal.	$2,558,000
Total Network Upgrades	**$2,558,000**

(c) Network Upgrades constructed by other transmission owning entity: Network Upgrades to be designed, procured, constructed, installed and owned by another transmission owning entity that are 100% cost responsibility of the Interconnection Customer. These Network Upgrades will require a Notification to Construct:

Description	Allocated Cost Estimate
None	$0
Total Network Upgrades by other Transmission Owners	**$0**

(d) **Shared Network Upgrades:** Network Upgrade that is needed for the interconnection of multiple Interconnection Customers' Generating Facilities and which is the shared funding responsibility of such Interconnection Customers that may also benefit other Interconnection Customer(s) that are later identified as beneficiaries. These Shared Network Upgrades may be constructed by the Transmission Owner or another transmission owning entity as identified:

Description	Total Cost Estimate	Allocated Share	Allocated Cost Estimate
None	$0		$0
Total Shared Network Upgrades	**$0**		**$0**

(e) **Previous Network Upgrades:** Network Upgrades that are required for the interconnection of Interconnection Customers' Generating Facility, but are not the cost responsibility of the Interconnection Customer, subject to restudy:

Description	Current Cost Assignment	Estimate In-Service Date
Woodward – Tatonga – Mathewson 345kV circuit #2 build: assigned in 2012 Integrated Transmission Planning – 10 Year Assessment (ITP10)	$125,308,050	2/1/2018
Woodward EH Phase Shifting Transformer circuit #1 build: assigned to DISIS-2011-001 Interconnection Customer(s)	$7,103,971	In-Service

3. **Summary of Generation Interconnection Costs:**

(a) **Transmission Owner Interconnection Facilities:** The cost for the Transmission Owner's Interconnection Facilities to be constructed by Transmission Owner. $410,000

(b) **Network Upgrades:** The portion of the Network Upgrades that could be subject to the transmission service credits described in Article 11.5 of this Agreement will be adjusted for actual costs and expenses incurred in accordance with Article 11.5. $2,619,890

(c) Total Interconnection Costs: The total cost for the Transmission Owner's Interconnection Facilities, Stand Alone Network Upgrades, and Network Upgrades. The Interconnection Customer is responsible for payment for the engineering, procurement, and construction of the Transmission Owner's Interconnection Facilities, Stand Alone Network Upgrades, and Network Upgrades pursuant to the payment schedule as indicated in Appendix B, Milestones.	**$3,029,890**
(d) Initial Payment: Pursuant to Article 11.6 of this Agreement, the Interconnection Customer's Initial Payment will be equal to the greater of a) twenty (20) percent of the total cost of Network Upgrades, Shared Network Upgrades, Transmission Owner Interconnection Facilities and/or Distribution Upgrades or b) $4,000/MW of the size of the Generating Facility. Any remaining milestone deposits provided by Interconnection Customer in Section 8.2 and Section 8.9 of the GIP will be applied to the Initial Payment requirement. If Security Deposits by Interconnection Customer were provided in the form of cash pursuant to the Definitive Interconnection System Impact Study and Interconnection Facilities Study procedures and held by Transmission Provider, Transmission Owner may invoice the Transmission Provider, up to the amount held, pursuant to the milestones of Appendix B. If Security Deposits by Interconnection Customer were provided in the form of a Letter of Credit pursuant to the Definitive Interconnection System Impact Study and Interconnection Facilities Study procedures, the Interconnection Customer must assign a Letter of Credit to the Transmission Owner pursuant to the milestones of Appendix B.	$800,000
(e) Taxes, Interests and/or Penalties: Interconnection Customer's estimated liability for reimbursement of Transmission Owner for taxes, interest and/or penalties under Article 5.17.3. This estimate assumes that there are no costs incurred by the Transmission Owner for land.	$0
(f) Final Invoice: All cost estimates will be trued up for actual costs and expenses for purposes of final billing under Article 12.2.	

4. **Distribution Upgrades:**

   - None

5. **Interconnection Service:**

Interconnection Customer has requested the following (from Appendix 1 of the GIP):
200.0 MW Energy Resource Interconnection Service – OR –
0 MW Network Resource Interconnection Service in the Transmission Owner load zone.

This request has been analyzed for Energy Resource Interconnection Service and shall be limited to a total of 200.0 MW of Energy Resource Interconnection Service.

6. Construction Option Selected by Customer:

Interconnection Customer has selected the Standard Option for construction of the Transmission Owner's Interconnection Facilities and the Stand Alone Network Upgrades.

7. Permits, Licenses, and/or Authorizations:

Permit, License, and/or Authorization	Responsible Party	Date Required
Obtain Governmental Authorization (as necessary).	As necessary	As required

8. Description of the Point of Change of Ownership:

The Point of Change of Ownership shall be the point where the Transmission Owner's 138kV transmission line meets the Transmission Owner's 138kV dead end tower at the Point of Interconnection.

9. Description of the Point of Interconnection:

Point of Interconnection will be the Transmission Owner's 138kV bus at the Cleo Corner Substation.

10. Higher-Queued Interconnection Customers:

- GEN-2007-050 (On line for 150MW)
- GEN-2007-062 (On line for 225MW)
- GEN-2011-019
- GEN-2011-020
- GEN-2014-002 (IFS-2014-001-02)
- GEN-2014-003 (IFS-2014-001-03)
- GEN-2014-005 (IFS-2014-001-05)
- GEN-2014-056 (IFS-2014-002-21)
- GEN-2015-029 (IFS-2015-001-12)
- GEN-2015-057 (IFS-2015-002-33)
- GEN-2015-093 (IFS-2015-002-37)

