

Control Number: 35077



Item Number: 1092

Addendum StartPage: 0

PUC Project No. 35077



Second Amendment to the

# **ERCOT STANDARD GENERATION INTERCONNECTION AGREEMENT**

Between

LCRA Transmission Services Corporation

and

Maverick Creek Wind, LLC

Dated April 27, 2020



# SECOND AMENDMENT TO THE ERCOT STANDARD GENERATION INTERCONNECTION AGREEMENT

This Second Amendment ("Second Amendment") is made and entered into this <u>27th</u> day of April, 2020, between LCRA Transmission Services Corporation ("Transmission Service Provider" or "TSP") and Maverick Creek Wind, LLC ("Generator"), hereinafter individually referred to as "Party," and collectively referred to as "Parties."

WHEREAS, the Transmission Service Provider and the Generator entered into that certain ERCOT Standard Generation Interconnection Agreement executed July 30, 2018 as amended by that certain First Amendment to the Interconnection Agreement, dated as of July 31, 2019 (collectively, as amended, the "Agreement");

**WHEREAS**, pursuant to Section 4.2 and 4.3 of Exhibit "A" to the Agreement, Generator has provided TSP with the necessary security and written authorization to proceed with the design, procurement and construction of the TIF as detailed in Exhibit "C"; and

WHEREAS, Generator notified the TSP of a change in the design of the Plant as originally contemplated in the Agreement; and

WHEREAS, Generator notified the TSP of a change in the Commercial Operation Date as originally contemplated in the Agreement; and

**WHEREAS,** the TSP has completed the construction of a substantial portion of the TIF, as originally contemplated in the Agreement, and Generator has provided timely status updates demonstrating significant progress on the construction of the GIF.

**NOW, THEREFORE,** in consideration of the mutual promises and undertakings herein set forth, the Parties agree to amend the Agreement as follows:

- 1. Exhibits "B", "C", "C2", and "E" are deleted in their entirety and Exhibits "B", "C", "C2", and "E" attached to this Second Amendment are hereby added to the Agreement in lieu thereof.
- 2. Article 1.2, Exhibit "A", the definition for Commercial Operation in the Agreement is hereby deleted in its entirety and replaced with the following:

"<u>Commercial Operation</u>" shall mean the stage of completion where (i) the construction of the Plant has been substantially completed, (ii) Trial Operation of the Plant has been completed, (iii) the Plant is ready for dispatch, (iv) ERCOT has approved the Generator's Resource Commissioning Date, and (v) Generator notifies TSP that requirements (i) through (iv) have been achieved.

3. Exhibits "B", "C", "C2", and "E" attached to this Second Amendment will become effective upon execution of this Second Amendment by the Parties.

Except as otherwise expressly provided herein, the Agreement will continue in full force and effect in accordance with its terms.

----The remainder of this page has intentionally been left blank----

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

Maverick Creek Wind, LLC

By its Administrator, Algonquin Power Co.

By: David Bronicheski Signature: Aniel Bronicheshi

Title: CFO

Date: \_\_\_\_\_Apr 27, 2020

LCRA Transmission Services Corporation

By: Sergio Garza, P.E.

Signature:

Title: <u>Vice President, LCRA Transmission</u> <u>Design and Protection</u>

Date: April 27, 2020

By:

Signature: \_\_\_\_\_

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

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

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

Maverick Creek Wind, LLC

By its Administrator, Algonquin Power Co.

By:	JOHNAM SPHNSTON
Signature	MA
Title:	(00

LCRA Transmission Services Corporation

By: Sergio Garza, P.E.

Signature:\_

Title: <u>Vice President</u>, <u>LCRA Transmission</u> <u>Design and Protection</u>

Date: April 27, 2020

Date:	 		_

By:

Signature:		

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

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

## Exhibit "B" Time Schedule

Interconnection Option chosen by Generator (check one): <u>X</u> Section 4.1.A. or <u>Section</u> 4.1.B

If Section 4.1.B is chosen by Generator, the In-Service Date(s) was determined by (check one): (1) N/A good faith negotiations, or (2) N/A Designated by Generator upon failure to agree.

