

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Application of NEVADA POWER COMPANY d/b/a NV Energy and SIERRA PACIFIC POWER COMPANY d/b/a NV Energy, seeking approval of the Third Amendment to the 2018 Joint Integrated Resource Plan, including a request for approval of three new renewable energy power purchase agreements, and updates to the Transmission Action Plan including several new projects needed to allow the new renewable facilities to interconnect into the system, and to meet distribution load growth.

Docket No. 19-06____

VOLUME 5 OF 5

TECHNICAL APPENDIX

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REN-7

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REN-8

TECHNICAL APPENDIX REN-8

Final Due Diligence and Selection Reports (Fall 2018 RE RFP):

- Summary of Analysis on Short-Listed Proposals in Fall 2018 RE RFP Memorandum
- Due Diligence Summary of Short-Listed Proposals
- Burns & McDonnell Final Due Diligence Memorandums

CONFIDENTIAL



MEMORANDUM

Date: May 21, 2019

SUBJECT: Summary Analysis of Shortlisted Proposals in Fall 2018 RE RFP

BACKGROUND

Sierra and Nevada Power issued the fall 2018 renewable energy request for proposals (“Fall 2018 RE RFP” or “RFP”) on October 16, 2018, with the intent of NV Energy securing proposals for the acquisition of long-term dispatchable renewable energy resources ranging from 20 megawatts (“MW”) up to approximately 350 MW in size¹, together with all associated environmental and renewable energy attributes. The timing of the RFP was driven by the expectation of an increasing renewable portfolio standard (“RPS”) and the decrease in investment tax credit (“ITC”) in 2020. The RFP was renewable technology agnostic and included a request for optional battery energy storage systems (“Battery Storage”).

Proposals were due December 17, 2018. The Companies received 145 conforming bids from 18 counterparties, covering 31 project sites, totaling 5,563 MW of nameplate renewable energy resource capacity and 2,880 MW of supplemental battery energy storage. Of the 31 project sites, 23 were for solar photovoltaic technology, one for concentrating solar power, three for new Battery Storage at existing NV Energy contracted renewable energy projects, three for geothermal and one for bio-power technologies. There were no wind projects submitted into the RFP. Nineteen of the projects involving solar photovoltaic technology included options for associated Battery Storage systems.

Each of the conforming proposals was initially subject to price, non-price and economic benefit analyses to identify a shortlist of proposals for each resource/product type: a) geothermal - 15 and 25 year term; b) biomass - 25 year term; c) solar - 15 and 25 year term, and Build Transfer Agreement (“BTA”); d) solar with storage - 15 and 25 year term, and BTA; and e) Battery Storage only - 15 and 20 year term, which were then subjected to further due diligence

¹ Actual size was dependent on resource type (i.e. solar, wind, geothermal, etc.).

review by subject matter experts. Of the 47 initially shortlisted bids, NV Energy selected fifteen (15) of the top ranking bids, from seven (7) counterparties, following final due diligence, to undergo further economic and qualitative analysis, including production cost simulation modeling using PROMOD. This screening resulted in the selection of three (3) projects for final shortlisting. In addition to the production cost analysis of the shortlisted proposals, the Company completed a more detailed diligence review of the non-price considerations of the shortlisted proposals. This final non-price analysis was qualitative and intended to ensure that the requirements of NRS 704.7316 were fully considered; specifically: (a) the greatest economic benefit to the State of Nevada; (b) the greatest opportunity for the creation of new jobs in the State of Nevada; and (c) the best value to customers of the electric utility. By more fully evaluating the viability of the shortlisted proposals, NV Energy enhances the likelihood that the projects ultimately selected will be developed and placed in operation on schedule. Minimizing the risk of project delays or default offers a greater likelihood of realizing the economic, employment and customer value benefits sought by the legislature in NRS 704.7316.

In completing this further due diligence review of the initial shortlisted proposals, the Company focused on the areas of inquiry most critical in evaluating whether a project was viable, would perform as represented, and could be completed on schedule. The Company identified the following thirteen (13) categories for this due diligence review:

1. Status & timing of interconnection
2. Site control
3. Status of material permits
4. Solar panel information
5. Information on other material equipment (e.g., trackers, inverters, transformers)
6. Generation profile
7. Milestone schedule
8. Material exceptions to pro-formas
9. Experience in development and operation of utility-scale projects
10. Financial strength
11. Safety
12. Construction/Permanent Water Supply
13. Work Site Agreement

This due diligence review was qualitative in nature. The intent of the review was to identify any material concerns that could warrant the Company to recommend selection of a shortlisted proposal that did not necessarily result in the lowest levelized cost of energy (“LCOE”) or present worth of revenue requirement (“PWRR”). A summary of the findings is contained in the attached “Summary of Analysis on Shortlisted Proposals” table.

CONCLUSION

The documents identified below and attached with this memorandum summarize the findings relied upon by NV Energy in determining the final shortlist for the Fall 2018 RE RFP:

1. Due Diligence Summary of Shortlisted Proposals table providing a summary of the Company’s due diligence findings.
2. Burns & McDonnell Final Due Diligence Memoranda.

NV Energy concluded that three of the projects are viable and had no fatal flaws. Of the remaining three projects, there were no material findings in the final qualitative due diligence review that would warrant the Company not pursuing them as representing the best balance of low cost, project viability and value to customers. As a result of these findings, the Company executed three Power Purchase Agreements (“PPA”). Those projects include:

1. 8minutenergy’s Southern Bighorn Solar; 300 megawatt PV with 135 megawatts of storage
2. EDF Renewable’s Moapa Solar; 200 megawatt PV with 75 megawatts of storage
3. Arevia Power’s Gemini Solar; 690 megawatt PV with 380 megawatts of storage

**REMAINDER OF DOCUMENT
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REN-9

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TRAN-1

**SECOND AMENDED AND RESTATED
STANDARD LARGE GENERATOR
INTERCONNECTION AGREEMENT (LGIA)**

SERVICE AGREEMENT # 12-00082

Between

**NEVADA POWER COMPANY d/b/a
NV ENERGY**

And

ARROW CANYON SOLAR, LLC

Date: 12/7/2018

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STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT

THIS STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT (“Agreement”) is made and entered into this 7 day of December, 2018 by and between Arrow Canyon Solar, LLC, a limited liability company organized and existing under the laws of the State/Commonwealth of Delaware (“Interconnection Customer” with a Large Generating Facility), and Nevada Power Company d/b/a NV Energy, a company organized and existing under the laws of the State/Commonwealth of the State of Nevada (“Transmission Provider and/or Transmission Owner”). Interconnection Customer and Transmission Provider each may be referred to as a “Party” or collectively as the “Parties.”

Recitals

WHEREAS, Transmission Provider operates the Transmission System; and

WHEREAS, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this Agreement; and,

WHEREAS, Interconnection Customer and Transmission Provider have agreed to enter into this Agreement for the purpose of interconnecting the Large Generating Facility with the Transmission System;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Standard Large Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

Article 1. Definitions

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

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

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

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

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

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

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

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

Application Process shall mean the activities required prior to the Interconnection Customer entering the Interconnection Queue, a further set forth in Section 3 of the Large Generator Interconnection Procedures.

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

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

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

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

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

Clustering shall mean the process whereby a group of Completed Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.

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

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

Completed Interconnection Request shall mean an Interconnection Customer's request following the completion of the Application Process, to interconnect a new Generating Facility, increasing the capacity of, or making a Material Modification to the operating characteristics of an existing Generating Facility.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Generating Facility shall mean Interconnection Customer's device for the production of electricity identified in the Completed Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

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

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

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

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

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

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

Interconnection Customer shall mean any entity, including the Transmission Provider, Transmission Owner or any of the Affiliates or subsidiaries of either, that proposes to interconnect its Generating Facility with the Transmission Provider’s Transmission System.

Interconnection Customer’s Interconnection Facilities shall mean all facilities and equipment, as identified in Appendix A of the Standard Large Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Customer’s Interconnection Facilities are sole use facilities.

Interconnection Facilities shall mean the Transmission Provider’s Interconnection Facilities and the Interconnection Customer’s Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Facilities Study shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider’s Interconnection Facilities and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider’s Transmission System. The scope of the study is defined in Section 8 of the Standard Large Generator Interconnection Procedures.

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

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

Interconnection Study shall mean any of the following studies: the Interconnection System Impact Study and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

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

Interconnection System Impact Study Agreement shall mean the form of agreement contained in Appendix 2 of the Standard Large Generator Interconnection Procedures for conducting the Interconnection System Impact Study.

IRS shall mean the Internal Revenue Service.

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

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

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

Material Modification shall mean those modifications that have a material impact on the: (1) cost or timing of any Application Request with a later Application Number or (2) cost or timing of any Completed Interconnection Request with a later queue priority date.

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

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

Network Resource shall mean any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

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

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

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

Optional Interconnection Study shall mean a sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

Optional Interconnection Study Agreement shall mean the form of agreement contained in Appendix 5 of the Standard Large Generator Interconnection Procedures for conducting the Optional Interconnection Study.

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

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

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

Queue Position shall mean the order of a valid Completed Interconnection Request, relative to all other pending valid Completed Interconnection Requests, that is established based upon successful completion of the Application Process, as determined by the Transmission Provider.

Reasonable Efforts shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Large Generator Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

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

Shared Network Upgrades shall mean a Network Upgrade listed in Appendix A of the Generator Interconnection Agreement that is needed for the interconnection of multiple Interconnection Customers' Generating Facilities where such Interconnection Customers share the cost.

Site Control shall mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility; (2) an option to purchase or acquire a leasehold site for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site for such purpose.

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

Stand Alone Network Upgrades shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement.

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

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

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

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

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

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

Transmission Provider's Interconnection Facilities shall mean all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

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

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

Variable Energy Resource shall mean a device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

Article 2. Effective Date, Term, and Termination

2.1 Effective Date.

This LGIA shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. Transmission Provider shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

2.2 Term of Agreement.

Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ten (10) years from the Effective Date (Term to be specified in individual agreements) and shall be automatically renewed for each successive one-year period thereafter.

2.3 Termination Procedures.

2.3.1 Written Notice.

This LGIA may be terminated by Interconnection Customer after giving Transmission Provider ninety (90) Calendar Days advance written notice, or by Transmission Provider notifying FERC after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Default.

Either Party may terminate this LGIA in accordance with Article 17.

2.3.3 Notwithstanding Articles 2.3.1 and 2.3.2, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA, which notice has been accepted for filing by FERC.

2.4 Termination Costs.

If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party, as of the date of the other Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this LGIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this LGIA, unless otherwise ordered or approved by FERC:

2.4.1 With respect to any portion of Transmission Provider's Interconnection Facilities that have not yet been constructed or installed, Transmission Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Transmission Provider for any or all such costs of materials or equipment not taken by Interconnection Customer, Transmission Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Transmission Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this LGIA, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any

Network Upgrades for which Transmission Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

2.4.2 Transmission Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Transmission Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

2.4.3 With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

2.5 Disconnection.

Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

2.6 Survival.

This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

Article 3. Regulatory Filings

3.1 Filing.

Transmission Provider shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority, if required. Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If Interconnection Customer has executed this LGIA, or any amendment thereto, Interconnection Customer shall reasonably cooperate with Transmission Provider with respect to such filing and to provide any information reasonably requested by Transmission Provider needed to comply with applicable regulatory requirements.

Article 4. Scope of Service

4.1 Interconnection Product Options.

Interconnection Customer has selected the following (checked) type of Interconnection Service:

4.1.1 Energy Resource Interconnection Service

4.1.1.1 The Product. Energy Resource Interconnection Service allows Interconnection Customer to connect the Large Generating Facility to the Transmission System and be eligible to deliver the Large Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. To the extent Interconnection Customer wants to receive Energy Resource Interconnection Service, Transmission Provider shall construct facilities identified in Appendix A to this LGIA.

4.1.1.2 Transmission Delivery Service Implications. Under Energy Resource Interconnection Service, Interconnection Customer will be eligible to inject power from the Large Generating Facility into and deliver power across the interconnecting Transmission Provider's Transmission System on an "as available" basis up to the amount of MWs identified in the applicable stability and steady state studies to the extent the upgrades initially required to qualify for Energy Resource Interconnection Service have been constructed. Where eligible to do so (e.g., PJM, ISO-NE, NYISO), Interconnection Customer may place a bid to sell into the market up to the maximum identified Large Generating Facility output, subject to any conditions specified in the interconnection service approval, and the Large Generating Facility will be dispatched to the extent Interconnection Customer's bid clears. In all other instances, no transmission delivery service from the Large Generating Facility is assured, but Interconnection Customer may obtain Point-to-Point Transmission Service, Network Integration Transmission Service, or be used for secondary network transmission service, pursuant to Transmission Provider's Tariff, up to the maximum output identified in the stability and steady state studies. In those instances, in order for Interconnection Customer to obtain the right to deliver or inject energy beyond the Large Generating Facility Point of Interconnection or to improve its ability to do so, transmission delivery service must be obtained pursuant to the provisions of Transmission Provider's Tariff. The Interconnection Customer's ability to inject its Large Generating Facility output beyond the Point of Interconnection, therefore, will depend on the existing capacity of Transmission Provider's Transmission System at such time as a transmission service request is made that would accommodate such delivery. The provision of firm Point-to-Point Transmission Service or Network Integration Transmission Service may require the construction of additional Network Upgrades.

✓ **4.1.2 Network Resource Interconnection Service.**

4.1.2.1 The Product. Transmission Provider must conduct the necessary studies and construct the Network Upgrades needed to integrate the Large Generating Facility (1) in a manner comparable to that in which

Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an ISO or RTO with market based congestion management, in the same manner as all Network Resources. To the extent Interconnection Customer wants to receive Network Resource Interconnection Service, Transmission Provider shall construct the facilities identified in Appendix A to this LGIA.

4.1.2.2 Transmission Delivery Service Implications. Network Resource Interconnection Service allows Interconnection Customer's Large Generating Facility to be designated by any Network Customer under the Tariff on Transmission Provider's Transmission System as a Network Resource, up to the Large Generating Facility's full output, on the same basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur. Although Network Resource Interconnection Service does not convey a reservation of transmission service, any Network Customer under the Tariff can utilize its network service under the Tariff to obtain delivery of energy from the interconnected Interconnection Customer's Large Generating Facility in the same manner as it accesses Network Resources. A Large Generating Facility receiving Network Resource Interconnection Service may also be used to provide Ancillary Services after technical studies and/or periodic analyses are performed with respect to the Large Generating Facility's ability to provide any applicable Ancillary Services, provided that such studies and analyses have been or would be required in connection with the provision of such Ancillary Services by any existing Network Resource. However, if an Interconnection Customer's Large Generating Facility has not been designated as a Network Resource by any load, it cannot be required to provide Ancillary Services except to the extent such requirements extend to all generating facilities that are similarly situated. The provision of Network Integration Transmission Service or firm Point-to-Point Transmission Service may require additional studies and the construction of additional upgrades. Because such studies and upgrades would be associated with a request for delivery service under the Tariff, cost responsibility for the studies and upgrades would be in accordance with FERC's policy for pricing transmission delivery services.

Network Resource Interconnection Service does not necessarily provide Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on Transmission Provider's Transmission System without incurring congestion costs. In the event of transmission constraints on Transmission Provider's Transmission System, Interconnection Customer's Large Generating Facility shall be subject to the

applicable congestion management procedures in Transmission Provider's Transmission System in the same manner as Network Resources.

There is no requirement either at the time of study or interconnection, or at any point in the future, that Interconnection Customer's Large Generating Facility be designated as a Network Resource by a Network Service Customer under the Tariff or that Interconnection Customer identify a specific buyer (or sink). To the extent a Network Customer does designate the Large Generating Facility as a Network Resource, it must do so pursuant to Transmission Provider's Tariff.

Once an Interconnection Customer satisfies the requirements for obtaining Network Resource Interconnection Service, any future transmission service request for delivery from the Large Generating Facility within Transmission Provider's Transmission System of any amount of capacity and/or energy, up to the amount initially studied, will not require that any additional studies be performed or that any further upgrades associated with such Large Generating Facility be undertaken, regardless of whether or not such Large Generating Facility is ever designated by a Network Customer as a Network Resource and regardless of changes in ownership of the Large Generating Facility. However, the reduction or elimination of congestion or redispatch costs may require additional studies and the construction of additional upgrades.

To the extent Interconnection Customer enters into an arrangement for long term transmission service for deliveries from the Large Generating Facility outside Transmission Provider's Transmission System, such request may require additional studies and upgrades in order for Transmission Provider to grant such request.

4.1.3 Interim Interconnection Service.

4.1.3.1 The Product. As described in Article 4, provision of Interconnection Service under this LGIA requires the construction of the Network Upgrades identified in Appendix A. However, in order to make the most efficient use of the transmission system and available generation before the aforementioned Network Upgrades are constructed, the Transmission Provider will use Reasonable Efforts to grant Interconnection Service under this LGIA on an interim basis under the following circumstances and subject to the following conditions ("Interim Interconnection Service"). Interconnection Customer understands and acknowledges that it has no right to Interim Interconnection Service and that any Interim Interconnection Service granted in this section is limited pursuant to the terms of this section.

4.1.3.2 Process for Requesting Interim Interconnection Service. No later than 180 Calendar days of Interconnection Customer's anticipated testing date for the generating facility that is the subject of this LGIA, where the aforementioned Network Upgrades are not expected to have been completed by that time, Interconnection Customer may submit a written request to the Transmission Provider for Interim Interconnection Service. The Interconnection Customer must be in good standing under this LGIA to request Interim Interconnection Service.

4.1.3.3 Transmission Provider's Evaluation of Request for Interim Interconnection Service. After a valid request for Interim Interconnection Service has been received, the Interconnection Customer will be provided a study agreement obligating the Interconnection Customer to pay the costs of the Interim Interconnection Service System Impact Study. The Interim Interconnection System Impact Study to be conducted by Transmission Provider has the same scope as the current LGIP System Impact Study. The Interim Interconnection System Impact Study will model only those projects that are planned to be in service on the effective date of the requested Interim Interconnection Service and any use of Interim Interconnection Service by a higher-queued interconnection customer. Once completed, the study will identify if the Interim Interconnection Service can be provided to the Interconnection Customer with the transmission system as currently configured. No additional facilities will be constructed to accommodate Interim Interconnection Service. Once the Transmission Provider determines that Interim Interconnection Service can be accommodated for all or part of the Interconnection Customer's anticipated output, the Interconnection Customer will then be limited to the output level contained in the Transmission Provider's response to the request for Interim Interconnection Service.

Regardless of when Interim Interconnection Service is requested, the Transmission Provider will have 60 days to conduct the Interim Interconnection Service System Impact Study. No formal report will be produced, but the Transmission Provider will provide a written response detailing whether, and to what extent, Interim Interconnection Service can be provided under this LGIA. The Interim Interconnection Service is governed by this LGIA.

4.1.3.4 Competing Requests for Interim Interconnection Service. To the extent Transmission Provider receives multiple requests for Interim Interconnection Service from Interconnection Customer and other interconnection customers that cannot be simultaneously accommodated, available Interim Interconnection Service will be given to the interconnection customer with the higher generation

interconnection queue position, even if the competing requests come from projects that were studied in the same cluster.

- 4.1.3.5 No Transmission Service.** The Transmission Providers' provision of Interim Interconnection Service under this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.

4.2 Provision of Service.

Transmission Provider shall provide Interconnection Service for the Large Generating Facility at the Point of Interconnection.

4.3 Performance Standards.

Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is a Transmission Provider or Transmission Owner, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

4.4 No Transmission Delivery Service.

The execution of this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.

4.5 Interconnection Customer Provided Services.

The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

Article 5. Interconnection Facilities Engineering, Procurement, and Construction

5.1 Options.

Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Alternate Option set forth below for completion of Transmission Provider's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities and Network Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

✓ **5.1.1 Standard Option.**

Transmission Provider shall design, procure, and construct Transmission Provider's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Provider's Interconnection Facilities and

Network Upgrades by the dates set forth in Appendix B, Milestones. Transmission Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Transmission Provider reasonably expects that it will not be able to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the specified dates, Transmission Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

5.1.2 Alternate Option.

If the dates designated by Interconnection Customer are acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities by the designated dates.

If Transmission Provider subsequently fails to complete Transmission Provider's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; Transmission Provider shall pay Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by Interconnection Customer shall be extended day for day for each day that the applicable RTO or ISO refuses to grant clearances to install equipment.

5.1.3 Option to Build.

If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.2. Transmission Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option.

5.1.4 Negotiated Option.

If Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, Interconnection Customer shall so notify Transmission

Provider within thirty (30) Calendar Days, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades by Interconnection Customer) pursuant to which Transmission Provider is responsible for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, Transmission Provider shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades pursuant to 5.1.1, Standard Option.

5.2 General Conditions Applicable to Option to Build.

If Interconnection Customer assumes responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades,

- (1) Interconnection Customer shall engineer, procure equipment, and construct Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Transmission Provider;
- (2) Interconnection Customer's engineering, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law and Applicable Reliability Standards to which Transmission Provider would be subject in the engineering, procurement or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (3) Transmission Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) Prior to commencement of construction, Interconnection Customer shall provide to Transmission Provider a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from Transmission Provider;
- (5) At any time during construction, Transmission Provider shall have the right to gain unrestricted access to Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;
- (6) At any time during construction, should any phase of the engineering, equipment procurement, or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Transmission Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;

- (7) Interconnection Customer shall indemnify Transmission Provider for claims arising from Interconnection Customer's construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;
- (8) Interconnection Customer shall transfer control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;
- (9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Transmission Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Transmission Provider;
- (10) Transmission Provider shall approve and accept for operation and maintenance Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and
- (11) Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information, and any other documents that are reasonably required by Transmission Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Transmission Provider.

5.3 Liquidated Damages.

The actual damages to Interconnection Customer, in the event Transmission Provider's Interconnection Facilities or Network Upgrades are not completed by the dates designated by Interconnection Customer and accepted by Transmission Provider pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by Transmission Provider to Interconnection Customer in the event that Transmission Provider does not complete any portion of Transmission Provider's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to $\frac{1}{2}$ of 1 percent per day of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades, in the aggregate, for which Transmission Provider has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades for which Transmission Provider has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Transmission Provider to Interconnection Customer as just compensation for the damages caused to Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Transmission Provider's failure to meet its schedule.

No liquidated damages shall be paid to Interconnection Customer if: (1) Interconnection Customer is not ready to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for the Large Generating Facility's Trial Operation or to export power from the Large Generating Facility on the specified dates, unless Interconnection Customer would have been able to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for Large Generating Facility's Trial Operation or to export power from the Large Generating Facility, but for Transmission Provider's delay; (2) Transmission Provider's failure to meet the specified dates is the result of the action or inaction of Interconnection Customer or any other Interconnection Customer who has entered into an LGIA with Transmission Provider or any cause beyond Transmission Provider's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

5.4 Power System Stabilizers.

The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council. Transmission Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators.

5.5 Equipment Procurement.

If responsibility for construction of Transmission Provider's Interconnection Facilities or Network Upgrades is to be borne by Transmission Provider, then Transmission Provider shall commence design of Transmission Provider's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

- 5.5.1** Transmission Provider has completed the Facilities Study pursuant to the Facilities Study Agreement;
- 5.5.2** Transmission Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.5.3** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

5.6 Construction Commencement.

Transmission Provider shall commence construction of Transmission Provider's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

- 5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;
- 5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Transmission Provider's Interconnection Facilities and Network Upgrades;
- 5.6.3** Transmission Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.6.4** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

5.7 Work Progress.

The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Transmission Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Transmission Provider of such later date upon which the completion of Transmission Provider's Interconnection Facilities will be required.

5.8 Information Exchange.

As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Transmission Provider's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

5.9 Limited Operation.

If any of Transmission Provider's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Large Generating Facility, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Large Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Provider's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. Transmission Provider shall permit Interconnection Customer to operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

5.10 Interconnection Customer's Interconnection Facilities ("ICIF").

Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

5.10.1 Interconnection Customer's Interconnection Facility Specifications.

Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Provider at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. Transmission Provider shall review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider and comment on such specifications within thirty (30) Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

5.10.2 Transmission Provider's Review.

Transmission Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Transmission Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider.

5.10.3 ICIF Construction.

The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Large Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Large Generating Facility. The Interconnection Customer shall provide Transmission Provider specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

5.11 Transmission Provider's Interconnection Facilities Construction.

Transmission Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Transmission Provider shall deliver to Interconnection Customer the following "as-built" drawings, information and documents for Transmission Provider's Interconnection Facilities include appropriate drawings and

relay diagrams. Transmission Provider will obtain control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities.

5.12 Access Rights.

Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

5.13 Lands of Other Property Owners.

If any part of Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Transmission Provider or Transmission Owner, Transmission Provider or Transmission Owner shall at Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades upon such property.

5.14 Permits.

Transmission Provider or Transmission Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, Transmission Provider or Transmission Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Transmission Provider's own, or an Affiliate's generation.

5.15 Early Construction of Base Case Facilities.

Interconnection Customer may request Transmission Provider to construct, and Transmission Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but

where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

5.16 Suspension.

Interconnection Customer reserves the right, upon written notice to Transmission Provider, to suspend at any time all work by Transmission Provider associated with the construction and installation of Transmission Provider's Interconnection Facilities and/or Network Upgrades required under this LGIA with the condition that Transmission System shall be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Provider's safety and reliability criteria. In such event, Interconnection Customer shall be responsible for all reasonable and necessary costs which Transmission Provider (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Transmission System during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which Transmission Provider cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Provider shall obtain Interconnection Customer's authorization to do so. Transmission Provider shall invoice Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work by Transmission Provider required under this LGIA pursuant to this Article 5.16, and has not requested Transmission Provider to recommence the work required under this LGIA on or before the expiration of three (3) years following commencement of such suspension, this LGIA shall be deemed terminated. The three-year period shall begin on the date the suspension is requested, or the date of the written notice to Transmission Provider, if no effective date is specified.

5.17 Taxes.

5.17.1 Interconnection Customer Payments Not Taxable.

The Parties intend that all payments or property transfers made by Interconnection Customer to Transmission Provider for the installation of Transmission Provider's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as an advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

5.17.2 Representations and Covenants.

In accordance with IRS Notice 2001-82 and IRS Notice 88-129, Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the Transmission System, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to Transmission Provider for Transmission Provider's Interconnection Facilities will be capitalized by Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years,

and (iii) any portion of Transmission Provider's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At Transmission Provider's request, Interconnection Customer shall provide Transmission Provider with a report from an independent engineer confirming its representation in clause (iii), above. Transmission Provider represents and covenants that the cost of Transmission Provider's Interconnection Facilities paid for by Interconnection Customer will have no net effect on the base upon which rates are determined.

5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider.

Notwithstanding Article 5.17.1, Interconnection Customer shall protect, indemnify and hold harmless Transmission Provider from the cost consequences of any current tax liability imposed against Transmission Provider as the result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Transmission Provider.

Transmission Provider shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges Interconnection Customer under this LGIA unless (i) Transmission Provider has determined, in good faith, that the payments or property transfers made by Interconnection Customer to Transmission Provider should be reported as income subject to taxation or (ii) any Governmental Authority directs Transmission Provider to report payments or property as income subject to taxation; provided, however, that Transmission Provider may require Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Transmission Provider (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. Interconnection Customer shall reimburse Transmission Provider for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from Transmission Provider of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by Transmission Provider upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

5.17.4 Tax Gross-Up Amount.

Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that Interconnection Customer will pay Transmission Provider, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on Transmission Provider ("Current Taxes") on the excess of (a) the gross income realized by Transmission Provider as a result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit Transmission Provider to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on Transmission Provider's composite federal and state tax rates at the time the payments or property transfers are received and Transmission Provider will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting Transmission Provider's anticipated tax depreciation deductions as a result of such payments or property transfers by Transmission Provider's current weighted average cost of capital. Thus, the formula for calculating Interconnection Customer's liability to Transmission Owner pursuant to this Article 5.17.4 can be expressed as follows: $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$. Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

5.17.5 Private Letter Ruling or Change or Clarification of Law.

At Interconnection Customer's request and expense, Transmission Provider shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Interconnection Customer to Transmission Provider under this LGIA are subject to federal income taxation. Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Interconnection Customer's knowledge. Transmission Provider and Interconnection Customer shall cooperate in good faith with respect to the submission of such request.

Transmission Provider shall keep Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes Interconnection Customer to participate in all discussions

with the IRS regarding such request for a private letter ruling. Transmission Provider shall allow Interconnection Customer to attend all meetings with IRS officials about the request and shall permit Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

5.17.6 Subsequent Taxable Events.

If, within 10 years from the date on which the relevant Transmission Provider's Interconnection Facilities are placed in service, (i) Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and Transmission Provider retains ownership of the Interconnection Facilities and Network Upgrades, Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on Transmission Provider, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

5.17.7 Contests.

In the event any Governmental Authority determines that Transmission Provider's receipt of payments or property constitutes income that is subject to taxation, Transmission Provider shall notify Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by Interconnection Customer and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon Interconnection Customer's written request and sole expense, Transmission Provider may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. Transmission Provider reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but Transmission Provider shall keep Interconnection Customer informed, shall consider in good faith suggestions from Interconnection Customer about the conduct of the contest, and shall reasonably permit Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Transmission Provider may agree to a settlement either with Interconnection Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Transmission Provider, but reasonably acceptable to Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from

nationally-recognized tax counsel selected under the terms of the preceding sentence. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without Interconnection Customer's consent or such written advice will relieve Interconnection Customer from any obligation to indemnify Transmission Provider for the tax at issue in the contest.

5.17.8 Refund.

In the event that (a) a private letter ruling is issued to Transmission Provider which holds that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to Transmission Provider in good faith that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not taxable to Transmission Provider, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by Interconnection Customer to Transmission Provider are not subject to federal income tax, or (d) if Transmission Provider receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by Interconnection Customer to Transmission Provider pursuant to this LGIA, Transmission Provider shall promptly refund to Interconnection Customer the following:

- (i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,
- (ii) interest on any amounts paid by Interconnection Customer to Transmission Provider for such taxes which Transmission Provider did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 CFR §35.19a(a)(2)(iii) from the date payment was made by Interconnection Customer to the date Transmission Provider refunds such payment to Interconnection Customer, and
- (iii) with respect to any such taxes paid by Transmission Provider, any refund or credit Transmission Provider receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to Transmission Provider for such overpayment of taxes (including any reduction in interest otherwise payable by Transmission Provider to any Governmental Authority resulting from an offset or credit); provided, however, that Transmission Provider will remit such amount promptly to Interconnection Customer only after and to the extent that Transmission Provider has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Transmission Provider's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

5.17.9 Taxes Other Than Income Taxes.

Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Transmission Provider for which Interconnection Customer may be required to reimburse Transmission Provider under the terms of this LGIA. Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and Transmission Provider shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to Transmission Provider for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Transmission Provider.

5.17.10 Transmission Owners Who Are Not Transmission Providers.

If Transmission Provider is not the same entity as the Transmission Owner, then (i) all references in this Article 5.17 to Transmission Provider shall be deemed also to refer to and to include the Transmission Owner, as appropriate, and (ii) this LGIA shall not become effective until such Transmission Owner shall have agreed in writing to assume all of the duties and obligations of Transmission Provider under this Article 5.17 of this LGIA.

5.18 Tax Status.

Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this LGIA is intended to adversely affect any Transmission Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

5.19 Modification.

5.19.1 General.

Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include

information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Large Generating Facility modifications that do not require Interconnection Customer to submit a Completed Interconnection Request, Transmission Provider shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Transmission System, Transmission Provider's Interconnection Facilities or Network Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof.

5.19.2 Standards.

Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA, Applicable Reliability Standards and Good Utility Practice.

5.19.3 Modification Costs.

Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Provider makes to Transmission Provider's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Provider's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

Article 6. Testing and Inspection

6.1 Pre-Commercial Operation Date Testing and Modifications.

Prior to the Commercial Operation Date, Transmission Provider shall test Transmission Provider's Interconnection Facilities and Network Upgrades and Interconnection Customer shall test the Large Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

6.2 Post-Commercial Operation Date Testing and Modifications.

Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

6.3 Right to Observe Testing.

Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right, at its own expense, to observe such testing.

6.4 Right to Inspect.

Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

Article 7. Metering**7.1 General.**

Each Party shall comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Provider shall install Metering Equipment at the Point of Interconnection prior to any operation of the Large Generating Facility and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at Transmission Provider's option, compensated to, the Point of Interconnection. Transmission Provider shall provide metering quantities, in analog and/or digital form, to Interconnection Customer upon request. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

7.2 Check Meters.

Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check Transmission Provider's meters. Such check meters shall be for check purposes

only and shall not be used for the measurement of power flows for purposes of this LGIA, except as provided in Article 7.4 below. The check meters shall be subject at all reasonable times to inspection and examination by Transmission Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.

7.3 Standards.

Transmission Provider shall install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.

7.4 Testing of Metering Equipment.

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

7.5 Metering Data.

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

Article 8. Communications

8.1 Interconnection Customer Obligations.

Interconnection Customer shall maintain satisfactory operating communications with Transmission Provider's Transmission System dispatcher or representative designated by Transmission Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone

system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Transmission Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by Transmission Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

8.2 Remote Terminal Unit.

Prior to the Initial Synchronization Date of the Large Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Transmission Provider at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Provider through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1. The communication protocol for the data circuit(s) shall be specified by Transmission Provider. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Provider.

Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

8.3 No Annexation.

Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

8.4 Provision of Data from a Variable Energy Resource

The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the Transmission Provider to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The Transmission Provider and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The

Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this LGIA, as they may change from time to time.

Article 9. Operations

9.1 General.

Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

9.2 Control Area Notification.

At least three months before Initial Synchronization Date, Interconnection Customer shall notify Transmission Provider in writing of the Control Area in which the Large Generating

Facility will be located. If Interconnection Customer elects to locate the Large Generating Facility in a Control Area other than the Control Area in which the Large Generating Facility is physically located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Control Area.

9.3 Transmission Provider Obligations.

Transmission Provider shall cause the Transmission System and Transmission Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. Transmission Provider may provide operating instructions to Interconnection Customer consistent with this LGIA and Transmission Provider's operating protocols and procedures as they may change from time to time. Transmission Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.

9.4 Interconnection Customer Obligations.

Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. Interconnection Customer shall operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA.

9.5 Start-Up and Synchronization.

Consistent with the Parties' mutually acceptable procedures, Interconnection Customer is responsible for the proper synchronization of the Large Generating Facility to Transmission Provider's Transmission System.

9.6 Reactive Power.**9.6.1 Power Factor Design Criteria.**

Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless Transmission Provider has established different requirements that apply to all generators in the Control Area on a comparable basis. The requirements of this paragraph shall not apply to wind generators.

9.6.2 Voltage Schedules.

Once Interconnection Customer has synchronized the Large Generating Facility with the Transmission System, Transmission Provider shall require Interconnection Customer to operate the Large Generating Facility to produce or absorb reactive power within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Provider's voltage schedules shall treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Provider shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Transmission System. Interconnection Customer shall operate the Large Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the System Operator.

9.6.2.1 Governors and Regulators. Whenever the Large 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 Large Generating Facility with its speed governors and voltage regulators in automatic operation. If the Large Generating Facility's speed governors and voltage regulators are not capable of such automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative, and ensure that such Large Generating Facility's reactive power production or absorption (measured in MVARs) are within the design capability of the Large Generating Facility's generating unit(s) and steady state stability limits. Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Control Area on a comparable basis.

9.6.3 Payment for Reactive Power.

Transmission Provider is required to pay Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Large Generating Facility when Transmission Provider requests Interconnection Customer to operate its Large Generating Facility outside the range specified in Article 9.6.1, provided that if Transmission Provider pays its own or affiliated generators for reactive power service within the specified range, it must also pay Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the Parties have otherwise agreed.

9.7 Outages and Interruptions.

9.7.1 Outages.

9.7.1.1 Outage Authority and Coordination. Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use

Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

9.7.1.2 Outage Schedules. Transmission Provider shall post scheduled outages of its transmission facilities on the OASIS. Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Transmission Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply shall not be a criterion in determining Transmission System reliability. Transmission Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Transmission Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities.

9.7.1.3 Outage Restoration. If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

9.7.2 Interruption of Service.

If required by Good Utility Practice to do so, Transmission Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

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

- 9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Transmission System;
- 9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, Transmission Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;
- 9.7.2.4** Except during the existence of an Emergency Condition, when the interruption or reduction can be scheduled without advance notice, Transmission Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Transmission Provider;
- 9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, and the Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

9.7.3 Under-Frequency and Over Frequency Conditions.

The Transmission System is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under-frequency system disturbance. Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Large Generating Facility as required by the Applicable Reliability Council to ensure “ride through” capability of the Transmission System. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term “ride through” as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

9.7.4 System Protection and Other Control Requirements.

- 9.7.4.1 System Protection Facilities.** Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or Interconnection Customer’s Interconnection Facilities.

Transmission Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Transmission Provider's Interconnection Facilities or the Transmission System as a result of the interconnection of the Large Generating Facility and Interconnection Customer's Interconnection Facilities.

- 9.7.4.2** Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Good Utility Practice.
- 9.7.4.3** Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.
- 9.7.4.4** Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.
- 9.7.4.5** Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice.
- 9.7.4.6** Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

9.7.5 Requirements for Protection.

In compliance with Good Utility Practice, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Transmission System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Large Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Large Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence

currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and Interconnection Customer's other equipment if conditions on the Transmission System could adversely affect the Large Generating Facility.

9.7.6 Power Quality.

Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard. In the event of a conflict between ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, ANSI Standard C84.1-1989, or the applicable superseding electric industry standard, shall control.

9.8 Switching and Tagging Rules.

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

9.9 Use of Interconnection Facilities by Third Parties.

9.9.1 Purpose of Interconnection Facilities.

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

9.9.2 Third Party Users.

If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Transmission Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

9.10 Disturbance Analysis Data Exchange.

The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or Transmission Provider's Transmission System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

Article 10. Maintenance**10.1 Transmission Provider Obligations.**

Transmission Provider shall maintain the Transmission System and Transmission Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

10.2 Interconnection Customer Obligations.

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

10.3 Coordination.

The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

10.4 Secondary Systems.

Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

10.5 Operating and Maintenance Expenses.

Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Provider's Interconnection Facilities.

Article 11. Performance Obligation

11.1 Interconnection Customer Interconnection Facilities.

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

11.2 Transmission Provider's Interconnection Facilities.

Transmission Provider or Transmission Owner shall design, procure, construct, install, own and/or control the Transmission Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.

11.3 Network Upgrades and Distribution Upgrades.

Transmission Provider or Transmission Owner shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless Transmission Provider or Transmission Owner elects to fund the capital for the Network Upgrades, they shall be solely funded by Interconnection Customer.

11.4 Transmission Credits.

11.4.1 Repayment of Amounts Advanced for Network Upgrades.

Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Transmission Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Transmission Provider's Tariff and Affected System's Tariff for transmission services with respect to the Large Generating Facility. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any person.

Notwithstanding the foregoing, Interconnection Customer, Transmission Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Transmission Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Transmission Provider or Affected System Operator will continue to provide payments to Interconnection Customer on a

dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond twenty (20) years from the Commercial Operation Date. If the Large Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, Transmission Provider and Affected System Operator shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

11.4.2 Special Provisions for Affected Systems.

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

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

11.5 Provision of Security.

At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of a Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, Interconnection Customer shall provide Transmission Provider, at Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to Transmission Provider for these purposes.

In addition:

- 11.5.1** The guarantee must be made by an entity that meets the creditworthiness requirements of Transmission Provider, and contain terms and conditions that guarantee payment of any amount that may be due from Interconnection Customer, up to an agreed-to maximum amount.
- 11.5.2** The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.
- 11.5.3** The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.6 Interconnection Customer Compensation.

If Transmission Provider requests or directs Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this LGIA, Transmission Provider shall compensate Interconnection Customer in accordance with Interconnection Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to an RTO or ISO FERC-approved rate schedule. Interconnection Customer shall serve Transmission Provider or RTO or ISO with any filing of a proposed rate schedule at the time of such filing with FERC. To the extent that no rate schedule is in effect at the time the Interconnection Customer is required to provide or absorb any Reactive Power under this LGIA, Transmission Provider agrees to compensate Interconnection Customer in such amount as would have been due Interconnection Customer had the rate schedule been in effect at the time service commenced; provided, however, that such rate schedule must be filed at FERC or other appropriate Governmental Authority within sixty (60) Calendar Days of the commencement of service.

11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.

Transmission Provider or RTO or ISO shall compensate Interconnection Customer for its provision of real and reactive power and other Emergency Condition services that Interconnection Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.6.

Article 12. Invoice

12.1 General.

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

12.2 Final Invoice.

Within six months after completion of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades, Transmission Provider shall provide an invoice of the final cost of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Transmission Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.

12.3 Payment.

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

12.4 Disputes.

In the event of a billing dispute between Transmission Provider and Interconnection Customer, Transmission Provider shall continue to provide Interconnection Service under this LGIA as long as Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Transmission Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with the methodology set forth in FERC's regulations at 18 CFR § 35.19a(a)(2)(iii).

Article 13. Emergencies**13.1 Definition.**

"Emergency Condition" shall mean a condition or situation: (i) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (ii) that, in the case of Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Transmission System, Transmission Provider's Interconnection Facilities or the Transmission Systems of others to which the Transmission System is directly connected; or (iii) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Large Generating Facility or Interconnection Customer's Interconnection Facilities' System restoration and black start shall be considered Emergency Conditions;

provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

13.2 Obligations.

Each Party shall comply with the Emergency Condition procedures of the applicable ISO/RTO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.

13.3 Notice.

Transmission Provider shall notify Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Provider's Interconnection Facilities or the Transmission System that may reasonably be expected to affect Interconnection Customer's operation of the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection Customer shall notify Transmission Provider promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Transmission System or Transmission Provider's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection Customer's or Transmission Provider's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice.

13.4 Immediate Action.

Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Transmission Provider, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or otherwise regarding the Transmission System.

13.5 Transmission Provider Authority.

13.5.1 General.

Transmission Provider may take whatever actions or inactions with regard to the Transmission System or Transmission Provider's Interconnection Facilities it deems necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Transmission System or Transmission Provider's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing Interconnection Customer to shut-down, start-up, increase or decrease the real or

reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing Interconnection Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and Interconnection Customer's Interconnection Facilities.

Interconnection Customer shall comply with all of Transmission Provider's operating instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

13.5.2 Reduction and Disconnection.

Transmission Provider may reduce Interconnection Service or disconnect the Large Generating Facility or Interconnection Customer's Interconnection Facilities, when such, reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of Transmission Provider pursuant to Transmission Provider's Tariff. When Transmission Provider can schedule the reduction or disconnection in advance, Transmission Provider shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer and Transmission Provider. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the Transmission System to their normal operating state as soon as practicable consistent with Good Utility Practice.

13.6 Interconnection Customer Authority.

Consistent with Good Utility Practice and the LGIA and the LGIP, Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Provider's Interconnection Facilities. Transmission Provider shall use Reasonable Efforts to assist Interconnection Customer in such actions.

13.7 Limited Liability.

Except as otherwise provided in Article 11.6.1 of this LGIA, neither Party shall be liable to the other for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

Article 14. Regulatory Requirements and Governing Law

14.1 Regulatory Requirements.

Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.

14.2 Governing Law.

14.2.1 The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

14.2.2 This LGIA is subject to all Applicable Laws and Regulations.

14.2.3 Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

Article 15. Notices.

15.1 General.

Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

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

15.2 Billings and Payments.

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

15.3 Alternative Forms of Notice.

Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.

15.4 Operations and Maintenance Notice.

Each Party shall notify the other Party in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

Article 16. Force Majeure**16.1 Force Majeure.**

16.1.1 Economic hardship is not considered a Force Majeure event.

16.1.2 Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

Article 17. Default**17.1 Default****17.1.1 General.**

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

17.1.2 Right to Terminate.

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

notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this LGIA, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this LGIA.

Article 18. Indemnity, Consequential Damages and Insurance

18.1 Indemnity.

The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this LGIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

18.1.1 Indemnified Person.

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

18.1.2 Indemnifying Party.

If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

18.1.3 Indemnity Procedures.

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

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right

to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or Indemnified Persons having such differing or additional legal defenses.

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

18.2 Consequential Damages.

Other than the Liquidated Damages heretofore described, in no event shall either Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

18.3 Insurance.

Each party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

18.3.1 Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.

18.3.2 Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of

One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

- 18.3.3** Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.
- 18.3.4** Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.
- 18.3.5** The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.
- 18.3.6** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.
- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this LGIA.

- 18.3.9** Within ten (10) days following execution of this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.
- 18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.
- 18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this LGIA.

Article 19. Assignment

19.1 Assignment.

This LGIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this LGIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that Interconnection Customer shall have the right to assign this LGIA, without the consent of Transmission Provider, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that Interconnection Customer will promptly notify Transmission Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Transmission Provider of the date and particulars of any such exercise of assignment right(s), including providing the Transmission Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

Article 20. Severability

20.1 Severability.

If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Transmission Provider) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of these provisions shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

Article 21. Comparability

21.1 Comparability.

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

Article 22. Confidentiality

22.1 Confidentiality.

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

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

Transmission Provider may perform study work using WECC data (power flow, stability, and disturbance monitoring data) for nonmembers provided that the WECC data are not provided to the nonmember. Under such arrangements the nonmembers are permitted to look at the data in the Transmission Provider's office to gain an understanding of the study results, but are not permitted to have the data or a copy of the data. Interconnection Customer must also sign the WECC Nonmember Confidentiality Agreement in accordance with regional Reliability Council policies.

22.1.1 Term.

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

22.1.2 Scope.

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of the LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA.

Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

22.1.3 Release of Confidential Information.

Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions.

Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

22.1.4 Rights.

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

22.1.5 No Warranties.

By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.

22.1.6 Standard of Care.

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this LGIA or its regulatory requirements.

22.1.7 Order of Disclosure.

If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

22.1.8 Termination of Agreement.

Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

22.1.9 Remedies.

The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are

necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

22.1.10 Disclosure to FERC, its Staff, or a State.

Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

22.1.11 Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this LGIA (“Confidential Information”) shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party’s Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

Article 23. Environmental Releases

23.1 Environmental Releases.

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

Article 24. Information Requirements

24.1 Information Acquisition.

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

24.2 Information Submission by Transmission Provider.

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

24.3 Updated Information Submission by Interconnection Customer.

The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. Interconnection Customer shall submit a completed copy of the Large Generating Facility data requirements contained in Appendix 1 to the LGIP. It shall also include any additional information provided to Transmission Provider for the Facilities Study. Information in this submission shall be the most current Large Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Transmission Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the Interconnection Study Agreement between Transmission Provider and Interconnection Customer, then Transmission

Provider will conduct appropriate studies to determine the impact on Transmission Provider Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

24.4 Information Supplementation.

Prior to the Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all “as-built” Large Generating Facility information or “as-tested” performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Large Generating Facility as required by Good Utility Practice such as an open circuit “step voltage” test on the Large Generating Facility to verify proper operation of the Large Generating Facility’s automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Large Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Large Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage. Interconnection Customer shall provide validated test recordings showing the responses of Large Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Large Generating Facility’s terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Large Generating Facility terminal or field voltages is provided. Large Generating Facility testing shall be conducted and results provided to Transmission Provider for each individual generating unit in a station.

Subsequent to the Operation Date, Interconnection Customer shall provide Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Provider-owned substation that may affect Interconnection Customer’s Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

Article 25. Information Access and Audit Rights

25.1 Information Access.

Each Party (the “disclosing Party”) shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA.

25.2 Reporting of Non-Force Majeure Events.

Each Party (the “notifying Party”) shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

25.3 Audit Rights.

Subject to the requirements of confidentiality under Article 22 of this LGIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party’s accounts and records pertaining to either Party’s performance or either Party’s satisfaction of obligations under this LGIA. Such audit rights shall include audits of the other Party’s costs, calculation of invoiced amounts, Transmission Provider’s efforts to allocate responsibility for the provision of reactive support to the Transmission System, Transmission Provider’s efforts to allocate responsibility for interruption or reduction of generation on the Transmission System, and each Party’s actions in an Emergency Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party’s performance and satisfaction of obligations under this LGIA. Each Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

25.4 Audit Rights Periods.**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.**

Accounts and records related to the design, engineering, procurement, and construction of Transmission Provider’s Interconnection Facilities and Network Upgrades shall be subject to audit for a period of twenty-four months following Transmission Provider’s issuance of a final invoice in accordance with Article 12.2.