11. Diagrams and Figures:

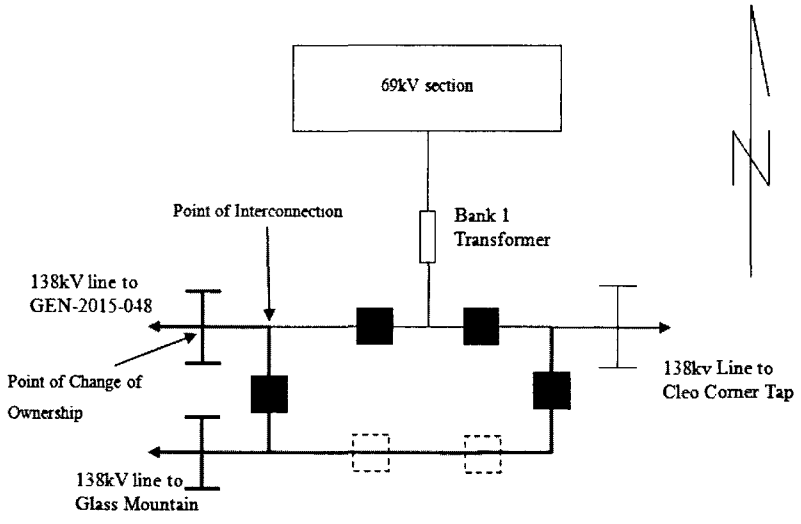


Figure A1: One-line Diagram of Point of Interconnection

APPENDIX B TO GIA

Milestones

Item	Action	Responsible Party	Completion Date
1	Provide $1,000/MW (Provided as wire) to Transmission Provider per DISIS Security Deposit requirements, totaling $200,000.	Interconnection Customer	Completed 9/30/2015
2	Provide $3,000/MW (Provided as Wire) to Transmission Provider per IFS Security Deposit requirements. totaling $600,000.	Interconnection Customer	Completed 3/10/2016
3	Provide $300,000 under E&P Agreement with OG&E.	Interconnection Customer	Completed 12/31/2016
4	Complete Facilities Study	Transmission Provider	Completed 3/17/2017
5	Provide Transmission Provider Site Control and Generating Facility development milestones per Generator Interconnection Procedure 11.3.	Interconnection Customer	Within fifteen (15) Business Days after receipt of final GIA
6	Complete and provide Bank Information Form and W-9 to Transmission Provider for the Interconnection Customer entity listed in this Agreement.	Interconnection Customer	Within fifteen (15) Business Days after receipt of final GIA
7	Upon invoice from Transmission Owner, Transmission Provider transfers Security Deposits up to a total of $800,000 to Transmission Owner.	Transmission Owner and Transmission Provider	Upon Invoice from Transmission Owner
8	Obtain Governmental Authorizations (as necessary).	As necessary	As necessary
9	Provide written authorization to proceed with design and procurement of Transmission Owner Interconnection Facilities and all Network Upgrades listed in Appendix A, Item 1.(b), 2.(b), and 2(d) to be constructed by Transmission Owner per Article 5.5.2.	Interconnection Customer	8/1/2018
10	Provide payment to Transmission Owner in the amount of $500,000 for design and procurement of the Interconnection Facilities and all Network Upgrades listed in Appendix A, Item 1.(b), 2.(b) and 2(d).	Interconnection Customer	8/1/2018

11	Provide written authorization to proceed with design, procurement, and construction of Transmission Owner Interconnection Facilities and all Network Upgrades listed in Appendix A, Item 1.(b), 2.(b), and 2.(d) to be constructed by Transmission Owner per Article 5.5.2.	Interconnection Customer	12/3/2018
12	Provide payment to Transmission Owner in the amount of $700,000 for engineering, procurement, and construction of the Interconnection Facilities and all Network Upgrades listed in Appendix A, Item 1.(b), 2.(b), and 2.(d).	Interconnection Customer	12/3/2018
13	Provide payment to Transmission Owner in the amount of $729,890 for procurement and construction of the Interconnection Facilities and all Network Upgrades listed in Appendix A, Item 1.(b), 2.(b), and 2.(d).	Interconnection Customer	3/1/2019
14	Complete Transmission Owner Interconnection Facilities identified in Appendix A, Item 1.(b).	Transmission Owner	6/14/2019
15	Complete Network Upgrades constructed by Transmission Owner listed in Appendix A, Item(s) 2.(b) and 2.(d)	Transmission Owner	6/14/2019
16	Complete registration of the Generating Facility as a market asset in the Transmission Provider's Integrated Marketplace in accordance with Attachment AE of the Tariff and the Transmission Provider's Market Protocols.	Interconnection Customer (if applicable)	Registration process must be completed prior to energization of the interconnection and applicable resources for either generation testing or commercial operation.
17	Energization of Interconnection Customer's Interconnection Facilities.	Interconnection Customer	6/14/2019
18	Initial Synchronization Date.	Interconnection Customer	7/1/2019
19	Begin trial operation & testing per Article 6.1.	Interconnection Customer & Transmission Owner	7/3/2019
20	Commercial operation date	Interconnection Customer	10/1/2019

21	Final accounting of costs incurred by Transmission Owner for Transmission Owner's Interconnection Facilities and Network Upgrades constructed by Transmission Owner. Interconnection Customer responsible for actual costs identified in Appendix A.	Transmission Owner	Five (5) months following Commercial Operation Date.
22	Payment of any balance due, based on final accounting of costs.	Interconnection Customer, Transmission Provider or Transmission Owner, as applicable	Two (2) months following completion of final accounting of costs for Transmission Owner's Interconnection Facilities.
23	Provide Transmission Provider with summary of date and amount of each payment for Network Upgrades per Article 12. Required for accurate implementation of Article 11.5.	Interconnection Customer	Within one (1) month following payment of Final Invoice.

APPENDIX C TO GIA

Interconnection Details

This Appendix C is an integral part of the Interconnection and Operating Agreement among the Interconnection Customer, Transmission Provider and Transmission Owner.

1. **Description of Generating Facility:**

   Interconnection Customer's Generating Facility will consist of one hundred (100) 2.0MW Vestas Wind Turbines for a total generating nameplate of 200.0MW. The wind turbines will be equipped with the manufacturer's low voltage ride package to meet the requirements of Appendix G. The customer is required to meet 0.95 lagging (providing vars) and 0.95 leading (absorbing vars) power factor at the [2]Point of Interconnection. To prevent reactive power injection into the transmission system during low/no wind operation, the Interconnection Customer will be required to install approximately 20.3 Mvar of shunt reactors to be located in the Interconnection Customer's collector substation on the 34.5 kV bus(es) or install and utilize an equivalent means of compensating for the injection of reactive power into the transmission system at the Point of Interconnection. Additionally, the Interconnection Customer will be required to install any equipment necessary to meet the voltage schedule requirements in Article 9.6.2 of this Agreement.

2. **Point of Change of Ownership:**

   Refer to Appendix A, Section 8 for Point of Change of Ownership.

3. **Point of Interconnection:**

   Refer to Appendix A, Section 9 for Point of Interconnection.

4. **Transmission Owner Specific Interconnection Requirements:**

   The unique requirements of each generation interconnection will dictate the establishment of mutually agreeable Interconnection Guidelines that further define the requirements of this Interconnection and Operating Agreement. The Interconnection Guidelines will address, but not be limited to, the following:

   (a) Auxiliary Power;
   Interconnection Customer will arrange for auxiliary power as allowed, for periods when the Generating Facility is not generating.

   (b) Capacity determination and verification (including ancillary services and certification);

---

[2] Because the Interconnection Facilities Study agreement was executed prior to the effective date of FERC Order 827, the measurement point for the power factor requirement is at the Point of Interconnection rather than at the high side of the generator substation as indicated in Article 9.6.1.2.

If Interconnection Customer seeks to provide ancillary services, Interconnection Customer will obtain certification under the requirements of the Transmission Provider.

(c) Data reporting requirements;

As required by NERC Operating Policies, Transmission Provider Criteria, Transmission Provider Integrated Marketplace Protocols, applicable Balancing Authority, and responsible reliability entities. The Interconnection Customer shall provide total production (instantaneous and integrated real and reactive power) data to the Transmission Owner as mutually agreed between the Transmission Owner and the Interconnection Customer. In no case shall the Transmission Owner be required to provide real-time or integrated total production data or operating data to any party other than the Transmission Provider and the Balancing Authority. Furthermore, the Transmission Owner shall have no obligation to provide any data related to customer-specific allocation of real or reactive power production data to any customers of the Interconnection Customer or any other party.

The Interconnection Customer shall make other operating data available to the SCADA system of the Transmission Owner, utilizing the communications channel connecting the Interconnection Customer's Interconnection Facilities to the Transmission Owner's Interconnection Facilities. Such operating data shall include the status of the transformer breaker(s), transmission level and collector level bus voltages, and the status of any other reactive device switching equipment located at the Interconnection Customer's Interconnection Facilities.

As the owner and operator of the wind generating facility, the Interconnection Customer shall register with NERC as a generation owner and generation operator as applicable, and comply with all NERC planning and operating criteria and Transmission Provider Criteria.