Date by which Generator must provide written notice to proceed with design and provide security, as specified in Section 4.2, so that TSP may maintain schedule to meet the In-Service Date: <u>July</u> <u>27, 2018 – Completed prior to First Amendment</u>

Date by which Generator must provide written notice to proceed for completion of design and procurement and provide security, as specified in Section 4.2, so that TSP may maintain schedule to meet the In-Service Date: <u>October 1, 2018 – Completed prior to First Amendment</u>

Date by which Generator must provide written notice to proceed for completion of procurement and provide security, as specified in Section 4.2, so that TSP may maintain schedule to meet the In-Service Date: January 5, 2019 – Completed prior to First Amendment

Date by which Generator must provide written notice to commence construction and provide security, as specified in Section 4.3, so that TSP may maintain schedule to meet the In-Service Date: <u>February 15, 2019 – Completed prior to First Amendment</u>

Date by which Generator must provide additional security to guaranty TSP's additional cost to construct the TIF due to site selection and delay on acquisition of real property rights, as specified in Section 4.3, so that TSP may maintain schedule to meet the In-Service Date: <u>December 1,</u> 2019 – Completed prior to Second Amendment

In - Service Date(s): <u>July 1, 2020</u> Scheduled Trial Operation Date: <u>October 1, 2020</u>

Scheduled Commercial Operation Date: December 15, 2020

Due to the nature of the subject of this Agreement, the Parties may mutually agree to change the dates and times of this Exhibit B.

## Exhibit "C" Interconnection Details

- 1. <u>Name:</u> Maverick Creek Wind II
- 2. <u>Point of Interconnection location</u>: The Point of Interconnection will be at the new LCRA TSC Amos Creek Substation ("TSP Substation") located in Concho County, TX along the existing LCRA TSC 345-kV transmission line T424, at the approximate location shown in Exhibit "C3". The Point of Interconnection, shown on Exhibit "C1" and Exhibit "C2" shall be the physical point where the LCRA TSC Amos Creek Substation facilities are connected to the GIF. This point is more specifically defined as being located at the 4-hole pad terminals on the dead-end assembly where the Co-Tenant Generator's 345-kV line connects to LCRA TSC's interconnect structure.
- 3. <u>Delivery Voltage:</u> 345-kV
- 4. <u>Number and size of Generating Units ("The Plant")</u>: The Plant is a wind generation facility with one Point of Interconnection to the grid through a Co-Tenant Generator Line. The Plant rating will be approximately 118.8-MWs of AC power at the Point of Interconnection.
- 5. <u>Type of Generating Unit:</u> Maverick Creek Wind II is composed of 10 Vestas V110 2MW Turbines, 10 Vestas V120 2.2MW Turbines, and 16 Siemens Gamesa SG145 4.8MW Turbines.
- 6. Metering and Telemetry Equipment:

A). TSP's ERCOT polled settlement ("EPS") metering will be located at the TSP Substation as part of the TIF. 345-kV extended range, metering current transformers will be used to accurately read the generation energy and power delivered to the grid and the auxiliary energy and power consumed through the Point of Interconnection. Three 345-kV metering accuracy voltage transformers will also be installed by the TSP for the ERCOT settlement metering. The ERCOT settlement metering panel furnished by the TSP will be located in the TSP Substation.

B). TSP will provide one ERCOT Polled Settlement (EPS) metering point at the TSP Substation to accommodate both Co-Tenant Generators through a single Point of Interconnection. The single EPS meter located at the Point of Interconnection will measure all energy flows for the Plants. The allocation of the EPS meter data to each generating entity is the responsibility of the Co-Tenant Generators and will be in accordance with Section 10.3.2.1 of the ERCOT Nodal Protocols, or its successor.