25.4.2 Audit Rights Period for All Other Accounts and Records.

Accounts and records related to either Party’s performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party’s receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

25.5 Audit Results.

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

Article 26. Subcontractors

26.1 General.

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

26.2 Responsibility of Principal.

The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Transmission Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

26.3 No Limitation by Insurance.

The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

Article 27. Disputes

27.1 Submission.

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute").

Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

27.2 External Arbitration Procedures.

Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to

chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

27.3 Arbitration Decisions.

Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

27.4 Costs.

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

Article 28. Representations, Warranties, and Covenants

28.1 General.

Each Party makes the following representations, warranties and covenants:

28.1.1 Good Standing.

Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

28.1.2 Authority.

Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

28.1.3 No Conflict.

The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

28.1.4 Consent and Approval.

Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

Article 29. Joint Operating Committee**29.1 Joint Operating Committee.**

Except in the case of ISOs and RTOs, Transmission Provider shall constitute a Joint Operating Committee to coordinate operating and technical considerations of Interconnection Service. At least six (6) months prior to the expected Initial Synchronization Date, Interconnection Customer and Transmission Provider shall each appoint one representative and one alternate to the Joint Operating Committee. Each Interconnection Customer shall notify Transmission Provider of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee shall meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee shall hold a meeting at the request of either Party, at a time and place agreed upon by the representatives. The Joint Operating Committee shall perform all of its duties consistent with the provisions of this LGIA. Each Party shall cooperate in providing to the Joint Operating Committee all information required in the performance of the Joint Operating Committee's duties. All decisions and agreements, if any, made by the Joint Operating Committee, shall be evidenced in writing. The duties of the Joint Operating Committee shall include the following:

29.1.1 Establish data requirements and operating record requirements.

- 29.1.2** Review the requirements, standards, and procedures for data acquisition equipment, protective equipment, and any other equipment or software.
- 29.1.3** Annually review the one (1) year forecast of maintenance and planned outage schedules of Transmission Provider's and Interconnection Customer's facilities at the Point of Interconnection.
- 29.1.4** Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Large Generating Facility and other facilities that impact the normal operation of the interconnection of the Large Generating Facility to the Transmission System.
- 29.1.5** Ensure that information is being provided by each Party regarding equipment availability.
- 29.1.6** Perform such other duties as may be conferred upon it by mutual agreement of the Parties.

Article 30. Miscellaneous

30.1 Binding Effect.

This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

30.2 Conflicts.

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

30.3 Rules of Interpretation.

This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8)

relative to the determination of any period of time, “from” means “from and including”, “to” means “to but excluding” and “through” means “through and including”.

30.4 Entire Agreement.

This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party’s compliance with its obligations under this LGIA.

30.5 No Third Party Beneficiaries.

This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

30.6 Waiver.

The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer’s legal rights to obtain an interconnection from Transmission Provider. Any waiver of this LGIA shall, if requested, be provided in writing.

30.7 Headings.

The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

30.8 Multiple Counterparts.

This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

30.9 Amendment.

The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by the Parties.

30.10 Modification by the Parties.

The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

30.11 Reservation of Rights.

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

30.12 No Partnership.

This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

IN WITNESS WHEREOF, the Parties have executed this LGIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

Nevada Power Company d/b/a NV Energy

By: Shahzad Lateef
7CE3BF9CB7E64C6...

Title: Vice President, Transmission

Date: 12/7/2018

Arrow Canyon Solar, LLC

By: **EDE Renewables Development, Inc., its Manager**

By: Tristan Grimbirt
4E6EBC5812DF43A...

Title: President and CEO

Date: 12/4/2018 7:32:44 PM PST

LGIA Appendix A: Interconnection Facilities, Network Upgrades and Distribution Upgrades

Arrow Canyon Solar, LLC – Companies 79 and 119– Photovoltaic Solar Facilities

Type of Interconnection Service: Network Resource Interconnection Service

Generating Facility Capacity: 200 MW net at the Point of Interconnection

Total Generating Facility Nameplate Rating: 200 MVA from eighty (80) 2.5MVA Solar Inverters

Point of Interconnection:

The Point of Interconnection will be the point where the Interconnection Customer's owned 230 kV lead-line from the Arrow Canyon Solar Substation intersects the 2328/2329 terminal position at the Transmission Provider's 230 kV Harry Allen Substation. See Appendix C.

Point of Change of Ownership:

The Point of Change of Ownership will be the point where the Interconnection Customer's 230 kV transmission lead line terminates on the Transmission Provider-owned termination structure located adjacent to the Harry Allen 230 kV Substation land grant area. See Appendix C.

Nominal Delivery Voltage: 230 kV

Metering Voltage: 230 kV

1. Interconnection Facilities

(a) Interconnection Customer's Interconnection Facilities: -

1) Interconnection Customer Generation Facility Requirements, Facility to Include:

- a. Out of Step generator tripping protection;
- b. One (1) 230/34.5 kV 200 MVA generator step-up transformer (GSU), located at the Interconnection Customer's Substation; and
- c. One (1) 230 kV breaker at the Interconnection Customer's Substation, located on the high side of the main GSU transformer as indicated in Appendix C.

2) Interconnection Customer Generator Lead Line Requirements, Lead Line to Include:

- a. Approximately 7 miles of 1-795 Aluminum Conductor Steel Reinforced (ACSR) conductor from the Interconnection Customer's 230/34.5 kV Substation to the 230 kV termination structure. The termination structure's preliminary location is:
 - i. Latitude 36°26'9.85"N; Longitude, 114°53'59.26"W
- b. Overhead lead line to be designed with static wire(s) and adequate overvoltage protection from lightning surges;
- c. Lead-line and structures to be built in accordance with Good Utility Practices; and
- d. Fiber Optic Cable as described by the interconnection communications requirements.

3) Interconnection Customer Generating Facility Protection Requirements:

- a. Interconnection Customer will install generating facility protection and dual SEL-311L 230 kV line protection relays at the Interconnection Customer's Substation;
 - i. The 230 kV line protection relays in the protection package must be compatible with the Schweitzer Engineering Laboratories (SEL) relays that Transmission Provider will install at the Harry Allen 230 kV Substation;
- b. Line protection will be a communication aided scheme utilizing Interconnection Customer-installed two (2) independent digital high speed protection communication circuits between the Harry Allen 230 kV substation and the Interconnection Customer's Substation are required. The Interconnection Customer must submit the protection and communications plan to the Transmission Provider for review and concurrence prior to construction;
- c. Interconnection Customer to install generator out-of-step protection; and
- d. Interconnection Customer will provide the line protection scheme to the Transmission Provider for review, comment, and approval prior to construction.

4) Interconnection Customer's Communication Requirements:

- a. Interconnection Customer will install Fiber Optic Cable capable to provide at least two (2) communications circuits for high speed protection communications on the generator lead-line
 - i. The Fiber Optic communications path will facilitate communications between the Interconnection Customer protection relays at the Interconnection Customer's Substation and the Transmission Provider relays at the Harry Allen 230 kV Substation;
 - ii. The Interconnection Customer will install the Fiber Optic Cable from the Interconnection Customer's Substation to the Point of Change of Ownership Structure;
 - iii. Fiber communications must be coordinated with the Interconnection Customer owned protection relays; and

- iv. Interconnection Customer to provide infrastructure to deliver fiber into the control building.
- b. Interconnection Customer will provide and deliver a T-1 service along with any T-1 circuit isolation gear required by the local T-1 provider;
 - i. The T-1 line will originate at the Transmission Provider's telecommunications equipment location at the Interconnection Customer's facility and terminate at a place to be specified by the Transmission Provider;
 - ii. The dedicated T-1 leased telecommunications line must be provided by the customer for the Transmission Provider's Telephony, SCADA, Metering and Protection requirements and use;
- c. Interconnection Customer will provide a ring down phone and/or 24-hour contact for Transmission Provider Energy System Control Center (ESCC);
- d. Interconnection Customer will provide one dial up telephone line continuously capable of a 9600 baud rate minimum at any given time for the new 230 kV meter that will be located at the Interconnection Customer's Substation as indicated in Drawing 1 in Appendix C;
 - i. Note: If the metering telecommunication circuits are via copper circuits and connecting to Transmission Provider telecom equipment, then Ground Protection Rise isolation is required and is the responsibility of Interconnection Customer, per applicable industry standards.
- e. Interconnection Customer will provide a temperature-controlled space located in the control room at the Interconnection Customer's Generating Facility;
 - i. The Interconnection Customer shall provide a dedicated room in the Interconnection Customer's control building at the Generating Facility where the Transmission Provider will install up to two (2) 8-foot tall 26-inch wide racks or cabinets for the Transmission Provider's communications and protection equipment to be installed at the Interconnection Customer's plant. A minimum working space of three feet is required to be provided on front and back of these racks. Provisions for the following must be made:
 - a) Interconnection Customer will provide two (2) Direct Current (DC) load centers dedicated to Transmission Provider's communication equipment at a minimum of 20 Amperes each. The DC voltage will be identified during the coordination meetings between Interconnection Customer and Transmission Provider. These load centers are to provide both primary and back-up power sources for the Transmission Provider's equipment; and
 - b) Conduit and/or cable trays to provide connectivity from the Transmission Provider's rack space area to Interconnection Customer's main telecommunications board.
 - ii. Interconnection Customer must provide a separate exterior entrance to Transmission Provider for this dedicated area;
 - iii. Space for Transmission Provider's equipment in the control building must be isolated with chain-linked fencing and secured for Transmission Provider's access only; and
 - iv. Interconnection Customer to provide 24-hour access to all of Transmission Providers facilities without limitations.

- f. Interconnection Customer will provide a 125 volt DC Battery backup with a minimum of twelve hour support; and
 - g. Detailed Communications and Protection Requirements are outlined in Appendix C.
- 5) Interconnection Customer's Generating Facility Metering Requirements:**
- a. The 230 kV revenue quality metering will be located on the high-side of the Interconnection Customer's transformer at the Interconnection Customer's Substation;
 - b. Interconnection Customer will transport the 230 kV metering instrument transformers (CT's and PT's) provided by the Transmission Provider from the Transmission Provider's warehouse to the generator site; The metering units will be released only if the Interconnection Customer's metering structure is ready, already inspected, approved by the Transmission Provider, and there are no more heavy equipment activities around the area of installation that can possibly damage the units.
 - c. The Transmission Provider will procure the 230 kV metering instrument transformers (CT's and PT's) and provide the instrument transformers to the Interconnection Customer for installation. The Interconnection Customer will install the instrument transformers and connect the primary leads to the instrument transformers, and run the secondary leads to the metering structure. The Transmission Provider will make the connections from the secondary leads to the meter;
 - d. Interconnection Customer will design, purchase and install a Transmission Provider approved structure for mounting the Transmission Provider's metering units, meter class instrument transformers (PTs and CTs) in a Transmission Provider approved location. The meter structure with the installed metering instruments must be designed to meet the Transmission Provider's safety clearances, standard design requirements, and accessibility to the Transmission Provider's meter personnel. Drawings, design calculations, and equipment shall be reviewed and approved by the Transmission Provider prior to installation;
 - i. Interconnection Customer to provide a separate wall space for the metering cabinet and equipment; the Interconnection Customer shall install a Transmission Provider supplied metering cabinets (30" x 30" x 16") at an approved location in the Interconnection Customer's control building, per Transmission Provider's specification;
 - ii. Separate communications and power cabling is required through separate conduits.
 - iii. Provide appropriately sized junction/pullbox at the meter structure and install one and a half inch diameter conduits for termination of CT/PT wirings at the Termination/Junction Box. Install 1-3" diameter conduit from the junction/pullbox to meter enclosure at Transmission Provider dedicated room. Cables and wirings for metering shall be provided and pulled by the Interconnection Customer per Transmission Provider's sizing and specification. Conduits and cables identified with Transmission Provider's metering should be installed separately and exclusively routed. It should not be marshalled/combined with Interconnection Customer's trench, conduits, cables, wirings and terminal blocks.

- iv. CT secondary wirings shall be strictly 4/conductor #8AWG (stranded) with color coding Black, Blue, Red & White. PT secondary wirings shall be strictly 5/conductor #10AWG (stranded) with color coding Black, Blue, Red, White & Green. All cables shall be rated for 600V application. Metering potential circuit fuses shall be 10A slow blow to be provided by Interconnection Customer.
 - e. Interconnection Customer will provide a dedicated and protected 125 V DC circuit to the meter; and
 - f. Spare Instrument Transformers:
 - i. The Transmission Provider does not stock spare instrument transformers. Spare instrument transformers may be procured by either the Transmission Provider or the Interconnection Customer to provide back-up metering capability at the Interconnection Customer's expense. The Interconnection Customer may request that the Transmission Provider procure spare instrument transformers at the Interconnection Customer's expense to be stored at the Interconnection Customer's site for the purposes of replacing instrument transformers in the event of failure.
 - ii. The Interconnection Customer has elected to **not** purchase spare instrument transformers and accepts the associated risk.
 - iii. The associated risk of not purchasing spare instrument transformers in the event of instrument transformer failure includes prolonged outages (approximately 6 months) and additional costs for expedited ordering and shipping.
- 6) Interconnection Customer's Permitting Requirements:**
- a. Interconnection Customer to submit all relevant Federal, State, County and local land use permitting and Right-Of-Way applications to the Transmission Provider for review and concurrence **prior** to submittal to the applicable agency.
 - i. Failure to secure Transmission Provider's concurrence prior to submittal of permitting or Right-of-Way applications to the respective agency can result in requiring the Interconnection Customer to resubmit or amend permitting documentation to meet Transmission Provider's satisfaction which may delay the project In-Service schedule significantly.
 - b. Subsequent to receiving Transmission Provider's concurrence, the Interconnection Customer will acquire all Federal, State, County, and Local land use and environmental permits, authorizations and right of way grants required in order to build, operate, and maintain the Generating Facility, Interconnection Customer Interconnection Facilities, Transmission Provider's Interconnection Facilities, and Network Upgrades including (but not limited to):
 - i. All permits related to the generator plant facilities, including fencing, grading and access roads;
 - ii. All permits required to interconnect the Interconnection Customer's generator lead-line to the Transmission Provider Interconnection Facilities at the Point of Change of Ownership;
 - iii. All authorizations, right of way grants and/or assignments related to Interconnection Customer's rights under Interconnection Customer's Federal Right of Way (ROW) Grant which authorizes Transmission Provider to install or otherwise take necessary action to interconnect Transmission Provider's Interconnection Facilities associated with this project;

- iv. All Federal Aviation Administration determination of no hazard or other applicable FAA approvals, as required;
- v. All State Lands, roadway, and environmental permits;
- vi. All dust control permits;
- vii. All storm water permits;
- viii. All Special Use Permits and applicable Variances;
- ix. All reclamation activities completed and accepted by appropriate agencies; and
- x. Any other land rights as deemed necessary by Transmission Provider to perform its obligations under this Agreement, with such land rights being granted on a form acceptable to Transmission Provider;
- xi. All Federal authorizations including the Standard Form-299 (SF-299) application. The SF-299 application will include, among other things:
 - a) Transmission Provider's switch and dead-end structure. The final location of the dead-end structure must be approved by Transmission Provider's engineering and property services along with any other necessary Transmission Provider department(s);
 - b) Additions to Transmission Provider's Harry Allen 230kV Substation;
 - c) All access roads to Interconnection Customer's 230 kV Substation;
 - d) Access road to the dead-end structure; road to be an all-weather, adequate access road, minimum 20 feet in width or an approved width by Transmission Provider;
 - e) Transmission Providers Interconnection Facilities at Interconnection Customer's substation
 - f) Access road to Interconnection Customer's substation.
 - g) Approximately 7 miles of generator lead-line (minimum 1-795 ACSR with OPGW or equivalent) from Interconnection Customer's Substation to a dead-end structure outside of the Harry Allen 230kV Substation.
- xii. Final Plan of Development and SF299 to be reviewed and approved by Transmission Provider before submittal to BLM.
- c. Interconnection Customer will acquire the Utility Environmental Protection Act (UEPA) permit for all the facilities required for the Interconnection inclusive of the following:
 - i. Interconnection Customer Interconnection Facilities;
 - ii. Transmission Provider Interconnection Facilities; and
 - iii. Network Upgrades.
 - a) Interconnection Customer must coordinate with the Transmission Provider for the UEPA requirements for the Transmission Provider Interconnection Facilities and Network Upgrades;
 - b) The Transmission Provider will provide to the Interconnection Customer a detailed description of the facilities required inclusive of scope, costs and schedule, per the milestones in Appendix B;
 - c) The Interconnection Customer will include the description provided by the Transmission Provider in the UEPA submittal; and prior to construction, the Interconnection Customer will transfer the UEPA Permit to Construct for the Transmission Provider Interconnection Facilities and the Network Upgrades to the Transmission Provider.

- d. Transmission Provider shall cooperate with Interconnection Customer's efforts to obtain relevant permits.
- e. Once the project is built and operational, the Interconnection Customer will support Transmission Provider, to the extent necessary, in obtaining all documentation related to the assignment of the necessary rights under BLM ROW Grant obtained by the Interconnection Customer. The assignment of the necessary rights under Interconnection Customer's BLM ROW Grant will include the area impacted by the Transmission Provider's Interconnection Facilities associated with this project; an application will be submitted once the Transmission Provider is satisfied that all environmental and other stipulations have been met (i.e., work areas have been adequately restored, plants have been salvaged appropriately, Section 7 form completed and submitted back to the BLM post –construction etc.)
 - a) The Interconnection Customer will finalize and execute the BLM Right of Way application and assignment document within 60 days of the energization of the Transmission Provider Interconnection Facilities;
 - b) The Interconnection Customer will support the Transmission Provider, to the extent necessary, in obtaining all documentation related to the assignment of the necessary rights under BLM ROW Grant obtained by the Interconnection Customer once the project construction is complete;
 - c) The assignment of the necessary rights under Interconnection Customer's BLM ROW Grant will include the area impacted by Transmission Provider's Interconnection Facilities and Network Upgrades associated with this project. See Appendix C.
- f. The Interconnection Customer and the Transmission Provider will execute an Access to Equipment Agreement to secure Transmission Provider's access to communications and metering equipment located at the Interconnection Customer Generating Facility sites. The Transmission Provider will record the Access to Equipment Agreement with the Clark County Recorder.
- g. The Interconnection Customer will provide 24 hour access to all of Transmission Provider's facilities without limitations, upon reasonable notice from Transmission Provider and subject to Interconnection Customer's safety and other applicable procedures.

(b) Transmission Provider's Interconnection Facilities:

1) 230 kV Substation Entrance, termination structure and switch:

- a. Transmission Provider will design, procure and install a 230 kV transmission getaway from Harry Allen Substation.
- b. Transmission Provider will design, procure and construct new 230 kV structures to allow for the installation of 1-954 AA conductor per phase from the Harry Allen 230 kV Substation to the Point of Change of Ownership structure;
- c. Transmission Provider will design, procure and construct the Point of Change of Ownership Structure consisting of a 230-kV dead end structure and 230 kV switch;
 - i. The preliminary location identified for the dead-end structure is: Latitude 36°26'9.85"N; Longitude, 114°53'59.26"W

- ii. The actual dead-end structure location will be determined by the Transmission Provider prior to Interconnection Customer's initiation of permitting, design, and construction.
- d. Transmission Provider will install relays at Harry Allen 230 kV Substation dedicated to the Interconnection Customer's Transmission Line.
- 2) **Telecommunications at the Interconnection Customer's Site:**
 - a. Transmission Provider will purchase and install one (1) Remote Terminal Unit (RTU) and necessary communications equipment for the required SCADA from the new Generating Facility;
 - b. Transmission Provider will purchase and install a multiplexer on the T-1 line for the Generating Facility;
 - c. Transmission Provider will purchase and install miscellaneous communication cables and link equipment as required; and
 - d. Transmission Provider will review, coordinate with and provide acceptance for the Interconnection Customer's engineered 230 kV lead line protection.
- 3) **Metering at the Interconnection Customer's Site:**
 - a. Transmission Provider will purchase metering class current transformers and potential transformers (CT's and PT's) and provide them at the Transmission Provider's warehouse for pick-up and installation by the Interconnection Customer; and
 - b. Transmission Provider will purchase and install one (1) 230 kV ION revenue quality meter at Interconnection Customer's Generating Facility compensated to the high side of the Interconnection Customer's 230/34.5 kV transformer.
 - c. If the Generating Facility is comprised of multiple phases with different off-takers, the Transmission Provider will require a common high-side meter and individual high-side metering per phase for Energy Imbalance Market purposes, which will allow each phase to be separately metered and separately scheduled for Energy Imbalance Market purposes. It is the Interconnection Customer's responsibility to notify the Transmission Provider of multiple phases prior to construction of the project. The Interconnection Customer will implement metering in compliance with the Transmission Provider's posted Energy Imbalance Market business practice posted on the Transmission Provider's OASIS website.
- 4) **Communications at Harry Allen 230 kV Substation to integrate Interconnection Customer's lead line:**
 - a. Transmission Provider to install SCADA required for protection equipment and connection to dual fiber feeds at Harry Allen 230 kV Substation.
- 5) **Lands Interface and Access to Equipment Agreement:**
 - a. Transmission Provider will review Interconnection Customer's plant site permitting documents and provide support in relation to Transmission Provider's facilities at the plant site.
 - b. Transmission Provider will draft and execute an Access to Equipment Agreement with the Interconnection Customer.
 - c. Transmission Provider will support the Interconnection Customer's efforts in acquiring land rights for the 230 kV switch structure and dead-end structure located adjacent to the new Harry Allen 230 kV Substation.

6) Environmental Interface:

- a. Transmission Provider will coordinate the environmental work with the Interconnection Customer for the 230 kV termination structure, and switch located adjacent to the Harry Allen 230 kV Substation grant area;
- b. Transmission Provider will assist Interconnection Customer in transferring BLM Right of Way and related permits originally obtained by the Interconnection Customer for the 230 kV termination structure, and switch located adjacent to the Harry Allen 230 kV Substation grant area.

2. Network Upgrades (NU):**(a) Stand Alone Network Upgrades: None****(b) Individual Network Upgrades:****1) Harry Allen 230 kV Substation Terminal:**

- a. The Transmission Provider will design, procure, and construct a 230 kV terminal addition at Harry Allen 230 kV Substation to terminate the Interconnection Customer's generator lead line to the 2328/2329 terminal position; and
- b. Transmission Provider to procure and install one (1) new 230 kV circuit breaker, associated switches and support structures.

(c) Shared Network Upgrades: None**(d) Distribution Upgrades:**

- 1) None

3. Affected System Upgrades:**(a) Affected System Upgrades – The following Affected System Upgrades have been determined to be needed in order to mitigate disturbances on and maintain the reliability of Affected Systems directly or indirectly interconnected to Transmission System.**

- 1) None

4. Ownership:**(a) Upon completion of construction, the Parties shall have ownership of the facilities as follows:**

- 1) Interconnection Customer's Interconnection Facilities shall be owned by the Interconnection Customer;
- 2) Transmission Provider's Interconnection Facilities shall be owned by the Transmission Provider;
- 3) Stand Alone Network Upgrades shall be owned by the Transmission Provider;
- 4) Network Upgrades shall be owned by the Transmission Provider; and
- 5) Distribution Upgrades shall be owned by the Transmission Provider.

5. Operation and Maintenance Responsibilities:**(a) Upon completion of construction, the Parties shall have responsibilities for operation and maintenance of the Interconnection Facilities, Network Upgrades and Distribution Upgrades as follows:**

- 1) Interconnection Customer's Interconnection Facilities shall be operated and maintained by the Interconnection Customer;
 - 2) Transmission Provider's Interconnection Facilities shall be operated and maintained by the Transmission Provider and paid for by the Interconnection Customer;
 - 3) Stand Alone Network Upgrades shall be operated and maintained by the Transmission Provider;
 - 4) Network Upgrades shall be operated and maintained by the Transmission Provider; and
 - 5) Distribution Upgrades shall be operated and maintained by the Transmission Provider.
- (b) The Interconnection Customer shall be responsible for the payment of the actual costs incurred by the Transmission Provider for operation and maintenance of the Transmission Provider's Interconnection Facilities consistent with Article 10.5 of this Agreement.

7. Cost Estimate & Responsibilities:**(a) Interconnection Customer's Interconnection Facilities: Interconnection Customer.****(b) Transmission Provider's Interconnection Facilities:****1) \$2,300,000 - Interconnection Customer funded, Transmission Provider owned.**

COMPANY 79/119 INTERCONNECTION COSTS		
Project Component	Scope Description	TPIF \$M's
Lands / Environmental	Generator permitting support	\$0.050
	Environmental permitting support	\$0.100
Communication	Communications work at Harry Allen substation to integrate Customer's fiber	\$0.100
	RTU at Customer's Site	\$0.110
Transmission Lines	Substation Entrance at Harry Allen	\$1.800
Metering	High side metering at Generator site	\$0.120
Substation/Protection	System Protection Facilities and Protection review/coordination of plant settings	\$0.020
	TOTAL	\$2.300

All Costs will be trued to actual after the completion of the Project and all costs have been recorded, consistent with Article 12.2 of this LGIA and these estimates do not include any tax gross-up.

(c) Individual Network Upgrades (NU):

1) \$1,300,000 - Interconnection Customer shall provide security/collateral pursuant to Article 11 of the LGIA and Attachment L of the Open Access Transmission Tariff.

COMPANY 79/119 INTERCONNECTION COSTS		
Project Component	Scope Description	Network Upgrade \$M's
Substation/Protection	Harry Allen terminal addition	\$1.300
	TOTAL	\$1.300

(d) Shared Network Upgrades:

1) \$0 - Responsibility of the Interconnection Customer
1. None

All Costs will be trued to actual after the completion of the Project and all costs have been recorded. These estimates do not include any tax gross-up.

(e) Distribution Upgrades:

- 1) \$ 0 - Responsibility of the Interconnection Customer**
 1. None

All Costs will be trued to actual after the completion of the Project and all costs have been recorded. These estimates do not include any tax gross-up.

8. Appendix G: Interconnection Requirements for a Wind Generating Plant

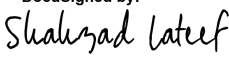
- (a) The Parties agree that Appendix G is not applicable.**

LGIA Appendix B: Milestones

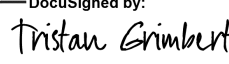
Arrow Canyon Solar, LLC Milestones		
Interconnection Customer's Project Milestones		Date
<u>1</u>	Interconnection Customer to contact Transmission Provider to schedule regular project meetings	upon execution
<u>2</u>	Interconnection Customer has previously provided \$1,075,000 Cash for TPIF project engineering, design and equipment procurement	Completed
<u>3</u>	Interconnection Customer to initiate application for Telecommunications Service	upon execution
<u>4</u>	Pursuant to Section 11.3 of the LGIP the Interconnection Customer shall provide either (a) reasonable evidence that continued Site Control or (b) posting of \$250,000 non-refundable additional security which shall be applied toward future construction costs	Completed
<u>5</u>	Interconnection Customer has previously provided to the Transmission Provider an irrevocable Letter of Credit in the amount of \$1,300,000 for the entire cost of the Network Upgrades	Completed
<u>6</u>	Interconnection Customer to provide completed documentation (e.g. signed Right of Entries) to Transmission Provider allowing for site access, survey, and study work	within 15 Business Days of execution of this LGIA
<u>7</u>	Interconnection Customer to provide Transmission Provider with drafts of all right-of-way and permitting applications for Transmission Provider Interconnection Facilities prior to submittal	9/1/2019
<u>8</u>	Interconnection Customer to submit all required right-of-way permit applications and/or amendments to permit applications for Transmission Provider equipment	10/1/2019
<u>9</u>	Interconnection Customer to contact Transmission Provider to schedule initial coordination meeting for protection, system control, telecommunications, and metering to discuss Telemetry Points Worksheet	9/1/2020
<u>10</u>	Interconnection Customer to provide Control Room Preliminary Dimension Design to Transmission Provider	9/1/2020
<u>11</u>	Interconnection Customer to provide One-line with Protection Scheme Descriptions and Relay Settings to Transmission Provider	9/1/2020
<u>12</u>	Interconnection Customer to provide signed Telemetry Points Worksheet to Transmission Provider	9/1/2020
<u>13</u>	Interconnection Customer to provide BLM issued Notice to Proceed (NTP) to Transmission Provider	9/1/2020
<u>14</u>	Interconnection Customer to provide Transmission Provider with copies of completed permits from all required federal, state, county & local entities including, but not limited to, Right-of-Way Grant (BLM), final UEPa (PUCN), Special Use Permits, Grading Permits, Building Permits, etc. for the Transmission Provider Interconnection Facilities and all project components on BLM lands.	9/1/2020

Agreed to by:

For the Transmission Provider

DocuSigned by:

 Date 12/7/2018
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For the Interconnection Customer

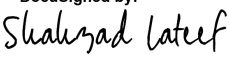
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Interconnection Customer's Milestones Continued

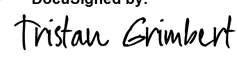
15	Interconnection Customer to provide copies of tortoise fees, BLM rentals, copy of the final environmental documents (i.e., EA, Cat Ex, POD, Restoration Plan) including any company-specific Interconnection Customer environmental compliance policies and the final BLM grants for the Transmission Provider Interconnection Facilities and all project components on BLM lands.	9/1/2020
16	Interconnection Customer to provide \$1,225,000 Cash for TPIF Project construction	10/1/2020
17	Interconnection Customer to provide Transformer (GSU) specification sheet to Transmission Provider	12/1/2020
18	Interconnection Customer to provide completed Energy Imbalance Market Resource Data Template with attachments	12/1/2020
19	Interconnection Customer to provide the transformer Factory Acceptance Testing (FAT) data to the Transmission Provider	2/1/2021
20	Interconnection Customer to complete all installations of conduits with pull strings and make available for Transmission Provider use	2/1/2021
21	Interconnection Customer to provide DC load centers dedicated for Transmission Provider communications equipment and RTU	2/1/2021
22	Interconnection Customer to complete Control Room construction with cable trays and conduits and provide full access to Transmission Provider	2/1/2021
23	Interconnection Customer to Provide T-1 line from Generator Control Room to the Transmission Provider's Energy System Control Center	2/1/2021
24	Interconnection Customer to Provide dial up line to meter	2/1/2021
25	Interconnection Customer to complete installation of Generator Facility protection relays	2/1/2021
26	Interconnection Customer to complete installation of Meter Structure including PT/CT and meter cabinet	2/1/2021
27	Interconnection Customer to provide 125 Volt DC power to meter	2/1/2021
28	Interconnection Customer to provide 24 hour access number to Transmission Provider or ring down line from Generator Control Room ESCC	2/1/2021
29	Interconnection Customer to initiate application for Standby Service	6/1/2021
30	Interconnection Customer to provide either: (1) documentation showing how the Interconnection Customer will meet the IRS Notice 2016-36 "Safe Harbor" provision or (2) Cash to the Transmission Provider for CIAC tax gross up for the Transmission Provider Interconnection Facilities at the applicable rate	Must be provided two months prior to in-service date
31	Interconnection Customer to provide signed Grant of Easement, Access Easement, Access to Equipment Easement Agreement, Transmission Use Agreement and other required documents to Transmission Provider	One month prior to In-Service Date
32	Interconnection Customer to complete Interconnection Customer Interconnection Facilities (provide notice to Transmission Provider in writing)	Notice must be provided at least one week prior to In-Service Date

Agreed to by:

For the Transmission Provider

DocuSigned by:

 Date 12/7/2018
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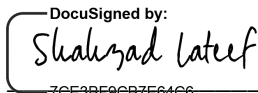
For the Interconnection Customer

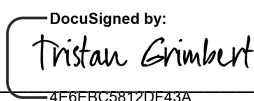
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Interconnection Customer's Milestones Continued

33	Interconnection Customer to initiate generator pre-energization meeting	Notice must be given at least one week prior to holding the meeting
34	Interconnection Customer to provide Transmission Provider operation plan for generator start up	at least one week prior to In-Service Date
35	Interconnection Customer to execute a Standby Service Agreement	at least one week prior to In-Service Date
36	Interconnection Customer and Transmission Provider to hold Pre-energization Meeting to review final Operating Procedures provided by the Transmission Provider	at least one week prior to In-Service Date
37	Interconnection Customer to commence sending the WECC 4 day forecast availability notice to the Transmission Provider	Four (4) days prior to In-Service Date
38	Interconnection Customer to provide a letter to the Transmission Provider acknowledging in writing that all plant systems are adequately protected and have been tested prior to energization	Must be completed prior to the In-Service date with written notice by the Interconnection Customer to the Transmission Provider
39	Interconnection Customer Facility Calibration and Trip Testing - Interconnection Customer to Coordinate with the Transmission Provider	Must be completed prior to the In-Service date with written notice by the Interconnection Customer to the Transmission Provider
40	Interconnection Customer and Transmission Provider to complete the PRC-001 System Protection Coordinator Letter	Prior to In-Service Date
41	In-Service Date	9/1/2021
42	Interconnection Customer to sign Transmission Provider's SF 299 for assignment of ROW Grant to Transmission Provider Interconnection Facilities	one month after In-Service Date
43	Interconnection Customer to complete Section 7 form and submit to BLM for "Transmission Provider Interconnection Facilities" - provide Transmission Provider copy of submittal for review	one month after In-Service Date
44	Generator Testing Start Date - Provide notice to Transmission Provider	within 30 days of Commercial Operation Date
45	Interconnection Customer to complete LGIA Appendix E and provide to the Transmission Provider when it is ready to declare COD	within 1 day of commercial operation
46	Commercial Operation Date - Provide notice to Transmission Provider	10/1/2021

Agreed to by:

For the Transmission Provider  Date 12/7/2018

For the Interconnection Customer  Date 12/4/2018 7:32:44 PM PST

Interconnection Customer's Milestones Continued

47	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2022
48	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2023
49	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2024
50	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2025
51	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2026
52	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2027
53	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2028
54	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2029
55	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2030
56	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	10/1/2031

Transmission Provider Milestones		Date
1	Transmission Provider Interconnection Facilities and Network Upgrades Completed Provided that all necessary approvals by Governmental Authorities are received, Interconnection Customer's required facilities are constructed, tested and ready for service per Interconnection Customer milestones above, and the Interconnection Customer has provided required securities and notices to the Transmission Provider per Interconnection Customer milestones above.	9/1/2021 provided that all necessary approvals by Governmental Authorities are received, Interconnection Customer's required facilities are constructed, tested and ready for service per Interconnection Customer milestones above, and the Interconnection Customer has provided required securities and notices to the Transmission Provider per Interconnection Customer milestones above.

Agreed to by:

For the Transmission Provider

DocuSigned by:

Shahzad Latief

Date 12/7/2018

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For the Interconnection Customer

DocuSigned by:

Tristan Grimbert

Date 12/4/2018 7:32:44 PM PST

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LGIA Appendix C: Interconnection Details

Arrow Canyon Solar, LLC – Companies 79 and 119– Photovoltaic Solar Facilities

Type of Interconnection Service: Network Resource Interconnection Service

Generating Facility Capacity: 200 MW net at the Point of Interconnection

Total Generating Facility Nameplate Rating: 200 MVA from eighty (80) 2.5MVA Solar Inverters

Point of Interconnection:

The Point of Interconnection will be the point where the Interconnection Customer's owned 230 kV lead-line from the Arrow Canyon Solar Substation intersects the 2328/2329 terminal position at the Transmission Provider's 230 kV Harry Allen Substation. See Appendix C.

Point of Change of Ownership:

The Point of Change of Ownership will be the point where the Interconnection Customer's 230 kV transmission lead line terminates on the Transmission Provider-owned termination structure located adjacent to the Harry Allen 230 kV Substation land grant area. See Appendix C.

Nominal Delivery Voltage: 230 kV

Metering Voltage: 230 kV

Generating Facility Communications and Protection Requirements:**1. Communications Requirements—Generating Facility Telemetry:**

- a. Generating Facility telemetry outputs:
 - i. Generator Plant total MW, MVAR, 3-phase amps, 3-phase volts (L-G referred to L-L) and accumulated MW-hr in and out. Fiber will be required if the distance between the meter and the Transmission Provider's RTU exceeds 1500 feet.
- b. Hard-wired open/closed indication for transformer circuit breaker/circuit switcher to Transmission Provider's ESCC;
- c. Plant transformer protection lockout status (one for each transformer, GSU, Unit Aux, or Station Service where connected to the POI high side bus);
- d. Condition signal indicating status of percentage of plant output availability to ESCC Control Room on a continuous basis;
- e. Interconnection Customer to provide SCADA capability to transmit real-time data output from the weather measurement equipment of the solar PV plant (Global and Point of Array diffuse Solar Radiance, Ambient Temperature and Wind Speed). Data collection shall be provided by customer from each individual (if more than one) weather station totalized such that there is one indication per point. Customer shall provide data using Transmission Provider accepted protocol or hardwired directly to Transmission Provider's RTU;
- f. Interconnection Customer shall provide forecasted hourly solar plant energy production data consistent with WECC-defined operational planning requirements and Energy Imbalance Market¹ requirements, (1 week forecast) including updates to all forecast hourly output values no less frequently than once per calendar day. Such forecasts shall be based on numerical weather prediction (NWP) models. Interconnection Customer shall provide data using Transmission Provider accepted protocol directly to Transmission Provider.
- g. Interconnection Customer shall provide any environmental data that may impact the percentage of the Generating Facility output availability (i.e. low temperature, high wind and/or trip settings);
- h. Tripped/Reset indication of all GSU and line protection lockouts – totalized such that there is one indication per GSU;
- i. Load Tap Changer (LTC) indication tap position and manual on/off indication (if GSUs are equipped with LTC); and
- j. Note—RTU at plant to which output will be delivered is to be designated as the master RTU. The Interconnection Customer will supply an interface that will allow the Transmission Provider's RTU to be the master (polling) device.

2. Generating Facility control points – Transmission Provider will require the following control points:

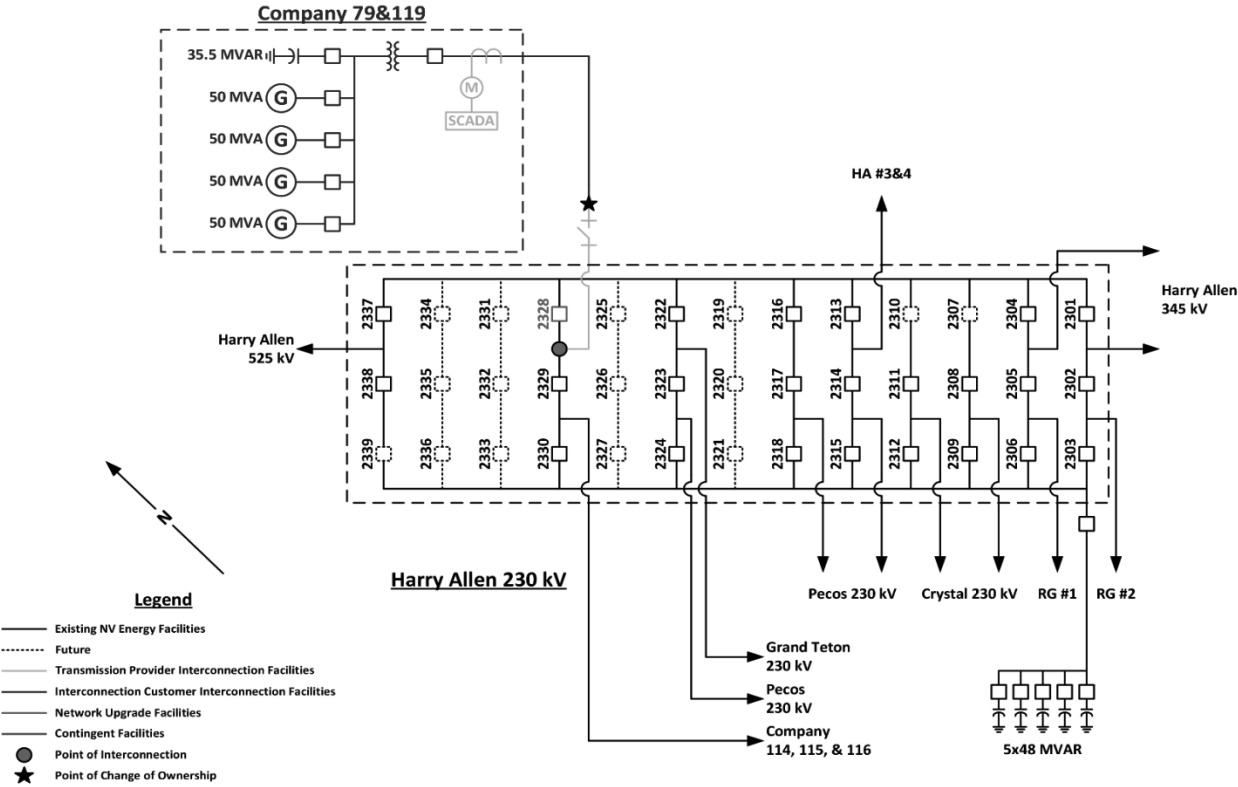
- a. Trip control of transformer main 230 kV breaker

¹ As defined in Section I.1.13D “Energy Imbalance Market (EIM)” of the Nevada Power Company Open Access Transmission Tariff.

3. Checklist of items that must be completed prior to proceeding with any start up and synchronization for Interconnection Customer's plant:
- a. Review by Transmission Provider of Interconnection Customer's protection settings for coordination purposes;
 - b. Interconnection Customer must perform both calibration and functional trip tests of its System Protection Facilities and report results back to Transmission Provider;
 - c. Complete communications required;
 - d. SCADA indications at plant substation operational with full Transmission Provider ESCC access;
 - e. Adequate voice communication at Interconnection Customer's substation (cell or land line at sub);
 - f. Transmission Provider to trip test Interconnection Customer's main interrupting device(s) from the RTU control point;
 - g. Interconnection Customer to acknowledge in writing that all plant systems are adequately protected and have been tested; and
 - h. Interconnection Customer and Transmission Provider to have start up and in service process meetings one (1) week prior to start-up and in service event.

LGIA Appendix C: One-Line Diagram

	Harry Allen 230 kV	8/20/2018
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LGIA Appendix D: 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.

LGIA Appendix E: Commercial Operation Date

This Appendix E is a part of the LGIA between Transmission Provider and Interconnection Customer.

[Date]

[Transmission Provider Address]

Re: _____ Large Generating Facility

Dear _____:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No. ____.
This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No. ____ at the Large Generating Facility, effective as of **[Date plus one day]**.

Thank you.

[Signature]

[Interconnection Customer Representative]

LGIA Appendix F: Addresses for Delivery of Notices and Billings

Notices:

Unless otherwise provided in this Agreement, any written notice demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national carrier service, or sent by first class mail, postage prepaid, to the person specified below:

Transmission Provider

Transmission Provider: Nevada Power Company d/b/a NV Energy
Attention: Manager, Transmission Business Services
Address: 6100 Neil Road or PO Box 10100
City: Reno State: NV Zip: 89511
Phone: 775-834-4802 Fax: 775-834-3047
E-Mail: TransmissionPolicy@nvenergy.com

Interconnection Customer

Interconnection Customer: Arrow Canyon Solar, LLC
c/o EDF Renewables Development, Inc.
Attention: Legal Department
Address: 15445 Innovation Drive
City: San Diego State: CA Zip: 92128
Phone: 858-521-3300 Fax: 858-521-3333
E-Mail: Joshua.pearson@edf-re.com

Billings and Payments:

Billings and payments shall be sent to the addresses set out below:

Transmission Provider: Nevada Power Company d/b/a NV Energy
Attention: Manager, Transmission Business Services
Address: 6100 Neil Road or PO Box 10100
City: Reno State: NV Zip: 89511
Phone: 775-834-4802 Fax: 775-834-3047
E-Mail: TransmissionPolicy@nvenergy.com

Interconnection Customer

Interconnection Customer: Arrow Canyon Solar, LLC
c/o EDF Renewables Development, Inc.
Attention: Accounts Payable
Address: 15445 Innovation Drive
City: San Diego State: CA Zip: 92128
Phone: 888-903-6926 Fax: 858-521-3333
E-Mail: ap.invoices@edf-re.com

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

Any notice or request required or permitted to be given by either party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out below:

Transmission Provider:

Transmission Provider: Nevada Power Company d/b/a NV Energy
 Attention: Project Manager
 Address: 6100 Neil Road or PO Box 10100
 City: Reno State: NV Zip: 89511
 Phone: 775-834-4042 Fax: 775-834-3047
 E-Mail: TransmissionPolicy@nvenergy.com

Interconnection Customer

Voice telephone: 612-486-4508
 Facsimile telephone: 858-521-3333
 Email address: Joshua.pearson@edf-re.com

Designated Operating Executive:

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Transmission Provider:

Transmission Provider: Nevada Power Company d/b/a NV Energy
 Attention: Director, Grid Operations & Reliability
 Address: 6100 Neil Road or PO Box 10100
 City: Reno State: NV Zip: 89511
 Phone: 775-834-3776 Fax: 702-402-6631
 E-Mail: ESCCOperations@nvenergy.com

Interconnection Customer

Interconnection Customer: Arrow Canyon Solar, LLC
 c/o EDF Renewables Development, Inc.
 Attention: Asset Manager
 Address: 15445 Innovation Drive
 City: San Diego State: CA Zip: 92128
 Phone: 858-521-3300 Fax: 858-521-3333
 E-Mail: daniel.summa@edf-re.com

Changes to the Notice Information

Either Party may change this information by giving five Business Days written notice prior to the effective date of the change.

LGIA Appendix G: Interconnection Requirements For A Wind Generating Plant

Appendix G sets forth requirements and provisions specific to a wind generating plant. All other requirements of this LGIA continue to apply to wind generating plant interconnections.

A. Technical Standards Applicable to a Wind Generating Plant

i. Low Voltage Ride-Through (LVRT) Capability

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

Transition Period LVRT Standard

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

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles at a voltage as low as 0.15 p.u., as measured at the high side of the wind generating plant step-up transformer (i.e. the transformer that steps the voltage up to the transmission interconnection voltage or “GSU”), after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system.
2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU or to faults that would result in a voltage lower than 0.15 per unit on the high side of the GSU serving the facility.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR

Compensator, etc.) within the wind generating plant or by a combination of generator performance and additional equipment.

5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

Post-transition Period LVRT Standard

All wind generating plants subject to FERC Order No. 661 and not covered by the transition period described above must meet the following requirements:

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system. A wind generating plant shall remain interconnected during such a fault on the transmission system for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.
2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

ii. Power Factor Design Criteria (Reactive Power)

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 LGIA, if the Transmission Provider's System Impact Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability 606 (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.