(d) Grounding Requirements;

Interconnection Customer shall tie the ground for its transmission line to the ground grid of the Transmission Owner's Point of Interconnection substation at a point provided by the Transmission Owner.

(e) Maintenance and Testing;

Transmission Owner will provide Interconnection Customer 30 days notice for planned maintenance and testing that will affect the ability of the generator to remain interconnected to the transmission system. For emergency maintenance and testing, the Transmission Owner will provide notice as soon as the Owner is aware of the need for the emergency maintenance and testing. The Interconnection Customer will provide the Transmission Owner 30 days notice of an outage of the Interconnection Customer facilities that will require electrical clearance at the Interconnection Facility. In the event of the need for an emergency outage of the Generator Facilities, the Interconnection Customer will provide the Transmission Owner notice of the need for electrical clearance as soon as the Interconnection Customer is aware of the need for the outage. Nothing in this paragraph prohibits the Transmission Owner or the Interconnection Customer from opening their respective connection facilities without notice in the event of an Emergency Condition.

(f) Provision of ancillary services;

Nothing in this Agreement should be construed as obligating Transmission Owner to provide Ancillary Services to Interconnection Customer. Ancillary Services necessary to deliver the energy produced by the Generator Facilities over the Transmission System, if any, will be provided to Interconnection Customer or any entity purchasing or otherwise acquiring energy generated by the Generator Facilities pursuant to the provisions of the Transmission Provider's Open Access Transmission Tariff or any successor tariff.

(g) Modeling Requirements;

In accordance with Article 5.10.4, the Interconnection Customer agrees to provide updated available detailed wind turbine/generator (individually) models for system planning studies (dynamic, stability, switching, short circuit) to the Transmission Owner 180 days prior to the Initial Synchronization Date set forth in Appendix B Milestones. Interconnection Customer agrees to provide updated information to the Transmission Owner when such information is available.

(h) Meteorological and Wind Data Requirements;

In accordance with Article 8.4, the Interconnection Customer agrees to provide site specific meteorological information and wind turbine/generator availability and capability to the Transmission Provider and Transmission Owner. The provision of this information will be consistent with the final FERC rule for Docket No. RM10-11-000 and any Transmission Provider RTO adopted rules, process, procedures and criteria including Transmission Provider Integrated Marketplace Protocols. All Transmission Providers, market participants, and Interconnection Customers interconnected to the Transmission System will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

(i) Wind Generating Facility Output Reduction;

To protect the reliability of the Transmission System, a Generating Facility that is a wind plant shall 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).

APPENDIX D TO GIA

Security Arrangements Details

Infrastructure security of Transmission System equipment and operations and control hardware and software is essential to ensure day-to-day Transmission System reliability and operational security. FERC will expect all Transmission Providers, market participants, and Interconnection Customers interconnected to the Transmission System to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

APPENDIX E TO GIA

Commercial Operation Date

[Date]

Tessie Kentner
Managing Attorney
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Travis Hyde, Director T&D Planning
Oklahoma Gas and Electric Company
P.O. Box 321 M/C M110
Oklahoma City, OK 73101
Phone 405-553-5969

Re: Sundance Wind Project, LLC Generating Facility (GEN-2015-048)

Dear Mrs. Kentner and Mr. Hyde:

On **[Date]** Sundance Wind Project, LLC ("Sundance Wind Project") has completed Trial Operation of the referenced Generating Facility. This letter confirms that Sundance Wind Project commenced Commercial Operation of the Generating Facility, effective as of **[Date plus one day]**.

Thank you.

Derek Sunderman
Vice President
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
Lenexa, KS 66219-2305
Phone: 913-956-4092
Email: dsunderman@tradewindenergy.com

APPENDIX F TO GIA

Addresses for Delivery of Notices And Billings

Notices:

Transmission Provider:

Tessie Kentner
Managing Attorney
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936
Phone: 501-688-1782
Email: tkentner@spp.org

Transmission Owner:

Travis Hyde
Director T&D Planning
Oklahoma Gas and Electric Company
P.O. Box 321 M/C M110
Oklahoma City, OK 73101
Phone: 405-553-5969
Email: hydetd@oge.com

Interconnection Customer:

Derek Sunderman
Vice President
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
Lenexa, KS 66219-2305
Phone: 913-956-4092
Email: dsunderman@tradewindenergy.com

AND

Aaron Vander Vorst
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
Lenexa, KS 66219-2305
Phone: 913-953-5279
Email: avandervorst@tradewindenergy.com

Billings and Payments: [Specify addresses for construction invoices, O&M invoices and settlement of ancillary services]

Transmission Provider:

Brad Finkbeiner
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936
Phone: 501-688-1657
Email: bfinkbeiner@spp.org

Transmission Owner:

Andrew Aston
Lead Transmission Planning Engineer
Oklahoma Gas and Electric Company
P.O. Box 321 M/C M110
Oklahoma City, OK 73101
Phone: 405-553-8277
Email: astonar@oge.com

Interconnection Customer:

Derek Sunderman
Vice President
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
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Phone: 913-956-4092
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AND

Aaron Vander Vorst
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
Lenexa, KS 66219-2305
Phone: 913-953-5279
Email: avandervorst@tradewindenergy.com

AND

Accounting
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105

Lenexa, KS 66219-2305
Phone: 913-956-4087
Email: malexander@tradewindenergy.com

Alternative Forms of Delivery of Notices (telephone, facsimile or email):

Transmission Provider:

Tessie Kentner
Managing Attorney
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936
Phone: 501-688-1782
Email: tkentner@spp.org

Transmission Owner

Travis Hyde
Director T&D Planning
Oklahoma Gas and Electric Company
P.O. Box 321 M/C M110
Oklahoma City, OK 73101
Phone: 405-553-5969
Email: hydetd@oge.com

Interconnection Customer:

Derek Sunderman
Vice President
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
Lenexa, KS 66219-2305
Phone: 913-956-4092
Email: dsunderman@tradewindenergy.com

AND

Aaron Vander Vorst
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
Lenexa, KS 66219-2305
Phone: 913-953-5279
Email: avandervorst@tradewindenergy.com

Operational Communications: [Identify contacts for operations]

Transmission Provider:

Bruce Rew, Vice President, Operations
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936
Phone: 501-614-3214

Transmission Owner:

Manager Transmission Operations
Oklahoma Gas and Electric Company
P.O. Box 321 M/C M123
Oklahoma City, OK 73101
Phone: 405-553-8165

Interconnection Customer:

Derek Sunderman
Vice President
Sundance Wind Project, LLC
16105 W. 113th Street, Suite 105
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AND

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APPENDIX G TO GIA

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 shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the standard below. The LVRT standard provides for a transition period standard and a post-transition period standard.

Transition Period LVRT Standard

The transition period standard applies to wind generating plants subject to FERC Order 661 that have either: (i) interconnection agreements signed and filed with the Commission, filed with the Commission in unexecuted form, or filed with the Commission as non-conforming agreements between January 1, 2006 and December 31, 2006, with a scheduled in-service date no later than December 31, 2007, or (ii) wind generating turbines subject to a wind turbine procurement contract executed prior to December 31, 2005, for delivery through 2007.