C). A remote terminal unit ("RTU") will be furnished by the TSP at the TSP Substation as part of the TIF and will have a dedicated communication port available to provide applicable breaker status and other telemetry data to ERCOT as required by the ERCOT Nodal Operating Guides.

D). Multi-ported RTU(s) will be furnished by the Generator at the Generator's interconnection substation(s) as part of the GIF and will have dedicated communication port(s) available to provide breaker status and other telemetered data to TSP and ERCOT as required by the ERCOT Nodal Operating Guides. The Generator is responsible for determining and providing all their RTU communications needs.

- 7. <u>Generator Interconnection Facilities</u>: The GIF shall consist of the following major equipment, at a minimum:
  - A) Maverick Creek Wind I Facilities. The following facilities are owned solely by the Maverick Creek Wind I:
    - Maverick Creek Wind I Switchyard (West Substation) including control building(s), 345-kV step-up transformer(s), transformer protection package(s), 345-kV circuit breaker(s), 345-kV line disconnect switch(es), and protective relaying panels;
    - (2) Associated structures, bus work, conductor, connectors, grounding, conduit, control cable, foundation work, perimeter fencing, grading/dirt work and any appurtenances necessary for construction and operation of Generator Interconnection Facilities
  - B) Co-Tenant Facilities. The following facilities are jointly shared by Maverick Creek Wind I and Maverick Creek Wind II, as Co-Tenants:
    - (1) The following facilities are jointly shared by Maverick Creek Wind I and Maverick Creek Wind II:
      - a. One Co-Tenant 345-kV Line, a 345-kV radial circuit, approximately 20 miles in length consisting of bundled 795-kcmil ACSR phase conductors with necessary material to dead-end and connect to Co-Tenant Generators' interconnecting structure at the Point of Interconnection, as described in item 8. C)(13)below, and to the Co-Tenant Switchyard;
      - b. Fiber optic cable (Corning SMF-28e or equivalent 48 fiber, singlemode, fiber optic OPGW) from Co-Tenant Switchyard control building to the TSP's OPGW cable splice box on the TSP's interconnecting structure at the Point of Interconnection;

- c. Multi-ported RTU(s) and panels to provide breaker status, telemetry and energy data from the Generator's interconnection substation(s) to the Plant, Generator, TSP and ERCOT; and
- (2) The following facilities are constructed for Maverick Creek Wind I and will be used by Maverick Creek Wind I and Maverick Creek wind II:
  - a. Generator Switchyard (East Substation) including control building(s), 345-kV circuit breaker(s), 345-kV line disconnect switch(es), one Generator 345-kV step-up transformer, and protective relaying panels;
  - b. Associated structures, bus work, conductor, connectors, grounding, conduit, control cable, foundation work, perimeter fencing, grading/dirt work and any appurtenances necessary for construction and operation of Generator Interconnection Facilities.
- C) Maverick Creek Wind II Facilities. The following facilities are owned solely by Generator:
  - Generator's 345-kV step-up transformer, transformer protection package(s) and associated protective relaying panels not previously described in item 7. B)(2)(a) above;
- 8. Transmission Interconnection Facilities: There are no TIF-related facilities solely to Generator; these facilities are shared among the Co-Tenant Generators and the TSP and will be constructed by the TSP.

For the TSP Substation cut-in, the TIF shall include the following:

- A). Modifications to the TSP's existing 345-kV transmission line T424;
- B). Two (2) dead-end transmission structures for the line cut-in of T424;
- C). One (1) new 345-kV Amos Creek Substation which will include the following;
  - 1) Five (5) substation A-frame structures;
  - 2) 345-kV bus including bus supports and foundations;
  - 3) Eleven (11) 345-kV, 220 MCOV surge arresters;
  - 4) Six (6) 345-kV coupling capacitor voltage transformers;
  - 5) Two (2) 345-kV power voltage transformers;