TRAN-2

**INTERCONNECTION SYSTEM IMPACT RE-STUDY
CLUSTER 2018S S-1.2 Harry Allen Cluster**

Company 165

Company 166

Company 168

Company 170



May 31, 2019

GENERAL INFORMATION CLUSTER 2018F S-1.2 Harry Allen Cluster 900 MW			
NVE Project Name:	Company 165 – Reid Gardner 230 kV Interconnection	Queue Position:	Company 165
Max Gross Output: (Nameplate)	679.5 MVA (151 x 2.25 MVA Solar + 151 x 2.25 MVA BESS)	POI:	Reid Gardner 230 kV
Max Net Output: (Generating Facility Capacity)	300 MW @ 0.95 PF	Alternative POI:	None
Resource:	Solar PV & BESS	ERIS:	Yes
Location:	Clark County, Nevada	NRIS:	Yes
Requested In-Service:	5-1-2022	Queue Date:	9-17-2018
NVE Project Name:	Company 166 – Harry Allen 230 kV Interconnection	Queue Position:	Company 166
Max Gross Output: (Nameplate)	275.37 MVA (70 x 3.0853 MVA Solar + 18 x 3.3 MVA BESS)	POI:	Harry Allen 230 kV
Max Net Output: (Generating Facility Capacity)	200 MW @ 0.95 PF	Alternative POI:	None
Resource:	Solar PV & BESS	ERIS:	No
Location:	Clark County, Nevada	NRIS:	Yes
Requested In-Service:	12-1-2022	Queue Date:	9-20-2018
NVE Project Name:	Company 168 – Harry Allen 230 kV Interconnection	Queue Position:	Company 168
Max Gross Output: (Nameplate)	330.6 MVA (72 x 2.3 MVA Solar + 60 x 2.75 MVA BESS)	POI:	Harry Allen 230 kV
Max Net Output: (Generating Facility Capacity)	150 MW @ 0.95 PF	Alternative POI:	None
Resource:	Solar PV & BESS	ERIS:	No

Location:	Clark County, Nevada	NRIS:	Yes
Requested In-Service:	4-1-2020	Queue Date:	9-26-2018
NVE Project Name:	Company 170 – Harry Allen 230 kV Interconnection	Queue Position:	Company 170
Max Gross Output: (Nameplate)	279 MVA (93 x 3.0 MVA)	POI:	Harry Allen 230 kV
Max Net Output: (Generating Facility Capacity)	250 MW @ 0.95 PF	Alternative POI:	None
Resource:	Solar PV	ERIS:	Yes
Location:	Clark County, Nevada	NRIS:	Yes
Requested In-Service:	10-1-2021	Queue Date:	9-26-2018

1. PURPOSE

The purpose of this report is to present the results of the Interconnection System Impact Re-Study¹ for CLUSTER 2018F S-1.2 Harry Allen Cluster. This study addresses the interconnection requirements to connect to the NV Energy (NVE) transmission system pursuant to the CLUSTER 2018F S-1.2 Harry Allen Cluster Open Access Transmission Tariff (OATT) Interconnection Request. The NV Energy name for this interconnection is the CLUSTER 2018F S-1.2 Harry Allen Cluster.

This System Impact Re-Study is being performed in response to modifications to baseline study assumptions with regard to the Phase Shifting Transformers located at Crystal and Harry Allen substations.

See Appendices A and B, respectively, for a one-line representation of the proposed interconnection and a geographic map of the general project location.

This study provides no guarantee of transmission service nor does it reserve a spot in the transmission queue for this project. A Transmission Service Request (TSR) or a request to be designated as a Network Resource would need to be submitted by the Interconnection Customer (or someone on its behalf) and accepted by the Transmission Provider in order for a request to reserve transmission capacity to be valid. TSRs are accepted on a first come first serve basis. Additional costs (study work, facilities, etc.) for such TSR and subsequent Transmission Service Agreement (TSA) would be required pursuant to the OATT.

¹ Capitalized terms such as this, and those listed in Appendix A have the meaning ascribed to them in the Open Access Transmission Tariff.

The results and requirements of this Interconnection System Impact Study supersede those of any previous Interconnection System Impact Study.

2. ASSUMPTIONS

1. Harry Allen to Eldorado 500 kV Line is complete and in service.
 - a. Planned In Service Date of 5/2020
2. Magnolia 230/138 kV Transformer is completed and in service
 - a. Planned In Service Date of 5/30/2020

3. CONTINGENT FACILITIES

Contingent Facilities are unbuilt Interconnection Facilities and/or Network Upgrades upon which the cost, timing and study findings for Interconnection Customer's Interconnection Request are dependent.

1. All upgrades required of higher queued interconnections have been completed, specifically including the Company 79/119 terminal position addition at Harry Allen 230 kV for Company 170 and the Company 156 terminal position at Reid Gardner 230 kV for Company 165.
2. All upgrades associated with Redundant Bus Differential Relay Additions at Pecos 138 kV substation, Arden 230 kV substation, Iron Mountain 230 kV substation, Clark 138 kV, and Faulkner 230 kV substation.

4. BASE CASE

The Base Case was developed from the WECC 2024 "Heavy Summer" base case (2024HS2a) with maximum NPC generation in the Harry Allen, Crystal, Reid Gardner area. The following proposed generation interconnections have been included in the pre-interconnection case:

Generator	Point of Interconnection	MW @ POI
Company 156	Reid Gardner 230 kV	300
Company 151	Crystal 230 kV	440
Company 79/119	Harry Allen 230 kV	200
Company 139	Harry Allen 230 kV	100

For the post-interconnection case, this model was modified to incorporate the project generation connected in the Reid Gardner, Harry Allen and Crystal 500 & 230 kV area. The case represents adequately stressed conditions for the 500 and 230 kV systems in that area.

5. PRE-INTERCONNECTION POWER FLOW & TRANSIENT STABILITY RESULTS

No Adverse System Impacts were identified as a result of the pre-Interconnection power flow analysis. Appendix C provides power flow diagrams and results for the study.
Appendix C provides power flow diagrams and results for the study.

6. POST-INTERCONNECTION POWER FLOW RESULTS – NO OUTAGES

There were no Adverse System Impacts identified as a result of the post-Interconnection power flow analysis under normal or no outage conditions. Appendix C provides power flow diagrams and results for the study.

7. POST INTERCONNECTION POWER FLOW RESULTS – CONTINGENCY OR OUTAGE CONDITIONS

The following Adverse System Impacts were identified as a result of the post-Interconnection power flow analysis under outage or contingency conditions:

POST-INTERCONNECTION POWER FLOW RESULTS				
CONTINGENCY	IMPACTED FACILITY	SYSTEM IMPACT		MITIGATION
		PRE-INTERCONNECTION	POST-INTERCONNECTION	
Pecos 230/138 kV Transformer 1/2	Pecos 230/138 kV Transformer 3	83.3%	101.7%	Pecos 230/138 kV Transformer #5
Pecos 230/138 kV Transformer 1/2	Pecos 230/138 kV Transformer 4	83.3%	101.7%	
Pecos 230/138 kV Transformer 3	Pecos 230/138 kV Transformer 1/2	84.1%	102.6%	

The above identified contingencies are representative of the contingencies that emerged during this Interconnection study, but the list is not exhaustive. Appendix C provides power flow diagrams and results for the study.

8. POST INTERCONNECTION TRANSIENT STABILITY RESULTS

No Adverse System Impacts were identified as a result of the transient stability analysis.

Appendix D provides a list of disturbances studied, stability plots, results for the study, and the GE PSLF “.dyd” generator data used for transient stability analyses.

The transient stability analyses performed in this study include the results of a dynamic analysis that simulates the performance of the Interconnection Customer’s generating facilities following typical transmission line disturbances and faults (with normal clearing) on nearby facilities. The simulation may be based on data provided by the Interconnection Customer as well as other model data available at the time of the study.

Alternative generation dispatch patterns, line re-configuration, delayed fault clearing, or variance in the Interconnection Customer’s generator dynamic models/values compared to actual test result values² are some of the variables that can affect transient stability simulation.

Because of these variables, the Interconnection Customer’s generating facility may experience instability, out-of-step conditions, real/reactive power swings, and/or high/low transient frequencies and voltages. The Interconnection Customer is responsible for the electrical protection of its facilities, including the Interconnection Customer’s generating and transmission facilities.

The results can be used to help determine whether or not the generating facility will meet performance criteria and ride-through requirements³. Ultimately, however, it is the Interconnection Customer’s responsibility to meet these requirements during actual operation on a daily basis and failure to do so can result in loss of interconnection privileges. Therefore, the results of these simulations should be regarded as informational rather than definitive, and do not relieve the Interconnection Customer of any performance responsibilities.

² See WECC GENERATING UNIT MODEL VALIDATION POLICY: B.1.2.1. The Generator Owner shall test the generating unit and validate its model data. B.1.2.3.2. No later than 180 days after the new Generating Facility is released for Commercial Operation.

³ See WECC LOW VOLTAGE RIDE THROUGH CRITERION: Generators are required to remain in-service during system faults (three phase faults with normal clearing and single line to ground faults with delayed clearing) unless clearing the fault effectively disconnects the generator from the system. This requirement does not apply to faults that would occur between the generator terminals and the high side of the generator step-up transformer or to faults that would result in a voltage lower than 0.15 per unit on the high side of the generator step-up transformer.

9. FAULT DUTY ANALYSIS

POST-INTERCONNECTION FAULT DUTY RESULTS					
Bus	kV	Min Rating (kA)	Fault Type	Fault Current (kA)	X/R Ratio
Crystal	230	50	LG	46.39	16.2
			3LG	46.66	22.7
			LL	40.39	22.6
			2LG	47.04	19.1
Harry Allen	230	63	LG	62.04	19.9
			3LG	56.94	24.5
			LL	49.3	24.4
			2LG	59.84	21.7
Harry Allen	525	56.6	LG	43.4	19.5
			3LG	44.17	23.8
			LL	38.17	23.7
			2LG	44.02	21.6
Pecos	230	45.8	LG	37.8	9.3
			3LG	42.86	14
			LL	37.09	14
			2LG	41.7	11.8
Reid Gardner	230	37.4	LG	12.26	8.7
			3LG	15.93	13.3
			LL	13.8	13.2
			2LG	14.96	11.6

No Adverse System Impacts were identified as a result of the fault duty analysis.

10. REQUIREMENTS TO INTERCONNECT

Company 165 Requirements:

1. Company 165 Lead Line to Be Shared with Company 156: Overhead lead line designed with static wire, fiber optic cable and adequate overvoltage protection from lightning surges. To be adequately sized to carry current from Company 156 and 165 generation.
2. Company 165 Site Communications: Required Communications at customers generating plant site. Company 156 Communications modified to include points for Company 165.

3. 230 kV Metering: Two additional sets of meters will be required, one for Company 165 and one common coupling meter for the Company 156 and Company 165 Lead Line.
4. Reid Gardner 230 kV Communications: Equipment required at Reid Gardner 230 kV substation to support communications with Company 165 Generator Plant.

Company 166 Requirements:

1. Harry Allen 230 kV Terminal Position: Associated 230 kV breaker at Harry Allen Substation and bus work.
2. Company 166 Site Communications: Required Communications at customers generating plant site.
3. Harry Allen Substation Entrance: 230kV dead end structure, isolation switch, and vertical transition structure required to interconnect the generator lead line.
4. Site Metering: 230 kV Metering and communications equipment is required at the Interconnection customers generating site.
5. Communications Integration: Facilities required to integrate customer communications equipment with Harry Allen Communications equipment.
6. Harry Allen 230 kV Communications: Equipment required at Harry Allen 230 kV substation to support communications with Company 166 Generator Plant.

Company 168 Requirements:

1. Harry Allen 230 kV Terminal Position: Two associated 230 kV breakers at Harry Allen Substation and bus work.
2. Company 168 Site Communications: Required Communications at customers generating plant site.
3. Harry Allen Substation Entrance: 230kV dead end structure, isolation switch, and vertical transition structure required to interconnect the generator lead line. Due to the constrained access into Harry Allen Substation, a portion of the substation entrance will need to be undergrounded.
4. Site Metering and Communications: 230 kV Metering and communications equipment is required at the Interconnection customers generating site.

5. Communications Integration: Facilities required to integrate customer communications equipment with Harry Allen Communications equipment.
6. Harry Allen 230 kV Communications: Equipment required at Harry Allen 230 kV substation to support communications with Company 168 Generator Plant.

Company 170 Requirements:

1. Company 170 Lead Line To Be Shared with Company 79/119: Overhead lead line to be designed with static wire, fiber optic cable and adequate overvoltage protection from lightning surges. To be adequately sized to carry current from Company 79/119 and 170 generation.
2. Company 170 Site Communications: Required Communications at customers generating plant site. Company 179/119 Communications modified to include points for Company 170.
3. 230 kV Metering: Two additional sets of meters will be required, one for Company 170 and one common coupling meter for the Company 79/119 and Company 170 Lead Line.
4. Harry Allen 230 kV Communications: Equipment required at Harry Allen 230 kV substation to support communications with Company 170 Generator Plant.

Shared Requirements for All Companies:

1. Addition of the Pecos 230/138 kV 500 MVA Transformer #5.
2. Generator Reactive Capability: Reactive power output from the generation facility shall be under the direction of NV Energy system operation. Generation from this facility shall be capable of dynamically producing reactive power (VARs) in a range of at least 0.95 leading power factor to 0.95 lagging power factor (+/- 0.95 pf) measured at the high side of the generator substation and capable of automatic voltage regulation.

Continuously controlled reactive power capability, via thyristor or similar static switching means for periods up to 1 second qualifies for dynamic reactive power capability as part of the reactive resources required. Fast mechanically switched reactive power capability does not qualify for continuous reactive power as part of the required reactive resources.⁴

⁴ If applicable, dynamic reactive power requirement may be satisfied with inverters specified for dynamic +/- 0.95 power factor at rated power output or with appropriately sized SVC (or equivalent device).

3. Automatic Voltage Regulation: Generation from this facility shall be capable of automatic voltage regulation (AVR) under the direction of NV Energy system operation.
4. Intermittent Resource Requirement: NV Energy has limited capability to follow fluctuations in intermittent resource output. This study does not address the operational need to balance intermittent resources. Arrangements to balance the output of the intermittent resource through contracts with generators or loads, addition of storage devices, or off system dynamic schedules are beyond the scope of this study. Satisfactory agreements for balancing must be in place prior to energization of the interconnection.
5. Affected Systems: Resolution of any issues identified by Affected Systems prior to energization of the interconnection.

11. COST RESPONSIBILITY

COST RESPONSIBILITY TABLE FOR COMPANY 165				
	Total Upgrades \$MM		Network Upgrades \$MM	TPIF \$MM
Communications/Protection				
Company 165 Site Communications	0.100			0.100
Reid Gardner 230 kV Communications	0.100			0.100
Lead Line Protection Facilities and Review	0.100			0.100
Metering				
Two 230 kV Meter Sets	0.300			0.300
Lands/Permitting/Right-of-Way				
Lands Permitting Review	0.100			0.100
Environmental Permitting Review	0.100			0.100
Total:	0.800		0.000	0.800

COST RESPONSIBILITY TABLE FOR COMPANY 166				
	Total Upgrades \$MM		Network Upgrades \$MM	TPIF \$MM
Substation				
Harry Allen 230 kV Terminal Position	1.500		1.500	
Transmission Lines				
230 kV Substation Entrance	1.800			1.800
Communications/Protection				
Company 166 Site Communications	0.100			0.100
Harry Allen 230 kV Communications	0.100			0.100
Customer Communications Integration	0.100			0.100
Lead Line Protection Facilities and Review	0.100			0.100
Metering				
One 230 kV Meter Set	0.150			0.150
Lands/Permitting/Right-of-Way				
Lands Permitting Review	0.100			0.100
Environmental Permitting Review	0.100			0.100
Total:	4.050		1.500	2.550

COST RESPONSIBILITY TABLE FOR COMPANY 168				
	Total Upgrades \$MM		Network Upgrades \$MM	TPIF \$MM
Substation				
Harry Allen 230 kV Terminal Position	1.500		1.500	
Transmission Lines				
230 kV Substation Entrance	2.200			2.200
Communications/Protection				
Company 168 Site Communications	0.100			0.100
Harry Allen 230 kV Communications	0.100			0.100
Customer Communications Integration	0.100			0.100
Lead Line Protection Facilities and Review	0.100			0.100
Metering				
One 230 kV Meter Set	0.150			0.150
Lands/Permitting/Right-of-Way				
Lands Permitting Review	0.100			0.100
Environmental Permitting Review	0.100			0.100
Total:	4.450		1.500	2.950

COST RESPONSIBILITY TABLE FOR COMPANY 170				
	Total Upgrades \$MM		Network Upgrades \$MM	TIPIF \$MM
Communications/Protection				
Company 170 Site Communications	0.100			0.100
Harry Allen 230 kV Communications	0.100			0.100
Lead Line Protection Facilities and Review	0.100			0.100
Metering				
Two 230 kV Meter Sets	0.300			0.300
Lands/Permitting/Right-of-Way				
Lands Permitting Review	0.100			0.100
Environmental Permitting Review	0.100			0.100
Total:	0.800		0.000	0.800

HARRY ALLEN CLUSTER 1.1 SHARED NETWORK UPGRADES Company 165, 166, 168, 170						
	Shared Network Upgrades \$MM		Co 165 Share \$MM	Co 166 Share \$MM	Co 168 Share \$MM	Co 170 Share \$MM
Project Size (MW)	900		300	200	150	250
Substation						
Pecos 230/138 kV Transformer #5	11.00		3.67	2.44	1.83	3.06
Total:	11.00		3.67	2.44	1.83	3.06

The terminal position locations at Harry Allen 230 kV substation for Company 168 and 170 are preliminary and non-binding. Access to the Harry Allen 230 kV substation is particularly constrained, due to the existing physical configuration. A full routing study will need to be completed in order to determine and reserve the terminal position, which is outside the scope of this System Impact Study.

The cost estimates include both Transmission Provider's Interconnection Facilities (TPIF) and Network Upgrades (NU). The cost responsibility for all facilities will be pursuant to the provisions of the OATT. The Interconnection Customer is responsible for all of the TPIF and Direct Assign costs. The Transmission Provider is responsible for the costs associated with NU pursuant to the OATT, however such costs will be securitized by the Interconnection Customer as provided under the provisions of the OATT. Interconnection Customer's Interconnection Facilities (ICIF) are the sole responsibility of the Interconnection Customer.

These estimates of costs are preliminary and non-binding. These costs estimates are not detailed cost estimates and are derived from prior estimates for similar facilities. These estimates do not take specifics of the project in account and/or individually estimate the scope items. Costs are provided in 2019 dollars and do not include taxes. These costs will be estimated by the individual functional areas as a part of the Interconnection Facilities Study and/or the interconnection agreement. All estimated costs are tried to actual upon completion of construction.

A gross up on Contributions in Aid of Construction (CIAC) will be assessed unless the CIAC or the transfer of the intertie meets the safe harbor requirements of IRS Notice 2016-36. The CIAC gross up will be computed based on the rate in effect on the in-service date of the applicable facilities. CIAC for TPIF will be secured at the time the facilities costs are secured per Attachment L of the Open Access Transmission Tariff.

12. COORDINATED RECOMMENDATIONS

All upgrades and requirements to interconnect identified in this study were selected in accordance with applicable NV Energy design policies and standards and in consultation with the other engineering departments.

13. ALTERNATIVES CONSIDERED

The following alternatives were considered but decided against for the reasons provided below.

14. TIME TO CONSTRUCT⁵

The construction schedule is highly dependent on the permitting process. Environmental Assessments can require from 18 months to three years from filing the application to completion. An Environmental Impact Statement, if required, can take from three to five years for completion

⁵ This section provides a non-binding good faith estimate of time to construct.

depending on the complexity of the project. Design and construction of facilities can usually be completed in eighteen months to two years once the permits are secured.

NV Energy anticipates that permits requiring an Environmental Assessment or an Environmental Impact Statement will need to be procured in order to construct the NV Energy owned upgrades identified in this Interconnection Study. Such determinations are subject to the Bureau of Land Management and other applicable governmental agencies.

The requested in-service date of 5-1-2022 for Company 165 may allow adequate time for permitting and construction.

The requested in-service date of 12-1-2022 for Company 166 may allow adequate time for permitting and construction.

The requested in-service date of 4-1-2020 for Company 168 will not allow adequate time for permitting and construction.

The requested in-service date of 10-1-2021 for Company 170 may allow adequate time for permitting and construction.

15. AFFECTED SYSTEMS

No Adverse System Impacts were identified on Affected Systems as a result of NV Energy's analyses of this interconnection. If Adverse System Impacts are subsequently identified by NV Energy or an Affected System, additional studies may be required.

NV Energy will coordinate with the Affected System(s) with respect to conducting any studies. If additional studies are required by the Affected System, the Interconnection Customer will be required make arrangements with the Affected System(s) to pay the costs of such studies and may be required to execute a separate agreement with the Affected System.

16. GENERAL REQUIREMENTS FOR ALL INTERCONNECTIONS

1. The generator interconnection must satisfy Good Utility Practice and meet all applicable industry and North American Electric Reliability Corporation (NERC) - Western Electricity Coordinating Council (WECC) planning and operating standards, guidelines, and criteria including:
 - a. NERC Transmission System Planning Performance Requirements (TPL-001)
 - b. NERC Generator Frequency and Voltage Protective Relay Settings (PRC-024)

-
- c. WECC Power System Stabilizer Policy
 - d. WECC Generating Unit Model Validation Policy
 - e. WECC Automatic Voltage Regulators VAR-002
 - f. WECC System Operating Limits TOP-007
 - g. WECC Procedures for Regional Planning Project Review and Rating Transmission Facilities
 2. The generator interconnection must meet all applicable NV Energy planning, design, and operating requirements including NV Energy's RELIABILITY CRITERIA FOR TRANSMISSION SYSTEM PLANNING.
 3. The Interconnection Customer is responsible for all of its facilities up to the Point of Ownership, including construction of the Interconnection Customer Interconnection Facilities (ICIF) and the generator lead line, and additional costs identified below.
 4. Communications, SCADA, and real time metering are required for all generator interconnections. Redundant paths/channels may be required as determined in the Generator Interconnection Facilities Study. The Interconnection Customer is responsible for making arrangements for connectivity with the local telecommunications company. NV Energy owned communications, SCADA, and metering equipment installed at facilities owned by the Interconnection Customer must have adequate lightning protection provided by the Interconnection Customer.
 5. The Interconnection Customer's transmission line protection must be compatible with the Transmission Provider's primary and back up relays. Single Terminal Protection is required for interconnections with multiple generators; all generators must be arranged so that they are behind a single terminal when viewed from NV Energy's terminal. The interconnection should connect to the transmission system by means of a two-terminal line. Two high speed digital circuits between the Interconnection Customer's facilities and NV Energy's POI facilities are required for communication aided protection (eg: 2-channels in the Lead Line OPGW; or 2-channels of a microwave system).
 6. The Interconnection Customer is responsible for the electrical protection of its facilities, including the Interconnection Customer's generating and transmission facilities. The Interconnection Customer's generating facility step-up transformer must have an appropriate interrupting device installed on the high side of the step-up transformer.
 7. NV Energy may reduce, curtail, or disconnect the generating facility as a result of system reliability conditions.
 8. Energy storage systems, such as batteries, shall be charged by the generator(s) located at the plant site, when applicable.

If the battery interconnects under the OATT this wholesale resources' load cannot be served at retail. The resource will be responsible for finding and contracting with a wholesale energy provider and obtaining transmission service rights to serve the load of the battery.

9. Interconnection Customer must acquire all Federal, State, County, and Local land use and environmental permits and other authorizations required in order to build and operate the Generating Facility, and Interconnection Customer's Interconnection Facilities. Interconnection Customer must coordinate with Transmission Provider in obtaining all necessary permits for Transmission Provider's Interconnection Facilities, Network Upgrades and/or Distribution Upgrades needed to accommodate Interconnection Customer's generator interconnection.
10. Site selection for NV Energy owned substations and facilities, whether on private or public land, must be coordinated with and approved by NV Energy. This coordination is critical to ensure that the site location meets NV Energy's needs for size, access, communication paths, stable soils, terrain, drainage, and other technical considerations. Failure to do so may cause significant delays in the permitting process.
11. The Interconnection Customer is responsible for all other requirements as determined in the Interconnection Facilities Study.
12. NV Energy requires trip control for each phase of a multi-phase generator interconnection.
13. Throughout the region, utilities have noticed harmonic distortions being created by some renewable generation projects. No studies have been performed to pre-determine if a project will create harmonic, but after the fact evaluations are often performed to evaluate the performance of the generation projects. If harmonics are found to be created by this project and/or injected to the transmission system in excess of industry standards, the project will be required to resolve the concern to the satisfaction of NV Energy.

17. STUDY METHODOLOGY

The purpose of the Interconnection System Impact Study is to identify generation interconnection requirements and transmission system enhancements that would be necessary to accommodate the generation interconnection without Adverse System Impacts.

NV Energy primarily uses the General Electric Positive Sequence Load Flow (GE-PSLF) program under a contract with the Western Electricity Coordinating Council (WECC) to conduct steady state power flow and transient stability analyses for Interconnection System Impact Studies. A “Pre-Interconnection Base Case(s)” that represents stressed/constrained conditions on NV Energy’s transmission system is created by modifying either an approved “WECC base case”⁶ or an “existing transmission planning study” that was previously created from an approved WECC base case. A Post-Interconnection Case is created from the Pre-Interconnection Base Case by modeling the new generator interconnections and re-dispatching NV Energy generators.

Pre-Interconnection and post-Interconnection studies are both conducted. Pre-Interconnection studies are conducted to create benchmark results. NV Energy compares the pre-Interconnection and post-Interconnection study results to the applicable NERC reliability criteria, WECC reliability criteria, and NV ENERGY’s TRANSMISSION SYSTEM PLANNING RELIABILITY CRITERIA to determine potential Adverse System Impacts. Mitigation such as system improvements, system modifications, or operating restrictions is proposed to address any potential adverse impacts.

Transmission Planning Engineers evaluate the reliability performance of the Pre-Interconnection Base Case and Post-Interconnection Case(s) with power flow “no contingency” and “contingency” analysis. Contingency analysis is conducted by modeling outages on NV Energy’s and surrounding transmission systems to document any thermal overloads, voltage violations, system constraints, or other Adverse System Impacts. When simulating outages or post-transient conditions, actions are limited to automatic devices, and no manual action is to be assumed (eg: phase shifters do not operate; SVDs, LTCs, voltage regulators, automatically switched shunt reactors/capacitors are allowed to operate).⁷

When an Energy Storage System is assessed, it may be simulated as both a load to simulate charging and as a generator to simulate discharging of the Energy Storage system.

Analysis is done in accordance with applicable NERC transmission planning standards that describe the required tests and limits needed to demonstrate reliability under various conditions (refer to NERC TPL standards).

⁶ WECC base cases represent a regional snapshot of transmission system performance for the given season and WECC specified conditions, and *usually do not represent a specific stressed/constrained condition on NV Energy’s transmission system*. The Pre-Interconnection Base Case(s) is created to address potential impacts to NV Energy’s transmission system under stressed/constrained conditions on NV Energy’s transmission system.

⁷ When solving GE-PSLF power flow cases under contingency (or outage) conditions, one evaluation must be performed with “Automatic phase shifter adjustment” and “Area interchange control” turned off.

Additional engineering studies, including Transient/Stability, Voltage Stability, Reactive Margin, Fault Duty, Switching Studies, Overvoltage Analysis⁸, and/or Sub-Synchronous Resonance (SSR)⁹ are performed as required.

⁸ Commonly referred to as: Electromagnetic Transients Program (EMTP).

⁹ SSR studies may be required to be performed by the Interconnection Customer and the study results provided to NV Energy.

OPEN ACCESS TRANSMISSION TARIFF TERMS

The following terms as may be used in this document have the meaning ascribed to them in the Open Access Transmission Tariff (additional OATT defined terms may be included in this document):

ADVERSE SYSTEM IMPACT
AFFECTED SYSTEM
AFFECTED SYSTEM OPERATOR
BASE CASE
DISTRIBUTION UPGRADES
ENERGY RESOURCE INTERCONNECTION SERVICE
GENERATING FACILITY CAPACITY
GOOD UTILITY PRACTICE
INTERCONNECTION CUSTOMER
INTERCONNECTION CUSTOMER'S INTERCONNECTION FACILITIES
INTERCONNECTION FACILITIES
INTERCONNECTION FACILITIES STUDY
INTERCONNECTION FEASIBILITY STUDY
INTERCONNECTION SYSTEM IMPACT STUDY
LARGE GENERATING FACILITY
NETWORK RESOURCE INTERCONNECTION SERVICE
NETWORK UPGRADES
OPEN ACCESS TRANSMISSION TARIFF
POINT OF INTERCONNECTION (ALTERNATIVE POINT OF INTERCONNECTION)
TRANSMISSION PROVIDER
TRANSMISSION PROVIDER INTERCONNECTION FACILITIES
TRANSMISSION SERVICE AGREEMENT
TRANSMISSION SERVICE REQUEST

APPENDIX

Appendix A: One Line Diagram(s)

Appendix B: Geographic Map

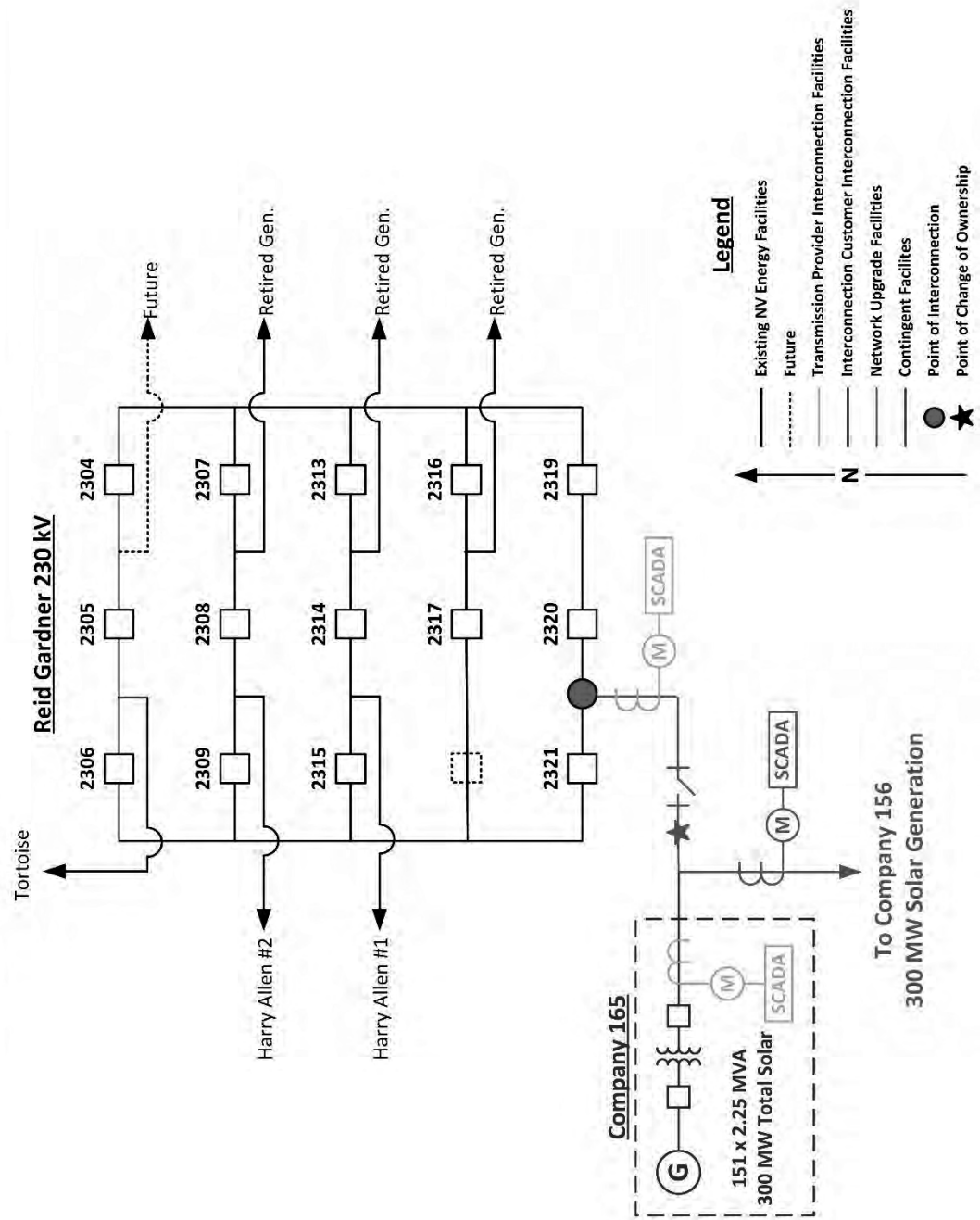
Appendix C: Power Flow Diagrams & Results

Appendix D: List of Disturbances, Stability Plots, & Results

APPENDIX A

ONE LINE DIAGRAM(S)

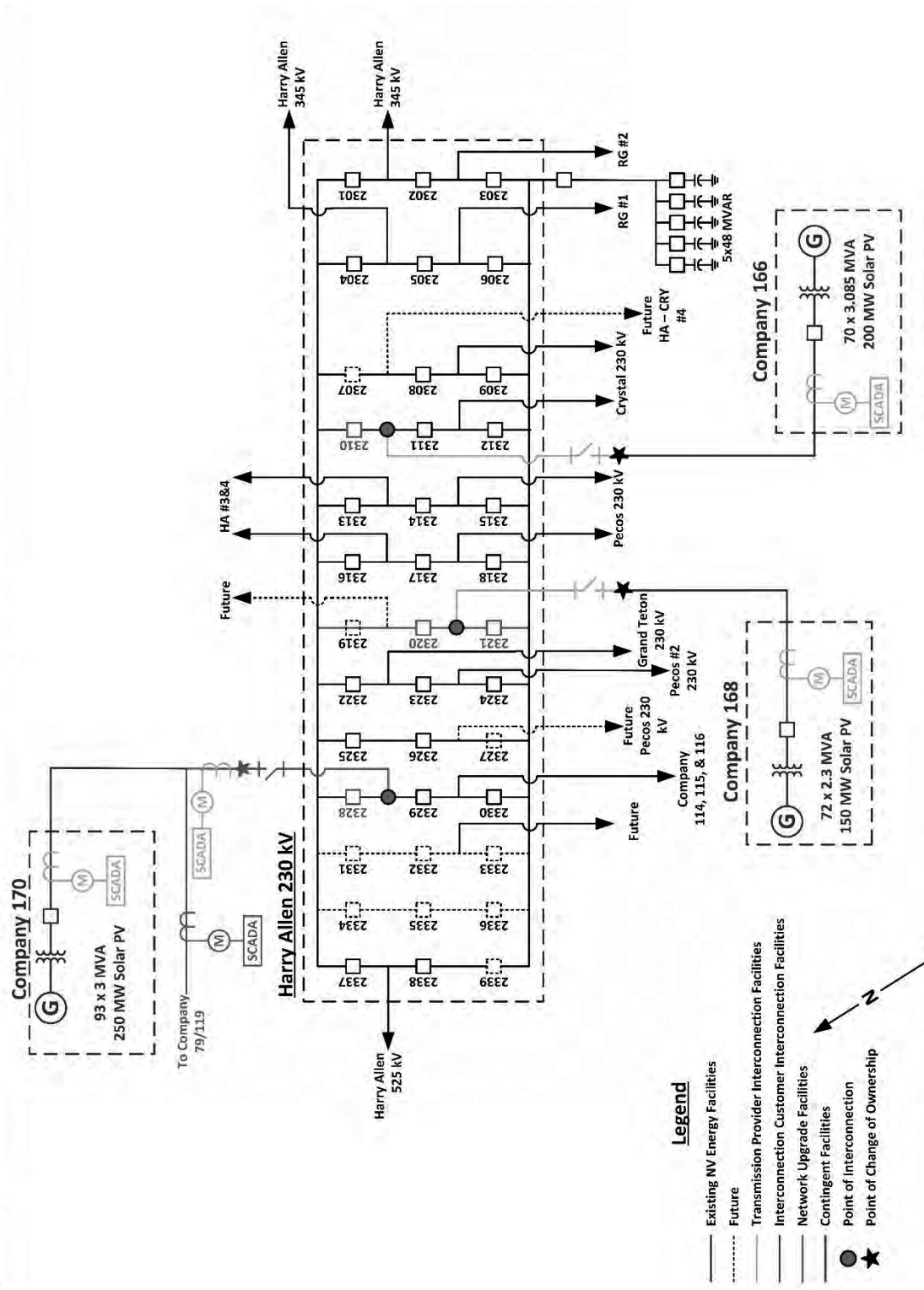
	Reid Gardner 230 kV Substation	1/28/2019
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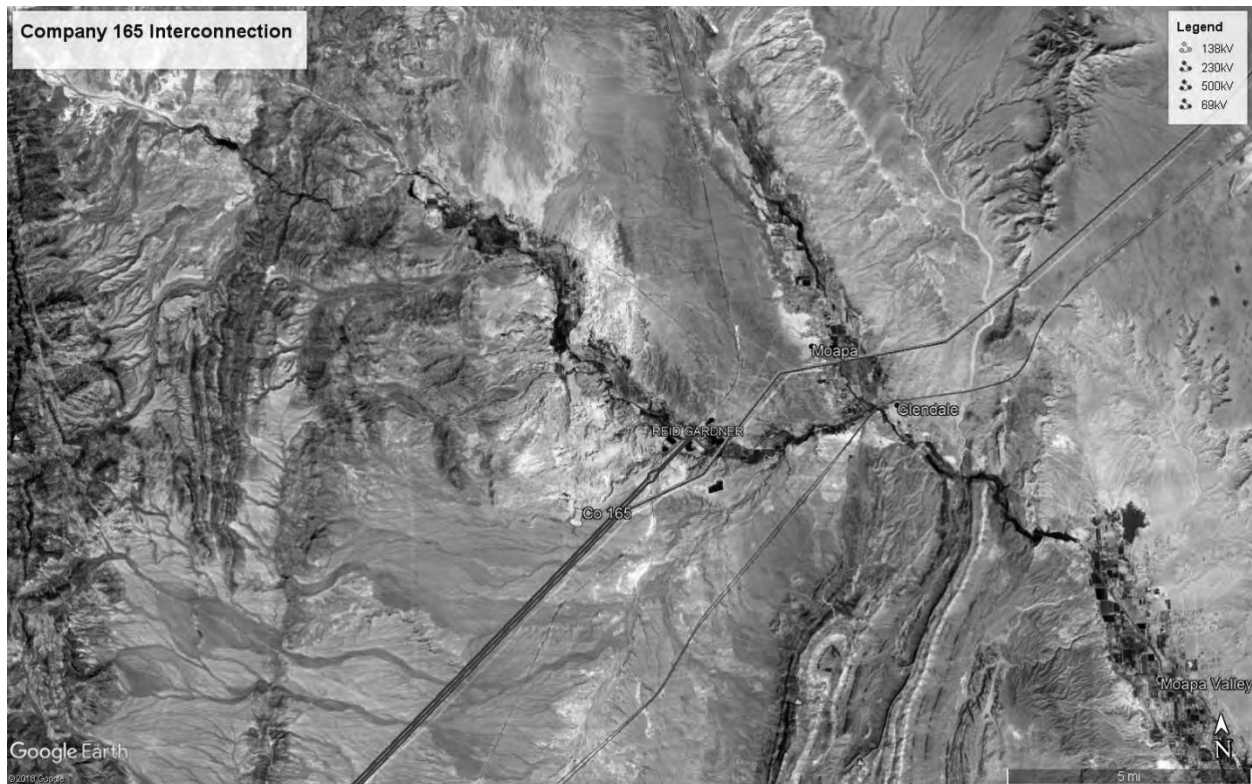
Harry Allen 230 kV Substation

5/30/2019



APPENDIX B

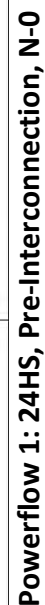
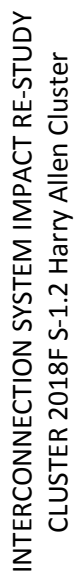
GEOGRAPHIC MAPS

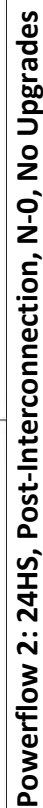




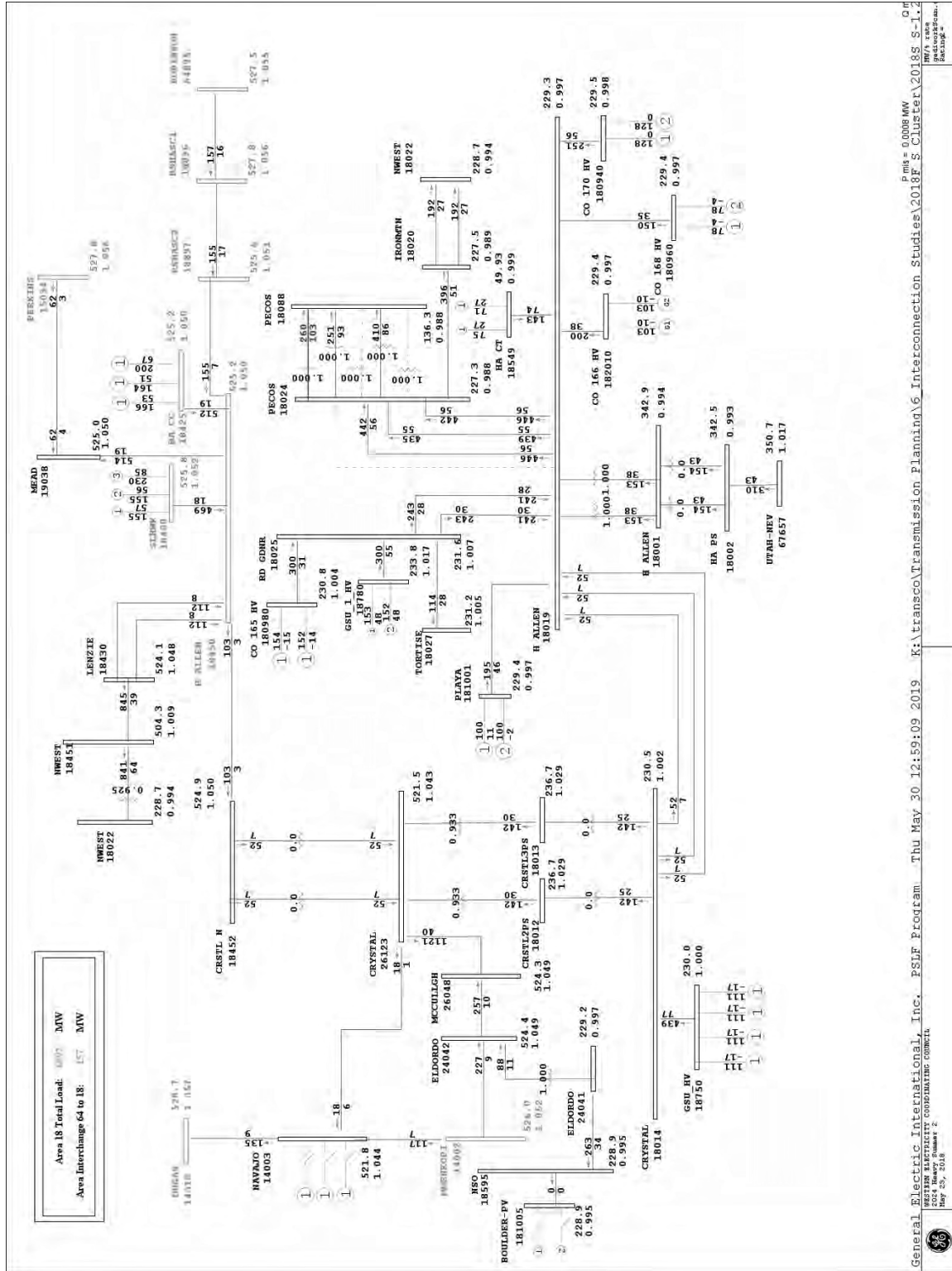
APPENDIX C

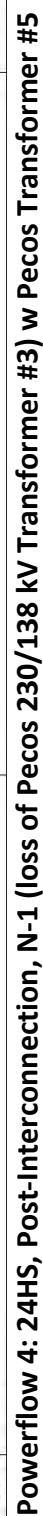
POWER FLOW DIAGRAMS AND RESULTS





INTERCONNECTION SYSTEM IMPACT RE-STUDY CLUSTER 2018F S-1.2 Harry Allen Cluster





APPENDIX D

STABILITY PLOTS AND RESULTS

DYNAMIC DATA**GE PSLF ".dyd" Generator Data File**

(ELECTRONIC FILE AVAILABLE FOR VERIFICATION)

Company 165

regc_a 180985 "CO 165 G1 " 0.5500 "1 " : #1 mva=171.0 "lvplsw" 1.000000 "rrpwr" 1.40000
"brkpt" 0.900000 "zerox" 0.500000 "lvpl1" 1.0000 "vtmax" 1.1000 "lvpnt1" 0.050000 "lvpnt0"
0.01 "qmin" -1.000000 "accel" 1.0 "tg" 0.020000 "tfltr" 0.01000 "iqrmax" 20.00000 "iqrmin" -
20.00000 "xe" 0.0

reec_b 180985 "CO 165 G1 " 0.5500 "1 " : #1 "mvab" 0.0 "vdip" 0.900000 "vup" 1.1000 "trv"
0.01000 "dbd1" -0.1 "dbd2" 0.1 "kqv" 2.0000 "iqh1" 1.000 "iq11" -1.000 "vref0" 0.0 "tp" 0.01000
"qmax" 0.6000 "qmin" -0.6000 "vmax" 1.2000 "vmin" 0.800000 "kqp" 1.0000 "kqi" 1.00000
"kvp" 1.0000 "kvi" 1.00000 "tiq" 0.01000 "dpmax" 1.00000 "dpmin" -1.00000 "pmax" 1.000000
"pmin" -1.0 "imax" 1.000000 "tpord" 0.01000 "pfflag" 0.000000 "vflag" 1.000000 "qflag"
1.00000 "pqflag" 0.000000

repc_a 180985 "CO 165 G1 " 0.55000 "1 " 180980 "GSU_1_HV " 230.0000 : #99 "mvab" 0.0
"tfltr" 0.02 "kp" 18.00 "ki" 5.00 "tft" 0.00 "tfv" 0.05 "refflg" 1.00 "vfrz" 0.00 "rc" 0.00 "xc"
0.00 "kc" 0.025 "vcmpflg" 0.00 "emax" 0.50 "emin" -0.50 "dbd" 0.04 "qmax" 0.575
"qmin" -0.575 "kpg" 0.10 "kig" 0.05 "tp" 0.25 "fdbd1" 0.00 "fdbd2" 0.00 "femax"
99.00 "femin" -99.00 "pmax" 1.00 "pmin" 0.00 "tlag" 0.10 "ddn" 20.00 "dup" 20.00 "frqflg"
0.00 "outflag" 0.00

lhfrt 180985 "CO 165 G1 " 0.5500 "1 " : #9 "fref" 60.00 "dftrp1" 0.6 "dftrp2" 1.6 "dftrp3" 1.7
"dftrp4" -0.6 "dftrp5" -1.6 "dftrp6" -2.2 "dftrp7" -2.7 "dftrp8" -3.0 "dftrp9" 0.0 "dftrp10" 0.0
"dttrp1" 181.0 "dttrp2" 31.0 "dttrp3" 0.16 "dttrp4" 181.0 "dttrp5" 31.0 "dttrp6" 7.600 "dttrp7"
0.76 "dttrp8" 0.16 "dttrp9" 0.0 "dttrp10" 0.0

lhvrt 180985 "CO 165 G1 " 0.5500 "1 " : #8 "vref" 1.00 "dvtrp1" 1.20 "dvtrp2" 1.175 "dvtrp3"
1.15 "dvtrp4" 1.10 "dvtrp5" -0.55 "dvtrp6" -0.35 "dvtrp7" -0.25 "dvtrp8" -0.1 "dvtrp9" 0.00
"dvtrp10" 0.00 "dttrp1" 0.16 "dttrp2" 0.210 "dttrp3" 0.51 "dttrp4" 1.10 "dttrp5" 0.16 "dttrp6"
0.31 "dttrp7" 2.100 "dttrp8" 3.10 "dttrp9" 0.00 "dttrp10" 0.00

regc_a 180987 "CO 165 B1 " 0.5500 "1 " : #9 mva=171.0 "lvplsw" 1.000000 "rrpwr" 1.4000
"brkpt" 0.900000 "zerox" 0.500000 "lvpl1" 1.1000 "vtmax" 1.1000 "lvpnt1" 0.050000 "lvpnt0"
0.010000 "qmin" -1.000000 "accel" 1.0000 "tg" 0.020000 "tfltr" 0.016668 "iqrmax" 20.0000
"iqrmin" -20.0000 "xe" 0.0

reec_c 180987 "CO 165 B1 " 0.5500 "1 " : #1 "mvab" 0.0 "vdip" 0.900000 "vup" 1.1000 "trv"
0.016668 "dbd1" -0.100000 "dbd2" 0.100000 "kqv" 2.0000 "iqh1" 1.000000 "iq11" -1.000000
"vref0" 0.000000 "SOCini" 0.500000 "SOCmax" 0.800000 "SOCmin" 0.200000 "T" 14400.0 "tp"
0.016668 "qmax" 0.600000 "qmin" -0.600000 "vmax" 1.1500 "vmin" 0.850000 "kqp" 1.000000