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles at a voltage as low as 0.15 p.u., as measured at the high side of the wind generating plant step-up transformer (i.e. the transformer that steps the voltage up to the transmission interconnection voltage or "GSU"), after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU or to faults that would result in a voltage lower than 0.15 per unit on the high side of the GSU serving the facility.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static var Compensator, etc.) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the 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 shall be required to withstand for a three phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system. A wind generating plant shall remain interconnected during such a fault on the transmission system for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.
2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.

3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static var Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the 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 shall maintain a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this 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 Interconnection Customer shall not disable power factor equipment while the wind plant is in operation. Wind plants shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the System Impact Study shows this to be required for system safety or reliability.

iii. Supervisory Control and Data Acquisition (SCADA) Capability

The wind plant shall provide SCADA capability to transmit data and receive instructions from the Transmission Provider to protect system reliability. The Transmission Provider and the wind plant Interconnection Customer shall determine what SCADA information is essential for the proposed wind plant, taking into account the size of the plant and its characteristics, location,

and importance in maintaining generation resource adequacy and transmission system reliability in its area.

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO EAST TEXAS ELECTRIC COOPERATIVE, INC. AND NORTHEAST TEXAS ELECTRIC COOPERATIVE, INC.'S FIRST REQUEST FOR INFORMATION

Question No. 1-14:

Please refer to page 5, line 10, of the direct testimony of SWEPCO witness Malcom Smoak. Provide a copy of SWEPCO's application filed at FERC requesting approval of the acquisition of the Selected Wind Facilities. If the application has not been filed, when does SWEPCO plan to file it? Please provide the application as soon as it becomes available.

Response No. 1-14:

The application to FERC for approval of the transactions has not been made. That application must be made no later than 120 days from the execution of the Purchase and Sale Agreements for the Selected Wind Facilities, or by November 9, 2019. At this time, the Company does not have a more precise timeline for when that filing will be made, but will provide a copy as requested.

Prepared By: Christopher N. Martel	Title: Regulatory Consultant Sr
Prepared By: Jonathan M. Griffin	Title: Regulatory Consultant Staff
Prepared By: Lynn M. Ferry-Nelson	Title: Dir Regulatory Svcs
Sponsored By: Thomas P. Brice	Title: VP Regulatory & Finance

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO EAST TEXAS ELECTRIC COOPERATIVE, INC. AND NORTHEAST TEXAS ELECTRIC COOPERATIVE, INC.'S FIRST REQUEST FOR INFORMATION

Question No. 1-15:

Please refer to the "JOA – Allocations" tab of WP "Aaron-AEP witness Aaron Exhibits SWEPCO-TX". List the FERC wholesale customers included in the 1,965 GWh forecast for 2021. For each wholesale customer listed, provide the following information:

a) The forecasted MWh by month for 2021,

b) The amount of GWh included in the 1,965 GWh,

c) The forecasted annual, and monthly, peak demands for 2021,

d) A copy of the most recent forecast of the customer's energy and demand requirement,

e) The date the customer's current power supply agreement ("PSA") with SWEPCO terminates, and

f) SWEPCO's expectations of whether the customer will continue to be a wholesale customer of SWEPCO beyond the PSA contract term.

Response No. 1-15:

SWEPCO and ETEC/NTEC are discussing resolution of potential objections to this request.

Prepared by: Counsel

Sponsored by: Counsel

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO EAST TEXAS ELECTRIC COOPERATIVE, INC. AND NORTHEAST TEXAS ELECTRIC COOPERATIVE, INC.'S FIRST REQUEST FOR INFORMATION

Question No. 1-16:

Please provide copies of the APSC and LPSC orders approving SWEPCO's most recent integrated resource plan ("IRP").

Response No. 1-16:

Neither Arkansas nor Louisiana issue orders formally approving integrated resource plans.

However, please see attachment ETEC_NTEC_1_016_Attachment_1, which is an order issued by the Louisiana PSC, which found that SWEPCO met the requirements of the IRP Rules and acknowledges the Company's final IRP report without the need for a litigated hearing. Although the LPSC's acknowledgement of the IRP does not constitute that commission's approval of the IRP or any specific resource decision, methodology, or project that SWEPCO included within the IRP, the IRP can be used in future LPSC proceedings that consider SWEPCO's resource plans.

Prepared By: Christopher N. Martel	Title: Regulatory Consultant Sr
Prepared By: Jonathan M. Griffin	Title: Regulatory Consultant Staff
Prepared By: Lynn M. Ferry-Nelson	Title: Dir Regulatory Svcs
Sponsored By: Thomas P. Brice	Title: VP Regulatory & Finance

LOUISIANA PUBLIC SERVICE COMMISSION

ORDER NO. I-33013

SOUTHWESTERN ELECTRIC POWER COMPANY (SWEPCO), EX PARTE

Docket No. I-33013 In re: 2013 Integrated Resource Planning ("IRP") process for Southwestern Electric Power Company pursuant to General Order dated April 20, 2012.

(Decided at the Business and Executive Session held February 1, 2016)

Overview

This matter is before the Louisiana Public Service Commission ("LPSC" or "Commission") for consideration of a recommendation by Commission Staff that the Final Integrated Resource Plan ("IRP") Report filed by Southwestern Electric Power Company ("SWEPCO") on September 30, 2015, satisfies the Commission's IRP Rules for Electric Utilities in Louisiana ("IRP Rules") promulgated on April 20, 2012 in Docket No. R-30021, and should be acknowledged without the necessity of a litigated proceeding. The Commission adopted the Staff Recommendation, acknowledging successful completion of SWEPCO's first IRP cycle pursuant to the IRP Rules. In addition, the Commission directed the Staff to open a rulemaking to consider modifications to the Commission's Market Based Mechanism ("MBM") Order dated October 29, 2008[1] to clarify when a competitive solicitation process must be utilized for renewable energy resources.

SWEPCO, an affiliate company of American Electric Power ("AEP"), serves approximately 527,000 retail customers in Louisiana, Arkansas and Texas, with approximately 229,000 of those retail customers located in Louisiana. A member of the Southwest Power Pool ("SPP"), SWEPCO is required to meet a minimum capacity margin of 12% (13.6% reserve requirement). SWEPCO's all time high peak demand occurred in August 2011 at 5,554 megawatts ("MW") and its all time winter peak was 4,919 MW, which occurred in January 2014. SWEPCO's 2015 summer and winter peak demands were significant at 5,149 MW and 4,708 MW, occurring on August 10 and January 8 respectively. Despite customer growth of approximately 0.5% per year, SWEPCO anticipates that its peak demand will decline at an average rate of 0.2% per year through 2035 due to reductions in internal energy and certain wholesale contracts. SWEPCO currently has 5705 MW of owned generating capability

[1] LPSC Docket No. R-26172, Sub Docket C.

("seasonal ratings"), with which it anticipates meeting its minimum capacity margin in the near term.

SWEPCO's IRP, conducted in accordance with the IRP Rules, resulted in a Five Year Action Plan containing the following elements related to Louisiana:

1. Continue the planning and regulatory actions necessary to implement the "Quick Start Phase" of the energy efficiency programs;

2. Conduct an RFP(S) to explore potential near term-, tax advantaged opportunities to add up to 200 MW wind and 50 MW of solar energy (via Renewable Energy Purchase Agreements or Renewable PPAs ("REPAs");

3. Continue to evaluate gas-steam unit ongoing operating and maintenance costs, in addition to equipment liability issues to determine most likely candidates for near term retirements;

4. Complete solid fuel plant Mercury and Air Toxic Standards ("MATS") and Regional Haze ("RH")-required retrofit projects already underway; and

5. Continue to evaluate the Final Clean Power Plan ("CPP") guidelines and provide technical input to state regulatory bodies as to cost effective compliance options.