- 6) Three (3) 345-kV, 4000A, 63-kAIC circuit breakers with foundations and protective relay panels;
- 7) Eleven (11) 345-kV, 3000A three-pole switches with HV tubular stands and foundations;
- 8) Multi-ported RTU(s) and panels to provide breaker status, telemetry and energy data to the TSP and ERCOT;
- 9) ERCOT settlement metering panel;
- 10) Two (2) EPS meters (one primary meter and one backup meter);
- 11) Three (3) 345-kV extended range metering CT's;
- 12) Three (3) 345-kV metering class voltage transformers; and
- 13) A full tension, dead-end, 345-kV line structure (interconnecting structure at the Point of Interconnection) located on the Amos Creek Substation (Co-Tenant Generators shall coordinate the height and strength of this structure and the arrangement of the phases with TSP); and
- 14) 345-kV span of conductors and OPGW from the TSP's interconnecting deadend structure to the TSP Substation A-frame structure along with the jumpers between the TSP conductors and the Generator's line conductors at the TSP's interconnecting dead-end structure

The above lists are not intended to be complete lists of all facilities that are part of the TIF.

- 9. Communications Facilities: The Generator shall, in accordance with ERCOT Requirements and Good Utility Practice, provide communications facilities that are, or may in the future be, necessary for effective interconnected operation of the Plant and Generator Interconnection Facilities with the transmission system. The Co-Tenant Generators shall own, and be responsible for installation, operation, and maintenance of fiber optic communication facilities between the Co-Tenant Switchyard and the TSP's interconnecting structure at the Point of Interconnection. TSP will complete the OPGW termination and dress of the TSP provided fiber splice box on TSP's interconnecting TSP will provide the splicing of fibers within the splice box at the Point of structure. Interconnection. The Co-Tenant Generators shall provide the dedicated channels or fiber pairs for TSP's 345-kV line protective relaying and special protection system communications. Voice communications provided by the Co-Tenant Generators shall at a minimum include one POTS (plain old telephone service) or equivalent voice circuit in the Co-Tenant Switchyard control buildings.
- 10. System Protection Equipment:

A). Co-Tenant Generators will provide a line protection panel for Co-Tenant 345-kV line at the Co-Tenant Switchyard, which will coordinate with the line panel(s) at the TSP Substation.

B). Generator will be responsible for the proper synchronization of its facilities with the LCRA TSC transmission system, in accordance with ERCOT guidelines.

C). The Plant and the Generator Interconnection Facilities shall be designed to isolate any fault, or to disconnect from or isolate any abnormality that would negatively affect the ERCOT system. The Generator shall be responsible for protection of its facilities. In particular, Generator shall provide relays, circuit breakers, and all other devices necessary to promptly remove any fault contribution of the generation equipment to any short circuit occurring on the TSP system. Such protective equipment shall include, without limitation, a disconnect device or switch with the appropriate interrupting capability to be located within the Generator Interconnection Facilities. In addition to faults within the Plant and the Generator Interconnection Facilities, Generator shall be responsible for protection of such facilities from such conditions as negative sequence currents, over or under frequency, sudden load rejection, over or under voltage, generator loss of field, inadvertent energization (reverse power) and uncleared transmission system faults.

D). The Plant and the Generator Interconnection Facilities shall have protective relaying that is consistent with the protective relaying criteria described in the ERCOT Requirements and NERC standards. If reasonably requested by the TSP, Generator shall, at its expense, provide corrections or additions to existing control and protective equipment required to protect the ERCOT system or to comply with government, industry regulations, or standard changes.

E). The Generator's protective relay design shall incorporate the necessary test switches to enable complete functional testing. 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 tripping generator units.

F). Generator shall install sufficient disturbance and fault monitoring equipment to thoroughly analyze all system disturbances of the generation system. This equipment shall monitor the voltages at major nodes of the system, current at major branches, breaker and switch positions, and enough of the dc logic in the relay control scheme to analyze a system disturbance. The TSP shall provide for disturbance and fault monitoring equipment in its TSP Substation. The disturbance and fault monitoring for both Generator and TSP shall be consistent with the disturbance monitoring requirements described in the ERCOT Requirements and NERC standard.