"kqi" 1.000000 "kvp" 1.000000 "kvi" 1.000000 "tiq" 0.016668 "dpmax" 1.000000 "dpmin" -
1.000000 "pmax" 1.000000 "pmin" -1.0 "imax" 1.000000 "tpord" 0.016668 "pfflag" 0.0 "vflag"
1.000000 "qflag" 1.0 "pqflag" 0.0 "vq1" 0.0 "iq1" 1.000000 "vq2" 0.500000 "iq2" 1.000000
"vq3" 1.000000 "iq3" 1.000000 "vq4" 1.5000 "iq4" 1.000000 "vp1" 0.0 "ip1" 1.000000 "vp2"
0.500000 "ip2" 1.000000 "vp3" 1.000000 "ip3" 1.000000 "vp4" 1.5000 "ip4" 1.000000

repc_a 180987 "CO 165 B1 " 0.55000 "1 " 180980 "GSU_1_HV " 230.0000 : #99 "mvab" 0.0
"tfltr" 0.02 "kp" 18.00 "ki" 5.00 "tft" 0.00 "tfv" 0.05 "refflg" 1.00 "vfrz" 0.00 "rc" 0.00 "xc"
0.00 "kc" 0.025 "vcmpflg" 0.00 "emax" 0.50 "emin" -0.50 "dbd" 0.04 "qmax" 0.575
"qmin" -0.575 "kpg" 0.10 "kig" 0.05 "tp" 0.25 "fdbd1" 0.00 "fdbd2" 0.00 "femax"
99.00 "femin" -99.00 "pmax" 1.00 "pmin" -1.00 "tlag" 0.10 "ddn" 20.00 "dup" 20.00 "frqflg"
0.00 "outflag" 0.00

lhvrt 180987 "CO 165 B1 " 0.55000 "1 " : #9 "vref" 1.00 "dvtrp1" 1.20 "dvtrp2" 1.175 "dvtrp3"
1.15 "dvtrp4" 1.10 "dvtrp5" -0.55 "dvtrp6" -0.35 "dvtrp7" -0.25 "dvtrp8" -0.1 "dvtrp9" 0.00
"dvtrp10" 0.00 "dttrp1" 0.16 "dttrp2" 0.210 "dttrp3" 0.51 "dttrp4" 1.10 "dttrp5" 0.16 "dttrp6"
0.31 "dttrp7" 2.100 "dttrp8" 3.10 "dttrp9" 0.00 "dttrp10" 0.00

lhfrt 180987 "CO 165 B1 " 0.55000 "1 " : #9 "fref" 60.00 "dftrp1" 0.6 "dftrp2" 1.6 "dftrp3" 1.7
"dftrp4" -0.6 "dftrp5" -1.6 "dftrp6" -2.2 "dftrp7" -2.7 "dftrp8" -3.0 "dftrp9" 0.0 "dftrp10" 0.0
"dttrp1" 181.0 "dttrp2" 31.0 "dttrp3" 0.16 "dttrp4" 181.0 "dttrp5" 31.0 "dttrp6" 7.600 "dttrp7"
0.76 "dttrp8" 0.16 "dttrp9" 0.0 "dttrp10" 0.0

regc_a 180992 "CO 165 G2 " 0.5500 "1 " : #1 mva=168.75 "lvplsw" 1.000000 "rrpwr" 1.40000
"brkpt" 0.900000 "zerox" 0.500000 "lvpl1" 1.0000 "vtmax" 1.1000 "lvpnt1" 0.050000 "lvpnt0"
0.01 "qmin" -1.000000 "accel" 1.0 "tg" 0.020000 "tfltr" 0.01000 "iqrmax" 20.00000 "iqrmin" -
20.00000 "xe" 0.0

reec_b 180992 "CO 165 G2 " 0.5500 "1 " : #1 "mvab" 0.0 "vdip" 0.900000 "vup" 1.1000 "trv"
0.01000 "dbd1" -0.1 "dbd2" 0.1 "kqv" 2.0000 "iqh1" 1.000 "iq1" -1.000 "vref0" 0.0 "tp" 0.01000
"qmax" 0.6000 "qmin" -0.6000 "vmax" 1.2000 "vmin" 0.800000 "kqp" 1.0000 "kqi" 1.00000
"kvp" 1.0000 "kvi" 1.00000 "tiq" 0.01000 "dpmax" 1.00000 "dpmin" -1.00000 "pmax" 1.000000
"pmin" -1.0 "imax" 1.000000 "tpord" 0.01000 "pfflag" 0.000000 "vflag" 1.000000 "qflag"
1.00000 "pqflag" 0.000000

repc_a 180992 "CO 165 G2 " 0.55000 "1 " 180980 "GSU_1_HV " 230.0000 : #99 "mvab" 0.0
"tfltr" 0.02 "kp" 18.00 "ki" 5.00 "tft" 0.00 "tfv" 0.05 "refflg" 1.00 "vfrz" 0.00 "rc" 0.00 "xc"
0.00 "kc" 0.025 "vcmpflg" 0.00 "emax" 0.50 "emin" -0.50 "dbd" 0.04 "qmax" 0.575
"qmin" -0.575 "kpg" 0.10 "kig" 0.05 "tp" 0.25 "fdbd1" 0.00 "fdbd2" 0.00 "femax"
99.00 "femin" -99.00 "pmax" 1.00 "pmin" 0.00 "tlag" 0.10 "ddn" 20.00 "dup" 20.00 "frqflg"
0.00 "outflag" 0.00

lhfrt 180992 "CO 165 G2 " 0.5500 "1 " : #9 "fref" 60.00 "dftrp1" 0.6 "dftrp2" 1.6 "dftrp3" 1.7
"dftrp4" -0.6 "dftrp5" -1.6 "dftrp6" -2.2 "dftrp7" -2.7 "dftrp8" -3.0 "dftrp9" 0.0 "dftrp10" 0.0

"dtrp1" 181.0 "dtrp2" 31.0 "dtrp3" 0.16 "dtrp4" 181.0 "dtrp5" 31.0 "dtrp6" 7.600 "dtrp7"
0.76 "dtrp8" 0.16 "dtrp9" 0.0 "dtrp10" 0.0

lhvrt 180992 "CO 165 G2 " 0.5500 "1 " : #8 "vref" 1.00 "dvtrp1" 1.20 "dvtrp2" 1.175 "dvtrp3"
1.15 "dvtrp4" 1.10 "dvtrp5" -0.55 "dvtrp6" -0.35 "dvtrp7" -0.25 "dvtrp8" -0.1 "dvtrp9" 0.00
"dvtrp10" 0.00 "dtrp1" 0.16 "dtrp2" 0.210 "dtrp3" 0.51 "dtrp4" 1.10 "dtrp5" 0.16 "dtrp6"
0.31 "dtrp7" 2.100 "dtrp8" 3.10 "dtrp9" 0.00 "dtrp10" 0.00

regc_a 180994 "CO 165 B2 " 0.5500 "1 " : #9 mva=168.75 "lvplsw" 1.000000 "rrpwr" 1.4000
"brkpt" 0.900000 "zerx" 0.500000 "lvpl1" 1.1000 "vtmax" 1.1000 "lvnt1" 0.050000 "lvnt0"
0.010000 "qmin" -1.000000 "accel" 1.0000 "tg" 0.020000 "tfltr" 0.016668 "iqrmax" 20.0000
"iqrmin" -20.0000 "xe" 0.0

reec_c 180994 "CO 165 B2 " 0.5500 "1 " : #1 "mvab" 0.0 "vdip" 0.900000 "vup" 1.1000 "trv"
0.016668 "dbd1" -0.100000 "dbd2" 0.100000 "kqv" 2.0000 "iqh1" 1.000000 "iq1" -1.000000
"vref0" 0.000000 "SOCini" 0.500000 "SOCmax" 0.800000 "SOCmin" 0.200000 "T" 14400.0 "tp"
0.016668 "qmax" 0.600000 "qmin" -0.600000 "vmax" 1.1500 "vmin" 0.850000 "kqp" 1.000000
"kqi" 1.000000 "kvp" 1.000000 "kvi" 1.000000 "tiq" 0.016668 "dpmax" 1.000000 "dpmin" -
1.000000 "pmax" 1.000000 "pmin" -1.0 "imax" 1.000000 "tpord" 0.016668 "pfflag" 0.0 "vflag"
1.000000 "qflag" 1.0 "pqflag" 0.0 "vq1" 0.0 "iq1" 1.000000 "vq2" 0.500000 "iq2" 1.000000
"vq3" 1.000000 "iq3" 1.000000 "vq4" 1.5000 "iq4" 1.000000 "vp1" 0.0 "ip1" 1.000000 "vp2"
0.500000 "ip2" 1.000000 "vp3" 1.000000 "ip3" 1.000000 "vp4" 1.5000 "ip4" 1.000000

repc_a 180994 "CO 165 B2 " 0.55000 "1 " 180980 "GSU_1_HV " 230.0000 : #99 "mvab" 0.0
"tfltr" 0.02 "kp" 18.00 "ki" 5.00 "tft" 0.00 "tfv" 0.05 "refflg" 1.00 "vfrz" 0.00 "rc" 0.00 "xc"
0.00 "kc" 0.025 "vcmpflg" 0.00 "emax" 0.50 "emin" -0.50 "dbd" 0.04 "qmax" 0.575
"qmin" -0.575 "kpg" 0.10 "kig" 0.05 "tp" 0.25 "fdbd1" 0.00 "fdbd2" 0.00 "femax"
99.00 "femin" -99.00 "pmax" 1.00 "pmin" -1.00 "tlag" 0.10 "ddn" 20.00 "dup" 20.00 "frqflg"
0.00 "outflag" 0.00

lhvrt 180994 "CO 165 B2 " 0.55000 "1 " : #9 "vref" 1.00 "dvtrp1" 1.20 "dvtrp2" 1.175 "dvtrp3"
1.15 "dvtrp4" 1.10 "dvtrp5" -0.55 "dvtrp6" -0.35 "dvtrp7" -0.25 "dvtrp8" -0.1 "dvtrp9" 0.00
"dvtrp10" 0.00 "dtrp1" 0.16 "dtrp2" 0.210 "dtrp3" 0.51 "dtrp4" 1.10 "dtrp5" 0.16 "dtrp6"
0.31 "dtrp7" 2.100 "dtrp8" 3.10 "dtrp9" 0.00 "dtrp10" 0.00

lhvrt 180994 "CO 165 B2 " 0.55000 "1 " : #9 "fref" 60.00 "dftrp1" 0.6 "dftrp2" 1.6 "dftrp3" 1.7
"dftrp4" -0.6 "dftrp5" -1.6 "dftrp6" -2.2 "dftrp7" -2.7 "dftrp8" -3.0 "dftrp9" 0.0 "dftrp10" 0.0
"dtrp1" 181.0 "dtrp2" 31.0 "dtrp3" 0.16 "dtrp4" 181.0 "dtrp5" 31.0 "dtrp6" 7.600 "dtrp7"
0.76 "dtrp8" 0.16 "dtrp9" 0.0 "dtrp10" 0.0

Company 166

regc_a 182013 "CO 166 G1 " 0.630 "G1" : #99 mvab=107.99 "lvplsw" 1.00 "rrpwr" 1.00 "brkpt" 0.85 "zerox" 0.80 "lvpl1" 1.00 "vtmax" 2.00 "lvnt1" 1.00 "lvnt0" 0.00 "qmin" -1.00 "accel" 0.00 "tg" 0.10 "tfltr" 0.02 "iqrmax" 999.00 "iqrmin" -999.00 "xe" 0.0

reec_b 182013 "CO 166 G1 " 0.630 "G1" : #99 "mvab" 0.0 "vdip" 0.8500 "vup" 1.1500 "trv" 0.0200 "dbd1" -0.0500 "dbd2" 0.0500 "kqv" 5.0000 "iqh1" 1.0000 "iq1" -1.0000 "vref0" 0.0000 "tp" 0.0200 "qmax" 0.3123 "qmin" -0.3123 "vmax" 1.1000 "vmin" 0.9000 "kqp" 2.0000 "kqi" 0.0010 "kvp" 1.0000 "kvi" 6.0000 "tiq" 0.0500 "dpmax" 999.00 "dpmin" -999.00 "pmax" 1.0000 "pmin" 0.0000 "imax" 1.0400 "tpord" 0.1000 "pflag" 0.0000 "vflag" 1.0000 "qflag" 0.0000 "pqflag" 0.0000

repc_a 182013 "CO 166 G1 " 0.630 "G1" 182010 "SUT1" 230.00 "G1" 1 : #99 "mvab" 0 "tfltr" 0.0200 "kp" 0.5000 "ki" 1.0000 "tft" 0.0000 "tfv" 0.0200 "refflg" 1.0000 "vfrz" 0.7000 "rc" 0.0000 "xc" 0.0000 "kc" 0.0500 "vcmpflg" 1.0000 "emax" 0.1000 "emin" -0.1000 "dbd" 0.0000 "qmax" 0.3123 "qmin" -0.3123 "kpg" 0.5000 "kig" 2.0000 "tp" 0.2500 "fdbd1" -0.0006 "fdbd2" 0.0006 "femax" 999.0000 "femin" -999.0000 "pmax" 1.0000 "pmin" 0.0000 "tlag" 0.1500 "ddn" 20.0000 "dup" 20.0000 "frqflg" 1.0000 "outflag" 0.0

lhvrt 182013 "CO 166 G1 " 0.630 "G1" : #9 "vref" 1.00 "dvtrp1" 0.40 "dvtrp2" 0.15 "dvtrp3" -0.50 "dvtrp4" -0.90 "dvtrp5" 0.00 "dvtrp6" 0.00 "dvtrp7" 0.00 "dvtrp8" 0.00 "dvtrp9" 0.00 "dvtrp10" 0.00 "dttrp1" 0.00 "dttrp2" 3.00 "dttrp3" 1.90 "dttrp4" 0.60 "dttrp5" 0.00 "dttrp6" 0.00 "dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

lhfrt 182013 "CO 166 G1 " 0.630 "G1" : #9 "fref" 60.00 "dftrp1" 3.00 "dftrp2" -13.0 "dftrp3" 0.00 "dftrp4" 0.00 "dftrp5" 0.00 "dftrp6" 0.00 "dftrp7" 0.00 "dftrp8" 0.00 "dftrp9" 0.00 "dftrp10" 0.00 "dttrp1" 100.00 "dttrp2" 100.00 "dttrp3" 0.00 "dttrp4" 0.00 "dttrp5" 0.00 "dttrp6" 0.00 "dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

regc_a 182015 "CO 166 G2 " 0.630 "G2" : #99 mvab=107.99 "lvplsw" 1.00 "rrpwr" 1.00 "brkpt" 0.85 "zerox" 0.80 "lvpl1" 1.00 "vtmax" 2.00 "lvnt1" 1.00 "lvnt0" 0.00 "qmin" -1.00 "accel" 0.00 "tg" 0.10 "tfltr" 0.02 "iqrmax" 999.00 "iqrmin" -999.00 "xe" 0.0

reec_b 182015 "CO 166 G2 " 0.630 "G2" : #99 "mvab" 0.0 "vdip" 0.8500 "vup" 1.1500 "trv" 0.0200 "dbd1" -0.0500 "dbd2" 0.0500 "kqv" 5.0000 "iqh1" 1.0000 "iq1" -1.0000 "vref0" 0.0000 "tp" 0.0200 "qmax" 0.3123 "qmin" -0.3123 "vmax" 1.1000 "vmin" 0.9000 "kqp" 2.0000 "kqi" 0.0010 "kvp" 1.0000 "kvi" 6.0000 "tiq" 0.0500 "dpmax" 999.00 "dpmin" -999.00 "pmax" 1.0000 "pmin" 0.0000 "imax" 1.0400 "tpord" 0.1000 "pflag" 0.0000 "vflag" 1.0000 "qflag" 0.0000 "pqflag" 0.0000

repc_a 182015 "CO 166 G2 " 0.630 "G2" 182010 "SUT1" 230.00 "G2" 1 : #99 "mvab" 0 "tfltr" 0.0200 "kp" 0.5000 "ki" 1.0000 "tft" 0.0000 "tfv" 0.0200 "refflg" 1.0000 "vfrz" 0.7000 "rc" 0.0000 "xc" 0.0000 "kc" 0.0500 "vcmpflg" 1.0000 "emax" 0.1000 "emin" -0.1000 "dbd" 0.0000 "qmax" 0.3123 "qmin" -0.3123 "kpg" 0.5000 "kig" 2.0000 "tp" 0.2500 "fdbd1" -0.0006 "fdbd2"

0.0006 "femax" 999.0000 "femin" -999.0000 "pmax" 1.0000 "pmin" 0.0000 "tlag" 0.1500 "ddn"
20.0000 "dup" 20.0000 "frqflg" 1.0000 "outflag" 0.0

lhvrt 182015 "CO 166 G2 " 0.630 "G2" : #9 "vref" 1.00 "dvtrp1" 0.40 "dvtrp2" 0.15 "dvtrp3" -
0.50 "dvtrp4" -0.90 "dvtrp5" 0.00 "dvtrp6" 0.00 "dvtrp7" 0.00 "dvtrp8" 0.00 "dvtrp9" 0.00
"dvtrp10" 0.00 "dttrp1" 0.00 "dttrp2" 3.00 "dttrp3" 1.90 "dttrp4" 0.60 "dttrp5" 0.00 "dttrp6"
0.00 "dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

lhfrt 182015 "CO 166 G2 " 0.630 "G2" : #9 "fref" 60.00 "dftrp1" 3.00 "dftrp2" -13.0 "dftrp3" 0.00
"dftrp4" 0.00 "dftrp5" 0.00 "dftrp6" 0.00 "dftrp7" 0.00 "dftrp8" 0.00 "dftrp9" 0.00 "dftrp10"
0.00 "dttrp1" 100.00 "dttrp2" 100.00 "dttrp3" 0.00 "dttrp4" 0.00 "dttrp5" 0.00 "dttrp6" 0.00
"dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

regc_a 182017 "CO 166 B1 " 0.630 "S1" : #99 mvab=55.536 "lvplsw" 1.00 "rrpwr" 1.00 "brkpt"
0.85 "zerex" 0.80 "lvpl1" 1.00 "vtmax" 2.00 "lvplnt1" 1.00 "lvplnt0" 0.00 "qmin" -1.00 "accel"
0.00 "tg" 0.10 "tfltr" 0.02 "iqrmax" 999.00 "iqrmin" -999.00 "xe" 0.0

reec_c 182017 "CO 166 B1 " 0.630 "S1" : #99 "mvab" 0.0 "vdip" 0.8500 "vup" 1.1500 "trv"
0.0200 "dbd1" -0.0500 "dbd2" 0.0500 "kqv" 5.0000 "iqh1" 1.0000 "iq1" -1.0000 "vref0" 0.0000
"SOCini" 1.0 "SOCmax" 1.0 "SOCmin" 0.0 "T" 14400 "tp" 0.0200 "qmax" 0.3920 "qmin" -0.3920
"vmax" 1.1000 "vmin" 0.9000 "kqp" 2.0000 "kqi" 0.0010 "kvp" 1.0000 "kvi" 6.0000 "tiq" 0.0500
"dpmax" 999.00 "dpmin" -999.00 "pmax" 1.0000 "pmin" -1.00000 "imax" 1.0400 "tpord"
0.1000 "pfflag" 0.0000 "vflag" 1.0000 "qflag" 0.0000 "pqflag" 0.0000 "vq1" 0 "iq1"
1.00 "vq2" 2 "iq2" 1.00 "vq3" 0 "iq3" 0 "vq4" 0 "iq4" 0
"vp1" 0 "ip1" 1.00 "vp2" 2 "ip2" 1.00 "vp3" 0 "ip3" 0 "vp4"
0 "ip4" 0

repc_a 182017 "CO 166 B1 " 0.630 "S1" 182010 "SUT1" 230.00 "S1" 1 : #99 "mvab" 0 "tfltr"
0.0200 "kp" 0.5000 "ki" 1.0000 "tft" 0.0000 "tfv" 0.0200 "refflg" 1.0000 "vfrz" 0.7000 "rc"
0.0000 "xc" 0.0000 "kc" 0.0500 "vcmpflg" 1.0000 "emax" 0.1000 "emin" -0.1000 "dbd" 0.0000
"qmax" 0.3920 "qmin" -0.3920 "kpg" 0.5000 "kig" 2.0000 "tp" 0.2500 "fdbd1" -0.0006 "fdbd2"
0.0006 "femax" 999.0000 "femin" -999.0000 "pmax" 1.0000 "pmin" -1.0000 "tlag" 0.1500 "ddn"
20.0000 "dup" 20.0000 "frqflg" 1.0000 "outflag" 0.0

lhvrt 182017 "CO 166 B1 " 0.630 "S1" : #9 "vref" 1.00 "dvtrp1" 0.40 "dvtrp2" 0.15 "dvtrp3" -0.50
"dvtrp4" -0.90 "dvtrp5" 0.00 "dvtrp6" 0.00 "dvtrp7" 0.00 "dvtrp8" 0.00 "dvtrp9" 0.00 "dvtrp10"
0.00 "dttrp1" 0.00 "dttrp2" 3.00 "dttrp3" 1.90 "dttrp4" 0.60 "dttrp5" 0.00 "dttrp6" 0.00 "dttrp7"
0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

lhfrt 182017 "CO 166 B1 " 0.630 "S1" : #9 "fref" 60.00 "dftrp1" 3.00 "dftrp2" -13.0 "dftrp3" 0.00
"dftrp4" 0.00 "dftrp5" 0.00 "dftrp6" 0.00 "dftrp7" 0.00 "dftrp8" 0.00 "dftrp9" 0.00 "dftrp10"
0.00 "dttrp1" 100.00 "dttrp2" 100.00 "dttrp3" 0.00 "dttrp4" 0.00 "dttrp5" 0.00 "dttrp6" 0.00
"dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

Company 168

regc_a 180966 "CO 168 G1" 0.60 "1" : #99 mva=82.80 "lvplsw" 1.0 "rrpwr" 10.0 "brkpt" 0.9
"zerox" 0.4 "lvpl1" 1.22 "vtmax" 1.2 "lvnt1" 0.8 "lvnt0" 0.4 "qmin" -1.3 "accel" 0.7 "tg" 0.02
"tfltr" 0.02 "iqrmax" 100. "iqrmin" -100. "xe" 0.0

reec_b 180966 "CO 168 G1" 0.60 "1" : #99 "mvab" 0.0 "vdip" -99. "vup" 99.0 "trv" 0.02 "dbd1"
-0.05 "dbd2" 0.05 "kqv" 0.0 "iqh1" 1.25 "iq1" -1.05 "vref0" 0.0 "tp" 0.05 "qmax" 0.40 "qmin" -
0.40 "vmax" 1.10 "vmin" 0.90 "kqp" 1.00 "kqi" 0.0 "kvp" 1.00 "kvi" 0.00 "tiq" 0.02 "dpmax" 99.0
"dpmin" -99.0 "pmax" 1.0 "pmin" 0.0 "imax" 1.00 "tpord" 0.02 "pfflag" 0.0 "vflag" 1.0 "qflag"
1.0 "pqflag" 1.0

repc_a 180966 "CO 168 G1" 0.60 "1" 180960 "CO 168 HV" 230.0 !! 180960 "CO 168 HV"
230.0 18019 "H ALLEN" 230.0 "1" : #99 "mvab" 0. "tfltr" 0.2 "kp" 18. "ki" 5. "tft" 0. "tfv"
0.180966 "refflg" 1. "vfrz" -1. "rc" 0. "xc" 0. "kc" 0. "vcmpflg" 1. "emax" 999. "emin" -999. "dbd"
0. "qmax" 0.44 "qmin" -0.44 "kpg" 0.1 "kig" 0.5 "tp" 0.25 "fdbd1" -0.0006 "fdbd2" 0.0006
"femax" 999. "femin" -999. "pmax" 999. "pmin" -999. "tlag" 0.1 "ddn" 20. "dup" 20. "frqflg" 1
"outflag" 0 "puflag" 0

lhvrt 180966 "CO 168 G1" 0.60 "1" 180960 "CO 168 HV" 230.0 : #9 "vref" 1.00 "dvtrp1" -1.0
"dvtrp2" -0.57 "dvtrp3" -0.37 "dvtrp4" -0.27 "dvtrp5" -0.11 "dvtrp6" 0.24 "dvtrp7" 0.20
"dvtrp8" 0.18 "dvtrp9" 0.11 "dvtrp10" 0.00 "dttrp1" 0.20 "dttrp2" 0.40 "dttrp3" 2.10 "dttrp4"
3.10 "dttrp5" 100.0 "dttrp6" 0.25 "dttrp7" 0.60 "dttrp8" 1.10 "dttrp9" 100.0 "dttrp10" 0.00

lhfrt 180966 "CO 168 G1" 0.60 "1" 180960 "CO 168 HV" 230.0 : #9 "fref" 60.0 "dftrp1" -3.00
"dftrp2" 2.00 "dftrp3" 0.00 "dftrp4" 0.00 "dftrp5" 0.00 "dftrp6" 0.00 "dftrp7" 0.0 "dftrp8" 0.0
"dftrp9" 0.0 "dftrp10" 0.00 "dttrp1" 0.20 "dttrp2" 0.20 "dttrp3" 0.00 "dttrp4" 0.00 "dttrp5" 0.00
"dttrp6" 0.00 "dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

regc_a 180967 "CO 168 G2" 0.60 "2" : #99 mva=82.80 "lvplsw" 1.0 "rrpwr" 10.0 "brkpt" 0.9
"zerox" 0.4 "lvpl1" 1.22 "vtmax" 1.2 "lvnt1" 0.8 "lvnt0" 0.4 "qmin" -1.3 "accel" 0.7 "tg" 0.02
"tfltr" 0.02 "iqrmax" 100. "iqrmin" -100. "xe" 0.0

reec_b 180967 "CO 168 G2" 0.60 "2" : #99 "mvab" 0.0 "vdip" -99. "vup" 99.0 "trv" 0.02 "dbd1"
-0.05 "dbd2" 0.05 "kqv" 0.0 "iqh1" 1.25 "iq1" -1.05 "vref0" 0.0 "tp" 0.05 "qmax" 0.40 "qmin" -
0.40 "vmax" 1.10 "vmin" 0.90 "kqp" 1.00 "kqi" 0.0 "kvp" 1.00 "kvi" 0.00 "tiq" 0.02 "dpmax" 99.0
"dpmin" -99.0 "pmax" 1.0 "pmin" 0.0 "imax" 1.00 "tpord" 0.02 "pfflag" 0.0 "vflag" 1.0 "qflag"
1.0 "pqflag" 1.0

repc_a 180967 "CO 168 G2" 0.60 "2" 180960 "CO 168 HV" 230.0 !! 180960 "CO 168 HV"
230.0 18019 "H ALLEN" 230.0 "1" : #99 "mvab" 0. "tfltr" 0.2 "kp" 18. "ki" 5. "tft" 0. "tfv"
0.180966 "refflg" 1. "vfrz" -1. "rc" 0. "xc" 0. "kc" 0. "vcmpflg" 1. "emax" 999. "emin" -999. "dbd"
0. "qmax" 0.44 "qmin" -0.44 "kpg" 0.1 "kig" 0.5 "tp" 0.25 "fdbd1" -0.0006 "fdbd2" 0.0006

"femax" 999. "femin" -999. "pmax" 999. "pmin" -999. "tlag" 0.1 "ddn" 20. "dup" 20. "frqflg" 1
"outflag" 0 "puflag" 0

lhvrt 180967 "CO 168 G2" 0.60 "2 " 180960 "CO 168 HV " 230.0 : #9 "vref" 1.00 "dvtrp1" -1.0
"dvtrp2" -0.57 "dvtrp3" -0.37 "dvtrp4" -0.27 "dvtrp5" -0.11 "dvtrp6" 0.24 "dvtrp7" 0.20
"dvtrp8" 0.18 "dvtrp9" 0.11 "dvtrp10" 0.00 "dttrp1" 0.20 "dttrp2" 0.40 "dttrp3" 2.10 "dttrp4"
3.10 "dttrp5" 100.0 "dttrp6" 0.25 "dttrp7" 0.60 "dttrp8" 1.10 "dttrp9" 100.0 "dttrp10" 0.00
lhfrt 180967 "CO 168 G2" 0.60 "2 " 180960 "CO 168 HV " 230.0 : #9 "fref" 60.0 "dftrp1" -3.00
"dftrp2" 2.00 "dftrp3" 0.00 "dftrp4" 0.00 "dftrp5" 0.00 "dftrp6" 0.00 "dftrp7" 0.0 "dftrp8" 0.0
"dftrp9" 0.0 "dftrp10" 0.00 "dttrp1" 0.20 "dttrp2" 0.20 "dttrp3" 0.00 "dttrp4" 0.00 "dttrp5" 0.00
"dttrp6" 0.00 "dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00
regc_a 180968 "CO 168 B1" 0.530 "1 " : #9 mvab=164.84 "lvplsw" 1. "rrpwr" 10.0 "brkpt" 0.9
"zerox" 0.4 "lvpl1" 1.22 "vtmax" 1.2 "lvnt1" 0.8 "lvnt0" 0.4 "qmin" -1.3 "accel" 0.7 "tg" 0.02
"tfltr" 0.02 "iqrmax" 999. "iqrmin" -999. "xe" 0

reec_c 180968 "CO 168 B1" 0.530 "1 " : #9 mvab=0 "vdip" -99 "vup" 99 "trv" 0.0 "dbd1" -0.05
"dbd2" 0.05 "kqv" 0 "iqh1" 1.05 "iq1" -1.05 "vref0" 0 "SOCini" 0.5 "SOCmax" 1
"SOCmin" 0.05 "T" 14400 m "tp" 0.05 "qmax" 0.62 "qmin" -0.62 "vmax" 1.1 "vmin" 0.5 "kqp"
0 "kqi" 0.1 "kvp" 0 "kvi" 120 "tiq" 0.02 "dpmax" 1 "dpmin" -1 "pmax" 1 "pmin" -1 "imax" 1.25
"tpord" 0.04 "pfflag" 0 "vflag" 1 "qflag" 1 "pqflag" 1 "vq1" 0 "iq1" 1.45 "vq2" 2 "iq2"
1.45 "vq3" 0 "iq3" 0 "vq4" 0 "iq4" 0 "vp1" 0 "ip1" 1.180966 "vp2" 2 "ip2" 1.180966 "vp3" 0 "ip3"
0 "vp4" 0 "ip4" 0

repc_a 180968 "CO 168 B1" 0.530 "1 " 180960 "CO 168 HV " 230.0 ! ! 180960 "CO 168 HV"
230.0 18019 "H ALLEN " 230.0 "1" : #9 "mvab" 0. "tfltr" 0.2 "kp" 18. "ki" 5. "tft" 0. "tfv"
0.180966 "refflg" 1. "vfrz" -1. "rc" 0. "xc" 0. "kc" 0. "vcmpflg" 1. "emax" 999. "emin" -999. "dbd"
0. "qmax" 0.44 "qmin" -0.44 "kpg" 0.1 "kig" 0.5 "tp" 0.25 "fdbd1" -0.0006 "fdbd2" 0.0006
"femax" 999. "femin" -999. "pmax" 999. "pmin" -999. "tlag" 0.1 "ddn" 20. "dup" 20. "frqflg" 1
"outflag" 0 "puflag" 0

lhvrt 180968 "CO 168 B1" 0.530 "1 " 180960 "CO 168 HV " 230.0 : #9 "vref" 1.00 "dvtrp1" -1.0
"dvtrp2" -0.57 "dvtrp3" -0.37 "dvtrp4" -0.27 "dvtrp5" -0.11 "dvtrp6" 0.24 "dvtrp7" 0.20
"dvtrp8" 0.18 "dvtrp9" 0.11 "dvtrp10" 0.00 "dttrp1" 0.20 "dttrp2" 0.40 "dttrp3" 2.10 "dttrp4"
3.10 "dttrp5" 100.0 "dttrp6" 0.25 "dttrp7" 0.60 "dttrp8" 1.10 "dttrp9" 100.0 "dttrp10" 0.00

lhfrt 180968 "CO 168 B1" 0.530 "1 " 180960 "CO 168 HV " 230.0 : #9 "fref" 60.0 "dftrp1" -3.00
"dftrp2" 2.00 "dftrp3" 0.00 "dftrp4" 0.00 "dftrp5" 0.00 "dftrp6" 0.00 "dftrp7" 0.0 "dftrp8" 0.0
"dftrp9" 0.0 "dftrp10" 0.00 "dttrp1" 0.20 "dttrp2" 0.20 "dttrp3" 0.00 "dttrp4" 0.00 "dttrp5" 0.00
"dttrp6" 0.00 "dttrp7" 0.00 "dttrp8" 0.00 "dttrp9" 0.00 "dttrp10" 0.00

Company 170

regc_a 180945 "CO 170 L1 " 0.69 "1 " : #99 mva=147 "lvplsw" 1.0 "rrpwr" 0.5 "brkpt" 0.8
"zerex" 0.79 "lvpl1" 1.0 "vtmax" 2.0 "lvnt1" 0.8 "lvnt0" 0.0 "qmin" -1.0 "accel" 1.0 "tg" 0.02
"tfltr" 0.02 "iqrmax" 2.0 "iqrmin" -2.0 "xe" 0.0

reec_b 180945 "CO 170 L1 " 0.69 "1 " : #99 "mvab" 0.0 "vdip" 0.93 "vup" 1.2 "trv" 0.02 "dbd1" -
0.1 "dbd2" 0.0 "kqv" 2.0 "iqh1" 1.0 "iq1" -1.0 "vref0" 0.0 "tp" 0.02 "qmax" 1.0 "qmin" -1.0
"vmax" 1.2 "vmin" -1.2 "kqp" 1.0 "kqi" 5.0 "kvp" 1.0 "kvi" 5.0 "tiq" 0.02 "dpmax" 1.0 "dpmin" -
1.0 "pmax" 1.0 "pmin" 0.0 "imax" 1.0 "tpord" 0.025 "pfflag" 0.0 "vflag" 0.0 "qflag" 0.0 "pqflag"
1.0

repc_a 180945 "CO 170 L1 " 0.69 "1 " : #1 "mvab" 0.0 "tfltr" 0.02 "kp" 1.0 "ki" 3.4 "tft" 0.0 "tfv"
0.1 "refflg" 1.0 "vfrz" 0.8 "rc" 0.0 "xc" 0.0 "kc" 0.0 "vcmpflg" 1.0 "emax" 0.1 "emin" -0.1 "dbd"
0.0 "qmax" 1.0 "qmin" -1.0 "kpg" 0.25 "kig" 0.00001 "tp" 0.02 "fdbd1" -0.0006 "fdbd2" 0.0006
"femax" 10000.0 "femin" -10000.0 "pmax" 1.0 "pmin" 0.0 "tlag" 0.1 "ddn" 20.0 "dup" 20.0
"frqflg" 1.0 "outflag" 0.0 "puflag" 0.0

lhvrt 180945 "CO 170 L1 " 0.69 "1 " : #1 "vref" 1.0 "dvtrp1" 0.1 "dvtrp2" 0.15 "dvtrp3" 0.175
"dvtrp4" 0.2 "dvtrp5" -0.1 "dvtrp6" -0.25 "dvtrp7" -0.35 "dvtrp8" -0.55 "dvtrp9" 0.0 "dvtrp10"
0.0 "dttrp1" 1.0 "dttrp2" 0.5 "dttrp3" 0.2 "dttrp4" 0.0001 "dttrp5" 3.0 "dttrp6" 2.0 "dttrp7" 0.3
"dttrp8" 0.15 "dttrp9" 0.0 "dttrp10" 0.0 "alarm" 0.0

lhfrt 180945 "CO 170 L1 " 0.69 "1 " : #1 "fref" 60.0 "dftrp1" 0.6 "dftrp2" 1.6 "dftrp3" 1.7
"dftrp4" -0.6 "dftrp5" -1.6 "dftrp6" -2.2 "dftrp7" -2.7 "dftrp8" -3.0 "dftrp9" 0.0 "dftrp10" 0.0
"dttrp1" 180.0 "dttrp2" 30.0 "dttrp3" 0.0001 "dttrp4" 180.0 "dttrp5" 30.0 "dttrp6" 7.5 "dttrp7"
0.75 "dttrp8" 0.0001 "dttrp9" 0.0 "dttrp10" 0.0 "alarm" 0.0

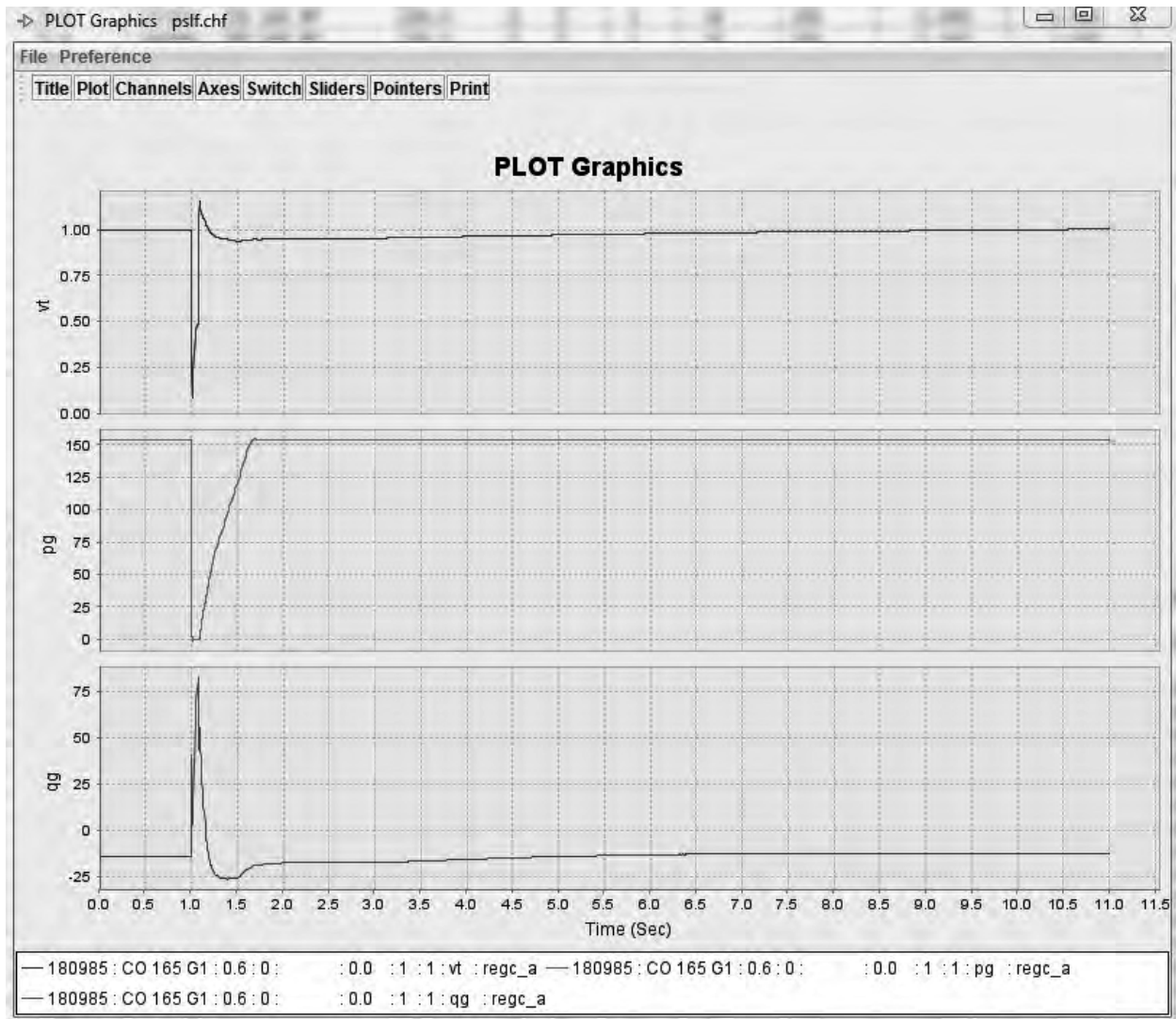
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"tfltr" 0.02 "iqrmax" 2.0 "iqrmin" -2.0 "xe" 0.0

reec_b 180950 "CO 170 L2 " 0.69 "2 " : #99 "mvab" 0.0 "vdip" 0.93 "vup" 1.2 "trv" 0.02 "dbd1" -
0.1 "dbd2" 0.0 "kqv" 2.0 "iqh1" 1.0 "iq1" -1.0 "vref0" 0.0 "tp" 0.02 "qmax" 1.0 "qmin" -1.0
"vmax" 1.2 "vmin" -1.2 "kqp" 1.0 "kqi" 5.0 "kvp" 1.0 "kvi" 5.0 "tiq" 0.02 "dpmax" 1.0 "dpmin" -
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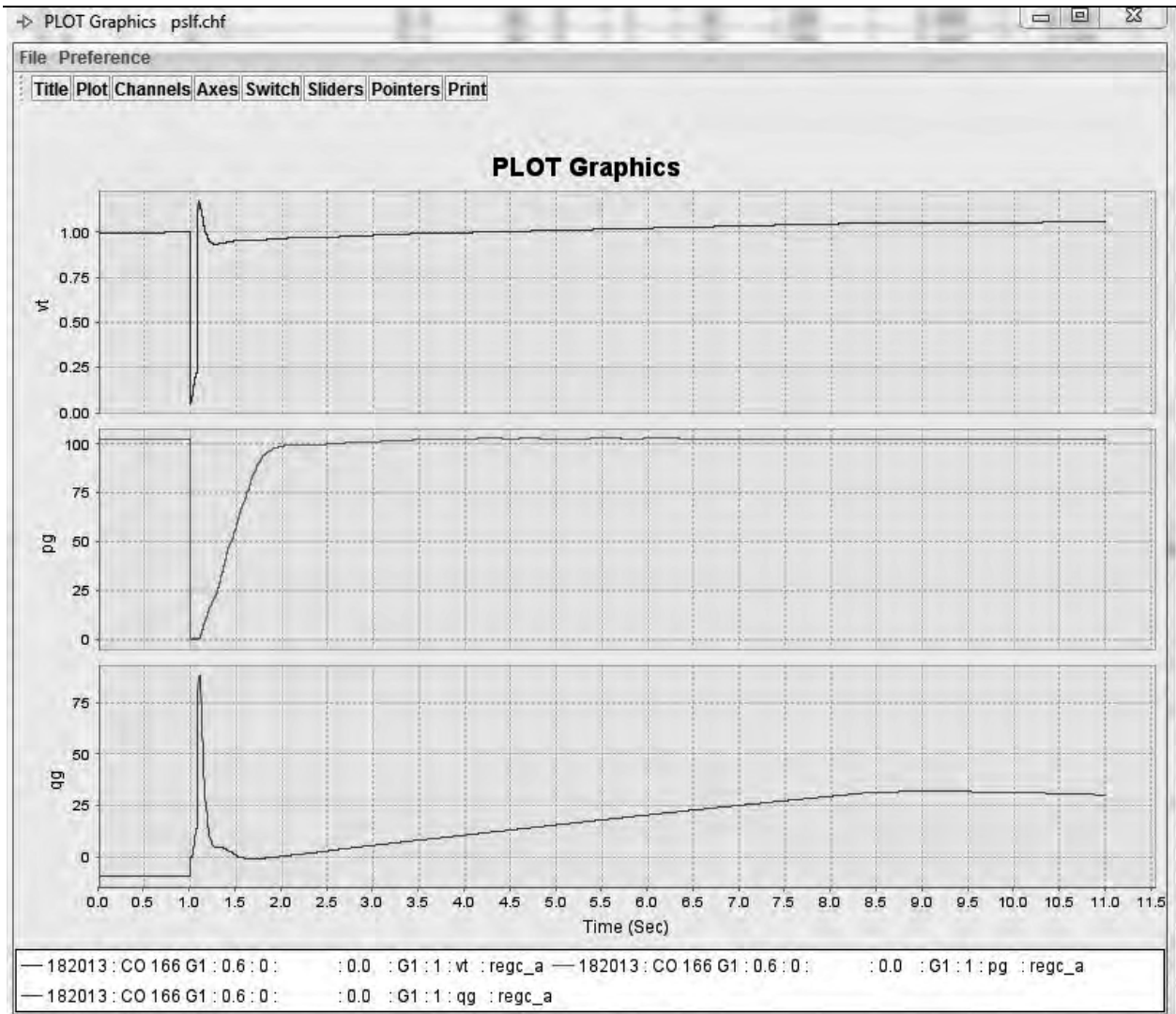
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0.1 "refflg" 1.0 "vfrz" 0.8 "rc" 0.0 "xc" 0.0 "kc" 0.0 "vcmpflg" 1.0 "emax" 0.1 "emin" -0.1 "dbd"
0.0 "qmax" 1.0 "qmin" -1.0 "kpg" 0.25 "kig" 0.00001 "tp" 0.02 "fdbd1" -0.0006 "fdbd2" 0.0006
"femax" 10000.0 "femin" -10000.0 "pmax" 1.0 "pmin" 0.0 "tlag" 0.1 "ddn" 20.0 "dup" 20.0
"frqflg" 1.0 "outflag" 0.0 "puflag" 0.0

lhvrt 180950 "CO 170 L2 " 0.69 "2 " : #1 "vref" 1.0 "dvtrp1" 0.1 "dvtrp2" 0.15 "dvtrp3" 0.175
"dvtrp4" 0.2 "dvtrp5" -0.1 "dvtrp6" -0.25 "dvtrp7" -0.35 "dvtrp8" -0.55 "dvtrp9" 0.0 "dvtrp10"
0.0 "dttrp1" 1.0 "dttrp2" 0.5 "dttrp3" 0.2 "dttrp4" 0.0001 "dttrp5" 3.0 "dttrp6" 2.0 "dttrp7" 0.3
"dttrp8" 0.15 "dttrp9" 0.0 "dttrp10" 0.0 "alarm" 0.0

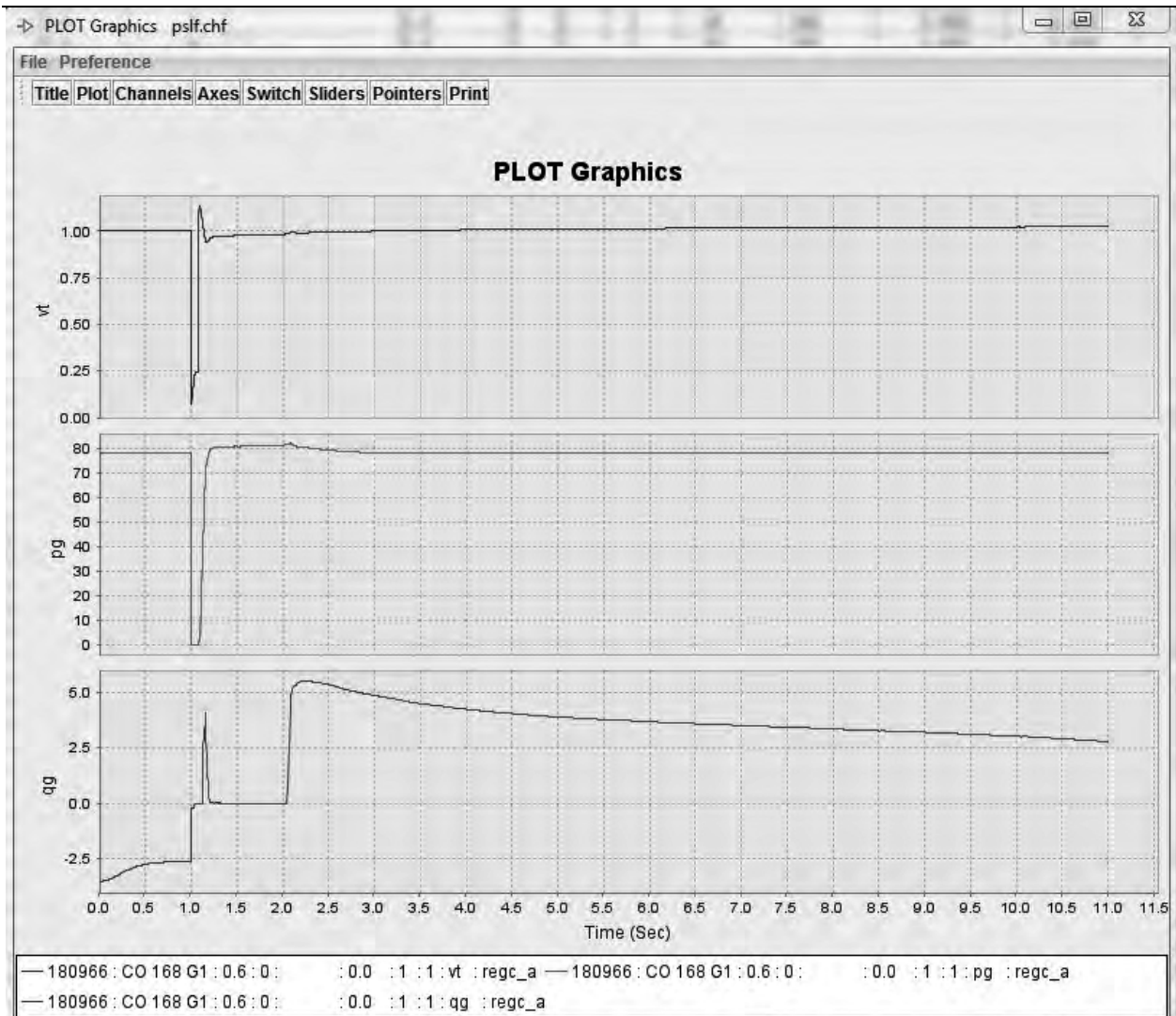
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"dftrp4" -0.6 "dftrp5" -1.6 "dftrp6" -2.2 "dftrp7" -2.7 "dftrp8" -3.0 "dftrp9" 0.0 "dftrp10" 0.0
"dttrp1" 180.0 "dttrp2" 30.0 "dttrp3" 0.0001 "dttrp4" 180.0 "dttrp5" 30.0 "dttrp6" 7.5 "dttrp7"
0.75 "dttrp8" 0.0001 "dttrp9" 0.0 "dttrp10" 0.0 "alarm" 0.0



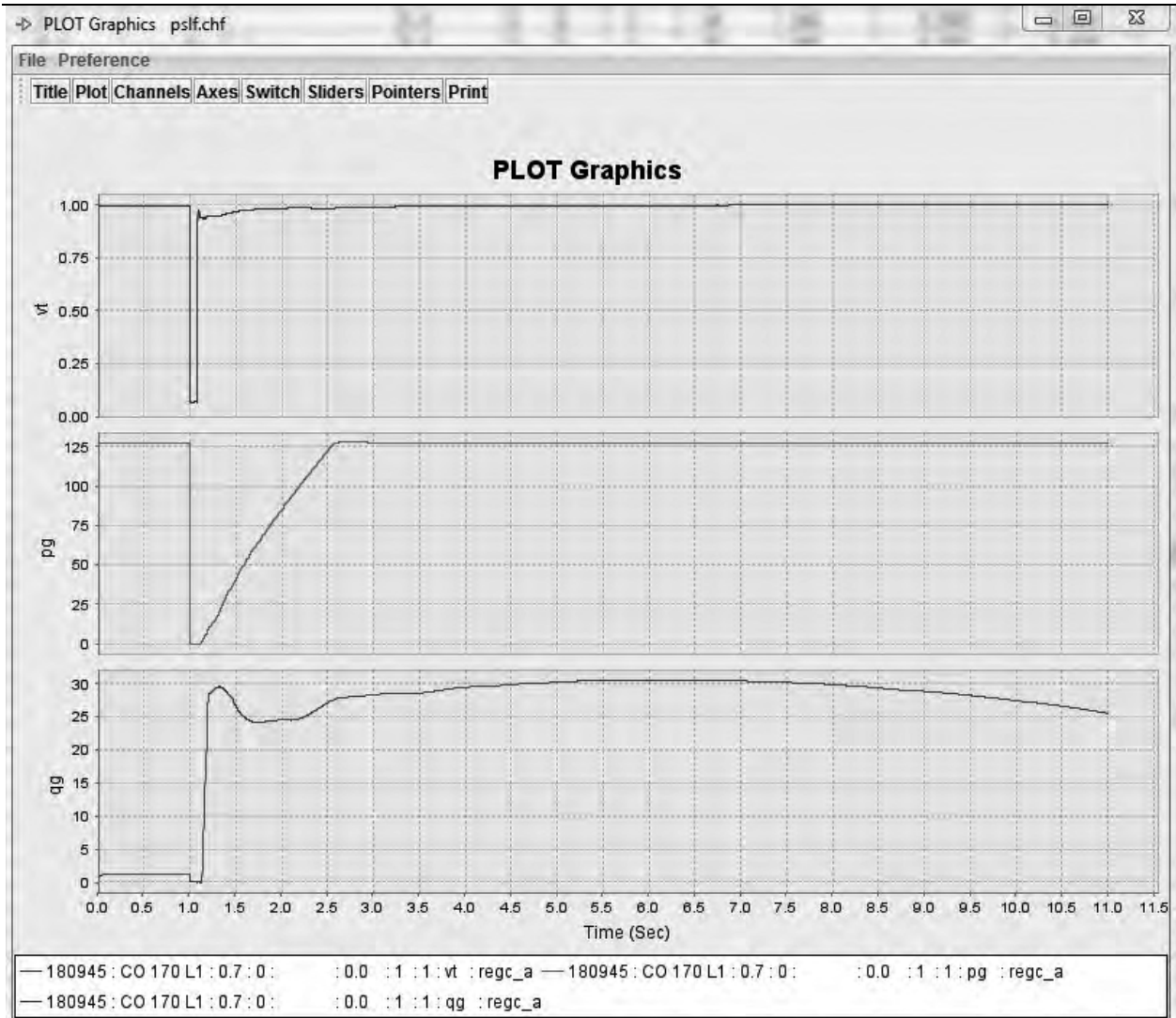
Transient Plot 1: Company 165 Generator response to a 5 cycle fault on Harry Allen to Reid Gardner 230 kV line.