Background and Procedural History

The Commission has, since 1983, required regulated electric utilities to seek certification that the public convenience and necessity will be served by commencing construction of electric generating facilities or entering into a contract for electric power. Since 2002, the Commission has required electric utilities to employ a competitive solicitation process through its MBM rules as part of the justification necessary for a certification pursuant to the 1983 General Order. Consistent with the 1983 and MBM General Orders, the Commission's IRP Rules are intended to provide a framework for utilities to develop long-term resource plans for satisfying load requirements in collaboration with stakeholders. Resource planning decisions made as part of the utility's IRP process are relevant to the Commission's approval of future investment decisions and future revenue requirement and rate design proceedings. Consistency with the IRP

Rules will be an additional factor for the Commission's evaluation of the prudence of investments in construction and rate application proceedings.

SWEPCO submitted a request to initiate this IRP process on October 18, 2013 in accordance with § 10(d) of the IRP Rules. Although § 10(d) provides for the filing of data assumptions one month after the request to initiate the IRP process, that deadline was informally extended in order to allow the Commission to issue a request for proposals ("RFP") for a technical consultant to assist Staff with the proceeding. The Commission hired United Professionals Company at its December 2013 Open Session. On January 31, 2014, SWEPCO submitted a second request to initiate the IRP process, along with a revised proposed schedule of events and confidentiality agreement as required by the rules.

Representatives of AEP made a formal presentation tracking the information presented in the Company's previously filed data assumptions at the first stakeholder meeting held March 20, 2014 in Shreveport, Louisiana. In response to requests made at the March 20 Stakeholder Meeting, SWEPCO provided additional information to parties regarding its discount factor and AEP's Volt Var Optimization ("VVO") energy efficiency technology. Staff and the following parties filed comments following the stakeholder meeting: the Southern Wind Energy Association ("SWEA"), Entegra Power Group ("Entegra"), the Alliance for Affordable Energy ("AAE"), the Sierra Club, America's natural Gas Alliance ("ANGA"), the Gulf States Renewable Energy Industries Association ("GSREIA"), the Southeast Energy Efficiency Alliance ("SEEA"), and Staff. Under the original IRP Process Schedule of Events proposed by the Company, SWEPCO was to issue its Draft IRP Report in January of 2015, after having reviewed all comments.

On February 6, 2015, SWEPCO filed a revised proposed schedule and a Draft IRP Report. The Revised Schedule included a Notice for SWEPCO's plans to hold its second stakeholder meeting on March 31, 2015 in Shreveport, Louisiana. The purpose of the second stakeholder meeting was to provide stakeholders with the opportunity to meet with the representatives of SWEPCO to discuss the Company's Draft IRP Report. At the second stakeholder meeting, representatives from SWEPCO and AEP made a formal presentation that provided: a description of the Company's Draft IRP Report and process status, asked for stakeholder input, supplied a summary of SWEPCO's preferred plan and modeling results, as

well as its underlying planning assumptions, and discussed next steps. On April 23, 2015, SWEPCO then supplied Staff and stakeholders with its responses to inquiries and requests that the Company received at its second stakeholder meeting, which, amongst others, included: where SWEPCO ranked in the AEP footprint in terms of carbon intensity, whether and how replacement resources for expiring wind PPAs were modeled in the Company's Draft IRP Report, whether Arkansas and Texas subsidize the cost associated with energy efficiency programs in the same manner that Louisiana does, whether the wind agreements were modeled by the Company as take or pay agreements, or included any performance requirements or penalties, and whether the Company had attempted to quantify the benefits associated with its VVO technology.

Under the Company's revised schedule, stakeholder comments on the Draft IRP Report were due May 29, 2015. On May 29, 2015, comments were submitted by GSREIA, AAE, and SWEA. Staff subsequently reviewed and took into consideration the comments filed by stakeholders before filing its second round of comments on the Company's Draft IRP Report on June 30, 2015. On September 30, 2015, SWEPCO filed its Final IRP Report. No disputed issues were identified by any stakeholders. Staff thereafter issued its recommendation January 4, 2016.

Staff's Recommendation

Having thoroughly reviewed the Company's Final IRP Report, assessing it for substantive methodological errors and omissions, as well as for compliance with Staff's requests in its June 30, 2015 Comments, Staff filed a recommendation January 4, 2016 finding that the Company has, in all material respects, met its obligations under the requirements established in the IRP Rules. As such, Staff did not recommend a proceeding to resolve disputed issues. Staff did, however, recommend that the Commission consider reviewing its MBM Order for the purpose of clarifying when a competitive solicitation process must be utilized for renewable energy resources.

Commission Consideration

On motion of Commissioner Campbell, seconded by Chairman Holloway, and unanimously adopted, the Commission voted to adopt Staff's Recommendation filed January 4, 2016, acknowledging SWEPCO's Final IRP Report without the necessity of a litigated

proceeding; and directing Staff to open a rulemaking to review the MBM Order for modifications necessary to properly account for the intermittency of renewable resources.

IT IS THEREFORE ORDERED THAT:

1. The Commission finds that SWEPCO has met the requirements of the IRP Rules and acknowledges its final IRP Report without the need for a litigated hearing;
2. The Commission's acknowledgment in this matter does not constitute Commission approval of the IRP or any specific resource decision, methodology or project that SWEPCO included within the IRP. The IRP may, however, be considered in any future Commission proceeding concerning SWEPCO's resource plans;
3. Commission Staff is directed to open a rulemaking to review the MBM Order for modifications necessary to properly account for the intermittency of renewable resources; and
4. This Order is effective immediately.

BY ORDER OF THE COMMISSION
BATON ROUGE, LOUISIANA
March 2, 2016

/S/ CLYDE C. HOLLOWAY
DISTRICT IV
CHAIRMAN CLYDE C. HOLLOWAY

S/ SCOTT A. ANGELLE
DISTRICT II
VICE CHAIRMAN SCOTT A. ANGELLE

/S/ FOSTER L. CAMPBELL
DISTRICT V
COMMISSIONER FOSTER L. CAMPBELL

/S/ LAMBERT C. BOISSIERE
DISTRICT III
COMMISSIONER LAMBERT C. BOISSIERE, III

EVE KAHAO GONZALEZ
SECRETARY

/S/ ERIC F. SKRMETTA
DISTRICT I
COMMISSIONER ERIC F. SKRMETTA

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO EAST TEXAS ELECTRIC COOPERATIVE, INC. AND NORTHEAST TEXAS ELECTRIC COOPERATIVE, INC.'S FIRST REQUEST FOR INFORMATION

Question No. 1-17:

Please provide a copy of SWEPCO's most recent approved IRP in Arkansas and in Louisiana. If SWEPCO has filed IRPs in either state that have not yet been approved, please provide copies of those IRPs as well.

Response No. 1-17:

As explained in ETEC/NTEC 1-16, the Arkansas and Louisiana commissions do not expressly approve SWEPCO's IRP.