G). Prior to modifying any relay protection system design or relay setting involving the connecting facilities between the two Parties, Generator shall submit the proposed changes to the TSP for review and approval. TSP's review and approval shall be for the limited purpose of determining whether such proposed changes are compatible with the ERCOT transmission system.

H). In accordance with Good Utility Practice and ERCOT and NERC standards, the TSP shall determine requirements for protection of the Point of Interconnection and the zone of protection around the Point of Interconnection and shall specify and implement protection and control schemes as necessary to meet such requirements. Generator shall have the right to review and comment on the necessary protection requirements, and such comments shall not be unreasonably refused by the TSP when determining such requirements. The TSP shall coordinate the relay system protection between Generator and the ERCOT system.

I). The Generator shall provide in PSSE or Aspen One-Liner format the short circuit model for the Generator Interconnection Facilities, the generators and collector facilities prior to the protective relays settings being calculated and in no case later than 60 days prior to the initial actual in-service date. Generator data submitted in accordance with Section 7.3 of Exhibit "A" shall include, but not be limited to, (1) a detailed one-line diagram of the proposed Plant and Generator Interconnection Facilities showing the collector buses and their voltages, (2) conductor types and lengths of all lines connecting the collector buses to the TSP Substation, (3) the total number of wind generators to be served by each collector bus, (4) size, make and model of wind turbines, (5) capacitor bank sizes, locations (electrical) and control settings, and (6) the impedance and rating data of each transmission voltage line, GSU and/or autotransformer that will be installed to get power from the Plant and onto the transmission grid.

11. <u>Inputs to Telemetry Equipment:</u> GIF disconnect devices status, Generator's 345-kV line protection/relay status, and Generator's 345-kV line MegaWatts, MegaVars, KiloVolts and Amperes.

#### 12. Supplemental Terms and Conditions:

A). Device Numbers, Switching and Clearance:

(a) Generator shall obtain prior approval of the TSP before operating any transmission voltage circuit switching apparatus (e.g. switches, circuit breakers, etc.) at the Generator Interconnection Facilities, whether for testing or for operations of the Plant, which approval shall not be unreasonably withheld, conditioned or delayed.

(b) The TSP shall coordinate switching at the Point of Interconnection. Each Party shall be responsible for operation of their facilities.

(c) In the event the Generator desires to have the ability to operate any directly connected TSP facilities for emergency operations switching, the TSP will provide transmission switching training to Generator personnel along with a copy of the TSP's transmission operations procedure manual ("Red Book") and any subsequent amendments thereto. Generator personnel or their designated agents that are to perform switching of the directly connected TSP facilities must be on the TSP authorized switching list. Generator and the TSP agree to conduct all switching operations of any directly connected TSP facilities in accordance with the Red Book, as it may be changed by the TSP from time to time.

(d) Generator and TSP will collaborate and reach mutual agreement on the establishment of: i) unique name(s) for the Generator's substations, unit main transformers

and switching station(s) connected at transmission voltage; ii) device numbers for all transmission voltage switches and breakers which will be owned by Generator; and iii) unique names for Generator's generating units, in accordance with ERCOT Requirements. Generator will submit to TSP, within thirty (30) days after execution of this Agreement, its proposed name(s), as referenced in this paragraph. Generator will register the name(s) of the facilities specified in this paragraph and Generator-owned device numbers at ERCOT, in accordance with ERCOT Requirements, and such names and device numbers will be consistent with the names and numbers mutually agreed upon pursuant to this paragraph. Generator will not change any of the names or device numbers, established pursuant to this paragraph, without written approval of TSP. Generator will label the devices, referenced in item (ii) above, with the numbers assigned to such devices.