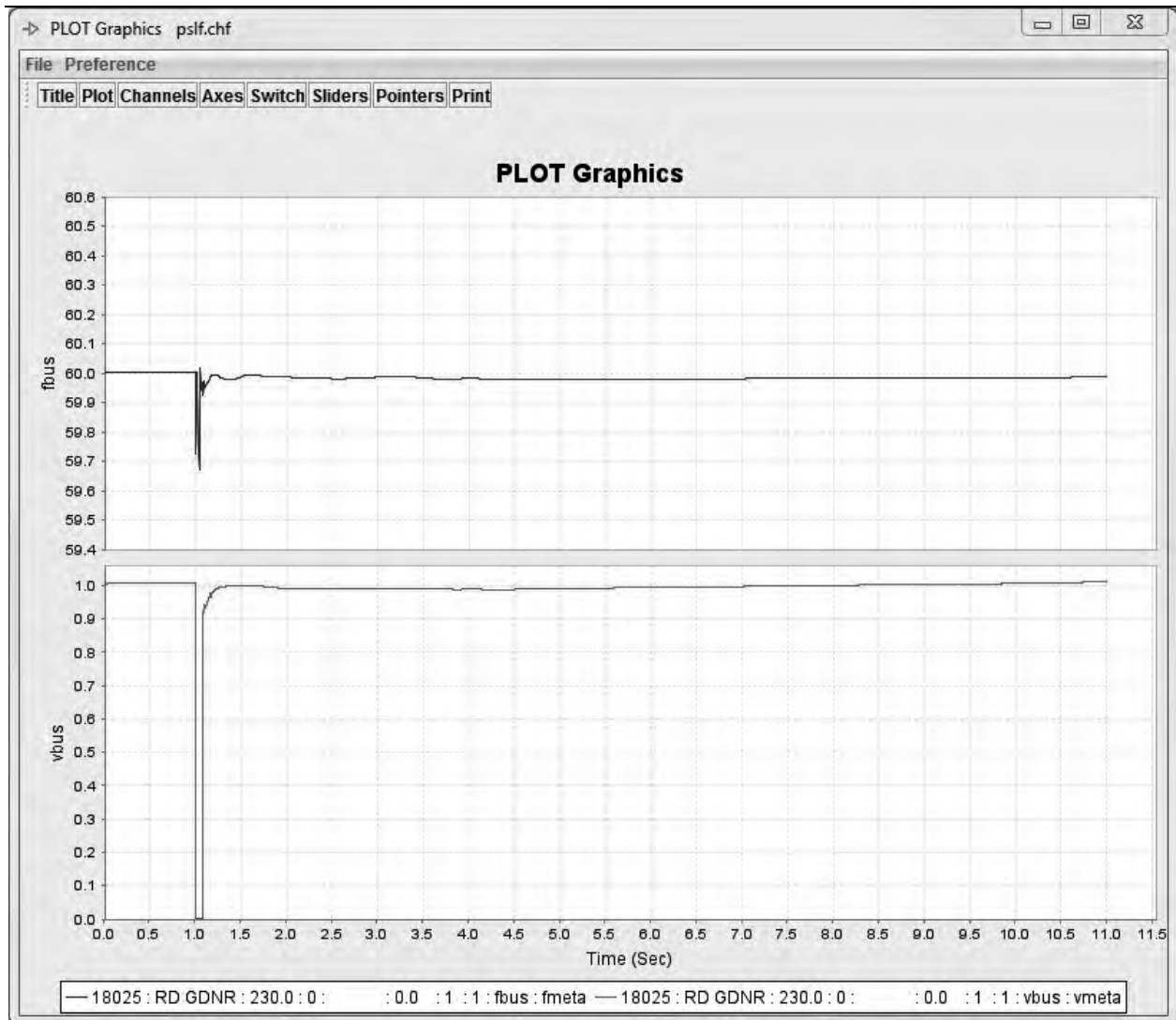
Transient Plot 2: Company 166 Generator response to a 5 cycle fault on Harry Allen to Crystal 230 kV line.



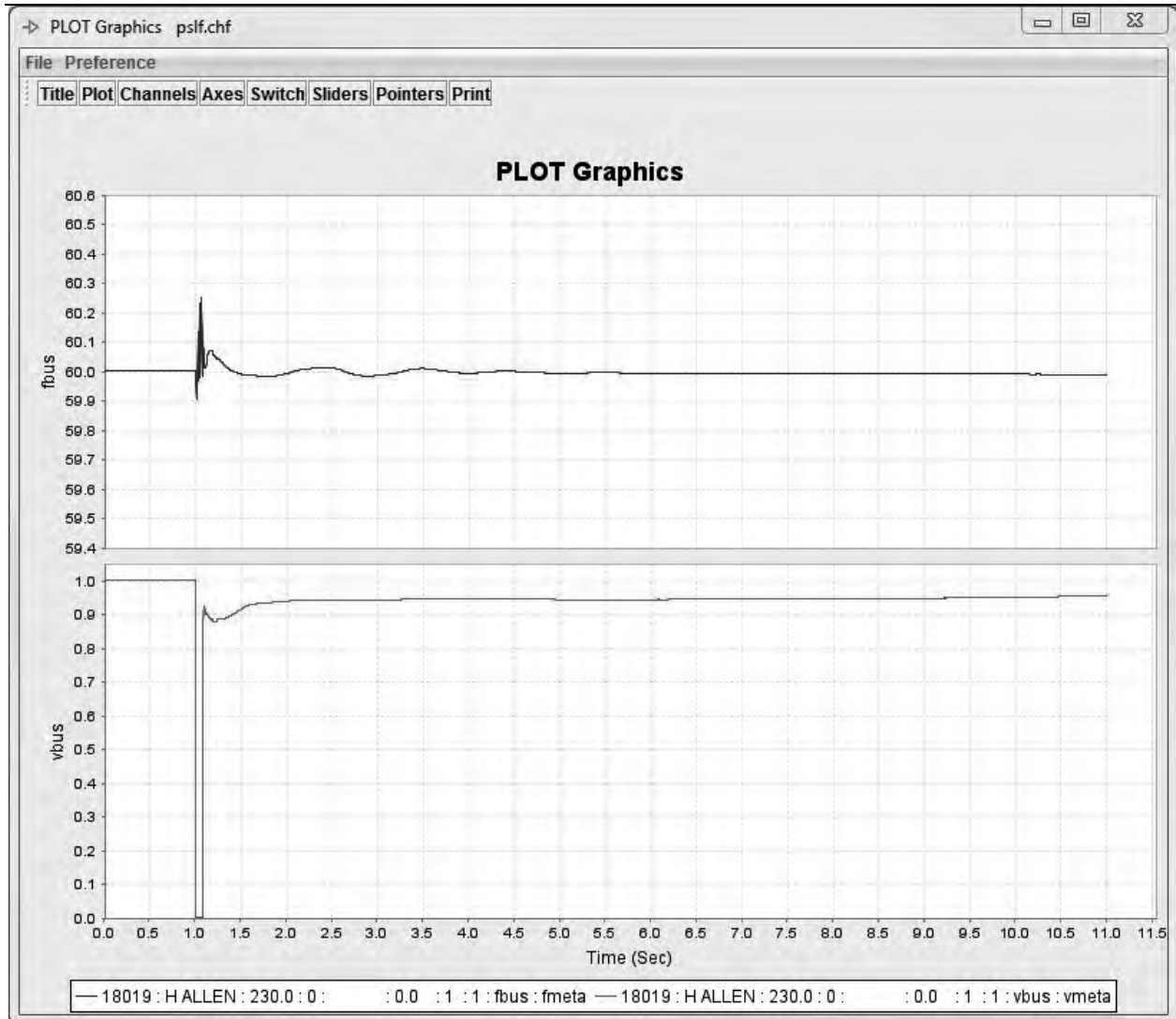
Transient Plot 3: Company 168 Generator response to a 5 cycle fault on Harry Allen to Crystal 230 kV line.



Transient Plot 4: Company 170 Generator response to a 5 cycle fault on Harry Allen to Crystal 230 kV line.



Transient Plot 5: Reid Gardner 230 kV response to a 5 cycle fault on Company 165 lead line.



Transient Plot 6: Harry Allen 230 kV response to a 5 cycle fault on Company 166, Company 168, Company 170 lead line.

TRAN-3

**STANDARD LARGE GENERATOR
INTERCONNECTION AGREEMENT (LGIA)**

SERVICE AGREEMENT # 18-00014

Between

**NEVADA POWER COMPANY d/b/a
NV ENERGY**

And

SOLAR PARTNERS XI, LLC

Date: 6/11/2018 6:04:51 PM PDT

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STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT

THIS STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT (“Agreement”) is made and entered into this 11—day of June, 2018 by and between Solar Partners XI, LLC a limited liability company organized and existing under the laws of the State of Delaware (“Interconnection Customer” with a Large Generating Facility), and Nevada Power Company d/b/a NV Energy, a company organized and existing under the laws of the State/Commonwealth of the State of Nevada (“Transmission Provider and/or Transmission Owner”). Interconnection Customer and Transmission Provider each may be referred to as a “Party” or collectively as the “Parties.”

Recitals

WHEREAS, Transmission Provider operates the Transmission System; and

WHEREAS, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this Agreement; and,

WHEREAS, Interconnection Customer and Transmission Provider have agreed to enter into this Agreement for the purpose of interconnecting the Large Generating Facility with the Transmission System;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Standard Large Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

Article 1. Definitions

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

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

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

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

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

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

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

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

Application Process shall mean the activities required prior to the Interconnection Customer entering the Interconnection Queue, as further set forth in Section 3 of the Large Generator Interconnection Procedures.

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

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

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

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

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

Clustering shall mean the process whereby a group of Completed Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.

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

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

Completed Interconnection Request shall mean an Interconnection Customer's request following the completion of the Application Process, to interconnect a new Generating Facility, increasing the capacity of, or making a Material Modification to the operating characteristics of an existing Generating Facility.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Generating Facility shall mean Interconnection Customer's device for the production of electricity identified in the Completed Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

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

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

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

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

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

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

Interconnection Customer shall mean any entity, including the Transmission Provider, Transmission Owner or any of the Affiliates or subsidiaries of either, that proposes to interconnect its Generating Facility with the Transmission Provider’s Transmission System.

Interconnection Customer’s Interconnection Facilities shall mean all facilities and equipment, as identified in Appendix A of the Standard Large Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Customer’s Interconnection Facilities are sole use facilities.

Interconnection Facilities shall mean the Transmission Provider’s Interconnection Facilities and the Interconnection Customer’s Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Facilities Study shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider’s Interconnection Facilities and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider’s Transmission System. The scope of the study is defined in Section 8 of the Standard Large Generator Interconnection Procedures.

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

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

Interconnection Study shall mean any of the following studies: the Interconnection System Impact Study and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

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

Interconnection System Impact Study Agreement shall mean the form of agreement contained in Appendix 2 of the Standard Large Generator Interconnection Procedures for conducting the Interconnection System Impact Study.

IRS shall mean the Internal Revenue Service.

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

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

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

Material Modification shall mean those modifications that have a material impact on the: (1) cost or timing of any Application Request with a later Application Number or (2) cost or timing of any Completed Interconnection Request with a later queue priority date.

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

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

Network Resource shall mean any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

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

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

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

Optional Interconnection Study shall mean a sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

Optional Interconnection Study Agreement shall mean the form of agreement contained in Appendix 5 of the Standard Large Generator Interconnection Procedures for conducting the Optional Interconnection Study.

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

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

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

Queue Position shall mean the order of a valid Completed Interconnection Request, relative to all other pending valid Completed Interconnection Requests, that is established based upon successful completion of the Application Process, as determined by the Transmission Provider.

Reasonable Efforts shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Large Generator Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

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

Shared Network Upgrades shall mean a Network Upgrade listed in Appendix A of the Generator Interconnection Agreement that is needed for the interconnection of multiple Interconnection Customers' Generating Facilities where such Interconnection Customers share the cost.

Site Control shall mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility; (2) an option to purchase or acquire a leasehold site for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site for such purpose.

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

Stand Alone Network Upgrades shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement.

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

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

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

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

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

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

Transmission Provider's Interconnection Facilities shall mean all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

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

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

Variable Energy Resource shall mean a device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

Article 2. Effective Date, Term, and Termination

2.1 Effective Date.

This LGIA shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. Transmission Provider shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

2.2 Term of Agreement.

Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of thirty (30) years from the Effective Date (Term to be specified in individual agreements) and shall be automatically renewed for each successive one-year period thereafter.

2.3 Termination Procedures.

2.3.1 Written Notice.

This LGIA may be terminated by Interconnection Customer after giving Transmission Provider ninety (90) Calendar Days advance written notice, or by Transmission Provider notifying FERC after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Default.

Either Party may terminate this LGIA in accordance with Article 17.

2.3.3 Notwithstanding Articles 2.3.1 and 2.3.2, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA, which notice has been accepted for filing by FERC.

2.4 Termination Costs.

If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party, as of the date of the other Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this LGIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this LGIA, unless otherwise ordered or approved by FERC:

2.4.1 With respect to any portion of Transmission Provider's Interconnection Facilities that have not yet been constructed or installed, Transmission Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Transmission Provider for any or all such costs of materials or equipment not taken by Interconnection Customer, Transmission Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Transmission Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this LGIA, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any

Network Upgrades for which Transmission Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

2.4.2 Transmission Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Transmission Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

2.4.3 With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

2.5 Disconnection.

Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

2.6 Survival.

This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

Article 3. Regulatory Filings

3.1 Filing.

Transmission Provider shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority, if required. Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If Interconnection Customer has executed this LGIA, or any amendment thereto, Interconnection Customer shall reasonably cooperate with Transmission Provider with respect to such filing and to provide any information reasonably requested by Transmission Provider needed to comply with applicable regulatory requirements.

Article 4. Scope of Service

4.1 Interconnection Product Options.

Interconnection Customer has selected the following (checked) type of Interconnection Service:

4.1.1 Energy Resource Interconnection Service

4.1.1.1 The Product. Energy Resource Interconnection Service allows Interconnection Customer to connect the Large Generating Facility to the Transmission System and be eligible to deliver the Large Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. To the extent Interconnection Customer wants to receive Energy Resource Interconnection Service, Transmission Provider shall construct facilities identified in Appendix A to this LGIA.

4.1.1.2 Transmission Delivery Service Implications. Under Energy Resource Interconnection Service, Interconnection Customer will be eligible to inject power from the Large Generating Facility into and deliver power across the interconnecting Transmission Provider's Transmission System on an "as available" basis up to the amount of MWs identified in the applicable stability and steady state studies to the extent the upgrades initially required to qualify for Energy Resource Interconnection Service have been constructed. Where eligible to do so (e.g., PJM, ISO-NE, NYISO), Interconnection Customer may place a bid to sell into the market up to the maximum identified Large Generating Facility output, subject to any conditions specified in the interconnection service approval, and the Large Generating Facility will be dispatched to the extent Interconnection Customer's bid clears. In all other instances, no transmission delivery service from the Large Generating Facility is assured, but Interconnection Customer may obtain Point-to-Point Transmission Service, Network Integration Transmission Service, or be used for secondary network transmission service, pursuant to Transmission Provider's Tariff, up to the maximum output identified in the stability and steady state studies. In those instances, in order for Interconnection Customer to obtain the right to deliver or inject energy beyond the Large Generating Facility Point of Interconnection or to improve its ability to do so, transmission delivery service must be obtained pursuant to the provisions of Transmission Provider's Tariff. The Interconnection Customer's ability to inject its Large Generating Facility output beyond the Point of Interconnection, therefore, will depend on the existing capacity of Transmission Provider's Transmission System at such time as a transmission service request is made that would accommodate such delivery. The provision of firm Point-to-Point Transmission Service or Network Integration Transmission Service may require the construction of additional Network Upgrades.

✓4.1.2 Network Resource Interconnection Service.

4.1.2.1 The Product. Transmission Provider must conduct the necessary studies and construct the Network Upgrades needed to integrate the Large Generating Facility (1) in a manner comparable to that in which

Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an ISO or RTO with market based congestion management, in the same manner as all Network Resources. To the extent Interconnection Customer wants to receive Network Resource Interconnection Service, Transmission Provider shall construct the facilities identified in Appendix A to this LGIA.

4.1.2.2 Transmission Delivery Service Implications. Network Resource Interconnection Service allows Interconnection Customer's Large Generating Facility to be designated by any Network Customer under the Tariff on Transmission Provider's Transmission System as a Network Resource, up to the Large Generating Facility's full output, on the same basis as existing Network Resources interconnected to Transmission Provider's Transmission System, and to be studied as a Network Resource on the assumption that such a designation will occur. Although Network Resource Interconnection Service does not convey a reservation of transmission service, any Network Customer under the Tariff can utilize its network service under the Tariff to obtain delivery of energy from the interconnected Interconnection Customer's Large Generating Facility in the same manner as it accesses Network Resources. A Large Generating Facility receiving Network Resource Interconnection Service may also be used to provide Ancillary Services after technical studies and/or periodic analyses are performed with respect to the Large Generating Facility's ability to provide any applicable Ancillary Services, provided that such studies and analyses have been or would be required in connection with the provision of such Ancillary Services by any existing Network Resource. However, if an Interconnection Customer's Large Generating Facility has not been designated as a Network Resource by any load, it cannot be required to provide Ancillary Services except to the extent such requirements extend to all generating facilities that are similarly situated. The provision of Network Integration Transmission Service or firm Point-to-Point Transmission Service may require additional studies and the construction of additional upgrades. Because such studies and upgrades would be associated with a request for delivery service under the Tariff, cost responsibility for the studies and upgrades would be in accordance with FERC's policy for pricing transmission delivery services.

Network Resource Interconnection Service does not necessarily provide Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on Transmission Provider's Transmission System without incurring congestion costs. In the event of transmission constraints on Transmission Provider's Transmission System, Interconnection Customer's Large Generating Facility shall be subject to the

applicable congestion management procedures in Transmission Provider's Transmission System in the same manner as Network Resources.

There is no requirement either at the time of study or interconnection, or at any point in the future, that Interconnection Customer's Large Generating Facility be designated as a Network Resource by a Network Service Customer under the Tariff or that Interconnection Customer identify a specific buyer (or sink). To the extent a Network Customer does designate the Large Generating Facility as a Network Resource, it must do so pursuant to Transmission Provider's Tariff.

Once an Interconnection Customer satisfies the requirements for obtaining Network Resource Interconnection Service, any future transmission service request for delivery from the Large Generating Facility within Transmission Provider's Transmission System of any amount of capacity and/or energy, up to the amount initially studied, will not require that any additional studies be performed or that any further upgrades associated with such Large Generating Facility be undertaken, regardless of whether or not such Large Generating Facility is ever designated by a Network Customer as a Network Resource and regardless of changes in ownership of the Large Generating Facility. However, the reduction or elimination of congestion or redispatch costs may require additional studies and the construction of additional upgrades.

To the extent Interconnection Customer enters into an arrangement for long term transmission service for deliveries from the Large Generating Facility outside Transmission Provider's Transmission System, such request may require additional studies and upgrades in order for Transmission Provider to grant such request.

4.1.3 Interim Interconnection Service.

4.1.3.1 The Product. As described in Article 4, provision of Interconnection Service under this LGIA requires the construction of the Network Upgrades identified in Appendix A. However, in order to make the most efficient use of the transmission system and available generation before the aforementioned Network Upgrades are constructed, the Transmission Provider will use Reasonable Efforts to grant Interconnection Service under this LGIA on an interim basis under the following circumstances and subject to the following conditions ("Interim Interconnection Service"). Interconnection Customer understands and acknowledges that it has no right to Interim Interconnection Service and that any Interim Interconnection Service granted in this section is limited pursuant to the terms of this section.

4.1.3.2 Process for Requesting Interim Interconnection Service. No later than 180 Calendar days of Interconnection Customer's anticipated testing date for the generating facility that is the subject of this LGIA, where the aforementioned Network Upgrades are not expected to have been completed by that time, Interconnection Customer may submit a written request to the Transmission Provider for Interim Interconnection Service. The Interconnection Customer must be in good standing under this LGIA to request Interim Interconnection Service.

4.1.3.3 Transmission Provider's Evaluation of Request for Interim Interconnection Service. After a valid request for Interim Interconnection Service has been received, the Interconnection Customer will be provided a study agreement obligating the Interconnection Customer to pay the costs of the Interim Interconnection Service System Impact Study. The Interim Interconnection System Impact Study to be conducted by Transmission Provider has the same scope as the current LGIP System Impact Study. The Interim Interconnection System Impact Study will model only those projects that are planned to be in service on the effective date of the requested Interim Interconnection Service and any use of Interim Interconnection Service by a higher-queued interconnection customer. Once completed, the study will identify if the Interim Interconnection Service can be provided to the Interconnection Customer with the transmission system as currently configured. No additional facilities will be constructed to accommodate Interim Interconnection Service. Once the Transmission Provider determines that Interim Interconnection Service can be accommodated for all or part of the Interconnection Customer's anticipated output, the Interconnection Customer will then be limited to the output level contained in the Transmission Provider's response to the request for Interim Interconnection Service.

Regardless of when Interim Interconnection Service is requested, the Transmission Provider will have 60 days to conduct the Interim Interconnection Service System Impact Study. No formal report will be produced, but the Transmission Provider will provide a written response detailing whether, and to what extent, Interim Interconnection Service can be provided under this LGIA. The Interim Interconnection Service is governed by this LGIA.

4.1.3.4 Competing Requests for Interim Interconnection Service. To the extent Transmission Provider receives multiple requests for Interim Interconnection Service from Interconnection Customer and other interconnection customers that cannot be simultaneously accommodated, available Interim Interconnection Service will be given to the interconnection customer with the higher generation

interconnection queue position, even if the competing requests come from projects that were studied in the same cluster.

- 4.1.3.5 No Transmission Service.** The Transmission Providers' provision of Interim Interconnection Service under this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.

4.2 Provision of Service.

Transmission Provider shall provide Interconnection Service for the Large Generating Facility at the Point of Interconnection.

4.3 Performance Standards.

Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is a Transmission Provider or Transmission Owner, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

4.4 No Transmission Delivery Service.

The execution of this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.

4.5 Interconnection Customer Provided Services.

The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

Article 5. Interconnection Facilities Engineering, Procurement, and Construction

5.1 Options.

Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Alternate Option set forth below for completion of Transmission Provider's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities and Network Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

✓5.1.1 Standard Option.

Transmission Provider shall design, procure, and construct Transmission Provider's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Provider's Interconnection Facilities and

Network Upgrades by the dates set forth in Appendix B, Milestones. Transmission Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Transmission Provider reasonably expects that it will not be able to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the specified dates, Transmission Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

5.1.2 Alternate Option.

If the dates designated by Interconnection Customer are acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities by the designated dates.

If Transmission Provider subsequently fails to complete Transmission Provider's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; Transmission Provider shall pay Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by Interconnection Customer shall be extended day for day for each day that the applicable RTO or ISO refuses to grant clearances to install equipment.

5.1.3 Option to Build.

If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.2. Transmission Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option.

5.1.4 Negotiated Option.

If Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, Interconnection Customer shall so notify Transmission

Provider within thirty (30) Calendar Days, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades by Interconnection Customer) pursuant to which Transmission Provider is responsible for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, Transmission Provider shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades pursuant to 5.1.1, Standard Option.

5.2 General Conditions Applicable to Option to Build.

If Interconnection Customer assumes responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades,

- (1) Interconnection Customer shall engineer, procure equipment, and construct Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Transmission Provider;
- (2) Interconnection Customer's engineering, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law and Applicable Reliability Standards to which Transmission Provider would be subject in the engineering, procurement or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (3) Transmission Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (4) Prior to commencement of construction, Interconnection Customer shall provide to Transmission Provider a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from Transmission Provider;
- (5) At any time during construction, Transmission Provider shall have the right to gain unrestricted access to Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;
- (6) At any time during construction, should any phase of the engineering, equipment procurement, or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Transmission Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;

- (7) Interconnection Customer shall indemnify Transmission Provider for claims arising from Interconnection Customer's construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;
- (8) Interconnection Customer shall transfer control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;
- (9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Transmission Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Transmission Provider;
- (10) Transmission Provider shall approve and accept for operation and maintenance Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and
- (11) Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information, and any other documents that are reasonably required by Transmission Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Transmission Provider.

5.3 Liquidated Damages.

The actual damages to Interconnection Customer, in the event Transmission Provider's Interconnection Facilities or Network Upgrades are not completed by the dates designated by Interconnection Customer and accepted by Transmission Provider pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by Transmission Provider to Interconnection Customer in the event that Transmission Provider does not complete any portion of Transmission Provider's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to $\frac{1}{2}$ of 1 percent per day of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades, in the aggregate, for which Transmission Provider has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of Transmission Provider's Interconnection Facilities and Network Upgrades for which Transmission Provider has assumed responsibility to design, procure, and construct. The foregoing payments will be made by Transmission Provider to Interconnection Customer as just compensation for the damages caused to Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Transmission Provider's failure to meet its schedule.

No liquidated damages shall be paid to Interconnection Customer if: (1) Interconnection Customer is not ready to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for the Large Generating Facility's Trial Operation or to export power from the Large Generating Facility on the specified dates, unless Interconnection Customer would have been able to commence use of Transmission Provider's Interconnection Facilities or Network Upgrades to take the delivery of power for Large Generating Facility's Trial Operation or to export power from the Large Generating Facility, but for Transmission Provider's delay; (2) Transmission Provider's failure to meet the specified dates is the result of the action or inaction of Interconnection Customer or any other Interconnection Customer who has entered into an LGIA with Transmission Provider or any cause beyond Transmission Provider's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

5.4 Power System Stabilizers.

The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council. Transmission Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators.

5.5 Equipment Procurement.

If responsibility for construction of Transmission Provider's Interconnection Facilities or Network Upgrades is to be borne by Transmission Provider, then Transmission Provider shall commence design of Transmission Provider's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

- 5.5.1** Transmission Provider has completed the Facilities Study pursuant to the Facilities Study Agreement;
- 5.5.2** Transmission Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.5.3** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

5.6 Construction Commencement.

Transmission Provider shall commence construction of Transmission Provider's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

- 5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;
- 5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Transmission Provider's Interconnection Facilities and Network Upgrades;
- 5.6.3** Transmission Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.6.4** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

5.7 Work Progress.

The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Transmission Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Transmission Provider of such later date upon which the completion of Transmission Provider's Interconnection Facilities will be required.

5.8 Information Exchange.

As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Transmission Provider's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

5.9 Limited Operation.

If any of Transmission Provider's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Large Generating Facility, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Large Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Provider's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. Transmission Provider shall permit Interconnection Customer to operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

5.10 Interconnection Customer's Interconnection Facilities ("ICIF").

Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

5.10.1 Interconnection Customer's Interconnection Facility Specifications.

Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Provider at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. Transmission Provider shall review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider and comment on such specifications within thirty (30) Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

5.10.2 Transmission Provider's Review.

Transmission Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Transmission Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider.

5.10.3 ICIF Construction.

The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Large Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Large Generating Facility. The Interconnection Customer shall provide Transmission Provider specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

5.11 Transmission Provider's Interconnection Facilities Construction.

Transmission Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Transmission Provider shall deliver to Interconnection Customer the following "as-built" drawings, information and documents for Transmission Provider's Interconnection Facilities [include appropriate drawings and

relay diagrams]. Transmission Provider will obtain control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities.

5.12 Access Rights.

Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

5.13 Lands of Other Property Owners.

If any part of Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Transmission Provider or Transmission Owner, Transmission Provider or Transmission Owner shall at Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove Transmission Provider or Transmission Owner's Interconnection Facilities and/or Network Upgrades upon such property.

5.14 Permits.

Transmission Provider or Transmission Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, Transmission Provider or Transmission Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Transmission Provider's own, or an Affiliate's generation.

5.15 Early Construction of Base Case Facilities.

Interconnection Customer may request Transmission Provider to construct, and Transmission Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but

where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

5.16 Suspension.

Interconnection Customer reserves the right, upon written notice to Transmission Provider, to suspend at any time all work by Transmission Provider associated with the construction and installation of Transmission Provider's Interconnection Facilities and/or Network Upgrades required under this LGIA with the condition that Transmission System shall be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Provider's safety and reliability criteria. In such event, Interconnection Customer shall be responsible for all reasonable and necessary costs which Transmission Provider (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Transmission System during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which Transmission Provider cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Provider shall obtain Interconnection Customer's authorization to do so. Transmission Provider shall invoice Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work by Transmission Provider required under this LGIA pursuant to this Article 5.16, and has not requested Transmission Provider to recommence the work required under this LGIA on or before the expiration of three (3) years following commencement of such suspension, this LGIA shall be deemed terminated. The three-year period shall begin on the date the suspension is requested, or the date of the written notice to Transmission Provider, if no effective date is specified.

5.17 Taxes.

5.17.1 Interconnection Customer Payments Not Taxable.

The Parties intend that all payments or property transfers made by Interconnection Customer to Transmission Provider for the installation of Transmission Provider's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as an advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

5.17.2 Representations and Covenants.

In accordance with IRS Notice 2001-82 and IRS Notice 88-129, Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the Transmission System, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to Transmission Provider for Transmission Provider's Interconnection Facilities will be capitalized by Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years,

and (iii) any portion of Transmission Provider's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At Transmission Provider's request, Interconnection Customer shall provide Transmission Provider with a report from an independent engineer confirming its representation in clause (iii), above. Transmission Provider represents and covenants that the cost of Transmission Provider's Interconnection Facilities paid for by Interconnection Customer will have no net effect on the base upon which rates are determined.

5.17.3 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider.

Notwithstanding Article 5.17.1, Interconnection Customer shall protect, indemnify and hold harmless Transmission Provider from the cost consequences of any current tax liability imposed against Transmission Provider as the result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Transmission Provider.

Transmission Provider shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges Interconnection Customer under this LGIA unless (i) Transmission Provider has determined, in good faith, that the payments or property transfers made by Interconnection Customer to Transmission Provider should be reported as income subject to taxation or (ii) any Governmental Authority directs Transmission Provider to report payments or property as income subject to taxation; provided, however, that Transmission Provider may require Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to Transmission Provider (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. Interconnection Customer shall reimburse Transmission Provider for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from Transmission Provider of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by Transmission Provider upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

5.17.4 Tax Gross-Up Amount.

Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that Interconnection Customer will pay Transmission Provider, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on Transmission Provider ("Current Taxes") on the excess of (a) the gross income realized by Transmission Provider as a result of payments or property transfers made by Interconnection Customer to Transmission Provider under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit Transmission Provider to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on Transmission Provider's composite federal and state tax rates at the time the payments or property transfers are received and Transmission Provider will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting Transmission Provider's anticipated tax depreciation deductions as a result of such payments or property transfers by Transmission Provider's current weighted average cost of capital. Thus, the formula for calculating Interconnection Customer's liability to Transmission Owner pursuant to this Article 5.17.4 can be expressed as follows: $(\text{Current Tax Rate} \times (\text{Gross Income Amount} - \text{Present Value of Tax Depreciation})) / (1 - \text{Current Tax Rate})$. Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

5.17.5 Private Letter Ruling or Change or Clarification of Law.

At Interconnection Customer's request and expense, Transmission Provider shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Interconnection Customer to Transmission Provider under this LGIA are subject to federal income taxation. Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Interconnection Customer's knowledge. Transmission Provider and Interconnection Customer shall cooperate in good faith with respect to the submission of such request.

Transmission Provider shall keep Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes Interconnection Customer to participate in all discussions

with the IRS regarding such request for a private letter ruling. Transmission Provider shall allow Interconnection Customer to attend all meetings with IRS officials about the request and shall permit Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

5.17.6 Subsequent Taxable Events.

If, within 10 years from the date on which the relevant Transmission Provider's Interconnection Facilities are placed in service, (i) Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and Transmission Provider retains ownership of the Interconnection Facilities and Network Upgrades, Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on Transmission Provider, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

5.17.7 Contests.

In the event any Governmental Authority determines that Transmission Provider's receipt of payments or property constitutes income that is subject to taxation, Transmission Provider shall notify Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by Interconnection Customer and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon Interconnection Customer's written request and sole expense, Transmission Provider may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. Transmission Provider reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but Transmission Provider shall keep Interconnection Customer informed, shall consider in good faith suggestions from Interconnection Customer about the conduct of the contest, and shall reasonably permit Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest. At any time during the contest, Transmission Provider may agree to a settlement either with Interconnection Customer's consent or after obtaining written advice from nationally-recognized tax counsel, selected by Transmission Provider, but reasonably acceptable to Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from

nationally-recognized tax counsel selected under the terms of the preceding sentence. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. Any settlement without Interconnection Customer's consent or such written advice will relieve Interconnection Customer from any obligation to indemnify Transmission Provider for the tax at issue in the contest.

5.17.8 Refund.

In the event that (a) a private letter ruling is issued to Transmission Provider which holds that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to Transmission Provider in good faith that any amount paid or the value of any property transferred by Interconnection Customer to Transmission Provider under the terms of this LGIA is not taxable to Transmission Provider, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by Interconnection Customer to Transmission Provider are not subject to federal income tax, or (d) if Transmission Provider receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by Interconnection Customer to Transmission Provider pursuant to this LGIA, Transmission Provider shall promptly refund to Interconnection Customer the following:

- (i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,
- (ii) interest on any amounts paid by Interconnection Customer to Transmission Provider for such taxes which Transmission Provider did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 CFR §35.19a(a)(2)(iii) from the date payment was made by Interconnection Customer to the date Transmission Provider refunds such payment to Interconnection Customer, and
- (iii) with respect to any such taxes paid by Transmission Provider, any refund or credit Transmission Provider receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to Transmission Provider for such overpayment of taxes (including any reduction in interest otherwise payable by Transmission Provider to any Governmental Authority resulting from an offset or credit); provided, however, that Transmission Provider will remit such amount promptly to Interconnection Customer only after and to the extent that Transmission Provider has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to Transmission Provider's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

5.17.9 Taxes Other Than Income Taxes.

Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, Transmission Provider may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against Transmission Provider for which Interconnection Customer may be required to reimburse Transmission Provider under the terms of this LGIA. Interconnection Customer shall pay to Transmission Provider on a periodic basis, as invoiced by Transmission Provider, Transmission Provider's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and Transmission Provider shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to Transmission Provider for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by Transmission Provider.

5.17.10 Transmission Owners Who Are Not Transmission Providers.

If Transmission Provider is not the same entity as the Transmission Owner, then (i) all references in this Article 5.17 to Transmission Provider shall be deemed also to refer to and to include the Transmission Owner, as appropriate, and (ii) this LGIA shall not become effective until such Transmission Owner shall have agreed in writing to assume all of the duties and obligations of Transmission Provider under this Article 5.17 of this LGIA.

5.18 Tax Status.

Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this LGIA is intended to adversely affect any Transmission Provider's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

5.19 Modification.

5.19.1 General.

Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include

information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Large Generating Facility modifications that do not require Interconnection Customer to submit a Completed Interconnection Request, Transmission Provider shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Transmission System, Transmission Provider's Interconnection Facilities or Network Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof.

5.19.2 Standards.

Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA, Applicable Reliability Standards and Good Utility Practice.

5.19.3 Modification Costs.

Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Provider makes to Transmission Provider's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Provider's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

Article 6. Testing and Inspection

6.1 Pre-Commercial Operation Date Testing and Modifications.

Prior to the Commercial Operation Date, Transmission Provider shall test Transmission Provider's Interconnection Facilities and Network Upgrades and Interconnection Customer shall test the Large Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

6.2 Post-Commercial Operation Date Testing and Modifications.

Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

6.3 Right to Observe Testing.

Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right, at its own expense, to observe such testing.

6.4 Right to Inspect.

Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

Article 7. Metering**7.1 General.**

Each Party shall comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Provider shall install Metering Equipment at the Point of Interconnection prior to any operation of the Large Generating Facility and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at Transmission Provider's option, compensated to, the Point of Interconnection. Transmission Provider shall provide metering quantities, in analog and/or digital form, to Interconnection Customer upon request. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

7.2 Check Meters.

Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check Transmission Provider's meters. Such check meters shall be for check purposes

only and shall not be used for the measurement of power flows for purposes of this LGIA, except as provided in Article 7.4 below. The check meters shall be subject at all reasonable times to inspection and examination by Transmission Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.

7.3 Standards.

Transmission Provider shall install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.

7.4 Testing of Metering Equipment.

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

7.5 Metering Data.

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

Article 8. Communications

8.1 Interconnection Customer Obligations.

Interconnection Customer shall maintain satisfactory operating communications with Transmission Provider's Transmission System dispatcher or representative designated by Transmission Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone

system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Transmission Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by Transmission Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

8.2 Remote Terminal Unit.

Prior to the Initial Synchronization Date of the Large Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Transmission Provider at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Provider through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1. The communication protocol for the data circuit(s) shall be specified by Transmission Provider. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Provider.

Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

8.3 No Annexation.

Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

8.4 Provision of Data from a Variable Energy Resource

The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the Transmission Provider to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The Transmission Provider and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The

Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this LGIA, as they may change from time to time.

Article 9. Operations

9.1 General.

Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

9.2 Control Area Notification.

At least three months before Initial Synchronization Date, Interconnection Customer shall notify Transmission Provider in writing of the Control Area in which the Large Generating

Facility will be located. If Interconnection Customer elects to locate the Large Generating Facility in a Control Area other than the Control Area in which the Large Generating Facility is physically located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Control Area.

9.3 Transmission Provider Obligations.

Transmission Provider shall cause the Transmission System and Transmission Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. Transmission Provider may provide operating instructions to Interconnection Customer consistent with this LGIA and Transmission Provider's operating protocols and procedures as they may change from time to time. Transmission Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.

9.4 Interconnection Customer Obligations.

Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. Interconnection Customer shall operate the Large Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA.

9.5 Start-Up and Synchronization.

Consistent with the Parties' mutually acceptable procedures, Interconnection Customer is responsible for the proper synchronization of the Large Generating Facility to Transmission Provider's Transmission System.

9.6 Reactive Power.**9.6.1 Power Factor Design Criteria.**

Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless Transmission Provider has established different requirements that apply to all generators in the Control Area on a comparable basis. The requirements of this paragraph shall not apply to wind generators.

9.6.2 Voltage Schedules.

Once Interconnection Customer has synchronized the Large Generating Facility with the Transmission System, Transmission Provider shall require Interconnection Customer to operate the Large Generating Facility to produce or absorb reactive power within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Provider's voltage schedules shall treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Provider shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Transmission System. Interconnection Customer shall operate the Large Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within the design limitations of the Large Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the System Operator.

9.6.2.1 Governors and Regulators. Whenever the Large 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 Large Generating Facility with its speed governors and voltage regulators in automatic operation. If the Large Generating Facility's speed governors and voltage regulators are not capable of such automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative, and ensure that such Large Generating Facility's reactive power production or absorption (measured in MVARs) are within the design capability of the Large Generating Facility's generating unit(s) and steady state stability limits. Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Control Area on a comparable basis.

9.6.3 Payment for Reactive Power.

Transmission Provider is required to pay Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Large Generating Facility when Transmission Provider requests Interconnection Customer to operate its Large Generating Facility outside the range specified in Article 9.6.1, provided that if Transmission Provider pays its own or affiliated generators for reactive power service within the specified range, it must also pay Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the Parties have otherwise agreed.

9.7 Outages and Interruptions.

9.7.1 Outages.

9.7.1.1 Outage Authority and Coordination. Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use

Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

9.7.1.2 Outage Schedules. Transmission Provider shall post scheduled outages of its transmission facilities on the OASIS. Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to Transmission Provider for a minimum of a rolling twenty-four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Transmission Provider may request Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply shall not be a criterion in determining Transmission System reliability. Transmission Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Transmission Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities.

9.7.1.3 Outage Restoration. If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

9.7.2 Interruption of Service.

If required by Good Utility Practice to do so, Transmission Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

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

- 9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Transmission System;
- 9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, Transmission Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;
- 9.7.2.4** Except during the existence of an Emergency Condition, when the interruption or reduction can be scheduled without advance notice, Transmission Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Transmission Provider;
- 9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, and the Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

9.7.3 Under-Frequency and Over Frequency Conditions.

The Transmission System is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under-frequency system disturbance. Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Large Generating Facility as required by the Applicable Reliability Council to ensure “ride through” capability of the Transmission System. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term “ride through” as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

9.7.4 System Protection and Other Control Requirements.

- 9.7.4.1 System Protection Facilities.** Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or Interconnection Customer’s Interconnection Facilities.

Transmission Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Transmission Provider's Interconnection Facilities or the Transmission System as a result of the interconnection of the Large Generating Facility and Interconnection Customer's Interconnection Facilities.

9.7.4.2 Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Good Utility Practice.

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

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

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

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

9.7.5 Requirements for Protection.

In compliance with Good Utility Practice, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Transmission System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Large Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Large Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence

currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and Interconnection Customer's other equipment if conditions on the Transmission System could adversely affect the Large Generating Facility.

9.7.6 Power Quality.

Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard. In the event of a conflict between ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, ANSI Standard C84.1-1989, or the applicable superseding electric industry standard, shall control.

9.8 Switching and Tagging Rules.

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

9.9 Use of Interconnection Facilities by Third Parties.

9.9.1 Purpose of Interconnection Facilities.

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

9.9.2 Third Party Users.

If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Transmission Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

9.10 Disturbance Analysis Data Exchange.

The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or Transmission Provider's Transmission System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

Article 10. Maintenance**10.1 Transmission Provider Obligations.**

Transmission Provider shall maintain the Transmission System and Transmission Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

10.2 Interconnection Customer Obligations.

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

10.3 Coordination.

The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

10.4 Secondary Systems.

Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

10.5 Operating and Maintenance Expenses.

Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Provider's Interconnection Facilities.