Please see attachments: ETEC_NTEC_1_017_Attachment_1.pdf, "ETEC_NTEC_1_017_Attachment_2.pdf, and ETEC_NTEC_1_017_Attachment_3.pdf.

These attachments are voluminous and are provided electronically via the PUC Interchange.

Prepared By: Christopher N. Martel	Title: Regulatory Consultant Sr
Prepared By: Jonathan M. Griffin	Title: Regulatory Consultant Staff
Prepared By: Lynn M. Ferry-Nelson	Title: Dir Regulatory Svcs
Sponsored By: Thomas P. Brice	Title: VP Regulatory & Finance

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO EAST TEXAS ELECTRIC COOPERATIVE, INC. AND NORTHEAST TEXAS ELECTRIC COOPERATIVE, INC.'S FIRST REQUEST FOR INFORMATION

Question No. 1-18:

Will the Selected Wind Facilities benefit other customers in SPP that are not served by SWEPCO or PSO? If yes, provide a copy of all studies, analysis, models, reports or other documents which qualify, analyze and/or discuss this benefit.

Response No. 1-18:

The Selected Wind Facilities will be fully dedicated to SWEPCO and PSO and are not anticipated to benefit other SPP customers.

Prepared by: Akarsh Sheilendranath — Title: Senior Associate, The Brattle Group

Sponsored By: Thomas P. Brice — Title: VP Regulatory & Finance
Sponsored by: Johannes P. Pfeifenberger — Title: Principal, The Brattle Group

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO EAST TEXAS ELECTRIC COOPERATIVE, INC. AND NORTHEAST TEXAS ELECTRIC COOPERATIVE, INC.'S FIRST REQUEST FOR INFORMATION

Question No. 1-19:

In SWEPCO's Wind Catcher CCN case, Docket No. 47461, SWEPCO witness Michael Bright stated that the wind facility would be engineered to have a design life of 25 years. In this case, SWEPCO witness Joseph DeRuntz states that the Selected Wind Facilities will have a design life of 30 years. Please explain the reasons for the change in the proposed design life. Also, is Mr. Bright still employed by AEP and, if yes, why did he not file testimony in this case?

Response No. 1-19:

Please see the Company's response to TIEC 2-13. Mr. DeRuntz was chosen as a witness because he is responsible for the oversight of the technical and construction-related aspects of the Selected Wind Facilities.

Prepared By: Edward J. Locigno Title: Regulatory Analysis & Case Mgr

Sponsored By: Joseph G. DeRuntz Title: Director - Projects

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Question No. 1-20:

1-20 In AEP's July 15, 2019, news release regarding the proposed acquisition of the Selected Wind Facilities, AEP states that it "has proposed adding 9,100 MW of new wind and solar generation and 2,300 MW of new natural gas generation to its regulated power plant fleet by 2030." Please provide a list of the proposed power plants, including the following information for each proposed power plant:

a) The name of the power plant,

b) The size of the power plant in MWs,

c) The estimated in-service date,

d) The type of power plant, (i.e., wind, solar, or natural gas),

e) The location of the power plant, and

f) The AEP company, or companies, that will own the power plant.

Response No. 1-20:

The new wind, solar and natural gas generation referred to in the July 15, 2019 news release is a summary of the proposed resources included in AEP operating company integrated resource plan filings. None of these proposed projects have been approved, and only a portion of the capacity proposed is in the process of requesting approval. ETEC/NTEC 1-20 Attachment 1 identifies the proposed resources by AEP operating company and the projected timeframe for their completion.

Prepared By: Mark A. Becker	Title: Resource Planning Mgr
Prepared By: Paul N. Demmy	Title: Resource Planning Anlyst Sr
Prepared By: Jon R. Maclean	Title: Resource Planning Mgr
Prepared By: James F. Martin	Title: Regulatory Case Mgr
Sponsored By: John F. Torpey	Title: Mng Dir Res Plnning&Op Anlysis

Projected Resource Additions

AMERICAN ELECTRIC POWER

Solar Additions (MW)

Operating Co	2020-2023	2024-2027	2028-2030
AEP Ohio	Up to 400 *	-	-
APCo	165	150	750
I&M	-	150	150
KPCo	90 *	20	40
PSO	11	600	600
SWEPCO	-	450	550
Totals	Up to 606	1,370	2,090

Wind Additions (MW)

Operating Co	2020-2023	2024-2027	2028-2030
AEP Ohio	Up to 500*	-	-
APCo	300	-	-
I&M	-	600	450
KPCo	-	-	-
PSO	Up to 1,000 *	-	200
SWEPCO	Up to 1,300 *	200	600
Totals	Up to 3,000	800	1,250

Natural Gas Additions (MW)

Operating Co	2020-2023	2024-2027	2028-2030
I&M	-	-	1,500
PSO	410 [1]	373 [1]	-
Totals	410	373	1,500

[1] To replace expiring PPA

* Subject to regulatory filings currently underway

Total Projected Resource Additions (MW)

Resource	2020-2030
Solar	Up to 4,066
Wind	Up to 5,050
Natural Gas	2,283
Totals	Up to 11,398

Updated 05/10/2019

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Question No. 1-21:

Please refer to the workpapers for Exhibit JOA-1 and JOA-2, which shows the costs and benefits of the Selected Wind Facilities are being allocated to the rate jurisdictions on the basis of energy (GWh). Will an energy allocation factor be used in the formulary rates of wholesale customers to allocate the costs and benefits of the Selected Wind Facilities? If not, explain how the costs and benefits will be allocated in the formulary rates.

Response No. 1-21:

No. Wholesale customer contracts are based on a "slice of system" cost of service approach, not based on an allocated share of any specific facilities. Revenues and costs of these facilities will be included in the formula rate templates and rates based on where they are recorded on the books, per the terms of each agreement.

Prepared By: James F. Martin	Title: Regulatory Case Mgr
Prepared By: Jacob A. Miller	Title: Regulatory Consultant Sr
Sponsored By: John O. Aaron	Title: Dir Reg Pricing & Analysis

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Question No. 1-22:

What are the three closest in-service wind generating facilities to each of the three Selected Wind Facilities? Provide any information that AEP has for each in-service wind facility identified, including installed capacity and historic annual energy generated.

Response No. 1-22:

A portion of the information responsive to this request is HIGHLY SENSITIVE under the terms of the Protective Order. The Highly Sensitive information is available for review at the Austin offices of American Electric Power Company (AEP), 400 West 15th Street, Suite 1520, Austin, Texas, 78701, (512) 481-4562, during normal business hours.

The response to this request is based on locations of the substations where the Selected Wind Facilities will interconnect with the SPP transmission system.

The Traverse Wind Facility, based on where it will connect with the SPP transmission system, is close the existing Canadian Hills, Minco Wind and Red Dirt wind facilities.

Both the Sundance and Maverick Wind Facilities, based on where the facilities will connect with the SPP transmission systems, are closest to the existing Chisholm View Wind, Breckinridge Wind and Red Dirt wind facilities.

Please see ETEC/NTEC Highly Sensitive Attachment 1 for the requested information related to those facilities where the Company is in possession of the requested data.

Prepared By: Anita A. Sharma — Title: Engineer Staff

Sponsored By: Kamran Ali — Title: Mng Dir Trans Planning

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Question No. 1-23:

Please provide all demand and energy allocation factors most recently used to calculate the rates for each wholesale customer of SWEPCO. Include the amounts (e.g., MWh, CP kW, NCP kW, etc.) used to calculate the allocation factor and identify the test year.