(e) Each Party will keep records of maintenance and switching operations of control and protective equipment associated with this interconnection and will allow the other Party reasonable access to inspect such records.

B). <u>No Retail Sale of Electricity to Generator by TSP</u>: TSP considers the energy and power that the Plant and Generator Interconnection Facilities may from time to time consume from the 345-kV ERCOT grid through the Point of Interconnection to be a retail transaction and as such, the TSP does not intend to be the provider of this retail service. Generator shall make necessary arrangements with the appropriate retail supplier for the energy and power that the Plant and Generator Interconnection Facilities may consume from the 345-kV ERCOT grid through the Point of Interconnection.

C). Notification:

(a) Generator shall supply notification to the TSP identifying its Qualified Scheduling Entity (QSE) 120 days prior to the In-Service Date and Generator shall supply notification to the TSP 60 days prior to any changes in QSE, thereafter.

(b) Upon written request from TSP, Generator shall supply notification to the TSP identifying their retail service provider 120 days prior to the In-Service Date and Generator shall supply notification to the TSP 60 days prior to any changes in retail service provider, thereafter.

(c) In the event of any interruption of service, TSP shall provide prompt notice to Generator of cause of such interruption and an estimation of when the Plant may be reconnected to the TSP.

(d) As a result of Co-Tenant Generators' joint use of portions of the GIF, it is expressly agreed that, to the extent either of the Co-Tenant Generators desire to refer an operational matter to a QSE in accordance with the ERCOT Protocols, both Co-Tenant Generators must refer such communications to a single, common QSE.

(e) Generator Dispatch Resource - Co-Tenant Generators shall have a common Qualified Scheduling Entity or Master Qualified Scheduling Entity (each as defined in the ERCOT protocols) which shall be staffed 24 hours per day, 7 days per week by personnel capable of making operating decisions and possessing the ability to control the Plants, the Generator Switchyard, the Co-Tenant Switchyard, the Co-Tenant 345-kV Line and the GIF, including making voltage adjustments. TSP's dispatch center personnel will communicate with this common dispatch resource via the telephone and fax numbers shown in item (a) of Amended and Restated Exhibit "D". (f) Generators will designate a single common person with whom TSP may communicate on matters not requiring dispatch center communications. Such contact person is designated in item (b) of Amended and Restated Exhibit "D".

### D). Substation Land, Easements and Access Road Provisions

(a) Generator has provided the anticipated project area for the Generator's wind generation facilities noting the anticipated route for the Generator's 345-kV generation tie line and the proposed location of Generator's step-up substation and the proximity of said facilities to LCRA TSC's 345-kV transmission line between AEP's Red Creek and TSP's Bow Wood substations. The intersection of these facilities represents the approximate location of the proposed LCRA TSC Amos Creek Substation ("Substation Site"). On or about April 24, 2019, TSP acquired from the Generator the Substation Site property as generally depicted in Exhibit "C3". The proposed Substation Site is generally described as an area of approximately 25 acres located near the intersection of County Road 4508 in Concho County, roughly 4.75 miles southeast of the city of Paint Rock, Texas.

(b) Generator has also conveyed to TSP access easements that provide good and adequate rights of vehicular ingress and egress to and from a public road and for access rights for necessary overhead and underground utility services and communication services to the Substation Site and are generally depicted as "Access Easement" in Exhibit "C3".

(d) Generator shall, at no cost to TSP, release any encumbrance that Generator may have on the acquired Substation Site, access road and utility services easement(s) between the Substation Site and the public roadway and the existing LCRA TSC transmission line. In no event shall the Substation Site be subject to any lien or any other encumbrance unacceptable to TSP.

### 13. Special Operating Conditions:

A). <u>Quality of Power</u>. Generator shall provide a quality of power into the TSP system consistent with the applicable ERCOT Requirements and NERC guidelines.