Article 11. Performance Obligation

11.1 Interconnection Customer Interconnection Facilities.

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

11.2 Transmission Provider's Interconnection Facilities.

Transmission Provider or Transmission Owner shall design, procure, construct, install, own and/or control the Transmission Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.

11.3 Network Upgrades and Distribution Upgrades.

Transmission Provider or Transmission Owner shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless Transmission Provider or Transmission Owner elects to fund the capital for the Network Upgrades, they shall be solely funded by Interconnection Customer.

11.4 Transmission Credits.

11.4.1 Repayment of Amounts Advanced for Network Upgrades.

Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Transmission Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments associated with Network Upgrades, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Transmission Provider's Tariff and Affected System's Tariff for transmission services with respect to the Large Generating Facility. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any person.

Notwithstanding the foregoing, Interconnection Customer, Transmission Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Transmission Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Transmission Provider or Affected System Operator will continue to provide payments to Interconnection Customer on a

dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond twenty (20) years from the Commercial Operation Date. If the Large Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, Transmission Provider and Affected System Operator shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

11.4.2 Special Provisions for Affected Systems.

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

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

11.5 Provision of Security.

At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of a Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, Interconnection Customer shall provide Transmission Provider, at Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to Transmission Provider for these purposes.

In addition:

- 11.5.1** The guarantee must be made by an entity that meets the creditworthiness requirements of Transmission Provider, and contain terms and conditions that guarantee payment of any amount that may be due from Interconnection Customer, up to an agreed-to maximum amount.
- 11.5.2** The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.
- 11.5.3** The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.6 Interconnection Customer Compensation.

If Transmission Provider requests or directs Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this LGIA, Transmission Provider shall compensate Interconnection Customer in accordance with Interconnection Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to an RTO or ISO FERC-approved rate schedule.

Interconnection Customer shall serve Transmission Provider or RTO or ISO with any filing of a proposed rate schedule at the time of such filing with FERC. To the extent that no rate schedule is in effect at the time the Interconnection Customer is required to provide or absorb any Reactive Power under this LGIA, Transmission Provider agrees to compensate Interconnection Customer in such amount as would have been due Interconnection Customer had the rate schedule been in effect at the time service commenced; provided, however, that such rate schedule must be filed at FERC or other appropriate Governmental Authority within sixty (60) Calendar Days of the commencement of service.

11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.

Transmission Provider or RTO or ISO shall compensate Interconnection Customer for its provision of real and reactive power and other Emergency Condition services that Interconnection Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.6.

Article 12. Invoice

12.1 General.

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

12.2 Final Invoice.

Within six months after completion of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades, Transmission Provider shall provide an invoice of the final cost of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Transmission Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice.

12.3 Payment.

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

12.4 Disputes.

In the event of a billing dispute between Transmission Provider and Interconnection Customer, Transmission Provider shall continue to provide Interconnection Service under this LGIA as long as Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Transmission Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with the methodology set forth in FERC's regulations at 18 CFR § 35.19a(a)(2)(iii).

Article 13. Emergencies**13.1 Definition.**

"Emergency Condition" shall mean a condition or situation: (i) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (ii) that, in the case of Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Transmission System, Transmission Provider's Interconnection Facilities or the Transmission Systems of others to which the Transmission System is directly connected; or (iii) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Large Generating Facility or Interconnection Customer's Interconnection Facilities' System restoration and black start shall be considered Emergency Conditions;

provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

13.2 Obligations.

Each Party shall comply with the Emergency Condition procedures of the applicable ISO/RTO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.

13.3 Notice.

Transmission Provider shall notify Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Provider's Interconnection Facilities or the Transmission System that may reasonably be expected to affect Interconnection Customer's operation of the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection Customer shall notify Transmission Provider promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Transmission System or Transmission Provider's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection Customer's or Transmission Provider's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice.

13.4 Immediate Action.

Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Transmission Provider, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or otherwise regarding the Transmission System.

13.5 Transmission Provider Authority.

13.5.1 General.

Transmission Provider may take whatever actions or inactions with regard to the Transmission System or Transmission Provider's Interconnection Facilities it deems necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Transmission System or Transmission Provider's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing Interconnection Customer to shut-down, start-up, increase or decrease the real or

reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing Interconnection Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and Interconnection Customer's Interconnection Facilities.

Interconnection Customer shall comply with all of Transmission Provider's operating instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

13.5.2 Reduction and Disconnection.

Transmission Provider may reduce Interconnection Service or disconnect the Large Generating Facility or Interconnection Customer's Interconnection Facilities, when such, reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of Transmission Provider pursuant to Transmission Provider's Tariff. When Transmission Provider can schedule the reduction or disconnection in advance, Transmission Provider shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer and Transmission Provider. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the Transmission System to their normal operating state as soon as practicable consistent with Good Utility Practice.

13.6 Interconnection Customer Authority.

Consistent with Good Utility Practice and the LGIA and the LGIP, Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Provider's Interconnection Facilities. Transmission Provider shall use Reasonable Efforts to assist Interconnection Customer in such actions.

13.7 Limited Liability.

Except as otherwise provided in Article 11.6.1 of this LGIA, neither Party shall be liable to the other for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

Article 14. Regulatory Requirements and Governing Law

14.1 Regulatory Requirements.

Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.

14.2 Governing Law.

14.2.1 The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

14.2.2 This LGIA is subject to all Applicable Laws and Regulations.

14.2.3 Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

Article 15. Notices.

15.1 General.

Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

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

15.2 Billings and Payments.

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

15.3 Alternative Forms of Notice.

Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.

15.4 Operations and Maintenance Notice.

Each Party shall notify the other Party in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

Article 16. Force Majeure**16.1 Force Majeure.**

16.1.1 Economic hardship is not considered a Force Majeure event.

16.1.2 Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

Article 17. Default**17.1 Default****17.1.1 General.**

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

17.1.2 Right to Terminate.

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

notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this LGIA, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this LGIA.

Article 18. Indemnity, Consequential Damages and Insurance

18.1 Indemnity.

The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this LGIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

18.1.1 Indemnified Person.

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

18.1.2 Indemnifying Party.

If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

18.1.3 Indemnity Procedures.

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

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right

to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or Indemnified Persons having such differing or additional legal defenses.

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

18.2 Consequential Damages.

Other than the Liquidated Damages heretofore described, in no event shall either Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

18.3 Insurance.

Each party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

18.3.1 Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.

18.3.2 Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of

One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

- 18.3.3** Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.
- 18.3.4** Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.
- 18.3.5** The Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.
- 18.3.6** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.
- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this LGIA.

- 18.3.9** Within ten (10) days following execution of this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.
- 18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.
- 18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this LGIA.

Article 19. Assignment

19.1 Assignment.

This LGIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this LGIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that Interconnection Customer shall have the right to assign this LGIA, without the consent of Transmission Provider, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that Interconnection Customer will promptly notify Transmission Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Transmission Provider of the date and particulars of any such exercise of assignment right(s), including providing the Transmission Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

Article 20. Severability

20.1 Severability.

If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Transmission Provider) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of these provisions shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

Article 21. Comparability

21.1 Comparability.

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

Article 22. Confidentiality

22.1 Confidentiality.

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

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

Transmission Provider may perform study work using WECC data (power flow, stability, and disturbance monitoring data) for nonmembers provided that the WECC data are not provided to the nonmember. Under such arrangements the nonmembers are permitted to look at the data in the Transmission Provider's office to gain an understanding of the study results, but are not permitted to have the data or a copy of the data. Interconnection Customer must also sign the WECC Nonmember Confidentiality Agreement in accordance with regional Reliability Council policies.

22.1.1 Term.

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

22.1.2 Scope.

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of the LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA.

Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

22.1.3 Release of Confidential Information.

Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions.

Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

22.1.4 Rights.

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

22.1.5 No Warranties.

By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.

22.1.6 Standard of Care.

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this LGIA or its regulatory requirements.

22.1.7 Order of Disclosure.

If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

22.1.8 Termination of Agreement.

Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

22.1.9 Remedies.

The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are

necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

22.1.10 Disclosure to FERC, its Staff, or a State.

Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

22.1.11 Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this LGIA (“Confidential Information”) shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party’s Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

Article 23. Environmental Releases

23.1 Environmental Releases.

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

Article 24. Information Requirements

24.1 Information Acquisition.

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

24.2 Information Submission by Transmission Provider.

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

24.3 Updated Information Submission by Interconnection Customer.

The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. Interconnection Customer shall submit a completed copy of the Large Generating Facility data requirements contained in Appendix 1 to the LGIP. It shall also include any additional information provided to Transmission Provider for the Facilities Study. Information in this submission shall be the most current Large Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Transmission Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the Interconnection Study Agreement between Transmission Provider and Interconnection Customer, then Transmission

Provider will conduct appropriate studies to determine the impact on Transmission Provider Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

24.4 Information Supplementation.

Prior to the Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all “as-built” Large Generating Facility information or “as-tested” performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Large Generating Facility as required by Good Utility Practice such as an open circuit “step voltage” test on the Large Generating Facility to verify proper operation of the Large Generating Facility’s automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Large Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Large Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage. Interconnection Customer shall provide validated test recordings showing the responses of Large Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Large Generating Facility’s terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Large Generating Facility terminal or field voltages is provided. Large Generating Facility testing shall be conducted and results provided to Transmission Provider for each individual generating unit in a station.

Subsequent to the Operation Date, Interconnection Customer shall provide Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Provider-owned substation that may affect Interconnection Customer’s Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than thirty (30) Calendar Days after the date of the equipment replacement, repair or adjustment.

Article 25. Information Access and Audit Rights

25.1 Information Access.

Each Party (the “disclosing Party”) shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA.

25.2 Reporting of Non-Force Majeure Events.

Each Party (the “notifying Party”) shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

25.3 Audit Rights.

Subject to the requirements of confidentiality under Article 22 of this LGIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party’s accounts and records pertaining to either Party’s performance or either Party’s satisfaction of obligations under this LGIA. Such audit rights shall include audits of the other Party’s costs, calculation of invoiced amounts, Transmission Provider’s efforts to allocate responsibility for the provision of reactive support to the Transmission System, Transmission Provider’s efforts to allocate responsibility for interruption or reduction of generation on the Transmission System, and each Party’s actions in an Emergency Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party’s performance and satisfaction of obligations under this LGIA. Each Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

25.4 Audit Rights Periods.**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.**

Accounts and records related to the design, engineering, procurement, and construction of Transmission Provider’s Interconnection Facilities and Network Upgrades shall be subject to audit for a period of twenty-four months following Transmission Provider’s issuance of a final invoice in accordance with Article 12.2.

25.4.2 Audit Rights Period for All Other Accounts and Records.

Accounts and records related to either Party’s performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party’s receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

25.5 Audit Results.

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

Article 26. Subcontractors

26.1 General.

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

26.2 Responsibility of Principal.

The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Transmission Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

26.3 No Limitation by Insurance.

The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

Article 27. Disputes

27.1 Submission.

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute").

Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

27.2 External Arbitration Procedures.

Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to

chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association (“Arbitration Rules”) and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

27.3 Arbitration Decisions.

Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

27.4 Costs.

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

Article 28. Representations, Warranties, and Covenants

28.1 General.

Each Party makes the following representations, warranties and covenants:

28.1.1 Good Standing.

Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

28.1.2 Authority.

Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

28.1.3 No Conflict.

The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

28.1.4 Consent and Approval.

Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

Article 29. Joint Operating Committee**29.1 Joint Operating Committee.**

Except in the case of ISOs and RTOs, Transmission Provider shall constitute a Joint Operating Committee to coordinate operating and technical considerations of Interconnection Service. At least six (6) months prior to the expected Initial Synchronization Date, Interconnection Customer and Transmission Provider shall each appoint one representative and one alternate to the Joint Operating Committee. Each Interconnection Customer shall notify Transmission Provider of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee shall meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee shall hold a meeting at the request of either Party, at a time and place agreed upon by the representatives. The Joint Operating Committee shall perform all of its duties consistent with the provisions of this LGIA. Each Party shall cooperate in providing to the Joint Operating Committee all information required in the performance of the Joint Operating Committee's duties. All decisions and agreements, if any, made by the Joint Operating Committee, shall be evidenced in writing. The duties of the Joint Operating Committee shall include the following:

29.1.1 Establish data requirements and operating record requirements.

- 29.1.2** Review the requirements, standards, and procedures for data acquisition equipment, protective equipment, and any other equipment or software.
- 29.1.3** Annually review the one (1) year forecast of maintenance and planned outage schedules of Transmission Provider's and Interconnection Customer's facilities at the Point of Interconnection.
- 29.1.4** Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Large Generating Facility and other facilities that impact the normal operation of the interconnection of the Large Generating Facility to the Transmission System.
- 29.1.5** Ensure that information is being provided by each Party regarding equipment availability.
- 29.1.6** Perform such other duties as may be conferred upon it by mutual agreement of the Parties.

Article 30. Miscellaneous

30.1 Binding Effect.

This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

30.2 Conflicts.

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

30.3 Rules of Interpretation.

This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8)

relative to the determination of any period of time, “from” means “from and including”, “to” means “to but excluding” and “through” means “through and including”.

30.4 Entire Agreement.

This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party’s compliance with its obligations under this LGIA.

30.5 No Third Party Beneficiaries.

This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

30.6 Waiver.

The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer’s legal rights to obtain an interconnection from Transmission Provider. Any waiver of this LGIA shall, if requested, be provided in writing.

30.7 Headings.

The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

30.8 Multiple Counterparts.

This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

30.9 Amendment.

The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by the Parties.

30.10 Modification by the Parties.

The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

30.11 Reservation of Rights.

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

30.12 No Partnership.

This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

IN WITNESS WHEREOF, the Parties have executed this LGIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

NEVADA POWER COMPANY d/b/a NV ENERGY

By: Shahzad Latief
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Title: Vice President, Transmission

Date: 6/11/2018 6:04:51 PM PDT

SOLAR PARTNERS XI, LLC

By: Ricardo Graf
BA430E4E1201484...

Title: Authorized Officer

Date: 6/11/2018 12:32:15 PM PDT

LGIA Appendix A: Interconnection Facilities, Network Upgrades and Distribution Upgrades

SOLAR PARTNERS XI, LLC – Company 151 – Photovoltaic Solar Facilities (Gemini Solar Project)

Type of Interconnection Service: Network Resource Interconnection Service

Generating Facility Capacity: 440 MW net at the Point of Interconnection

Total Generating Facility Nameplate Rating: 480 MVA gross from two hundred forty (240) 2.0 MVA TMEIC Samurai inverters.

Point of Interconnection:

The Point of Interconnection will be the point where the Interconnection Customer's 230 kV lead-line from the Gemini Solar Project Substation intersects the terminal position at the Transmission Provider's 230 kV Crystal Substation. See Appendix C.

Point of Change of Ownership:

The Point of Change of Ownership will be the point where the Interconnection Customer's 230 kV transmission lead line terminates on the Transmission Provider-owned Point of Change of Ownership dead-end structure located adjacent to the Crystal 230 kV Substation Bureau of Land Management (BLM) ROW Grant. See Appendix C.

Nominal Delivery Voltage: 230 kV

Metering Voltage: 230 kV

1. Interconnection Facilities

(a) Interconnection Customer's Interconnection Facilities:

1) **Interconnection Customer Generation Facility Requirements, Generating Facility to Include:**

- a. Four (4) 230/34.5 kV 120 MVA generator step-up transformers (GSU), located at the 230/34.5 kV substation to be built by the Interconnection Customer for the Generating Facility ("Gemini Solar Project Substation"); and
- b. Four (4) 6.5 MVAR switchable shunt capacitor banks, one on the low side of each transformer, located at the Gemini Solar Project Substation; and
- c. One (1) 230 kV common high-side breaker at the Gemini Solar Project Substation, as indicated in Appendix C;

2) **Interconnection Customer Generator Lead Line Requirements, Lead Line to Include:**

- a. Approximately 2 miles of 1-1272 Aluminum Conductor Steel Reinforced (ACSR) conductor per phase from the Gemini Solar Project 230/34.5 kV substation to the 230 kV Point of Change of Ownership Structure. The Point of Change of Ownership structure's preliminary location is:
 - i. Latitude: 36.479785⁰, Longitude: -114.823860⁰
- b. Overhead lead line to be designed with static wire(s) and adequate overvoltage protection from lightning surges;
- c. Lead-line and structures to be built in accordance with Good Utility Practices; and
- d. Fiber Optic Cable as described by the interconnection communications requirements below in Section 1(a)(4)(a)(a) of this Appendix A.

3) **Interconnection Customer Generating Facility Protection Requirements:**

- a. Interconnection Customer will install generating facility and 230 kV generator lead line protection relays at the Interconnection Customer's site.
 - i. Lead line protection relays must be compatible with the dual SEL-311-L line protection relays that the Transmission Provider will install at the Crystal 230 kV Substation;
 - ii. Line protection will be a communication aided scheme utilizing two (2) independent digital high speed protection communication circuits between the Interconnection Customer's Substation and the Crystal 230 kV Substation.
- b. The Interconnection Customer must submit the protection and communications plan to the Transmission Provider for review and concurrence *prior* to construction, such concurrence not to be unreasonably withheld; and
- c. The Interconnection Customer must install a breaker failure scheme for the high-side breaker that will key a direct trip signal to the Transmission Provider's POI Substation.

4) **Interconnection Customer's Communication Requirements:**

- a. Interconnection Customer will install two (2) high-speed communications circuits for high speed protection communications on the generator lead-line.
 - a) The Fiber Optic communications path will facilitate communications between the Interconnection Customer protection relays at the Gemini Solar Project Substation and the Transmission Provider relays at the Crystal 230 kV Substation;

- b) The Interconnection Customer will install the Fiber Optic Cable from the Gemini Solar Project Substation to the Point of Change of Ownership Structure; and
 - c) Fiber communications must be coordinated with the Interconnection Customer owned protection relays; and
 - d) The interfaces on the Fiber Optic Cable will be IEEE C37.94 compliant.
- b. Interconnection Customer will provide and deliver a T-1 service along with any T-1 circuit isolation gear required by the local T-1 provider;
 - i. The T-1 line will originate at the Transmission Provider's telecommunications equipment location at the Interconnection Customer's generating facility and terminate at the Transmission Provider's Energy System Control Center building;
 - ii. The dedicated T-1 leased telecommunications line must be provided by the customer for the Transmission Provider's Telephony, SCADA, Metering and Protection requirements and use;
- c. Interconnection Customer will provide a ring down phone and/or 24-hour contact for Transmission Provider Energy System Control Center (ESCC);
- d. Interconnection Customer will provide one dial up telephone line continuously capable of a 9600 baud rate minimum at any given time for the new 230 kV meter that will be located at the Gemini Solar Project Substation as indicated in Drawing 1 in Appendix C;
 - i. Note: If the metering telecommunication circuits are via copper circuits and connecting to Transmission Provider telecom equipment, then Ground Protection Rise isolation is required and is the responsibility of Interconnection Customer, per applicable industry standards.
- e. Interconnection Customer will provide a temperature-controlled space located in the control room at the Interconnection Customer's Generating Facility;
 - i. The Interconnection Customer shall provide a dedicated room in the Interconnection Customer's control building at the Generating Facility where the Transmission Provider will install up to two (2) 8-foot tall 26-inch wide racks or cabinets for the Transmission Provider's communications and protection equipment to be installed at the Interconnection Customer's plant. A minimum working space of three feet is required to be provided on front and back of these racks. Provisions for the following must be made:
 - a) Interconnection Customer will provide two (2) Direct Current (DC) load centers dedicated to Transmission Provider's communication equipment at a minimum of 20 Amperes each. The DC voltage will be identified during the coordination meetings between Interconnection Customer and Transmission Provider. These load centers are to provide both primary and back-up power sources for the Transmission Provider's equipment; and
 - b) Conduit and/or cable trays to provide connectivity from the Transmission Provider's rack space area to Interconnection Customer's main telecommunications board.
 - ii. Interconnection Customer must provide a separate exterior entrance to Transmission Provider for this dedicated area;

- iii. Space for Transmission Provider's equipment in the control building must be isolated with chain-linked fencing or wall and secured for Transmission Provider's access only; and
- iv. Interconnection Customer to provide 24-hour access to all of Transmission Provider's Interconnection Facilities located at the Generating Facility site without limitations.
- f. Interconnection Customer will provide. a 125 volt DC Battery backup with a minimum of twelve hour support; and
- g. Detailed Communications and Protection Requirements are outlined in Appendix C.

5) Interconnection Customer's Generating Facility Metering Requirements:

- a. Subject to Section 1(a)(5)(f) and Section 1(b)(3) of this Appendix A, the 230 kV revenue quality metering will be located on the high-side of the Interconnection Customer's transformer at the Interconnection Customer's Substation;
- b. The Transmission Provider will procure the 230 kV metering instrument transformers (CT's and PT's) and provide the instrument transformers to the Interconnection Customer for installation. Interconnection Customer will transport the 230 kV metering instrument transformers (CT's and PT's) provided by the Transmission Provider from the Transmission Provider's warehouse to the generator site;
- c. Interconnection Customer will install the 230 kV metering instrument transformers (CT's and PT's), connect the primary leads, and install conduit and the secondary leads from the secondary side of the transformers to the metering enclosure. The Transmission Provider will run secondary wire through the provided conduit making the connections from the metering instrument transformers to the meter;
- d. Interconnection Customer will design, purchase and install a Transmission Provider approved structure for mounting the Transmission Provider's metering units, meter class instrument transformers (PTs and CTs) in a Transmission Provider approved location. The meter structure with the installed metering instruments must be designed to meet the Transmission Provider's safety clearances, standard design requirements, and accessibility to the Transmission Provider's meter personnel. Drawings, design calculations, and equipment shall be reviewed and approved by the Transmission Provider prior to installation. Transmission Provider's approval shall not be unreasonably withheld;
 - i. Separate communications and power cabling is required through separate conduits.
 - ii. Provide appropriately sized junction/pullbox at the meter structure and install one and a half inch diameter conduits for termination of CT/PT wirings at the Termination/Junction Box. Install 1-3" diameter conduit from the junction/pullbox to meter enclosure at NVE room. Cables and wirings for metering shall be provided and pulled by the Interconnection Customer per Transmission Provider's sizing and specification. Conduits and cables identified with Transmission Provider's metering should be installed separately and exclusively routed. It should not be marshalled/combined with Interconnection Customer's trench, conduits, cables, wirings and terminal blocks.
- e. Interconnection Customer will provide a dedicated 125 V DC circuit and phone line to the meter; and

- f. If the Interconnection Customer's Generating Facility is comprised of multiple phases with different off-takers, the Transmission Provider will require a common high-side meter and individual high-side metering per phase for Energy Imbalance Market purposes, which will allow each phase to be separately metered and separately scheduled for Energy Imbalance Market purposes. Interconnection Customer may propose individual low-side metering per phase for Energy Imbalance Market purposes in lieu of the foregoing high-side metering requirement, and Transmission Provider will consider in good faith such proposal. It is the Interconnection Customer's responsibility to notify the Transmission Provider of multiple phases prior to construction of the project and submit the appropriate applications under the Energy Imbalance Market business practice posted on the Transmission Provider's OASIS website; and
- g. Spare Instrument Transformers:
 - i. The Transmission Provider does not stock spare instrument transformers. Spare instrument transformers may be procured by either the Transmission Provider or the Interconnection Customer to provide back-up metering capability at the Interconnection Customer's expense. The Interconnection Customer may request that the Transmission Provider procure spare instrument transformers at the Interconnection Customer's expense to be stored at the Interconnection Customer's site for the purposes of replacing instrument transformers in the event of failure.
 - ii. The Interconnection Customer has elected to **not** purchase spare instrument transformers and accepts the associated risk.
 - iii. The associated risk of not purchasing spare instrument transformers in the event of instrument transformer failure includes prolonged outages (approximately 6 months) and additional costs for expedited ordering and shipping.
- 6) **Interconnection Customer's Permitting Requirements:**
 - a. Interconnection Customer to submit all relevant Federal, State, County and local land use permitting and Right-Of-Way applications to the Transmission Provider for review and concurrence **prior** to submittal to the applicable agency.
 - i. Failure to secure Transmission Provider's concurrence prior to submittal of permitting or Right-of-Way applications to the respective agency can result in requiring the Interconnection Customer to resubmit or amend permitting documentation to meet Transmission Provider's satisfaction which may delay the project In-Service schedule significantly.
 - ii. The Transmission Provider's concurrence shall not be unreasonably withheld, conditioned, or delayed.
 - b. Subsequent to receiving Transmission Provider's concurrence, the Interconnection Customer will, acquire all Federal, State, County, and Local land use and environmental permits and authorizations required in order to build, operate, and maintain the Generating Facility, Interconnection Customer Interconnection Facilities, Transmission Provider's Interconnection Facilities (excluding any amendment(s) to existing BLM right of way grant(s) or notification letter to the BLM), and Network Upgrades (excluding any amendment(s) to existing BLM right of way grant(s) or notification letter to the BLM including (but not limited to), if applicable:

- i. All permits related to generator plant facilities including fencing, grading and access roads;
- ii. All permits required to interconnect the Interconnection Customer's generator lead-line to, and including, the Transmission Provider Interconnection Facilities.
- iii. All authorizations, right of way grants and/or assignments related to Interconnection Customer's rights under Interconnection Customer's Federal Right of Way (ROW) Grant which authorizes Transmission Provider to install or otherwise take necessary action to interconnect Transmission Provider's Interconnection Facilities associated with this project;
- iv. All Federal Aviation Administration determination of no hazard or other applicable FAA approvals, as required;
- v. All State Lands, roadway, and environmental permits;
- vi. All dust control permits;
- vii. All storm water permits;
- viii. All Special Use Permits, applicable Variances and other similar permits;
- ix. Any third party easements or other land rights required for the Transmission Providers Interconnection Facilities and access roads on a form reasonably acceptable to Transmission Provider;
- x. All reclamation activities completed and accepted by appropriate agencies; and
- xi. Any other land rights as reasonably deemed necessary by Transmission Provider to perform its obligations under this Agreement, with such land rights being granted on a form reasonably acceptable to Transmission Provider;
- xii. All Federal authorizations including the Standard Form-299 (SF-299) application. The SF-299 application will include, among other things:
 - a) Transmission Provider's switch and dead-end structure outside of Crystal 230 kV Substation. The final location of the dead-end structure must be approved by Transmission Provider's generation engineering and property services along with any other necessary Transmission Provider department(s), such approval not to be unreasonably withheld or delayed;
 - b) All access roads to the Interconnection Customer's Generating Facility and Substation;
 - c) Access road to the dead-end structure outside of Crystal 230 kV Substation BLM ROW Grant; road to be an all-weather, adequate access road, minimum 20 feet in width or an alternate approved minimum width by Transmission Provider;
 - d) Approximately 2 miles of generator lead-line (minimum 1-1272 ACSR with OPGW or equivalent) from Interconnection Customer's Gemini Solar Project Substation to the Crystal 230kV Substation BLM ROW Grant, including the dead-end structure.
- xiii. Plan of Development and SF299 to be reviewed and approved by Transmission Provider before submittal to BLM, such approval not to be unreasonably withheld or delayed. The Plan of Development must include descriptions of all facilities required for the project that would be on federal BLM land, including the generation facilities, the gen-tie facilities (e.g., transmission, substation and telecommunications), the Crystal-Harry Allen network upgrade facilities, and all access roads and temporary short-term work areas. Transmission Provider has

- reviewed and provided comments on the Plan of Development. As the Plan of Development is progressing the Transmission Provider will be included to review all updates in order to ensure that all facilities are appropriately included for EIS and permitting purposes;
- c. Interconnection Customer will acquire the Utility Environmental Protection Act (UEPA) permit for all the facilities required for the interconnection of the Generating Facility inclusive of the following:
 - i. Interconnection Customer Interconnection Facilities;
 - ii. Transmission Provider Interconnection Facilities; and
 - iii. Network Upgrades associated with the Point of Interconnection terminal at Crystal 230 kV Substation.
 - a) Interconnection Customer must coordinate with the Transmission Provider for the UEPA requirements for the Transmission Provider Interconnection Facilities and Network Upgrades associated with the Point of Interconnection terminal at Crystal 230 kV Substation;
 - b) The Transmission Provider will provide to the Interconnection Customer a detailed description of the facilities required inclusive of scope, costs and schedule, per the milestones in Appendix B;
 - c) The Interconnection Customer will include the description provided by the Transmission Provider in the UEPA submittal; and prior to construction, the Interconnection Customer will transfer the UEPA Permit to Construct for the Transmission Provider Interconnection Facilities and the Network Upgrades to the Transmission Provider.
 - d. Transmission Provider shall cooperate with Interconnection Customer's efforts to obtain relevant permits, including (but not limited to) noticing of new permits for the interconnection.
 - e. Once the project is built and operational, the Interconnection Customer will support Transmission Provider, to the extent necessary, in obtaining all documentation related to the assignment of the necessary rights under BLM ROW Grant obtained by the Interconnection Customer. The assignment of the necessary rights under Interconnection Customer's BLM ROW Grant will include the area impacted by the Transmission Provider's Interconnection Facilities associated with this project; an application will be submitted once the Transmission Provider is satisfied that all environmental and other stipulations have been met (i.e., work areas have been adequately restored, plants have been salvaged appropriately, Section 7 form completed and submitted back to the BLM post –construction etc.)
 - a) The Interconnection Customer will finalize and execute the BLM Right of Way application and assignment document within 60 days of the energization of the Transmission Provider Interconnection Facilities;
 - b) The Interconnection Customer will support the Transmission Provider, to the extent necessary, in obtaining all documentation related to the assignment of the necessary rights under BLM ROW Grant obtained by the Interconnection Customer once the project construction is complete;
 - c) The assignment of the necessary rights under Interconnection Customer's BLM ROW Grant will include the area impacted by Transmission Provider's

Interconnection Facilities and Network Upgrades associated with this project.
See Appendix C.

- f. The Interconnection Customer and the Transmission Provider will execute an Access to Equipment Agreement to secure Transmission Provider's access to communications and metering equipment located at the Interconnection Customer Generating Facility sites. The Transmission Provider will record the Access to Equipment Agreement with the County Recorder.
- g. The Interconnection Customer will provide 24 hour access to all of Transmission Provider's facilities without limitations, and subject to Interconnection Customer's safety, security, and other applicable procedures.

(b) Transmission Provider's Interconnection Facilities:

- 1) **230 kV Substation Entrance, Point of Change of Ownership Structure and switch:**
 - a. Transmission Provider will design, procure and install a 230 kV transmission getaway from Crystal 230 kV Substation;
 - b. Transmission Provider will design, procure and construct 230 kV structures to allow for the installation of 1-1272 ACSR per phase from the Crystal 230 kV Substation to the Point of Change of Ownership Structure;
 - c. Transmission Provider will design, procure and construct the Point of Change of Ownership Structure consisting of a 230 kV dead end structure and 230 kV switch;
 - i. The preliminary location identified for the dead end structure is:
Latitude 36.479785°N; Longitude, -114.823860°W
 - ii. The actual dead-end structure location will be determined by the Transmission Provider prior to Interconnection Customer's initiation of permitting, design, and construction.
 - d. Transmission Provider will install relays at Crystal 230 kV Switching Station dedicated to the Interconnection Customer's Transmission Line.
- 2) **Telecommunications at the Interconnection Customer's Site:**
 - a. Transmission Provider will purchase and install one (1) Remote Terminal Unit (RTU) and necessary communications equipment for the required SCADA from the new solar Generating Facility;
 - b. Transmission Provider will purchase and install a multiplexer on the T-1 line for the solar Generating Facility; and
 - c. Transmission Provider will purchase and install miscellaneous communication cables and link equipment as required.
 - d. Transmission Provider will review, coordinate with and provide acceptance for the Interconnection Customer's engineered 230 kV lead line protection.
- 3) **Metering at the Interconnection Customer's Site:**
 - a. Transmission Provider will purchase metering class current transformers and potential transformers (CT's and PT's) and provide them at the Transmission Provider's warehouse for pick-up and installation by the Interconnection Customer; and
 - b. Transmission Provider will purchase and install one (1) 230 kV ION revenue quality meter at Interconnection Customer's Generating Facility compensated to the Point of Interconnection; and

- c. If the Generating Facility is comprised of multiple phases with different off-takers, the Transmission Provider will require a common high-side meter and individual high-side metering per phase for Energy Imbalance Market purposes, which will allow each phase to be separately metered and separately scheduled for Energy Imbalance Market purposes. Interconnection Customer may propose individual low-side metering per phase for Energy Imbalance Market purposes in lieu of the foregoing high-side metering requirement, and Transmission Provider will consider in good faith such proposal. It is the Interconnection Customer's responsibility to notify the Transmission Provider of multiple phases prior to construction of the project. The Interconnection Customer will implement metering in compliance with the Transmission Provider's posted Energy Imbalance Market business practice posted on the Transmission Provider's OASIS website.
 - 4) **Communications at Crystal Substation to integrate Interconnection Customer's lead line:**
 - a. Transmission Provider to install SCADA required for protection equipment and connection to dual fiber feeds at Crystal 230 kV Substation.
 - 5) **Lands and Environmental Interface and Access to Equipment Agreement:**
 - a. Transmission Provider will review Interconnection Customer's plant site permitting documents and provide support in relation to Transmission Provider's facilities at the plant site.
 - b. Transmission Provider will draft, negotiate, and execute an Access to Equipment Agreement with the Interconnection Customer.
2. **Network Upgrades (NU):**
- (a) **Stand Alone Network Upgrades: None.**
 - (b) **Shared Network Upgrades: None.**
 - (c) **Individual Network Upgrades:**
 - 1) **Crystal 230 kV Substation Terminal:**
 - a. The Transmission Provider will design a new terminal between #2306 and #2303 located at the Crystal 230 kV Substation including:
 - i. Two (2) 230 kV breakers;
 - ii. Associated bus work;
 - iii. Disconnect switches;
 - iv. CCVT's;
 - v. Arresters; and
 - vi. Protection Facilities;
 - 2) **Crystal – Harry Allen #4 230 kV Line:**
 - a. The Transmission Provider will permit, design, procure and construct the new Crystal-Harry Allen #4 230 kV Line inclusive of Fiber Optic Cable. The line built to 2-954 ACSR per phase approximately 8.7 miles on existing Transmission Provider-owned steel structures. Installation of one dead-end takeoff structure just outside of Crystal Substation will also be required; and

- b. The Transmission Provider will permit, design, procure, and construct a 230 kV terminal addition at Crystal 230 kV Substation to terminate the new line; and
- c. The Transmission Provider will permit, design, procure, and construct a 230 kV terminal addition at Harry Allen 230 kV Substation to terminate the new line.
 - i. Substation additions include: One (1) 230 kV breaker, associated bus work, CCVT's and protection facilities.
- d. Environmental mitigation for the Crystal- Harry Allen #4 230 kV line includes: pre-construction surveys, tortoise monitoring during construction and post construction restoration.

3) North Las Vegas and Miller 69 kV Substation Upgrades:

- a. The Transmission Provider will permit, design, procure, and rebuild the bus and jumpers at the North Las Vegas 69 kV Substation; and
- b. The Transmission Provider will permit, design, procure, and rebuild the bus and jumpers at the Miller 69 kV Substation.

(d) Distribution Upgrades:

- 1) **None**

3. Affected System Upgrades:

- (a) Affected System Upgrades – The following Affected System Upgrades have been determined to be needed in order to mitigate disturbances on and maintain the reliability of Affected Systems directly or indirectly interconnected to Transmission System.

- 1) **None**

4. Ownership:

- (a) Upon completion of construction, the Parties shall have ownership of the facilities as follows:
 - 1) Interconnection Customer's Interconnection Facilities shall be owned by the Interconnection Customer;
 - 2) Transmission Provider's Interconnection Facilities shall be owned by the Transmission Provider;
 - 3) Stand Alone Network Upgrades shall be owned by the Transmission Provider;
 - 4) Network Upgrades shall be owned by the Transmission Provider; and
 - 5) Distribution Upgrades shall be owned by the Transmission Provider.

5. Operation and Maintenance Responsibilities:

- (a) Upon completion of construction, the Parties shall have responsibilities for operation and maintenance of the Interconnection Facilities, Network Upgrades and Distribution Upgrades as follows:
 - 1) Interconnection Customer's Interconnection Facilities shall be operated and maintained by the Interconnection Customer;
 - 2) Transmission Provider's Interconnection Facilities shall be operated and maintained by the Transmission Provider and paid for by the Interconnection Customer;
 - 3) Stand Alone Network Upgrades shall be operated and maintained by the Transmission Provider;

- 4) Network Upgrades shall be operated and maintained by the Transmission Provider; and
 5) Distribution Upgrades shall be operated and maintained by the Transmission Provider.
 (b) The Interconnection Customer shall be responsible for the payment of the actual costs incurred by the Transmission Provider for operation and maintenance of the Transmission Provider's Interconnection Facilities consistent with Article 10.5 of this Agreement.

6. Cost Estimate & Responsibilities:

(a) **Interconnection Customer's Interconnection Facilities:** Interconnection Customer.

(b) **Transmission Provider's Interconnection Facilities:**

- 1) \$935,000 - Interconnection Customer funded, Transmission Provider owned.

Project Component	Scope Description	TPIF \$M's
Environmental	UEPA permit & BLM permitting support	\$0.135
Communications	Communications work at Crystal Sub to integrate Customer's communications	\$0.065
	RTU at Customer's Site	\$0.110
	Protection review/coordination of plant settings	\$0.030
Transmission Lines	Substation Entrance	\$0.375
Metering	High side metering at Generator site	\$0.220
	TOTAL	\$0.935

All Costs will be tried to actual after the completion of the Project and all costs have been recorded, consistent with Article 12.2 of this LGIA and these estimates do not include any tax gross-up.

(c) **Individual Network Upgrades (NU):**

- 1) \$9,930,000 - Interconnection Customer shall provide security/collateral pursuant to Article 11 of the LGIA and Attachment L of the Open Access Transmission Tariff.

Project Component	Scope Description	Network Upgrade \$M's
Lands	Local permitting support	\$0.040
Environmental	Environmental mitigation during construction of the new 230 kV line	\$0.750
Communication	Fiber on the Crystal-Harry Allen #4 Line	\$0.230
Transmission Lines	New 230 kV line from Crystal-Harry Allen Substation	\$4.230
Substation/Protection	New 230 kV terminal at Crystal 230 kV Substation	\$2.500
	Harry Allen-Crystal Line terminal	\$0.910
	North Las Vegas Substation bus and jumpers rebuild	\$0.560
	Miller Substation bus and jumpers rebuild	\$0.710
	TOTAL	\$9.930

(d) Distribution Upgrades:

1) \$ 0 - Responsibility of the Interconnection Customer

1. None

All Costs will be trued to actual after the completion of the Project and all costs have been recorded. These estimates do not include any tax gross-up.

8. Appendix G: Interconnection Requirements for a Wind Generating Plant

(a) The Parties agree that Appendix G is not applicable.

LGIA Appendix B: Milestones

Solar Partners XI, LLC Milestones		
Interconnection Customer's Project Milestones		Date
<u>1</u>	Interconnection Customer to contact Transmission Provider to schedule regular project meetings	upon execution
<u>2</u>	Interconnection Customer to provide \$100,000 Cash for TPIF Preliminary Project Management	upon execution
<u>3</u>	Interconnection Customer to initiate application for Telecommunications Service	upon execution
<u>4</u>	Interconnection Customer to provide Transmission Provider with certification of all insurance pursuant to Article 18.3.9 of the LGIA	Within 10 business days of execution
<u>5</u>	Pursuant to Section 11.3 of the LGIP the Interconnection Customer shall provide either (a) reasonable evidence that continued Site Control or (b) posting of \$250,000 non-refundable additional security which shall be applied toward future construction costs	within 15 Business Days of execution of this LGIA
<u>6</u>	Interconnection Customer to provide \$300,000 for TPIF project engineering and design	Complete
<u>7</u>	Interconnection Customer to provide an irrevocable Letter of Credit in the amount of \$1,000,000 for Network Upgrade project engineering and design	Complete
<u>8</u>	Interconnection Customer to provide completed documentation (e.g. signed Right of Entries) to Transmission Provider allowing for site access, survey, and study work	2/1/2020
<u>9</u>	Interconnection Customer to provide Transmission Provider with drafts of all right-of-way and permitting applications for Transmission Provider equipment	3/1/2020
<u>10</u>	Interconnection Customer to submit all required permit applications and/or amendments to permit applications for Transmission Provider equipment	12/1/2020
<u>11</u>	Interconnection Customer to arrange meeting between Transmission Provider, Interconnection Customer and third parties to coordinate construction within third parties ROW	12/1/2020
<u>12</u>	Interconnection Customer to provide \$350,000 for TPIF equipment procurement	7/1/2021
<u>13</u>	Interconnection Customer to increase the irrevocable Letter of Credit by \$3,180,000 to a total amount of \$4,180,000 for Network Upgrade equipment procurement	7/1/2021
<u>14</u>	Interconnection Customer to provide Transformer (GSU) specification sheet to Transmission Provider	9/1/2021
<u>15</u>	Interconnection Customer to contact Transmission Provider to schedule initial coordination meeting for protection, system control, telecommunications, and metering to discuss Telemetry Points Worksheet	9/1/2021
<u>16</u>	Interconnection Customer to provide Control Room Preliminary Dimension Design to Transmission Provider	9/1/2021

Agreed to by:

For the Transmission Provider

DocuSigned by:

Shahzad Lateef

3/28/2019

Date

For the Interconnection Customer

DocuSigned by:

Ricardo Graf

3/26/2019

Date

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Interconnection Customer's Milestones Cont'd

<u>17</u>	Interconnection Customer to provide One-line with Protection Scheme Descriptions and Relay Settings to Transmission Provider	9/1/2021
<u>18</u>	Interconnection Customer to provide signed Telemetry Points Worksheet to Transmission Provider	9/1/2021
<u>19</u>	Interconnection Customer to provide Transmission Provider with copies of completed permits from all required federal, state, county & local entities including, but not limited to, Right-of-Way Grant (BLM), final UEPA (PUCN), BLM issued Notice to Proceed (NTP), Special Use Permits, Grading Permits, Building Permits, etc.	9/1/2021
<u>20</u>	Interconnection Customer to provide documentation/verification and executed easements to Transmission Provider for all access roads	9/1/2021
<u>21</u>	Interconnection Customer to provide the transformer Factory Acceptance Testing (FAT) data to the Transmission Provider	2/1/2022
<u>22</u>	Interconnection Customer to provide completed Energy Imbalance Market Resource Data Template with attachments	2/1/2022
<u>23</u>	Interconnection Customer to provide \$185,000 for TPIF Project construction	11/1/2021
<u>24</u>	Interconnection Customer to increase the irrevocable Letter of Credit by \$5,000,000 to a total amount of \$9,180,000 for Network Upgrade project construction	11/1/2021
<u>25</u>	Interconnection Customer to complete all installations of conduits with pull strings and make available for Transmission Provider use	3/1/2022
<u>26</u>	Interconnection Customer to provide DC load centers dedicated for Transmission Provider communications equipment and RTU	3/1/2022
<u>27</u>	Interconnection Customer to complete Control Room construction with cable trays and conduits and provide full access to Transmission Provider	3/1/2022
<u>28</u>	Interconnection Customer to Provide T-1 line from Generator Control Room to the Transmission Provider's Energy System Control Center	3/1/2022
<u>29</u>	Interconnection Customer to Provide dial up line to meter	3/1/2022
<u>30</u>	Interconnection Customer to complete installation of Generator Facility protection relays	3/1/2022
<u>31</u>	Interconnection Customer to complete installation of Meter Structure including PT/CT and meter cabinet	3/1/2022
<u>32</u>	Interconnection Customer to provide 125 Volt DC power to meter cabinet	3/1/2022
<u>33</u>	Interconnection Customer to provide 24 hour access number to Transmission Provider or ring down line from Generator Control Room ESCC	3/1/2022
<u>34</u>	Interconnection Customer to initiate application for Standby Service	8/1/2022
<u>35</u>	Interconnection Customer to provide Transmission Provider operation plan for generator start up	10/1/2022
<u>36</u>	Interconnection Customer to complete Interconnection Customer Interconnection Facilities (provide notice to Transmission Provider in writing)	Notice must be provided at least one week prior to In-Service Date

Agreed to by:

For the Transmission Provider

DocuSigned by:

Shahzad Latief

3/28/2019

Date

For the Interconnection Customer

DocuSigned by:

Ricardo Graf

3/26/2019

Date

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Interconnection Customer's Milestones Cont'd

37	Interconnection Customer to provide either: (1) documentation showing how the Interconnection Customer will meet the IRS Notice 2016-36 "Safe Harbor" provision or (2) Cash to the Transmission Provider for CIAC tax gross up for the Transmission Provider Interconnection Facilities at the applicable rate	at least one week prior to In-Service Date
38	Interconnection Customer to execute a Standby Service Agreement	at least one week prior to In-Service Date
39	Interconnection Customer to initiate generator pre-energization meeting	Notice must be given at least one week prior to holding the meeting
40	Interconnection Customer and Transmission Provider to hold Pre-energization Meeting to review final Operating Procedures provided by the Transmission Provider	at least one month prior to In-Service Date
41	Interconnection Customer to return signed final Operating Procedures provided by Transmission Provider	at least one month prior to In-Service Date
42	Interconnection Customer to provide a letter to the Transmission Provider acknowledging in writing that all plant systems are adequately protected and have been tested prior to energization	Must be completed prior to the In-Service date with written notice by the Interconnection Customer to the Transmission Provider
43	Interconnection Customer Facility Calibration and Trip Testing - Interconnection Customer to Coordinate with the Transmission Provider	Must be completed prior to the In-Service date with written notice by the Interconnection Customer to the Transmission Provider
44	Interconnection Customer and Transmission Provider to complete the PRC-001 System Protection Coordinator Letter	Prior to In-Service Date
45	In-Service Date	11/1/2022
46	Generator Testing Start Date - Provide notice to Transmission Provider	within 30 days of Commercial Operation Date
47	Interconnection Customer to complete LGIA Appendix E and provide to the Transmission Provider when it is ready to declare COD	within 1 day of commercial operation
48	Commercial Operation Date - Provide notice to Transmission Provider	12/1/2022
49	Interconnection Customer to provide signed Grant of Easement, Access Agreement, and other required documents to Transmission Provider	Approximately one month after in-service date
50	Interconnection Customer to provide copies of tortoise fees, BLM rentals, copy of the final environmental documents (i.e., EA, Cat Ex, POD, Restoration Plan) including any company-specify Interconnection Customer environmental compliance policies and the final BLM grants.	Approximately one month after in-service date
51	Interconnection Customer to complete Section 7 form and submit to BLM for "Transmission Provider Interconnection Facilities" - provide Transmission Provider copy of submittal for review	Approximately one month after in-service date

Agreed to by:

For the Transmission Provider

DocuSigned by:

Shahzad Latief

Date 3/28/2019

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DocuSigned by:

Ricardo Graf

Date 3/26/2019

For the Interconnection Customer

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Interconnection Customer's Milestones Cont'd

<u>52</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2023
<u>53</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2024
<u>54</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2025
<u>55</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2026
<u>56</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2027
<u>57</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2028
<u>58</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2029
<u>59</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2030
<u>60</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2031
<u>61</u>	Interconnection Customer to provide written notice to the Transmission Provider detailing how it continually meets the Safe Harbor Provision	12/1/2032

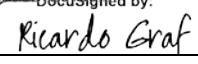
Transmission Provider Milestones		Date
<u>1</u>	Transmission Provider Interconnection Facilities and Network Upgrades Completed Provided that all necessary approvals by Governmental Authorities are received, Interconnection Customer's required facilities are constructed, tested and ready for service per Interconnection Customer milestones above, and the Interconnection Customer has provided required securities and notices to the Transmission Provider per Interconnection Customer milestones above.	11/1/2022

Agreed to by:

For the Transmission Provider

DocuSigned by:
 Date 3/28/2019

For the Interconnection Customer

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 DocuSigned by:
 Date 3/26/2019
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LGIA Appendix C: Interconnection Details

SOLAR PARTNERS XI, LLC – Company 151 – Photovoltaic Solar Facilities

Type of Interconnection Service: Network Resource Interconnection Service

Generating Facility Capacity: 440 MW net at the Point of Interconnection

Total Generating Facility Nameplate Rating: 480 MVA gross from two hundred forty (240) 2.0 MVA TMEIC Samurai inverters that the Interconnection Customer is installing.