Response No. 1-23:

Demand and energy allocation factors are not used to calculate rates for each wholesale customer of SWEPCO. SWEPCO wholesale customer contracts are based on a "slice of system" cost of service approach, in which total company cost of service is computed every year using cost of service assumptions defined in each contract. There is no test year. Each customer's contractually determined peak is included in the total SWEPCO peak load, which is then used to compute their demand charge rate. Their energy requirements are added to the rest of the company's energy needs and included in the calculation of the contractual fuel and non-fuel energy rates.

Prepared By: James F. Martin	Title: Regulatory Case Mgr
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Question No. 1-24:

Please provide a working computer file copy of a spreadsheet similar to Exhibit JOA-2 in Docket No. 47461 but based on the information in this Docket No. 49737. In addition, please explain why SWEPCO did not file a similar exhibit in this proceeding.

Response No. 1-24:

A working computer file copy of a spreadsheet similar to Exhibit JOA-2 in Docket No. 47461 but based on the information in this Docket No. 49737 has not been prepared. The information on Exhibit JOA-2 in Docket No. 47461 was not filed in this proceeding but similar information is contained in the filed updated workpapers of SWEPCO witness John Torpey at PUCT Interchange No. 55 and provided in the Company's supplemental response to TIEC 1-19, "Updated Torpey Errata Benefits Model Final", tab "P50 RR Base".

Prepared By: James F. Martin	Title: Regulatory Case Mgr
Prepared By: Jacob A. Miller	Title: Regulatory Consultant Sr
Sponsored By: John O. Aaron	Title: Dir Reg Pricing & Analysis
Sponsored By: John F. Torpey	Title: Mng Dir Res Plnning&Op Anlysis

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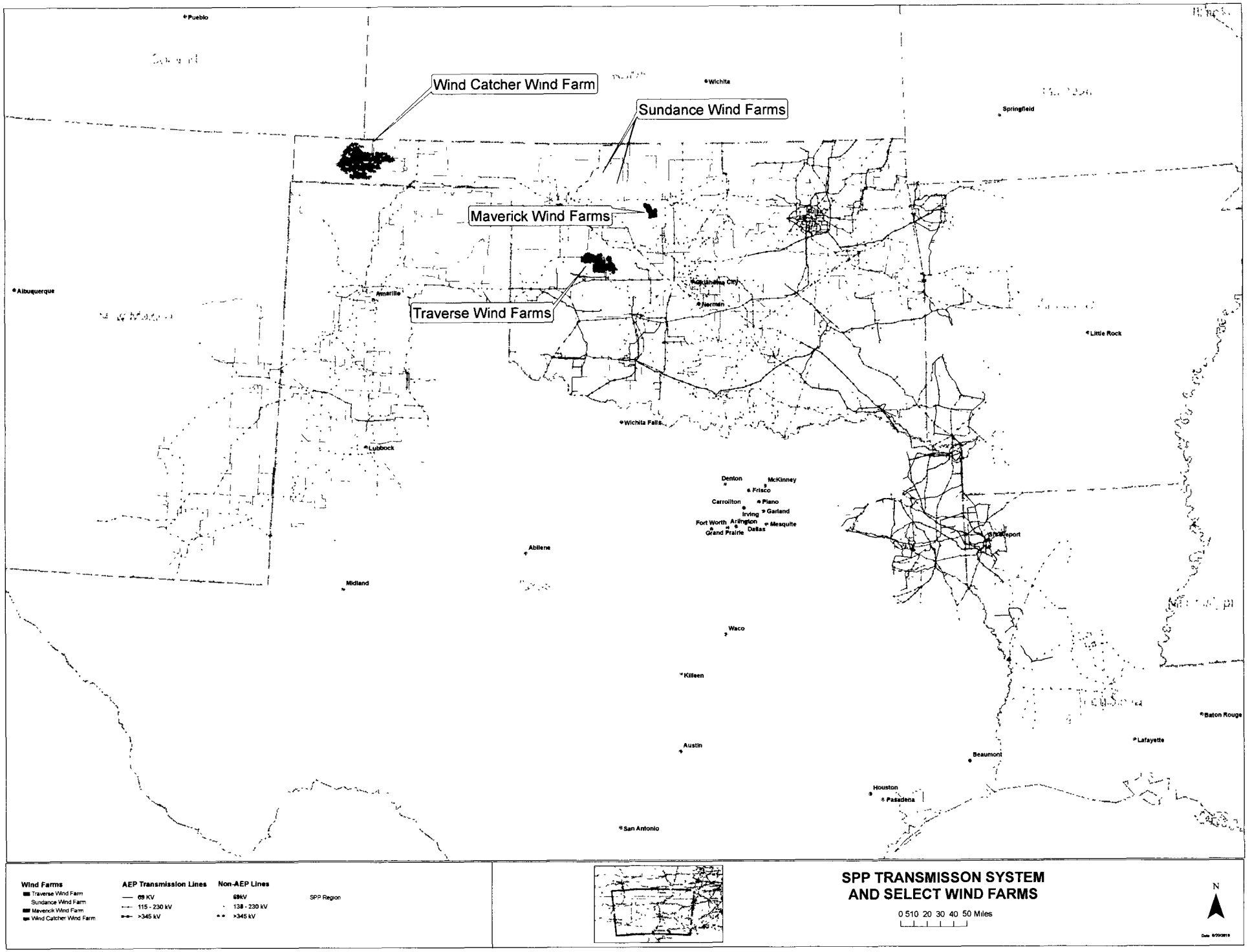
Question No. 1-25:

Please provide a map of the SPP portions of Texas, Oklahoma, Arkansas and Louisiana that show all AEP and non-AEP transmission facilities in SPP. In addition, indicate on the map the location of the following wind generation facilities: (1) the Wind Catcher wind facility, (2) the Traverse wind facility, (3) the Maverick wind facility, and (4) the Sundance wind facility.

Response No. 1-25:

Please see ETEC_NTEC 1-25 Attachment 1.

Prepared By: Matthew D. Vermilion	Title: Dir Trans Bus Development
Prepared By: Anita A. Sharma	Title: Engineer Staff
Prepared By: Timothy B. Gaul	Title: Dir Trans Line Siting
Sponsored By: Kamran Ali	Title: Mng Dir Trans Planning


Wind Catcher Wind Farm
Sundance Wind Farms
Maverick Wind Farms
Traverse Wind Farms
Pueblo
Albuquerque
Amarillo
Lubbock
Wichita
Springfield
Oklahoma City
Norman
Little Rock
Wichita Falls
Denton
McKinney
Frisco
Carrollton
Plano
Irving
Garland
Fort Worth
Arlington
Mesquite
Grand Prairie
Dallas
Abilene
Midland
Waco
Killeen
Austin
San Antonio
Houston
Pasadena
Beaumont
Lafayette
Baton Rouge
Wind Farms
Traverse Wind Farm
Sundance Wind Farm
Maverick Wind Farm
Wind Catcher Wind Farm
AEP Transmission Lines
69 KV
115 - 230 kV
>345 kV
Non-AEP Lines
69kV
138 - 230 kV
>345 kV
SPP Region
SPP TRANSMISSON SYSTEM
AND SELECT WIND FARMS
0 5 10 20 30 40 50 Miles
N

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Question No. 1-26:

In Docket No. 47461, SWEPCO witness Venita McCellon-Allen stated on page 9 of her direct testimony that the "Southwest Power Pool (SPP) lacks sufficient transmission resources to deliver that energy to the major load centers." Is that statement also true for the Selected Wind Facilities? If not, explain why not, and state what is different or what has changed since SWEPCO's Wind Catcher CCN Application.