B). <u>Harmonics</u>. The Generator's alternating current generating system must have a frequency of 60 Hz, be designed for balanced three-phase operation, not cause unreasonable imbalance on the ERCOT system or the TSP Switchyard equipment, and adhere to the recommendations in Institute of Electrical and Electronic Engineers Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems (IEEE 519), or its successor.

C). <u>Voltage, Frequency and Reactive Support</u>.
(a) Generator shall have and maintain the reactive capability as required in the ERCOT Requirements.

(b) Generator shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the ERCOT requirements for Voltage Ride Through (VRT) capability.

(c) The Generator shall be equipped with both frequency and voltage controls and shall be operated in synchronism with the TSP's system with such controls in service. Generator shall notify the TSP at any such time that such controls are out of service.

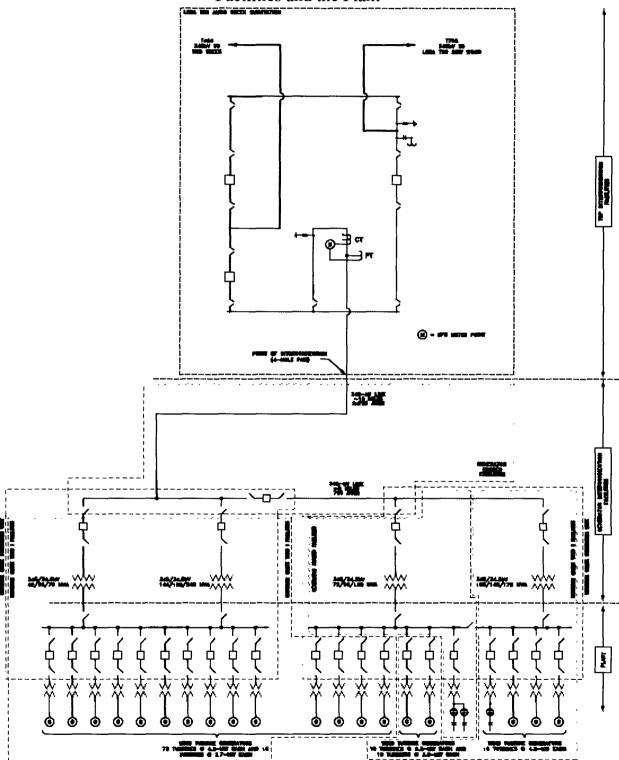
D). <u>ERCOT Operating Arrangements</u>. A special ERCOT-approved operating arrangement such as a Remedial Action Plan or Special Protection System may be required either prior to, or after, Commercial Operation. The terms "Remedial Action Plan" and "Special Protection System" shall have the meanings as set forth in the ERCOT Requirements. TSP and ERCOT will examine the need and feasibility of these arrangements in cooperation with the Generator. In the event that ERCOT determines that such an arrangement is required, then TSP, ERCOT, and Generator will cooperate to design and install the necessary facilities, to be operational for the duration of the period where such Remedial Action Plan or Special Protection System may be necessary.

E). <u>Back-up Power during Point of Interconnection Outage</u>. The Generator acknowledges that this Point of Interconnection may not always be available due to maintenance or other outage activities and at these times of unavailability the loss of both generator output and power delivery to the Generator will not be the responsibility of the TSP. The Generator is responsible for providing any back-up power sources that it may require due to the unavailability of this Point of Interconnection for any period of time.

F). <u>Sub-synchronous Resonance (SSR) Study.</u> Generator has requested that this Agreement be signed prior to completion of the SSR study associated with this interconnection request. Pursuant to Section 5.4.5.1 of the current ERCOT Planning Guide, the TSP shall complete the SSR study prior to initial synchronization of the plant. The findings of the SSR study may dictate that the Generator and/or TSP install additional facilities to mitigate this vulnerability in conjunction with this interconnection request.