Point of Interconnection:

The Point of Interconnection will be the point where the Interconnection Customer's 230 kV lead-line from the Gemini Solar Project Substation intersects the terminal position at the Transmission Provider's 230 kV Crystal Substation. See Appendix C.

Point of Change of Ownership:

The Point of Change of Ownership will be the point where the Interconnection Customer's 230 kV transmission lead line terminates on the Transmission Provider-owned Point of Change of Ownership dead-end structure located adjacent to the Crystal 230 kV Substation BLM ROW Grant. See Appendix C.

Nominal Delivery Voltage: 230 kV

Metering Voltage: 230 kV

Generating Facility Communications and Protection Requirements:

1. Communications Requirements—Generating Facility Telemetry:
 - a. Generating Facility telemetry outputs:
 - i. Generator Plant total MW, MVAR, 3-phase amps, 3-phase volts (L-G referred to L-L) and accumulated MW-hr in and out. Fiber will be required if the distance between the meter and the Transmission Provider's RTU exceeds 1500 feet.
 - b. Hard-wired open/closed indication for transformer circuit breaker/circuit switcher to Transmission Provider's ESCC;
 - c. Plant transformer protection lockout status (one for each transformer, GSU, Unit Aux, or Station Service where connected to the POI high side bus);
 - d. Condition signal indicating status of percentage of plant output availability to ESCC Control Room on a continuous basis;
 - e. Interconnection Customer to provide SCADA capability to transmit real-time data output from the weather measurement equipment of the solar PV plant (Global and Point of Array diffuse Solar Radiance, Ambient Temperature and Wind Speed). Data collection shall be provided by customer from each individual (if more than one) weather station totalized such that there is one indication per point. Customer shall provide data using Transmission Provider accepted protocol or hardwired directly to Transmission Provider's RTU;
 - f. Interconnection Customer shall provide forecasted hourly solar plant energy production data consistent with WECC-defined operational planning requirements and Energy Imbalance Market¹ requirements, (1 week forecast) including updates to all forecast hourly output values no less frequently than once per calendar day. Such forecasts shall be based on numerical weather prediction (NWP) models. Interconnection Customer shall provide data using Transmission Provider accepted protocol directly to Transmission Provider.
 - g. Interconnection Customer shall provide any environmental data that may impact the percentage of the Generating Facility output availability (i.e. low temperature, high wind and/or trip settings);
 - h. Tripped/Reset indication of all GSU and line protection lockouts – totalized such that there is one indication per GSU;
 - i. Load Tap Changer (LTC) indication tap position and manual on/off indication (if GSUs are equipped with LTC);
 - j. Alarms for loss of communication aided protection for line protection relays shall be provided via soft points from the Customer's RTU or SCADA/DCS system; and
 - k. Note—RTU at plant to which output will be delivered is to be designated as the master RTU. The Interconnection Customer will supply an interface that will allow the Transmission Provider's RTU to be the master (polling) device.
2. Generating Facility control points – Transmission Provider will require the following control points:
 - a. Trip control of transformer main 230 kV breaker;
 - b. Trip control of low side 34.5 individual phase breakers.

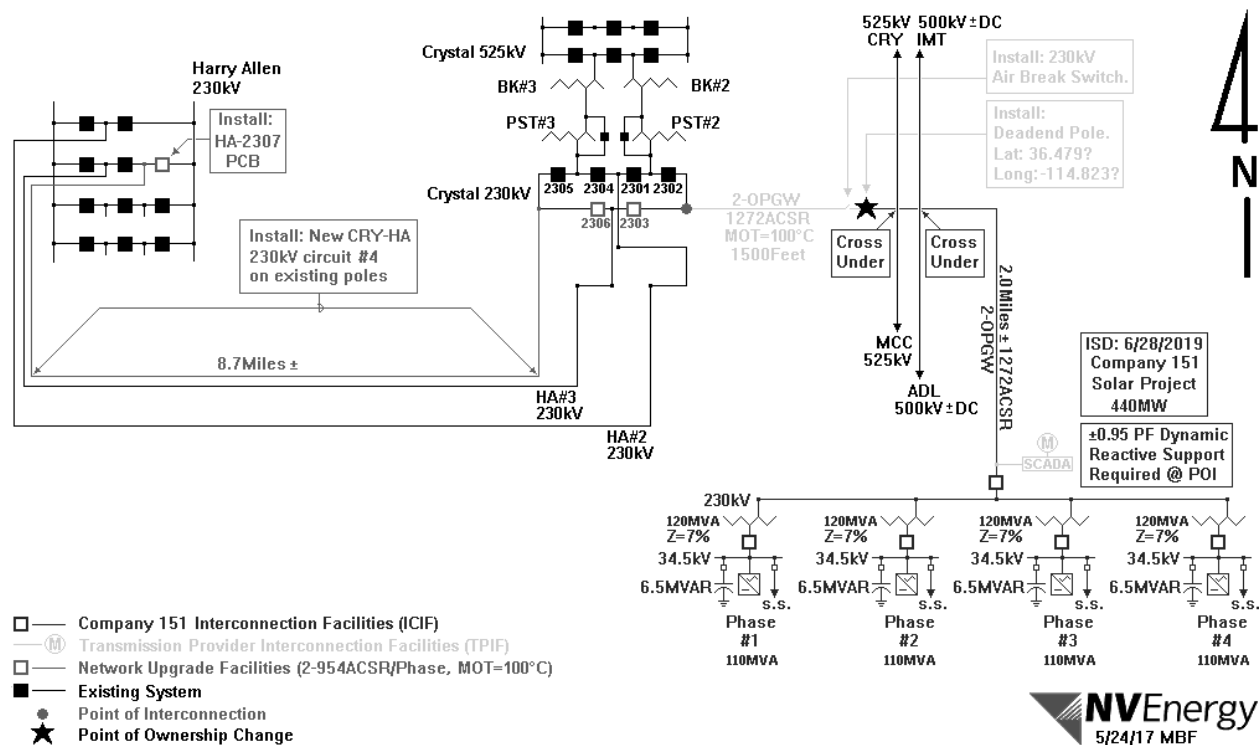
¹ As defined in Section I.1.13D "Energy Imbalance Market (EIM)" of the Nevada Power Company Open Access Transmission Tariff.

3. Checklist of items that must be completed prior to proceeding with any start up and synchronization for Interconnection Customer's plant:

- a. Review by Transmission Provider of Interconnection Customer's protection settings for coordination purposes;
- b. Interconnection Customer must perform both calibration and functional trip tests of its System Protection Facilities and report results back to Transmission Provider;
- c. Complete communications required;
- d. SCADA indications at plant substation operational with full Transmission Provider ESCC access;
- e. Adequate voice communication at Interconnection Customer's substation (cell or land line at sub);
- f. Transmission Provider to trip test Interconnection Customer's main interrupting device(s) from the RTU control point;
- g. Interconnection Customer to acknowledge in writing that all plant systems are adequately protected and have been tested; and
- h. Interconnection Customer and Transmission Provider to have start up and in service process meetings one (1) week prior to start-up and in service event.

LGIA Appendix C: One-Line Diagram

Company 151 Interconnection at Crystal 230kV Substation



Note: If the Generating Facility is comprised of multiple phases with different off-takers, the Interconnection Customer will provide an updated one-line diagram reflecting the location of the additional meters used to separately meter each phase.

LGIA Appendix D: 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.

LGIA Appendix E: Commercial Operation Date

This Appendix E is a part of the LGIA between Transmission Provider and Interconnection Customer.

[Date]

[Transmission Provider Address]

Re: _____ Large Generating Facility

Dear _____:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No. . This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No. at the Large Generating Facility, effective as of **[Date plus one day]**.

Thank you.

[Signature]

[Interconnection Customer Representative]

LGIA Appendix F: Addresses for Delivery of Notices and Billings

Notices:

Unless otherwise provided in this Agreement, any written notice demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

Transmission Provider

Transmission Provider: Nevada Power Company d/b/a NV Energy
Attention: Manager, Transmission Business Services
Address: 6100 Neil Road or PO Box 10100
City: Reno State: NV Zip: 89511
Phone: 775-834-4802 Fax: 775-834-3047
E-Mail: TransmissionPolicy@nvenergy.com

Interconnection Customer

Interconnection Customer: Solar Partners XI, LLC
Attention: Ricardo Graf
Address: 1044 10th Avenue
City: Redwood City State: CA Zip: 94558
Phone: 949-275-7538
E-Mail: ricardo@areviapower.com

Billings and Payments:

Billings and payments shall be sent to the addresses set out below:

Transmission Provider: Nevada Power Company d/b/a NV Energy
Attention: Manager, Transmission Business Services
Address: 6100 Neil Road or PO Box 10100
City: Reno State: NV Zip: 89511
Phone: 775-834-4802 Fax: 775-834-3047
E-Mail: TransmissionPolicy@nvenergy.com

Interconnection Customer

Interconnection Customer: Solar Partners XI, LLC
Attention: Ricardo Graf
Address: 1044 10th Avenue
City: Redwood City State: CA Zip: 94558
Phone: 949-275-7538
E-Mail: ricardo@areviapower.com

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

Any notice or request required or permitted to be given by either party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out below:

Transmission Provider:

Transmission Provider: Nevada Power Company d/b/a NV Energy
Attention: Project Manager
Address: 6100 Neil Road or PO Box 10100
City: Reno State: NV Zip: 89511
Phone: 775-834-4042 Fax: 775-834-3047
E-Mail: TransmissionPolicy@nvergy.com

Interconnection Customer

Interconnection Customer: Solar Partners XI, LLC
Attention: Mark Boyadjian
Address: 1044 10th Avenue
City: Redwood City State: CA Zip: 94063
Phone: 917-653-8116
E-Mail: mark@areviapower.com

Designated Operating Executive:

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Transmission Provider:

Transmission Provider: Nevada Power Company d/b/a NV Energy
Attention: Director, T&D System Operations
Address: 6100 Neil Road or PO Box 10100
City: Reno State: NV Zip: 89511
Phone: 702-402-6601 Fax: 702-402-6631
E-Mail: ESCCOperations@nvergy.com

Interconnection Customer

Interconnection Customer: Solar Partners XI, LLC
Attention: Ricardo Graf
Address: 1044 10th Avenue
City: Redwood City State: CA Zip: 94558
Phone: 949-275-7538
E-Mail: ricardo@areviapower.com

Changes to the Notice Information

Either Party may change this information by giving five Business Days written notice prior to the effective date of the change.

LGIA Appendix G: Interconnection Requirements For A Wind Generating Plant

Appendix G sets forth requirements and provisions specific to a wind generating plant. All other requirements of this LGIA continue to apply to wind generating plant interconnections.

A. Technical Standards Applicable to a Wind Generating Plant

i. Low Voltage Ride-Through (LVRT) Capability

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

Transition Period LVRT Standard

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

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles at a voltage as low as 0.15 p.u., as measured at the high side of the wind generating plant step-up transformer (i.e. the transformer that steps the voltage up to the transmission interconnection voltage or “GSU”), after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system.
2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU or to faults that would result in a voltage lower than 0.15 per unit on the high side of the GSU serving the facility.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAR

Compensator, etc.) within the wind generating plant or by a combination of generator performance and additional equipment.

5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

Post-transition Period LVRT Standard

All wind generating plants subject to FERC Order No. 661 and not covered by the transition period described above must meet the following requirements:

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the transmission provider. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system. A wind generating plant shall remain interconnected during such a fault on the transmission system for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.
2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.
3. Wind generating plants may be tripped after the fault period if this action is intended as part of a special protection system.
4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAr Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.
5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix G LVRT Standard are exempt from meeting the Appendix G LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix G LVRT Standard.

ii. Power Factor Design Criteria (Reactive Power)

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 LGIA, if the Transmission Provider's System Impact Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability 606 (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.

TRAN-4

Gemini Interconnection at South Crystal 525 kV

System Impact Study



December 2018

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GENERAL INTERCONNECTION INFORMATION			
Gemini Interconnection at Crystal 525 kV 250 MW			
NVE Project Name:	Gemini Interconnection at Crystal 525 kV	Queue Position:	NC5-002
Max Gross Output: (Nameplate)	253 MW	POI:	South Crystal 525 kV
Max Net Output: (Generating Facility Capacity)	250 MW	Alternative POI:	None
Resource:	Solar Photovoltaic	ERIS:	No
Location:	Clark County, Nevada	NRIS:	Yes
Requested In-Service:	5-1-2020	Queue Date:	5-26-2017

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1. EXECUTIVE SUMMARY

Interconnection Customer Solar Partners XI, LLC has requested a large generation interconnection of the Gemini Solar-Photovoltaic plant to the jointly owned by Navajo Transmission Project (NTP) participants South Crystal 525 kV Switchyard. The proposed generator would interconnect to South Crystal 525 kV Switchyard through a new, approximately 2.0 Mile, 795 ACSR 525 kV line. In order to accommodate this request, construction of one new 525 kV terminal position, associated bus work, metering and communication equipment will be required at the South Crystal 525 kV switchyard. In addition, re-termination of the Crystal 525/230 kV transformer #2 will be required to create space for the new 525 kV interconnection terminal. The customer will design and install the needed metering equipment such that the plant will be a part of LADWP's BAA with the approval of the remaining Navajo participants (LADWP, NVE & USBR).

The results and requirements of this Interconnection System Impact Study supersede those of any previous Interconnection Feasibility/System Impact Study. This report does not constitute an offer of transmission service or confer upon the Interconnector any right to receive transmission service. The Navajo Participants (i.e. APS, LADWP, NVE, SRP, TEP and USBR) and other interconnected utilities may not have the Available Transmission Capacity (ATC) to support the interconnection described in this report. It should also be noted that all results for the SIS are highly dependent upon the assumed topology and timing of new projects in the vicinity of the interconnection, which are subject to change.

2. PROJECT BACKGROUND

NV Energy, acting as an Operating Agent for the Navajo Western Transmission System, has received an interconnection request from Solar Partners XI (Interconnection Customer), for a proposed 250 MW solar owned South Crystal 525 kV substation as part of the Navajo Project. As part of this request, a new approximately 2 mile long 525 kV lead line would be built between the existing jointly owned South Crystal 525 kV Switchyard to the proposed 525 kV Gemini Switchyard and 250 MW Solar Photovoltaic generating facility. The proposed commercial operation date for this interconnection is June 1, 2020 with a proposed test operation date of May 1, 2020. A finalized, WATS approved Study Plan was issued March 5, 2018. The System Impact Study follows the approved study plan except in situations where more recently updated information was made available during the System Impact Study.

3. STUDY ASSUMPTIONS

This System Impact Study assumes Gemini plant generation output to be scheduled for delivery into LADWP BAA (area 26). The SIS assumes Navajo Coal Units #1, #2 and #3 are retired (currently

scheduled by the end of 2019). The Harry Allen to Eldorado 525 kV line is assumed to be in service (estimated to be in service in 2020). Additional significant topology assumptions are described in Table 1.

Table 1: Significant Topology Assumptions for Heavy Summer Based Case

Project	In-Service Date	Included?
Sun Valley 525/230 KV Substation (Delaney-Sun Valley Line)	2016	Yes (in 24HS2)
Delaney – Palo Verde 525 KV Line	2016	Yes (in 24HS2)
Hassayampa – Pinal West #1 525 KV Line Loop into Jojoba	2016	Yes (in 24HS2)
Mazatzal 345/69kV Substation	2017	Yes (in 24HS2)
Santiago Synchronous Condenser 225 MVAR	2017	Yes (in 24HS2)
Four Corners 525/345 kV Transformer #2	2017	Yes (in 24HS2)
Sun Valley – Morgan 525 KV Line	2018	Yes (in 24HS2)
TransWest Express ±600 kV HVDC Project	2022-24	No (not in 24HS2)
Eldorado - Harry Allen 525 KV Line	2020	Yes (in 24HS2)
Delaney – Colorado River 525 KV Line	2020	No (in 20HS2)
N.Gila – Imperial Valley 525 KV Line #2	2020	No (not in 24HS2)

4. **BASE CASES & CONTINGENCIES**

Base Case Scenarios for Analysis:

The base cases used to study Gemini Interconnection and to perform sensitivity analyses are described as follows:

- A. The WECC approved 2024 Heavy Summer base case¹ was used to analyze the Steady State and Contingency Analysis Pre- and Post-Gemini Interconnection at Crystal 525 kV substation. The case was also used to study the following sensitivities:
 1. Navajo to Crystal 525 kV Minimum Flow Stress
 2. Crystal to Harry Allen 525 kV (Path #77) Maximum Flow
 3. NC5-002 Apex T-T Interconnection (499 MW)
- B. The WATS approved 2020 High East of River base case (Path #49) was used to analyze the Steady State and Contingency Analysis Pre- and Post-Gemini Interconnection at Crystal 525 kV substation. The case was also used to study the following sensitivities:
 1. Navajo to Crystal 525 kV Maximum Flow Stress
 2. McCullough Series Capacitor Stress Case
 3. NC5-001 Big Water Solar Interconnection (480 MW)
- C. The NV Energy 2019 Heavy Summer Southern Nevada Transmission Interface (SNTI - Path #81) Maximum Import Case
- D. The NV Energy 2019 Heavy Summer Southern Nevada Transmission Interface (SNTI - Path #81) Maximum Export Case

Contingencies:

NERC TPL-001-4 defined P0-P7 conditions are evaluated for each of the cases listed above under the existing “Pre-Interconnection” configuration and the proposed “Post-Interconnection” configuration where Gemini Generation is connected to South Crystal 525 kV. Contingency analysis for each of these sensitivities includes:

- NV Energy Master Contingency file: a comprehensive P1-P7 list of contingencies within the NV Energy System

¹ The 2024 case topology was adjusted to remove significant topology additions included in the 2024HS2a case but not expected to be in-service until after the proposed Interconnection Customer’s Commercial Operation Date. The 2024HS2a case was selected due to being the most recent WECC approved base case (approved July 25, 2018) while also including minimal variation from the originally proposed base case (2020HS2a).

- CAISO EOR/WOR .otg file; used where applicable
- Out of NV Energy contingencies studied pre and post interconnection as outlined in the WATS study plan (described in Table 2)

Table 2: List of contingencies to be studied pre and post interconnection per the WATS approved Study Plan

Outage	NERC TPL-001-4 Category	Applied Fault Type
Navajo-Moenkopi 525 KV Line	P1	3-Ph
Navajo-Dugas 525 KV Line	P1	3-Ph
Crystal-H Allen 525 KV Line	P1	3-Ph
Morgan-Westwing 525 KV Line	P1	3-Ph
McCullough-Eldorado 525 KV Line	P1	3-Ph
Mead - Marketplace 525 KV Line	P1	3-Ph
Yavapai-Westwing 525 KV Line	P1	3-Ph
Moenkopi-Eldorado 525 KV Line	P1	3-Ph
Eldorado-Lugo 525 KV Line	P1	3-Ph
Four Corners-Moenkopi 525 KV Line	P1	3-Ph
Navajo-Big Water 525 KV Line	P1	3-Ph
Big Water-Crystal 525 KV Line	P1	3-Ph
Navajo-Crystal 525 KV Line (assumes no Big Water)	P1	3-Ph
Crystal-McCullough 525 KV Line	P1	3-Ph
Palo Verde-Westwing 525 KV Line (1 or 2)	P1	3-Ph
Palo Verde-Colorado River 525 KV Line	P1	3-Ph
Palo Verde-Delaney 525 KV Line	P1	3-Ph
Delaney-Colorado River 525 KV Line ²	P1	3-Ph
Hassayampa-North Gila 525 KV Line	P1	3-Ph
Perkins-Mead 525 KV Line	P1	3-Ph
(G-1) Tripping of one Navajo Unit (not needed if units off line)	P1	(None)
(G-1) Tripping of one Palo Verde Unit	P1	(None)
Harry Allen – Mead 525 kV Line	P1	3-Ph
Harry Allen – Eldorado 525 kV Line	P1	3-Ph
Lenzie – Northwest 525 kV Line	P1	3-Ph
Harry Allen – Mead & Crystal – McCullough (with Lenzie SSR RAS)	P7	3-Ph
Harry Allen – Red Butte & Navajo - Crystal	P7	3-Ph
Navajo-Dugas & Navajo - Moenkopi	P6.1.1	SLG
Navajo-Dugas & Cedar Mtn-Yavapai	P6.1.1	SLG
Navajo-Dugas & Yavapai-Westwing	P6.1.1	SLG
Devers-Red Bluff 525 kV #1 & #2	Extreme Event	SLG
Dugas-Morgan & Yavapai-Westwing	P6.1.1	SLG
IPP DC Bipolar Line Outage	P7	(none)
G-2 Simultaneous. loss of 2 Palo Verde Units	P7	(None)

² Contingency originally identified in the Study Plan but line was assumed to not be in-service prior to interconnection. Thus, this contingency was not simulated.

5. **POWERFLOW ANALYSIS**

A. WECC 2024 HEAVY SUMMER BASE CASE ANALYSIS

The WECC approved 2024 Heavy Summer (2024HS2a) base case was used to analyze the impact of the proposed interconnection on the system, including analysis of potential overloads on the system, and changes to path flow following Gemini generation interconnection. The generation and dispatch in the case are representative of a maximum generation and maximum load during a WECC defined Heavy Summer scenario. The case reflected, or was adjusted to reflect, the following assumptions to adhere to the Study Plan:

1. Retirement of Navajo Units #1, #2, and #3
2. Harry Allen - Eldorado 525 kV line in-service
3. Delaney – Colorado River 525 kV not in-service
4. Apex Combined Cycle generation connected at Harry Allen 525 kV, not Crystal 525 kV

i. Pre-Interconnection Power Flow Analysis Results

The existing system was modelled with the appropriate aforementioned assumptions in place to represent a pre-interconnection scenario. There were no adverse system impacts identified as a result of the pre-Interconnection power flow analysis using the WECC 2024 Heavy Summer base case. Appendix C provides power flow diagrams and results for the study.

ii. Post-Interconnection Power Flow Analysis Results (P0-P7)

Modification was made to the pre-interconnection case to model the requested system configuration to represent the post-interconnection scenario. Gemini generation was set at maximum output, connected to Crystal 525 kV and scheduled for Area 26. Area 26 generation was reduced to accommodate the additional 250 MW of generation. There were no adverse system impacts identified as a result of the post-Interconnection power flow analysis under normal or outage conditions using the WECC 2024 Heavy Summer base case with the addition of the Gemini generation interconnected at Crystal 525 kV substation. Appendix C provides power flow diagrams and results for the study.

iii. Sensitivity Analysis

Three sensitivity scenarios were studied using the WECC 2024 Heavy Summer case including:

1. Navajo to Crystal 525 kV Minimum Flow
2. Crystal to Harry Allen (Path #77) 230 kV Maximum Flow
3. Interconnection of NC5-002 (“Apex”) 499 MW at Crystal 525 kV Substation

1. Navajo to Crystal 525 kV Minimum Flow

The WECC 2024 Heavy Summer case was modified to minimize flow on the Navajo to Crystal 525 kV line to approximately 102 MW east to west. This flow level was determined to be an appropriate minimum value based on historical flow data from 2013 to 2018, as shown in Figure 1.

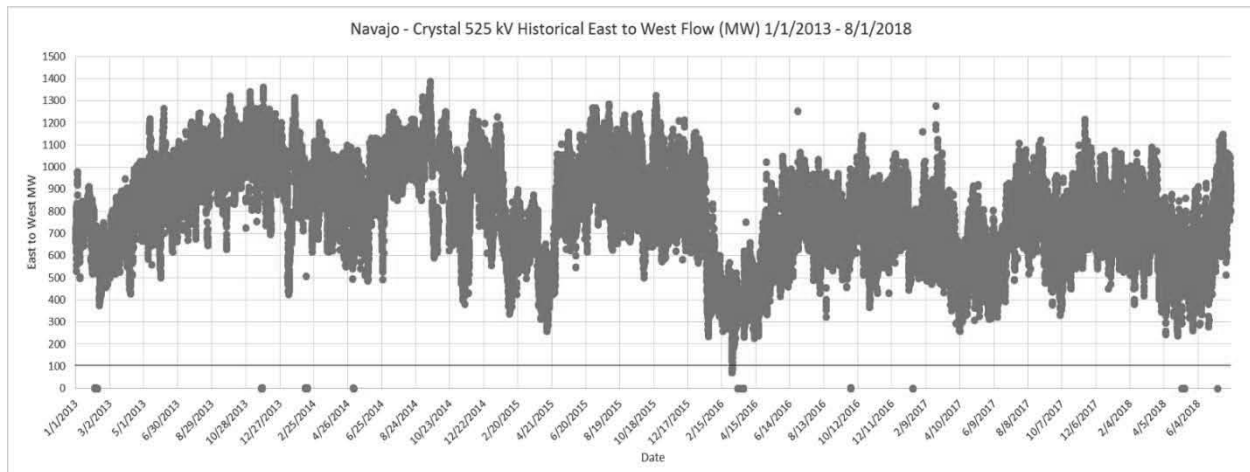


Figure 1: Navajo - Crystal 525 kV historical east to west flow (MW). Minimum flow observed in the five-year period (neglecting outages, e.g. “0 MW flow”) is approximately 100 MW.

To simulate the minimization of flow on the Navajo - Crystal 525 kV line, area interchange between areas 14 (APS) and 26 (LADWP) was modified by decreasing power export schedule for Area 14 and decreasing power import schedule for Area 26. Generation dispatch was increased in Area 26 and decreased in Area 14 in order to minimize east to west flow. The Crystal 525 and 230 kV phase shifters were then used to further minimize the flow on the line to reach as close to 100 MW east to west flow as possible.

Contingency analysis was performed on the case in the pre-Interconnection and post-Interconnection scenarios. There were no adverse system impacts identified in this sensitivity.

Further analysis was conducted by switching the Navajo reactors off (3x170 MVAR) and reviewing the voltages on the 525kV system pre and post interconnection. Specifically, the purpose of this evaluation was to determine whether the standard power factor capability requirement of the generator (+/- 0.95) would be sufficient to offset high voltages experienced on the Navajo – Crystal 525kV Line and immediately adjacent system. The post interconnection case was set with the Gemini generator operating at - 0.95 pf (absorbing MVARs) and the voltages were compared to the pre-interconnection case.

The results of this analysis are demonstrated in Figure 6 and Figure 7. When the Gemini plant is operating within the standard power factor capability, the Crystal and Navajo 525 kV bus voltages are lower than the pre-interconnection case. This demonstrates that the

standard power factor requirement will be sufficient to mitigate any high voltage issues caused by the addition of Gemini.

Appendix C provides power flow diagrams and results for the study.

2. Crystal to Harry Allen 230 kV (Path #77) Maximum Flow

The WECC 2024 Heavy Summer case was modified to maximize flow on Path #77 (950 MW NVE import via Crystal 230 kV phase-shifters, measured at Crystal 525/230 kV transformers). This analysis was specifically conducted to ensure sufficient angular range remains in the post-interconnection configuration of the Crystal 230 kV phase shifters to support required NVE schedules. The case was adjusted to maximize generation in the area surrounding Harry Allen with approximately 950 MW of flow across the Crystal 230 kV phase shifters. Contingency analysis was performed on the case in the pre-Interconnection and post-Interconnection scenarios. There were no adverse system impacts identified in this sensitivity. Appendix C provides power flow diagrams and results for the study.

3. Interconnection of NC5-002 (“Apex”) 499 MW at Crystal 525 kV Substation

Applicant NC5-002, 499 MW at Crystal 525 kV is ahead of the Gemini interconnection in the Navajo Interconnection Queue. Thus, a sensitivity scenario based on the Heavy Summer 2024 case was modeled to determine how the prior queued interconnection may affect Gemini’s requirements to interconnect. Contingency analysis was performed on the case in the pre-Gemini Interconnection and post-Gemini Interconnection scenarios. There were no adverse system impacts identified in this sensitivity. Appendix C provides power flow diagrams and results for the study.

B. High East of River (Path #49) Analysis

The WATS approved High East of River (Path #49) path flow case was used to analyze and describe the impact of the Gemini Project on Path #49. The case modeled approximately 10,200 MW of flow on path 49 east to west. The purpose of this scenario was to characterize the impacts of the project on the path flow itself and identify possible overloads and/or voltage violations triggered by the Gemini Interconnection. Table 3 below describes the change in flow for each transmission line that comprises the path pre and post interconnection.

Table 3: EOR Path #49 Flow Δ Pre & Post Gemini Interconnection P0

Line	Monitoring Point	Pre Interconnect (MW)	Post Interconnect (MW)	Δ
Navajo - Crystal 525 kV	Navajo 525 kV	1528	1496	flow decrease 32 MW
Moenkopi - Eldorado 525 kV	Eldorado 525 kV	1652	1656	flow increase 4 MW
Liberty - Peacock 345 kV	Liberty 345 kV	450	450	No change
Palo Verde - Colorado River 525 kV	Palo Verde 525 kV	2307	2324	flow increase 17 MW
Hassayampa - Hoodoo Wash 525 kV	Hassayampa 525 kV	1113	1121	flow increase 8 MW
Perkins - Mead 525 kV ³	Perkins 525 kV	2033	2027	flow decrease 6 MW
Hassayampa - N.Gila 525 kV	Hassayampa 525 kV	1117	1125	flow increase 8 MW
Total		10200	10199	flow decrease 1 MW

Overall, the steady state path flow was decreased by a total of 1 MW of flow resulting from a redistribution of flow. The redistribution did not result in voltage or power flow violations under normal or contingency conditions. The 1 MW reduction in flow can be mitigated by modifying generation dispatch to increase EOR east to west flow.

The impact of the Gemini Interconnection under contingency scenarios was studied, including the path specific critical contingency analysis. The most critical EOR contingencies remain the same as described in the Path Rating Catalog. The results of the path-specific critical contingency analysis are described in Table 4.

Table 4: EOR (Path #49) Δ Loading for Critical Contingencies

Critical Contingency	Monitored Element	% Loading		$\Delta\%$
		Pre-Interconnect	Post-Interconnect	
P1: Loss Navajo to Crystal 525 kV	Moenkopi - Eldorado SC 525 kV	96	96	0
P4: Loss Navajo - Crystal 525 kV & Harry Allen - Red Butte 345 kV	Moenkopi - Eldorado SC 525 kV	96	96	0
P1: Loss Palo Verde - Colo River 525 kV	Mead - Perkins SC 525 kV	98	97	-1
P4: Loss of Red Bluff - Colo River 525 kV	Mead - Perkins SC 525 kV	98	97	-1

Contingency analysis was performed on the case for both pre-Interconnection and post-Interconnection scenarios. Several existing known overloads were observed in the pre-

³ A known overload exists in the WATS approved High EOR Case where the Mead to Perkins Series Compensated 525 kV line flow is 100% under steady state, P0, conditions. This is a known overload in the case, therefore only the change in flow was noted.

Interconnection and post-Interconnection cases as described in Table 5. The general conclusion from the comparison is that the project has slightly increased pre-existing overload on J. Hinds-Mirage only while reduced all the others. Since it is expected that this issue is mitigated by the existing SCE's remedial action scheme, there is no need for further mitigations for this interconnection..

Table 5: 2020 High EOR case contingency analysis

Contingency/Contingencies	Overloaded Element	Rating (MVA)	Pre Interconnection Loading (p.u.)	Post Interconnection Loading (p.u.)
P1: Palo Verde – Colorado River 525 kV P4: Devers – Red Bluff 525 kV #1	J. Hinds – Mirage 230 kV Line ⁴	357	1.031	1.041
P4: Dugas – Morgan 525 kV and Yavapai – Westwing 525 kV	GAVLINWA – PRSCOTWA 230 kV	299.2	1.121	1.114
P4: Dugas – Morgan 525 kV & Yavapai – Westwing 525 kV	COCONINO – VERDE S 230 kV	219	1.115	1.109
P4: Navajo – Dugas 525 kV & Yavapai – Westwing 525 kV	GAVLINWA – PRSCOTWA 230 kV	299.2	1.03	1.024
P4: Navajo – Dugas 525 kV & Yavapai – Westwing 525 kV	COCONINO – VERDE S 230 kV	219	1.024	1.018
P4: Navajo – Dugas 525 kV & Cedar Mountain – Yavapai 525 kV	Perkins Series Compensation	2572	1.001	0.995
P4: Navajo – Dugas 525 kV & Cedar Mountain – Yavapai 525 kV	Mead Series Compensation	2572	1.006	1.000

Appendix C provides selected power flow diagrams and results for the study.

i. Sensitivity Analysis

Three additional sensitivities were studied using the 2020 High East of River case including:

1. Navajo to Crystal 525 kV Maximum Flow
2. McCullough Series Capacitor Stress
3. Big Water Solar Interconnection

1. Navajo to Crystal 525 kV Maximum Flow Analysis

Sensitivity analysis was performed using a modified WATS approved high East of River case with approximately 10,200 MW of path flow. The purpose of the sensitivity was to evaluate the impact of the interconnection in the Navajo – Crystal 525 kV maximum flow stressed scenario. The base case was adjusted to increase the flow from Navajo to Crystal 525 kV to a maximum capable in the case without overloading other elements

⁴ J. Hinds – Mirage 230 kV Line overload is mitigated with a remedial action scheme inside SCE

(approximately 1528 MW of flow). Contingency analysis was performed on the case for both pre-Interconnection and post-Interconnection scenarios.

Overvoltage conditions (≥ 1.10 p.u.) were observed on the Mead and Eldorado series compensation busses under P0 (normal operation) and following several P1 and P4 events. However, the difference in observed bus voltages between the pre and post interconnection cases was less than 0.5% for all system conditions modeled. Overvoltage conditions were observed for non-series compensated busses under several P1-P4 conditions, but the difference between pre and post case voltage response observed following the modeled events was less than 0.2%. These results indicate that the addition of Gemini does not appreciably increase existing overvoltage issues on the Western Arizona 525 kV system.

There were no new adverse system impacts identified in this sensitivity beyond the known impacts identified in the 2020 EOR case. Appendix C provides power flow diagrams and results for the study.

2. McCullough Series Capacitor Stress Case

The WATS approved High EOR case was used as the starting case. Sensitivity analysis was performed by maximizing the Crystal to McCullough 525 kV flow under pre-interconnection and post-interconnection cases. The Crystal to McCullough flow was increased in the pre-interconnection case by adjusting the EOR flow and flow schedule through the Crystal 525 kV and 230 kV phase-shifting transformers (PST) until the system reliability limits (SOLs) were reached. The Gemini project was then connected to the Crystal 525 kV bus and set to inject 250 MW.

Contingency analysis was performed on the case in the pre-Interconnection and post-Interconnection scenarios. There were no new adverse system impacts identified in this sensitivity and no System Operating Limits (SOLs) were violated post-interconnection. The results are presented in Table 6.

Table 6: EOR Flows and SOL limits pre- and post-interconnection using McCullough Series Capacitor Stress Case. Gemini interconnection does not appreciably reduce the EOR flow to maintain the Mead – Perkins 525 kV line flow below its SOL.

Case		CRY - MCC	NAV - CRY	S O L	E O R	CRY-PST injection	
#	name	P0, MW	P0, MW		P0, MW	P0, MW	Note
B2.0	pre-interconnection	1686	1194	P0, MD-PRKNS @ 99.9%	9900.6	522	*Apex at Harry Allen
B2.1	post-interconnection	1903	1157	P0 MD-PRKNS @ 99.5%	9894.4	522	*Apex at Harry Allen
	DIFFERENCE, MW	217	-37		-6.2	0	

However, an additional sensitivity was conducted to determine whether the Gemini interconnection, combined with prior queued interconnection customer NC5-002 “Apex Interconnection at Crystal 525kV,” would cause any SOL violations. When NC5-002 generation is modeled in-service, EOR flow must be reduced by approximately 233 MW to prevent overloading the McCullough series capacitor on the Crystal – McCullough 525 line under the P1 loss of Moenkopi – Eldorado 525 kV line. When the Gemini interconnection was modeled in addition to NC5-002, 108% overloading of the McCullough series capacitor was observed (while the EOR flow remained approximately the same as pre-project), as presented in Table 7. One operating solution to mitigate this overload (without affecting the EOR TTC), could be considerable re-adjustment of the Crystal 230 kV phase shifter flows by 250 MW (from 220 MW NVE export to -30 MW NVE import) to offset the additional injection from Gemini. While such Phase Shifter operation is possible, it is highly undesirable as it would limit NVE’s ATC on Crystal – McCullough line (today’s SOL is 617 MVA) and the range of its Crystal Phase Shifter regulating capability. Furthermore, a sufficient PST regulating range may be not available under certain scenarios; therefore this should be considered as a negative impact to NVE’s system requiring proper mitigation.

Table 7: EOR Flows and SOL limits post NC5-002 “Apex at Crystal 525kV” interconnection, pre-interconnection, post-interconnection, and post-interconnection with mitigation using the Crystal 230 kV phase-shifters.

Case		CRY - MCC	NAV - CRY	S O L	E O R	CRY-PST injection	
#	name	P0, MW	P0, MW		P0, MW	P0, MW	Note
B2.2	pre-Interconnection & post NC5-002	2146	1103	P1, MOE-ELD; McC SC 99.7%	9667	522	*Apex at Crystal
B2.3	post-Interconnection & post NC5-002	2336	1067	P1, MOE-ELD; McC SC @ 108.0%	9664	522	*Apex at Crystal
B2.4	post-Interconnection & post NC5-002	2116	1125	P1 MOE-ED; McC SC @ 99.4%	9668	272	*Apex at Crystal
	DIFFERENCE, MW	30	-22		-1	250	

As a result of these findings, the study confirms the finding that upgrading the Crystal - McCullough 525 kV line will be required to allow for both NC5-002 (Apex) and NC5-003 (Gemini) to interconnect. Since the line is currently limited by the McCullough series capacitor (2600 A) and then by the line wave-traps at both ends (3000 A), **upgrading both of these elements will be required to enhance the line rating and remove the capacity constraint due to Apex interconnection.** Since the conductor itself is rated 3536 A, this would allow for a substantial room for further flow increases, before re-conductoring would be necessary.

The project is currently recommended for completion for the NC5-002 (Apex) interconnection.

Appendix C provides selected power flow diagrams and results for the study.

3. Big Water Solar Interconnection (480 MW)

Sensitivity analysis was performed using the WATS approved High East of River (Path #49) case. The case was modified to include the proposed NC5-001 “Big Water” project, 480 MW of Solar Generation interconnected on the Navajo to Crystal 525 kV line, 26 miles out of Navajo. EOR flow was reduced to allow for the additional injection of the Big Water plant.

The purpose of this sensitivity was to determine the impact of the Gemini project on the system in addition to the prior queued Big Water Solar project. Contingency analysis was performed on the case in the pre-Interconnection and post-Interconnection scenarios. No overloads were observed. One P1 contingency resulted in a near overload that should be monitored in future studies, especially for interconnections on the Navajo – Crystal 525 kV line.

Table 8: Big Water Solar sensitivity contingency analysis

Contingency/Contingencies	Overloaded Element	Rating (MVA)	Pre Interconnection Loading (p.u.)	Post Interconnection Loading (p.u.)
P1: N. Gila – Imperial Valley 525 kV Line	Palo Verde – Colorado River 525 kV	2858	0.998	0.986

Appendix C provides power flow diagrams and results for the study.

C. 2019 Heavy Summer SNTI Maximum Import Case (Path #81)

Sensitivity analysis was performed using the most recent NV Energy SNTI Maximum Import case (Path #81) with an import of 3,553 MW. The purpose of this sensitivity scenario was to

characterize the impacts on the path flow as a result of the Gemini Interconnection. Contingency analysis was performed on the case in the pre-Interconnection and post-Interconnection scenarios including the path limiting contingencies. One element overload was observed that was not previously identified in either the 2024HS2a or the EOR 10,200 case.

Table 9: 2019 Heavy Summer SNTI Max Import contingency analysis

Contingency/Contingencies	Overloaded Element	Rating (MVA)	Pre Interconnection Loading (p.u.)	Post Interconnection Loading (p.u.)
P1: Moenkopi – Eldorado 525 kV Line	Crystal – McCullough 525 kV Line	2805.9	0.927	1.001

The overload of the Crystal – McCullough 525 kV line can be mitigated by reducing Gemini generation by 10 MW or adjusting the Crystal 525 kV phase shifters to reduce power flow into the Crystal 525 kV bus. This curtailment can be expected in case of high SNTI import.

The change in the path flow is shown in Table 10.

Table 10: SNTI Path #81 Heavy Import Flow Pre & Post Gemini to Crystal S 525 kV

Line	Monitoring Point	Pre Interconnect (MW)	Post Interconnect (MW)	Impact
Harry Allen - Mead 525 kV	Mead	717	711	6 MW Decrease
Arden - Mead 230 kV	Mead	331	330	1 MW Decrease
Equestrian - Mead 230 kV #1 & #2	Mead	639	637	2 MW Decrease
Greenway - Mead 230 kV	Mead	237	237	No change
Henderson - BC Tap - Mead 230 kV	Mead	178	178	No change
Henderson - Mead 230 kV	Mead	313	313	No change
Equestrian - Mead 69 kV #1 & #2	Mead	50	50	No change
Lake Las Vegas - Mead 69 kV	Mead	21	21	No change
Mead - Searchlight 69 kV	Mead	0	0	No change
Faulkner - McCullough 230 kV	McCullough	286	285	1 MW Decrease
McCullough - NSO 230 kV	McCullough	-64	-61	3 MW Increase
McCullough - Tolson 230 kV	McCullough	334	334	No change
Laughlin - Mohave 525 kV #1 & #2	Mohave	53	53	No change
Eldorado - Magnolia 230 kV	Eldorado	429	428	1 MW Decrease
Eldorado - NSO 230 kV	Eldorado	78	75	3 MW Decrease
Northwest - Desert View 230 kV	Desert View	-23	-23	No change
Indian Springs - Mercury 138 kV	Mercury	3	2	1 MW Decrease
Amargosa - Sandy 138 kV	Amargosa	-29	-29	No change
Total Flow:		3553	3541	12 MW Decrease

Without additional manipulation to the case, the interconnection reduces the path flow by 12 MW. The largest impact was a 6 MW decrease of flow on the Harry Allen to Mead 500 kV line.

The pre and post-interconnection most critical path specific contingencies, without additional changes to the case, are described in Table 11.

Table 11: SNTI Import (Path #81) Δ Loading for Critical Contingencies

Critical Contingency	Overloaded Element	% Loading		$\Delta\%$
		Pre Interconnect	Post Interconnect	
P0: Normal Operations	Clark 6 230/138 kV Transformer	64.6	64.2	-0.6%
P0: Normal Operations	Crystal 500 kV PSTs	97.7	98.2	0.5%
P0: Normal Operations	Crystal to McCullough 500 kV SC	90.8	99.8	9.9%
P1: Loss of Lenzie to Northwest 500 kV	Arden to Mead 230 kV	97.1	97.3	0.2%
P1: Loss of Clark to Concourse 138 kV	Claymont to Strip 138 kV ⁵	98.7	99.0	-0.3%

Without additional manipulation, the existing pre and post interconnection critical contingencies are described. Under P0 conditions, three critical elements are described, at the Clark 6 230/138 kV transformer, the Crystal 500 kV PSTs and the Crystal to McCullough 500 kV series capacitor. Additional analysis would be necessary to confirm the critical contingencies.

Contingency analysis was performed on the case in the pre-Interconnection and post-interconnection scenarios including the path limiting contingencies. There were no adverse system impacts identified in this sensitivity. Appendix C provides power flow diagrams and results for the study.

D. 2019 Heavy Summer SNTI Maximum Export Case (Path #81)

Sensitivity analysis was performed using the most recently updated NVE SNTI Maximum Export Case (Path #81) with a NVE export of approximately 4,000 MW. The purpose of this sensitivity was to analyze and describe the change in the flow on the path as a result of the Gemini interconnection. The Harry Allen - Eldorado 500 kV line was not included as part this analysis as the line has not yet been implemented in this path rating analysis. The change in the path flow is shown in Table 12.

⁵ Overload % based on rating 2, 258.1 MVA

Table 12: SNTI Path #81 Heavy Export Flow Pre & Post Apex to Crystal S 525 kV

Line	Monitoring Point	Pre CRY-APEX (MW)	Post CRY-APEX (MW)	Impact
Harry Allen - Mead 500 kV	Mead	-2409	-2417	8 MW Increase
Arden - Mead 230 kV	Mead	-147	-148	1 MW Increase
Equestrian - Mead 230 kV #1 & #2	Mead	-230	-232	2 MW Increase
Greenway - Mead 230 kV	Mead	-122	-123	1 MW Increase
Henderson - BC Tap - Mead 230 kV	Mead	2	2	No Change
Henderson - Mead 230 kV	Mead	4	3	1 MW Increase
Equestrian - Mead 69 kV #1 & #2	Mead	-13	-13	No Change
Lake Las Vegas - Mead 69 kV	Mead	-4	-4	No Change
Mead - Searchlight 69 kV	Mead	0	0	No Change
Faulkner - McCullough 230 kV	McCullough	-242	-242	No Change
McCullough - NSO 230 kV	McCullough	24	27	3 MW Decrease
McCullough - Tolson 230 kV	McCullough	-225	-226	1 MW Increase
Laughlin - Mohave 500 kV #1 & #2	Mohave	6	6	No Change
Eldorado - Magnolia 230 kV	Eldorado	-281	-283	2 MW Increase
Eldorado - NSO 230 kV	Eldorado	-236	-238	2 MW Increase
Northwest - Desert View 230 kV	Desert View	-106	-106	No Change
Indian Springs - Mercury 138 kV	Mercury	-13	-13	No Change
Amargosa - Sandy 138 kV	Amargosa	-3	-3	No Change
Total Flow:		-3993	-4010	16 MW Increase

Following the proposed interconnection of Gemini, the SNTI Export path flow was increased by approximately 16 MW.

The path specific critical contingencies for pre and post-interconnection configurations without changes to the case are described in Table 13.

Table 13: SNTI Export (Path #81) Δ Loading for Critical Contingencies

Critical Contingency	Overloaded Element	% Loading		$\Delta\%$
		Pre Interconnect	Post Interconnect	
P1: Loss of Mead to Marketplace 500 kV	McCullough 525/230 kV Bank J	99.7	99.1	-0.60%
P1: Loss of Harry Allen to Mead 500 kV	Clark 230/138 kV Transformer	98.7	99.2	0.51%
P1: Clark Gen to Faulkner 230 kV	Faulkner to Warm Springs 138 kV	99.7	100.0	0.30%

As shown in Table 13, the existing path specific critical contingencies remain as described in the path rating catalogue. The 100.0 percent loading of the Faulkner to Warm Springs 138 kV line under P1 loss of Clark Gen - Faulkner 230 kV is a local issue that can be mitigated by MOA (manual operator action).

Post-interconnection, the loading of the McCullough 525kV Transformer Bank J under the P1 Loss of Mead - Marketplace 525 kV critical contingency was slightly increased (0.6%) while still remaining below 100%.

As a result, the interconnection did not demonstrate an impact to the export rating (North to South) of SNTI (Path 81).

Contingency analysis was performed on the case in the pre-Interconnection and post-Interconnection scenarios including the path limiting contingencies. There were no adverse system impacts identified in this sensitivity. Appendix C provides power flow diagrams and results for the study.

6. POST INTERCONNECTION TRANSIENT STABILITY RESULTS

Transient analysis was performed by simulating contingencies near the Crystal 525 kV substation to study the impact of the proposed generation interconnection on the transient stability of the system. Transient stability analysis was performed using a normal clearing time of 5 cycles, and delayed clearing time of 14 cycles.