Response No. 1-26:

This statement is not true for the Selected Wind Facilities because the Selected Wind Facilities are in a geographically different area of SPP.

In Docket No. 47461, SWEPCO witness Venita McCellon-Allen stated that "while some of the best wind resources are located in the Oklahoma Panhandle, Southwest Power Pool (SPP) lacks sufficient transmission resources to deliver that energy to the major load centers." This statement was made in the context of explaining the benefit to SWEPCO's customers of the then proposed gen-tie line needed to deliver the output of the 2,000 MW Wind Catcher project to loads. The Wind Catcher project was proposed to be developed in the Oklahoma Panhandle, which does not have sufficient transmission capacity to deliver un-curtailed and uncongested power from a 2,000 MW project.

The Company's RFP evaluation analysis performed for this proceeding indicates that Ms. McCellon-Allen's statement in Docket No. 47461 still holds for wind facilities in the Panhandle. The statement, however, does not apply for the Selected Wind Facilities, which are located in central Oklahoma on a much stronger portion of the SPP transmission network.

As explained in SWEPCO witness Kamran Ali's direct testimony, the RFP evaluation analysis identified limited transmission deliverability for the clusters of wind resources in the Oklahoma Panhandle and in southeast Oklahoma. As Mr. Ali discusses on page 8 of his testimony, the Company eliminated four projects from these clusters that failed the First Contingency Incremental Transfer Capability ("FCITC") deliverability criteria under Section 9.1.12 of the RFP. No such transmission deliverability limitations were identified through the Company's deliverability assessment for the Selected Wind Facilities.

Insufficient transmission capacity, as evidenced by the deliverability limitations observed in the Company's analysis, implies that wind generation resources within such clusters experience greater risk of encountering unexpectedly high congestion costs, as explained by witness Pfeifenberger in his direct testimony (pp. 15-16).

Prepared By: Anita A. Sharma — Title: Engineer Staff

Sponsored By: Kamran Ali — Title: Mng Dir Trans Planning

Sponsored by: Johannes P. Pfeifenberger — Title: Principal, The Brattle Group

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Question No. 1-27:

Please explain how SWEPCO proposes to allocate PTCs to each jurisdiction. Also, please explain how SWEPCO proposes to allocate PTCs to each wholesale customer included in the FERC jurisdiction.

Response No. 1-27:

PTC's will be passed through to retail customers as explained in the testimony of Company witness Aaron in each state's retail proceeding. Mr. Aaron's testimony is publicly available on the commission's website for each state the Company made a filing. The Docket numbers are as follows: Oklahoma: PUD 201900048; Arkansas: 19-035-U; Louisiana: U-35324.

Each FERC customer will receive the benefits of PTC's as a reduction of the effective tax rate in their formula rates as described in SWEPCO's response to ETEC/NTEC Question 1-6.

Prepared By: James F. Martin	Title: Regulatory Case Mgr
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Question No. 1-28:

Please explain why the Texas jurisdiction allocation factor of 38.11% has increased so much compared to the Texas jurisdictional allocation factor of 34.3% in the Wind Catcher CCN case, Docket No. 47461. Provide copies of all energy and demand forecasts, reports, spreadsheets, analyses, or other documents supporting this increase.

Response No. 1-28:

The Texas jurisdictional allocation factor of 38.11% in the current filing is based on energy (GWh) delivered and the Texas jurisdictional allocation factor of 34.30% in the Wind Catcher CCN case, Docket No. 47461, was based on demand (MW).

Prepared By: James F. Martin	Title: Regulatory Case Mgr
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Question No. 1-29:

Many of the numbers shown on SWEPCO witness John Torpey's WP named "AEP witness Torpey Benefits Model Final" are hardcoded. Please provide a copy of this model that includes the formulas for the cells with the hardcoded numbers, or links to the source of the hardcoded number. If there are no formulas or links for any of the hardcoded numbers, provide copies of supporting documents for those numbers.

Response No. 1-29:

The majority of the hardcoded amounts in that file are PLEXOS inputs for net production costs, OSS margins, and congestion, which are pulled from close to 100 individual PLEXOS output files. See the file entitled Torpey Errata Workpaper Guide and the PLEXOS and capacity savings input files provided in TIEC_1_19_Supplemental_Attachment_1 for these inputs. Inputs for O&M, land leases, property taxes and ongoing capital expense are available in the workpapers of Company witness DeRuntz. Cost of Capital inputs are supported in the testimony of Company witness Hollis. Energy production and PTC volumes are supported in the testimony and exhibits of Company witness Godfrey. Jurisdictional allocators were provided in the workpapers of Company witness Aaron. Congestion was provided in the workpapers of Company witness Sheilendranath.

Prepared By: Mark A. Becker	Title: Resource Planning Mgr
Prepared By: Paul N. Demmy	Title: Resource Planning Anlyst Sr
Prepared By: Jon R. Maclean	Title: Resource Planning Mgr
Prepared By: James F. Martin	Title: Regulatory Case Mgr
Sponsored By: John F. Torpey	Title: Mng Dir Res Plnning&Op Anlysis

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Question No. 1-30:

Refer to SWEPCO Exhibit JOA-2. Please list the rate classes included in the residential, commercial and industrial customer classes shown on that exhibit.

Response No. 1-30:

SWEPCO Exhibit JOA-2 is a revenue class view without specific rate class identification.

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Question No. 1-31:

Please provide a working computer file copy similar to SWEPCO Exhibit JOA-1 for the FERC wholesale jurisdiction of SWEPCO and PSO. Provide this information on a total FERC jurisdiction basis and for the FERC wholesale customers in each state (i.e., Texas, Arkansas, Louisiana and Oklahoma).

Response No. 1-31:

The Company has not prepared the requested analysis. The bottom of the "P50 RR Base" worksheet within the "Torpey Errata Benefits Model Final" file provided in TIEC_1_19_Supplemental_Attachment_1 contains an estimate of the cost of service impacts for SWEPCO's wholesale customers in total.

PSO's one wholesale customer, representing 0.1% of the Company's load, has a stated rate contract. The addition of these resources will not impact their rate absent a filing at FERC to update the stated rate.

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Question No. 1-32:

Please provide all documents relating to the Company's analysis or consideration of a dedicated transmission line that connects one or more of the Selected Wind Facilities to a load center (Gen-Tie). Without limiting the generality of the foregoing, please provide information related to the estimated cost, routing plan or options, project timeline, voltage level, and length of the transmission line.

Response No. 1-32:

Please see ETEC_NTEC 1-32 Attachment 1(provided electronically on the PUC Interchange), which is the workpaper of Company witness Ali. This workpaper was provided at the time of the filing and is available on the PUCT interchange in this docket as Item #11. The Company's estimate is based on a 345 kV line.

The Company does not have a detailed project timeline nor routing plans or options as it is not known if or when a Gen-Tie may be needed.

Prepared By: Anita A. Sharma Title: Engineer Staff

Sponsored By: Kamran Ali Title: Mng Dir Trans Planning