Simulation of a three-phase, 5-cycle bus fault at Crystal 525 kV bus indicated that Gemini's Low/High Voltage Ride Through (lhvrt) and/or Low/High Frequency Ride Through generator protection settings did not allow the generator to adequately ride through and continue generating post fault-clearing. However, when the lhvrt and lhfrt models were disabled, the generator was able to ride-through and continue generation post-fault. The stability plot with the low/high ride through models enabled is presented in Figure 35. The stability plot with the low/high ride-through models disabled is presented in Figure 36.

The interconnection customer must review these settings and provide an updated lhvrt and lhfrt model capable of riding through a 5-cycle Crystal 525 kV bus fault prior to completion of the Facilities Study.

Appendix D describes the disturbances studied, provides stability plots, and the GE PSLF ".dyd" generator data used for transient stability analyses.

The transient stability analyses performed in this study include the results of a dynamic analysis that simulates the performance of the Interconnection Customer's generating facilities following typical transmission line disturbances and faults (with normal clearing) on nearby facilities. The simulation may be based on data provided by the Interconnection Customer as well as other model data available at the time of the study.

Alternative generation dispatch patterns, line re-configuration, delayed fault clearing, or variance in the Interconnection Customer's generator dynamic models/values compared to actual test result values⁶ are some of the variables that can affect transient stability simulation.

Because of these variables, the Interconnection Customer's generating facility may experience instability, out-of-step conditions, real/reactive power swings, and/or high/low transient frequencies and voltages. The Interconnection Customer is responsible for the electrical protection of its facilities, including the Interconnection Customer's generating and transmission facilities.

⁶ See WECC GENERATING UNIT MODEL VALIDATION POLICY: B.1.2.1. The Generator Owner shall test the generating unit and validate its model data. B.1.2.3.2. No later than 180 days after the new Generating Facility is released for Commercial Operation.

The results can be used to help determine whether or not the generating facility will meet performance criteria and ride-through requirements.⁷ **However, it is ultimately the Interconnection Customer's responsibility to meet these requirements during actual operation on a daily basis and failure to do so can result in loss of interconnection privileges.** Therefore, the results of these simulations should be regarded as informational rather than definitive, and do not relieve the Interconnection Customer of any performance responsibilities.

7. FAULT DUTY ANALYSIS

NV Energy's internal fault duty base case was used to evaluate the difference in fault duty pre and post interconnection. The case represents 2021 Heavy Summer conditions.

Table 14: Pre and Post Gemini Interconnection Fault Duty Analysis Results

Bus	kV	Capacity (kA)	Existing Configuration		Proposed Configuration	
			3LG (kA)	1LG (kA)	3LG (kA)	1LG (kA)
Gemini	500	63.0	39.7	34.9	40.40	35.50
Crystal	230	50.0	38.2	37.8	38.45	38.31
North Crystal	500	50.0	41.6	33.7	43.18	35.96
South Crystal	500	50.0	41.6	33.7	43.18	35.95
Eldorado	230	63.0	56.2	50.5	56.40	50.59
Eldorado	500	63.0	49.6	41.2	50.40	41.66
Harry Allen	230	50.0	47.5	50.2	47.91	50.56
Harry Allen	345	63.0	9.8	9.9	9.84	9.90
Harry Allen	500	50.0	47.8	47.4	49.03	48.66
McCullough	230	63.0	57.7	51.3	57.90	51.48
McCullough	500	50.0	49.7	41.3	50.48	41.74
Mead	345	40.0	17.7	16.5	17.73	16.53
Mead	500	40.0	31.8	26.4	32.11	26.50
Mead North	230	90.0	57.6	55.7	57.83	55.84
Mead South	230	90.0	65.7	62.7	65.97	62.86
Marketplace	500	50.0	45.5	36.5	46.12	36.84
Navajo	500	50.0	23.8	25.8	23.81	25.86

⁷ See WECC LOW VOLTAGE RIDE THROUGH CRITERION: Generators are required to remain in-service during system faults (three phase faults with normal clearing and single line to ground faults with delayed clearing) unless clearing the fault effectively disconnects the generator from the system. This requirement does not apply to faults that would occur between the generator terminals and the high side of the generator step-up transformer or to faults that would result in a voltage lower than 0.15 per unit on the high side of the generator step-up transformer.

The following post-Interconnection Adverse System Impacts are identified as a result of the fault duty analysis:

1. **ADVERSE SYSTEM IMPACT:** Expected fault duty will be 50.48 kA at McCullough 525 kV substation, which is 100.96% of the 50 kA breaker rating.

MITIGATION: Replace 50 kA rated breakers at McCullough 525 kV substation with higher rated breakers.

The replacement of McCullough 50 kA rated breakers is anticipated to occur prior to the interconnection of the Gemini project. If the Gemini project requires an in-service date before the planned completion of the McCullough 50 kA rated breakers, the proposed mitigation will be pursued as part of the Gemini project, including requiring Gemini to fund/securitize the upgrades in accordance with the Navajo agreement.

Determination and characterization of impact of the interconnection on the Arizona Nuclear Power Project (ANPP), and the contribution towards fault duty at Palo Verde and Hassayampa 525 kV is not necessary per Salt River Project representatives, as interconnection at Crystal 525 kV substation is not included as part of the analysis.

8. SSI & SSCI EVALUATION

The proposed post-interconnection configuration places Gemini generation at Crystal 525 kV substation and adjacent to two series compensated lines, Navajo (72% compensated) and McCullough (70% compensated), making SSR effects more likely and the existing NV Energy SSR RAS ineffective. Therefore the SSI and SSCI studies will be required to be completed by the Interconnection Customer, per the Study Plan, before completion of a Facilities Study, in order to incorporate any additional requirements from that study. Any requirements to mitigate adverse effects found in the SSI & SSCI study will be required to be completed before Interconnection is granted.

9. REQUIREMENTS TO INTERCONNECT

1. Crystal 525 kV Substation:
 - a. Re-termination of the Crystal 525/230 kV transformer #2 from the 5016/5017 terminal position to the 5014/5013 terminal position.
 - b. Addition of two 525 kV breakers at South Crystal 525 kV substation
 - c. Addition of 525 kV metering and associated protection equipment.
2. POI Substation Entrance:

- a. 525 kV dead end structure and vertical transition structure required to interconnect the generator lead line.
3. Lead Line (ICIF): Overhead Lead Line to be designed with static wire(s) and adequate overvoltage protection from lightning surges.
 - a. Geographically diverse and redundant communications channels are required for lead line protection to meet NV Energy's reliability criteria.
4. Communications:
 - a. Communications equipment required at Interconnection Customer's generating plant site
 - b. Communications upgrades to existing Crystal 525 kV microwave equipment.
5. Upgrading of the Crystal – McCullough 525kV Line to the conductor rating (3536 A) including the series capacitors and wave traps. Additional system upgrades or modifications needed to the line will be determined during the Facilities Study.
6. Generator Reactive Capability: Reactive power output from the generation facility shall be under the direction of NV Energy system operation. Generation from this facility shall be capable of dynamically producing reactive power (VARs) in a range of at least 0.95 leading power factor to 0.95 lagging power factor (+/- 0.95 pf) measured at the high side of the generator substation and capable of automatic voltage regulation.

Continuously controlled reactive power capability, via thyristor or similar static switching means for periods up to 1 second qualifies for dynamic reactive power capability as part of the reactive resources required. Fast mechanically switched reactive power capability does not qualify for continuous reactive power as part of the required reactive resources.⁸
7. Automatic Voltage Regulation: Generation from this facility shall be capable of automatic voltage regulation (AVR) under the direction of NV Energy system operation.
8. Intermittent Resource Requirement: NV Energy has limited capability to follow fluctuations in intermittent resource output. This study does not address the operational need to balance intermittent resources. Arrangements to balance the output of the intermittent resource through contracts with generators or loads, addition of storage devices, or off system dynamic schedules are beyond the scope of this study. Satisfactory agreements for balancing must be in place prior to energization of the interconnection.
9. Affected Systems: Resolution of any issues identified by Affected Systems prior to energization of the interconnection.

⁸ If applicable, dynamic reactive power requirement may be satisfied with inverters specified for dynamic +/- 0.95 power factor at rated power output or with appropriately sized SVC (or equivalent device).

10. GENERAL REQUIREMENTS FOR ALL INTERCONNECTIONS

1. The generator interconnection must satisfy Good Utility Practice and meet all applicable industry and North American Electric Reliability Corporation (“NERC”) - Western Electricity Coordinating Council (“WECC”) planning and operating standards, guidelines, and criteria including:
 - a. NERC Transmission System Planning Performance Requirements (TPL-001)
 - b. NERC Generator Frequency and Voltage Protective Relay Settings (PRC-024)
 - c. WECC Power System Stabilizer Policy
 - d. WECC Generating Unit Model Validation Policy
 - e. WECC Automatic Voltage Regulators VAR-002
 - f. WECC System Operating Limits TOP-007
 - g. WECC Procedures for Regional Planning Project Review and Rating Transmission Facilities
2. The generator interconnection must meet all applicable NV Energy planning, design, and operating requirements including NV Energy’s Reliability Criteria for Transmission System Planning.
3. The Interconnection Customer is responsible for all of its facilities up to the Point of Change of Ownership, including construction of the Interconnection Customer Interconnection Facilities (“ICIF”) and the generator lead line, and additional costs identified below.
4. Communications, SCADA, and real time metering are required for all generator interconnections. Redundant paths/channels may be required as determined in the Generator Interconnection Facilities Study. The Interconnection Customer is responsible for making arrangements for connectivity with the local telecommunications company. NV Energy owned communications, SCADA, and metering equipment installed at facilities owned by the Interconnection Customer must have adequate lightning protection provided by the Interconnection Customer.
5. The Interconnection Customer’s transmission line protection must be compatible with the Transmission Provider’s primary and back up relays. Single Terminal Protection is required for interconnections with multiple generators; all generators must be arranged so that they are behind a single terminal when viewed from NV Energy’s terminal. The interconnection should connect to the transmission system by means of a two-terminal line. Two high speed digital circuits between the Interconnection Customer’s facilities and NV Energy’s POI facilities are required for communication aided protection (eg: 2-channels in the Lead Line OPGW; or 2-channels of a microwave system).

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6. The Interconnection Customer is responsible for the electrical protection of its facilities, including the Interconnection Customer's generating and transmission facilities. The Interconnection Customer's generating facility step-up transformer must have an appropriate interrupting device installed on the high side of the step-up transformer.
 7. NV Energy may reduce, curtail, or disconnect the generating facility as a result of system reliability conditions.
 8. Interconnection Customer must acquire all Federal, State, County, and Local land use and environmental permits and other authorizations required in order to build and operate the Generating Facility, and Interconnection Customer's Interconnection Facilities. Interconnection Customer must coordinate with Transmission Provider in obtaining all necessary permits for Transmission Provider's Interconnection Facilities, Network Upgrades and/or Distribution Upgrades needed to accommodate Interconnection Customer's generator interconnection.
 9. Site selection for NV Energy owned substations and facilities, whether on private or public land, must be coordinated with and approved by NV Energy. This coordination is critical to ensure that the site location meets NV Energy's needs for size, access, communication paths, stable soils, terrain, drainage, and other technical considerations. Failure to do so may cause significant delays in the permitting process.
 10. The Interconnection Customer is responsible for all other requirements as determined in the Interconnection Facilities Study.
 11. NV Energy requires trip control for each phase of a multi-phase generator interconnection.
 12. In some cases harmonic distortions have been created on the system by newly interconnecting renewable generation. Studies have not been performed as part of this SIS to determine if harmonics are created as a result of this Interconnection. If harmonics are found to be created by this project and are injected into the transmission system in excess of industry standard, the interconnection customer will be responsible to mitigate the concern to the satisfaction of the transmission owners at the POI.

11. COST RESPONSIBILITY

Table 15: Cost Responsibility for Gemini Interconnection

	Total \$MM	Network Upgrade \$MM	TPIF \$MM
Substation			
Re-termination of the Crystal 525/230 kV transformer #2	0.500	0.500	
Crystal 525 kV Terminal Position - two 525 kV breakers, 525 kV metering, protection equipment	5.000	5.000	
Transmission Lines			
Crystal 525 kV Substation Entrance	1.000		1.000
Communications/System Protection			
Crystal 525 kV Communications	0.200	0.200	
Gemini Site Communications	0.600		0.600
Lead Line Protection and Review	0.100		0.100
Lands/Permitting/Right-of-Way			
ROW Permitting coordination	0.100		0.100
Environmental permitting coordination	0.100		0.100
Total:	7.600	5.700	1.900

The cost estimates include both Transmission Provider's Interconnection Facilities ("TPIF") and Network Upgrades ("NU"). The cost responsibility for all facilities will be pursuant to the provisions of the Navajo Transmission Project. The Interconnection Customer is responsible for all of the TPIF costs. The Transmission Provider is responsible for the costs associated with NU pursuant to the Navajo Transmission Project, to be securitized by the Interconnection Customer. Interconnection Customer's Interconnection Facilities ("ICIF") are the sole responsibility of the Interconnection Customer.

These estimates of costs are preliminary and non-binding. Costs are provided in 2018 dollars and do not include taxes. These costs will be re-evaluated as determined in the Interconnection Facilities Study and/or the interconnection agreement. All estimated costs are tried to actual upon completion of construction.

A gross up on Contributions in Aid of Construction (CIAC) will be assessed unless the CIAC or the transfer of the intertie meets the safe harbor requirements of IRS Notice 2016-36. The CIAC gross up will be computed based on the rate in effect on the in-service date of the applicable facilities. CIAC for TPIF will be secured at the time the facilities costs are secured per Attachment L of the Open Access Transmission Tariff.

12. TIME TO CONSTRUCT⁹

The construction schedule is highly dependent on the permitting process. Environmental Assessments can require from 18 months to three years from filing the application to completion. An Environmental Impact Statement, if required, can take from three to five years for completion depending on the complexity of the project. Design and construction of facilities can usually be completed in eighteen months to two years once the permits are secured.

NV Energy anticipates that special permits will need to be procured in order to construct the upgrades identified in this Interconnection Study. Such determinations are subject to the Bureau of Land Management and other applicable governmental agencies.

The requested in-service date of 5-1-2020 may not allow adequate time for permitting and construction.

13. STUDY METHODOLOGY

The purpose of the Interconnection System Impact Study is to identify generation interconnection requirements and transmission system enhancements that would be necessary to accommodate the generation interconnection without Adverse System Impacts.

NV Energy primarily uses the General Electric Positive Sequence Load Flow (GE-PSLF) program under a contract with the Western Electricity Coordinating Council (WECC) to conduct steady state power flow and transient stability analyses for Interconnection System Impact Studies. A “Pre-Interconnection Base Case(s)” that represents stressed/constrained conditions on NV Energy’s transmission system is created by modifying either an approved “WECC base case”¹⁰ or an “existing transmission planning study” that was previously created from an approved WECC base case. A Post-Interconnection Case is created from the Pre-Interconnection Base Case by modeling the new generator interconnections and re-dispatching NV Energy generators.

⁹ This section provides a non-binding good faith estimate of time to construct.

¹⁰ WECC base cases represent a regional snapshot of transmission system performance for the given season and WECC specified conditions, and *usually do not represent a specific stressed/constrained condition on NV Energy’s transmission system*. The Pre-Interconnection Base Case(s) is created to address potential impacts to NV Energy’s transmission system under stressed/constrained conditions on NV Energy’s transmission system.

Pre-Interconnection and post-Interconnection studies are both conducted. Pre-Interconnection studies are conducted to create benchmark results. NV Energy compares the pre-Interconnection and post-Interconnection study results to the applicable NERC reliability criteria, WECC reliability criteria, and NV ENERGY's TRANSMISSION SYSTEM PLANNING RELIABILITY CRITERIA to determine potential Adverse System Impacts. Mitigation such as system improvements, system modifications, or operating restrictions is proposed to address any potential adverse impacts.

Transmission Planning Engineers evaluate the reliability performance of the Pre-Interconnection Base Case and Post-Interconnection Case(s) with power flow "no contingency" and "contingency" analysis. Contingency analysis is conducted by modeling outages on NV Energy's and surrounding transmission systems to document any thermal overloads, voltage violations, system constraints, or other Adverse System Impacts. When simulating outages or post-transient conditions, actions are limited to automatic devices, and no manual action is to be assumed (eg: phase shifters do not operate; SVDs, LTCs, voltage regulators, automatically switched shunt reactors/capacitors are allowed to operate).¹¹ Any pre-existing system impacts in the Pre-Interconnection Base Case are documented.

Analysis is done in accordance with applicable NERC transmission planning standards that describe the required tests and limits needed to demonstrate reliability under various conditions (refer to NERC TPL standards).

Additional engineering studies, including Transient/Stability, Voltage Stability, Reactive Margin, Fault Duty, Switching Studies, Overvoltage Analysis¹², and/or Sub-Synchronous Resonance (SSR)¹³ are performed as required.

¹¹ When solving GE-PSLF power flow cases under contingency (or outage) conditions, one evaluation must be performed with "Automatic phase shifter adjustment" and "Area interchange control" turned off.

¹² Commonly referred to as: Electromagnetic Transients Program ("EMTP").

¹³ SSR studies may be required to be performed by the Interconnection Customer and the study results provided to NV Energy.

OPEN ACCESS TRANSMISSION TARIFF TERMS

The following terms as may be used in this document have the meaning ascribed to them in the Open Access Transmission Tariff (additional OATT defined terms may be included in this document):

ADVERSE SYSTEM IMPACT
AFFECTED SYSTEM
AFFECTED SYSTEM OPERATOR
BASE CASE
DISTRIBUTION UPGRADES
ENERGY RESOURCE INTERCONNECTION SERVICE
GENERATING FACILITY CAPACITY
GOOD UTILITY PRACTICE
INTERCONNECTION CUSTOMER
INTERCONNECTION CUSTOMER'S INTERCONNECTION FACILITIES
INTERCONNECTION FACILITIES
INTERCONNECTION FACILITIES STUDY
INTERCONNECTION FEASIBILITY STUDY
INTERCONNECTION SYSTEM IMPACT STUDY
LARGE GENERATING FACILITY
NETWORK RESOURCE INTERCONNECTION SERVICE
NETWORK UPGRADES
OPEN ACCESS TRANSMISSION TARIFF
POINT OF INTERCONNECTION (ALTERNATIVE POINT OF INTERCONNECTION)
TRANSMISSION PROVIDER
TRANSMISSION PROVIDER INTERCONNECTION FACILITIES
TRANSMISSION SERVICE AGREEMENT
TRANSMISSION SERVICE REQUEST

APPENDIX

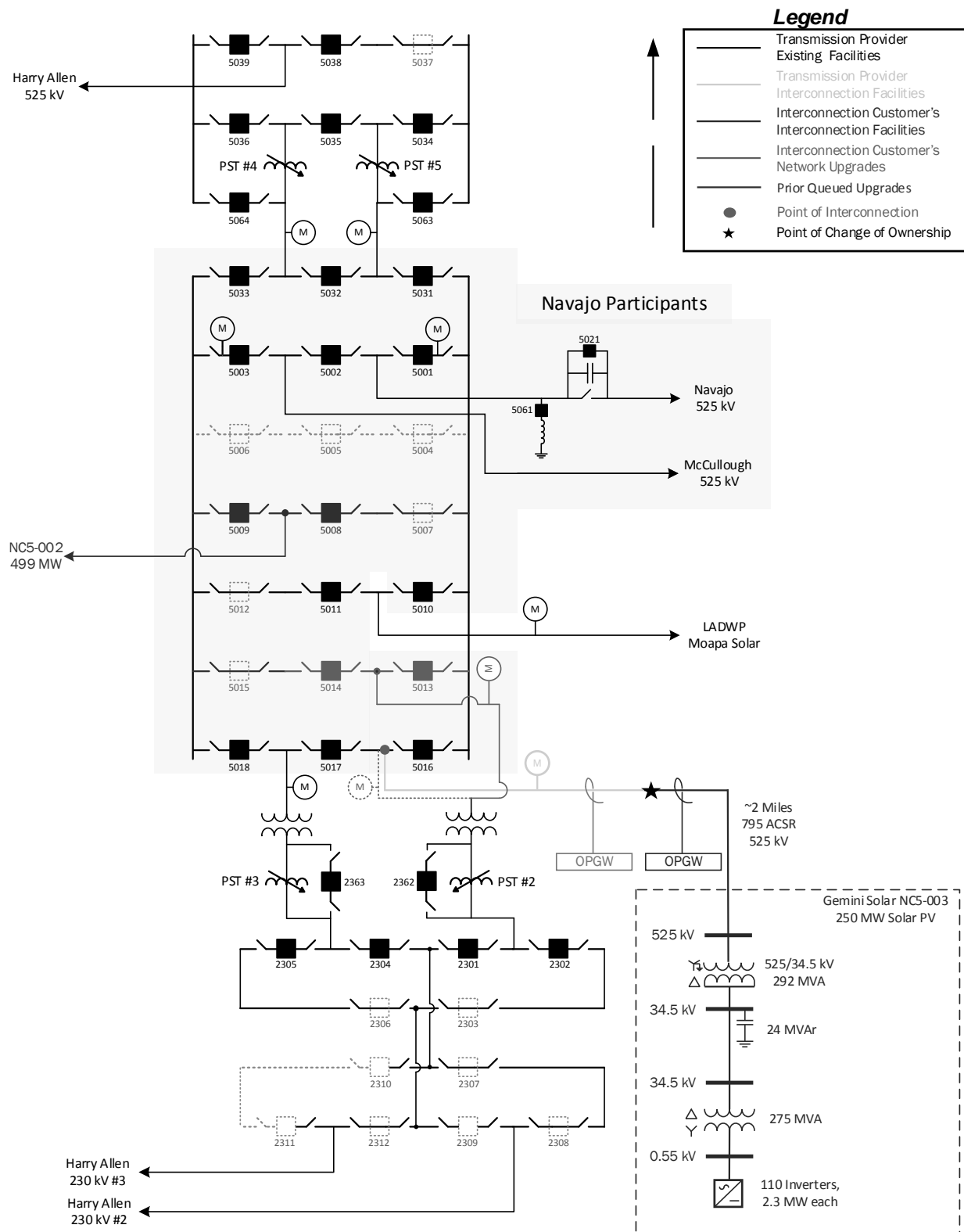
Appendix A: One Line Diagram(s)

Appendix B: Geographic Map

Appendix C: Power Flow Diagrams & Results

Appendix D: List of Disturbances, Stability Plots, & Results

APPENDIX A: ONE LINE DIAGRAM



APPENDIX B: GEOGRAPHIC MAP



APPENDIX C: POWER FLOW DIAGRAMS

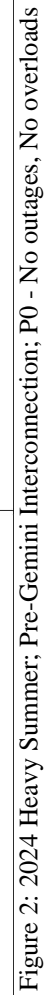
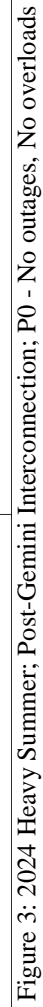


Figure 2: 2024 Heavy Summer; Pre-Gemini Interconnection; P0 - No outages, No overloads



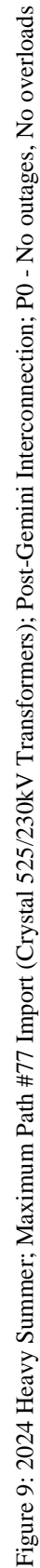


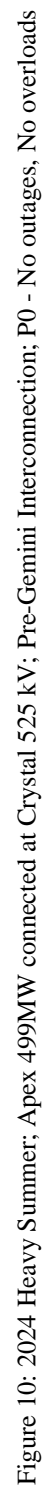


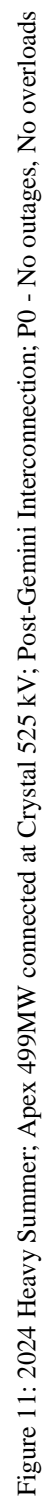






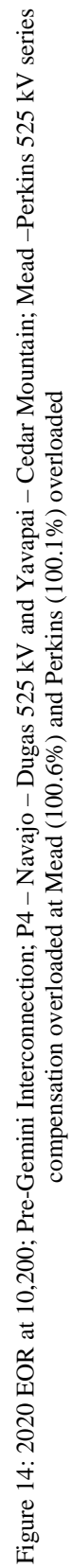








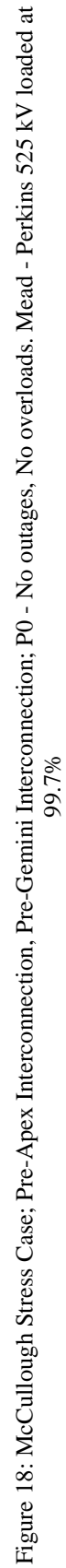












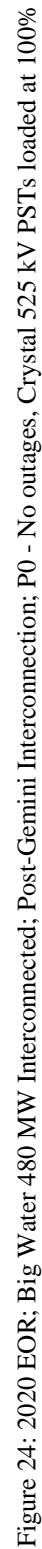


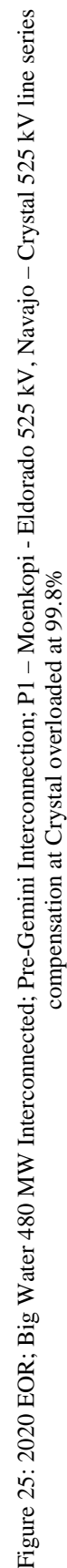
















SYSTEM IMPACT STUDY Gemini Interconnection at South Crystal 525 kV

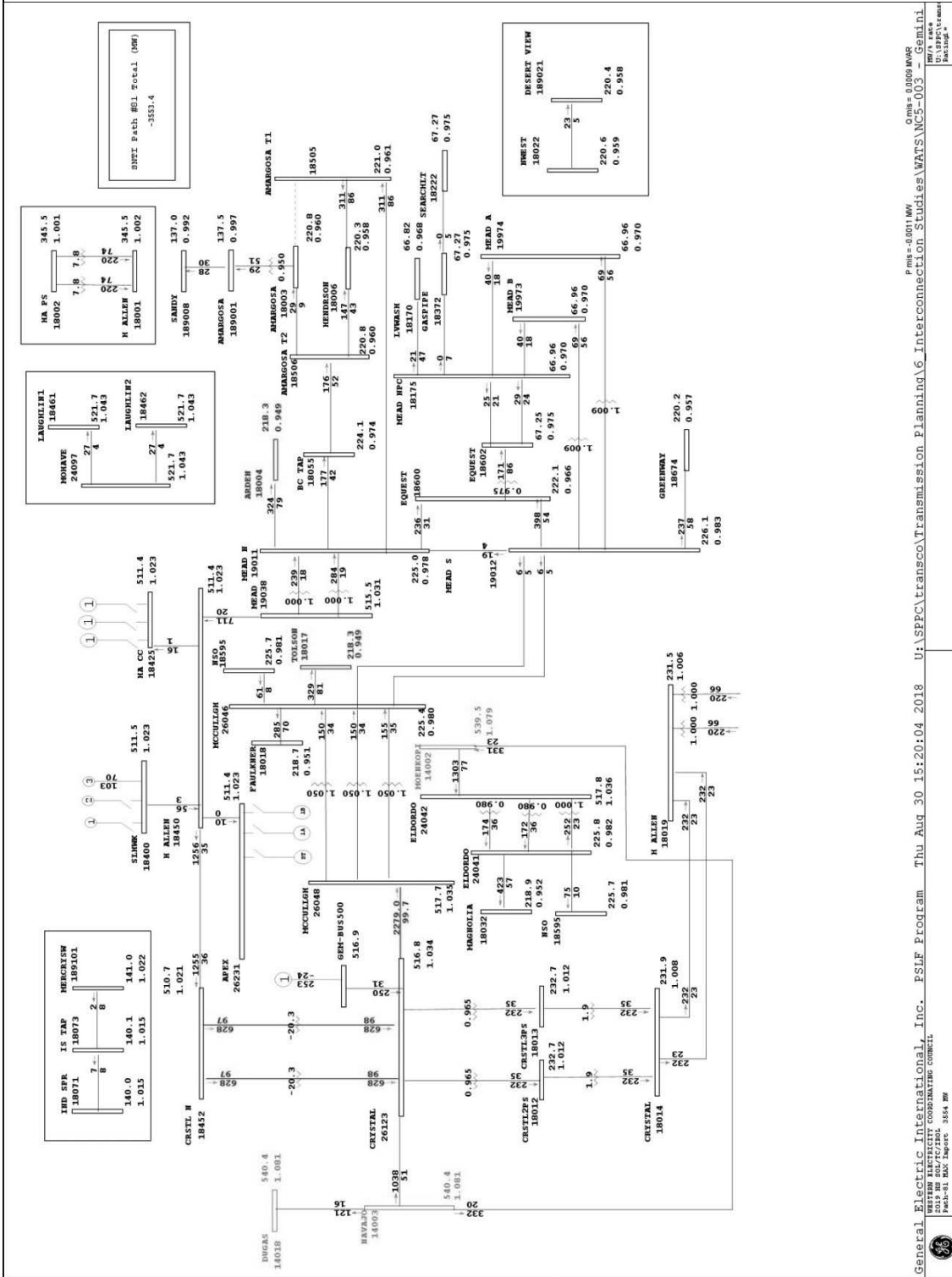
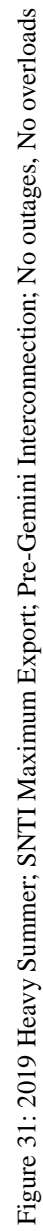
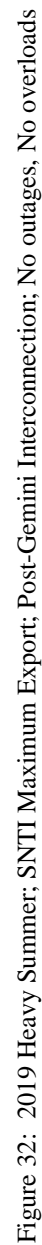


Figure 28: 2019 Heavy Summer; SNTI Maximum Import; Post-Gemini Interconnection; P0 - No outages, No overloads









APPENDIX D: TRANSIENT PLOTS

DYNAMIC DATA
GE PSLF ".dyd" Generator Data File
(ELECTRONIC FILE AVAILABLE FOR VERIFICATION)**Gemini Generator .dyd models:**

gencs 26123 "CRYSTAL " 500.00 "1 " : #9 mva=999.0000 "h" 999.0000 "d" 0.0000 "ra"
0.0000 "lppd" 0.1000 /
"rcomp" 0.0000 "xcomp" 0.0000 "accel" 0.0000

regc_a 999904 "GEM-GEN " 0.55 "1 " : #7 mva=275.0000 "lvplsw" 0.0 "rrpwr"
10.0000 "brkpt" 0.0 "zerox" 0.0 "lvpl1" 1.000000 "vtmax" 2.0000 "lvpnt1" 0.880000 "lvpnt0"
0.870000 "qmin" -0.460000 "accel" 0.0 /
"tg" 0.020000 "tfltr" 0.020000 "iqrmax" 99.0000 "iqrmin" -99.0000 "xe" 0.0

repc_a 999904 "GEM-GEN " 0.55 "1 " : #9 "mvab" 275.00 "tfltr" 0.020000 "kp"
18.0000 "ki" 5.0000 "tft" 0.0 "tfv" 0.150000 "refflg" 1.000000 "vfrz" 0.0 "rc" 0.0 "xc" 0.0 /
"kc" 0.0 "vcmpflg" 1.000000 "emax" 999.00 "emin" -999.00 "dbd" 0.0 "qmax" 0.460000
"qmin" -0.460000 "kpg" 0.100000 "kig" 0.500000 "tp" 0.250000 /
"fdbd1" 0.010000 "fdbd2" -0.010000 "femax" 999.00 "femin" -999.00 "pmax" 1.000000
"pmin" 0.0 "tlag" 0.100000 "ddn" 20.0000 "dup" 0.0 "frqflg" 0.0 /
"outflag" 0.0

lhfrt 999904 "GEM-GEN " 0.55 "1 " : #9 "fref" 60.0000 "dftrp1" 1.7000 "dftrp2"
1.6000 "dftrp3" 0.600000 "dftrp4" -3.0000 "dftrp5" -2.7000 "dftrp6" -2.2000 "dftrp7" -1.6000
"dftrp8" -0.600000 "dftrp9" 0.0 /
"dftrp10" 0.0 "dttrp1" 0.160000 "dttrp2" 31.0000 "dttrp3" 181.00 "dttrp4" 0.160000 "dttrp5"
0.760000 "dttrp6" 7.6000 "dttrp7" 31.0000 "dttrp8" 181.00 "dttrp9" 0.008334 /
"dttrp10" 0.008334 "alarm" 0.0

lhvrt 999904 "GEM-GEN " 0.55 "1 " : #8 "vref" 1.000000 "dvtrp1" 0.200000 "dvtrp2"
0.175000 "dvtrp3" 0.150000 "dvtrp4" 0.100000 "dvtrp5" -1.000000 "dvtrp6" -0.550000
"dvtrp7" -0.350000 "dvtrp8" -0.250000 "dvtrp9" -0.100000 /
"dvtrp10" 0.0 "dttrp1" 0.160000 "dttrp2" 0.210000 "dttrp3" 0.510000 "dttrp4" 1.0100
"dttrp5" 0.160000 "dttrp6" 0.160000 "dttrp7" 0.310000 "dttrp8" 2.0100 "dttrp9" 3.0100 /
"dttrp10" 0.008334 "alarm" 0.0

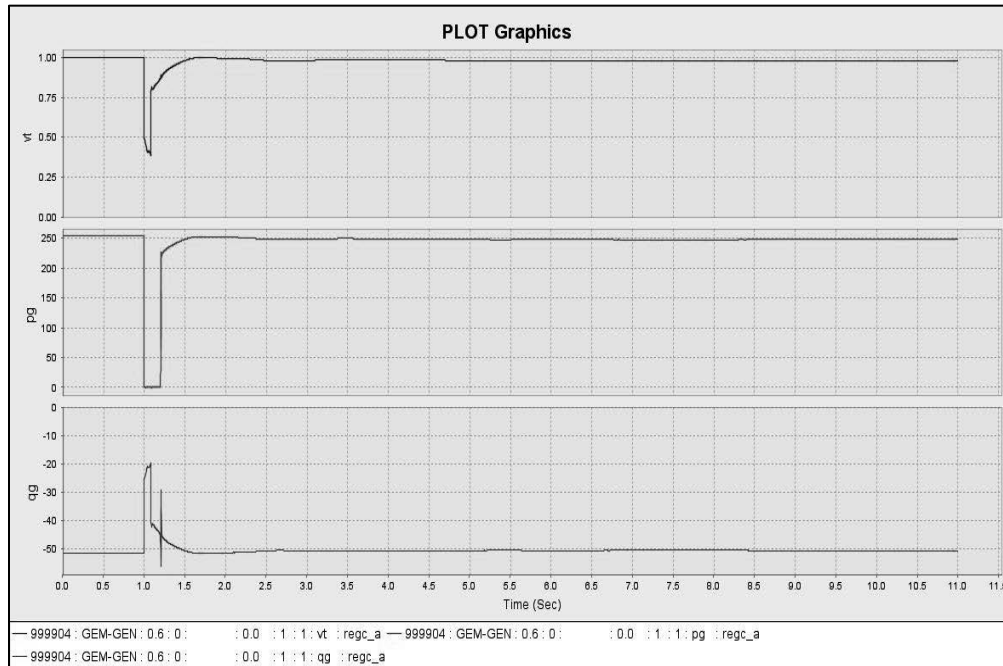


Figure 33: Gemini Generator Response Following a 5 Cycle Fault on Harry Allen to Crystal 525 kV Line

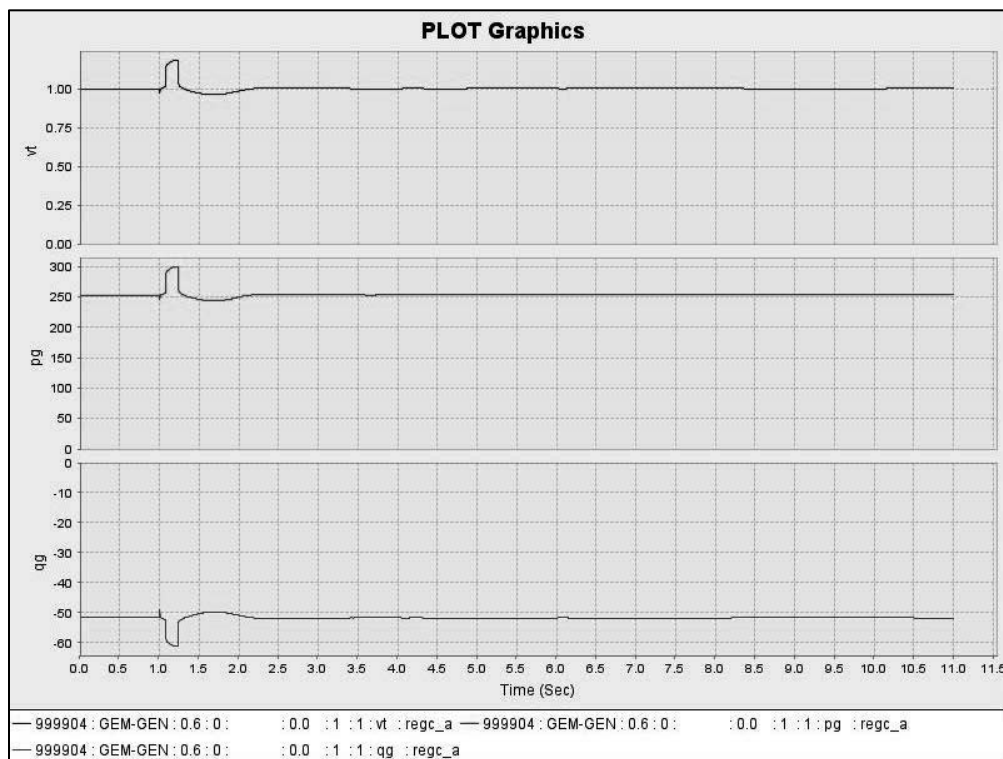


Figure 34: Gemini Generator Response Following a fault near Navajo on the Crystal – Navajo 525 kV Line.
Simulated 14-cycle clearing at Crystal and 5-cycle clearing at Navajo.

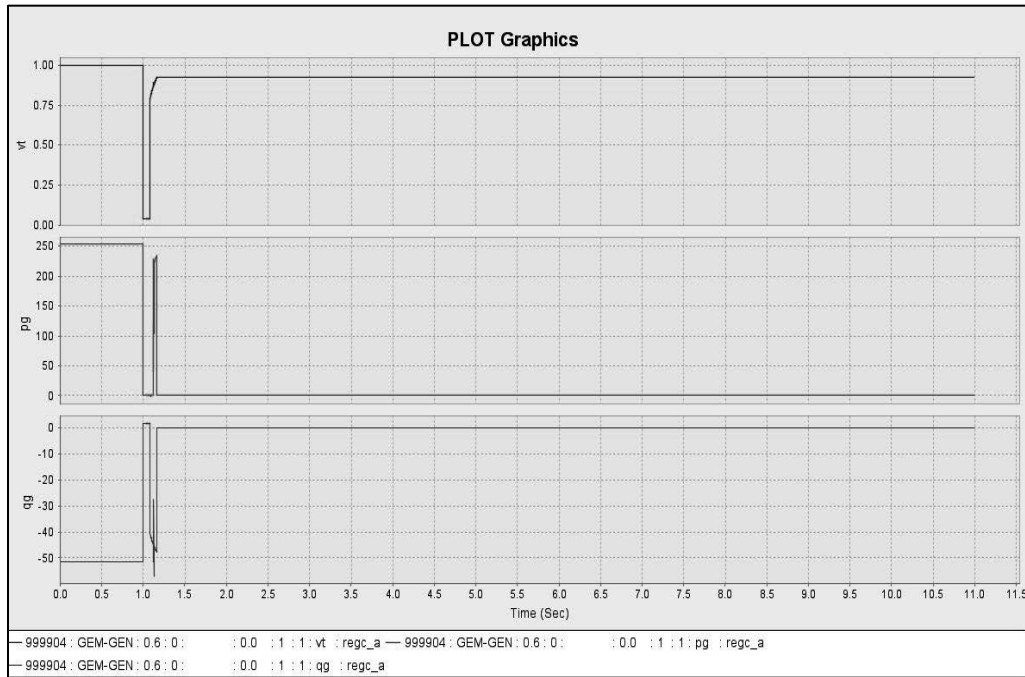


Figure 35: Gemini Generator Response Following a 5 Cycle Fault at Crystal 525 kV Substation with lhvrt and lhfrt models ON. Generator fails to ride through fault and continue generation post fault-clearing.

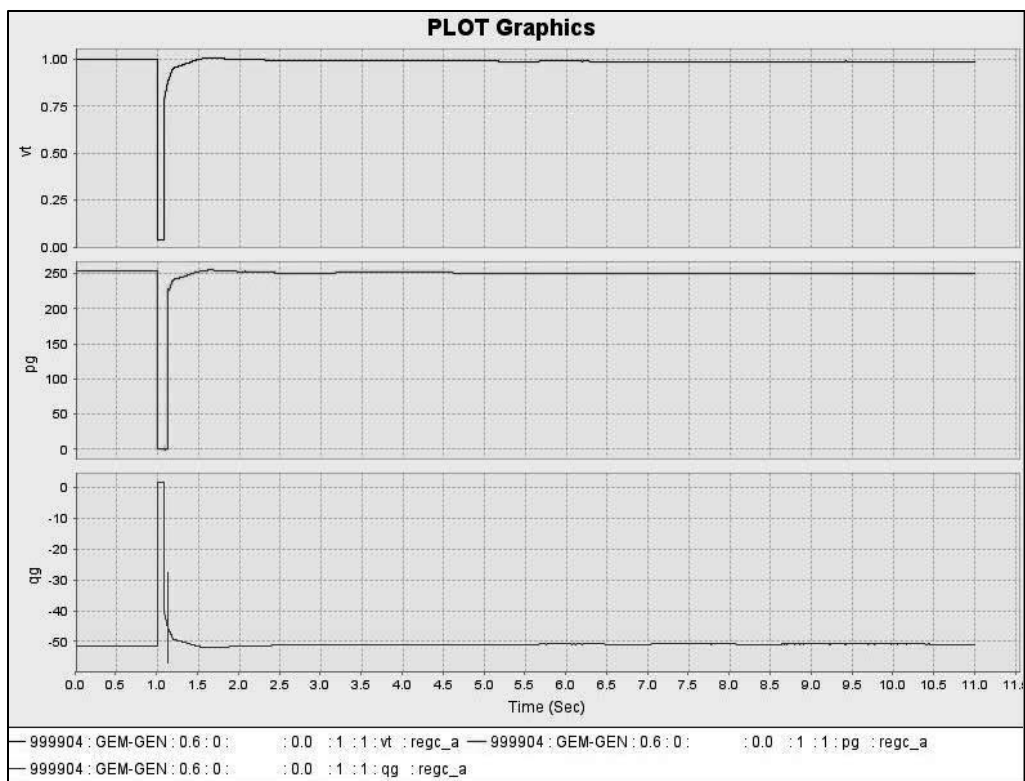


Figure 36: Gemini Generator Response Following a 5 Cycle Fault at Crystal 525 kV Substation with lhvrt and lhfrt models OFF. Generator adequately rides through fault and continues generation post fault-clearing.

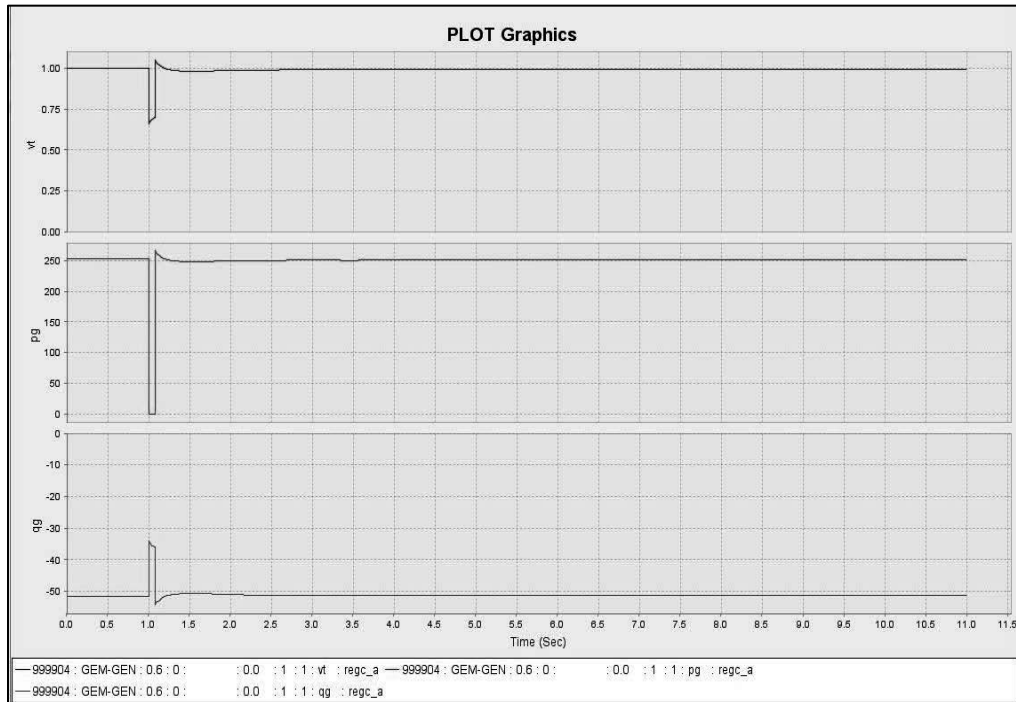


Figure 37: Gemini Generator Response Following a 5 Cycle Fault on McCullough to Crystal 525 kV Line

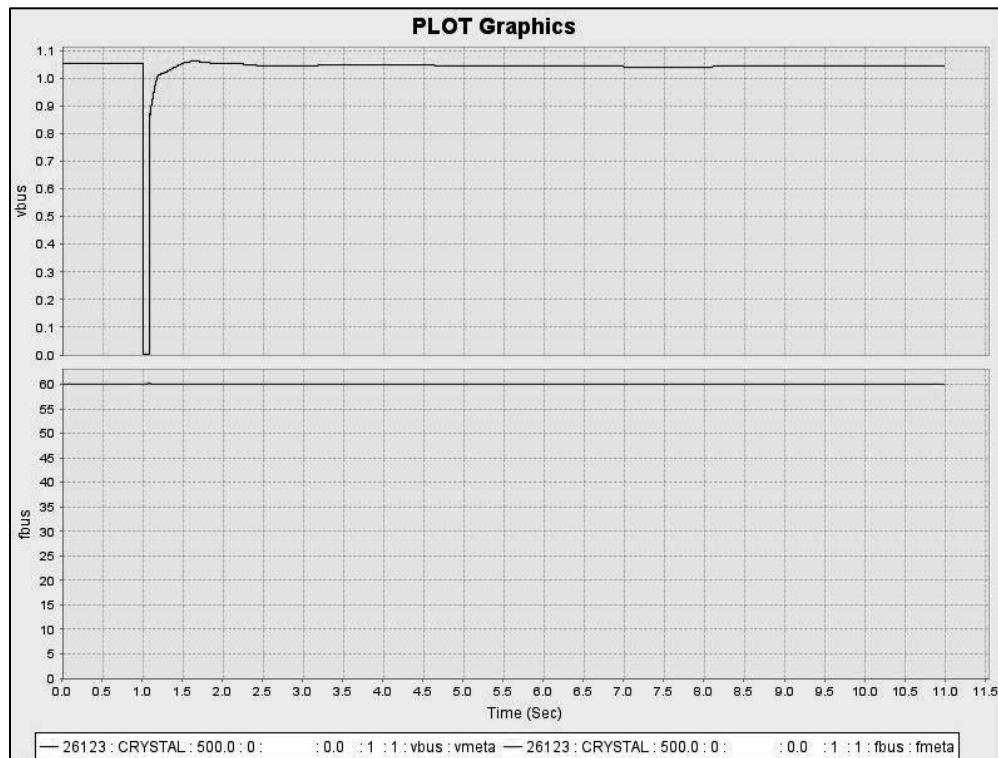


Figure 38: Voltage and Frequency response at Crystal 525 kV Following a 5 Cycle Fault on Gemini 525 kV Lead Line near Crystal