ERCOT and TSP shall approve all mitigation plans. Such mitigation may require additional time for the TSP to meet its In-Service Date and/or it may increase the dollar amount of the Security Instrument required of Generator. If mitigation is required, this Agreement shall be amended to include any additional facilities, additional time, and additional amount of Security. However, Generator may provide ERCOT and TSP documentation that conclusively establishes that the Plant will not be subject to sub-synchronous resonance problems with series compensation on the ERCOT system. ERCOT and TSP shall determine if such documentation is sufficient to preclude the need for TSP to perform the SSR study. Such documentation shall be supplied by Generator to ERCOT and TSP no later than ninety (90) days prior to initial synchronization of the plant. In the event that the generator vendor advises Generator that it cannot supply generators for the Plant that are compatible with the transmission system series compensation, the Generator shall notify TSP of such event, which shall be deemed a Default under Section 10.6 of the Agreement.

**Exhibit "C2"** One Line Diagram – TSP Interconnection Facilities, Generation Interconnection Facilities and the Plant



## Exhibit "E" Security Arrangement Details

Within 15 days of a request by TSP, in accordance with the dates in Exhibit "B" Generator shall cause to be established pursuant to Section 8.3 of Exhibit "A", and shall at all times through the earlier of (i) ten (10) Business Days after the date upon which TSP receives written notification from Generator that Commercial Operation has been achieved and TSP has verified the same (which verification by TSP shall not be unreasonably withheld or delayed) or (ii) ninety (90) days after the termination of the Agreement in accordance with its terms (the earlier of which shall be the "Final Expiration Date"), cause to be maintained in full force and effect a cash deposit or other security reasonably acceptable to TSP ("Security Instrument") for the benefit of TSP in a commercially acceptable form consistent with this Exhibit "E" and otherwise acceptable to TSP and Generator, which acceptance shall not be unreasonably withheld, in the amounts and for the periods set forth below.

In accordance with Section 8.3 of Exhibit "A", any repayment or return of such cash deposit shall include interest at a rate applicable to customer deposits as established from time to time by the PUCT.

Business Day means any day other than a Saturday, a Sunday, or a holiday on which national banking associations in the State of Texas are permitted or required to be closed.

Generator may replace a cash deposit with a Letter of Credit after review and acceptance of a Letter of Credit from a bank acceptable to TSP. TSP shall return the cash deposit to Generator in exchange for the Letter of Credit once the Letter of Credit is fully acceptable to TSP.

Notwithstanding the Expiration Dates there shall be no obligation by Generator to establish or maintain the Security Instrument after the Final Expiration Date and any Security Instrument outstanding as of the Final Expiration Date shall be immediately surrendered by TSP.

The maximum stated amounts, Effective Dates, and Expiration Dates of the Security Instrument(s) shall be as follows:

Maximum Stated Amount	Effective Date	Expiration Date
Initial amount of \$400,000 for	July 27, 2018	March 15, 2022
Design		
Additional amount of \$1,416,000	October 1, 2018	March 15, 2022
for Design and Material		
Procurement		
Additional amount of \$1,742,000	January 5, 2019	March 15, 2022
for Material Procurement		
Additional Amount of \$9,263,000	February 15, 2019	March 15, 2022
for Construction of the TIF.		
Additional Amount of	December 1, 2019	March 15, 2022
\$3,337,629.00 for Construction to		
bring Total to \$16,158,629.00		

Failure to deliver or maintain the Security Instruments in the amounts and for the periods set forth above shall be deemed a Default under Section 10.6 of the Agreement, notwithstanding any cure period otherwise provided for in Section 10.6.

"Letter of Credit" shall mean an irrevocable, transferable letter of credit, issued by a Generatorselected and TSP-approved (which approval shall not be unreasonably withheld), major U.S. commercial bank or a major foreign commercial bank with a U.S. branch office with a credit rating of at least "A-" by Standard & Poor's or "A3" by Moody's Investor Service ("Bank"). A Bank approved by TSP for the initial Letter of Credit shall be deemed approved for a subsequent Letter of Credit absent any adverse change in credit rating between the initial Effective Date and the Effective Date for such subsequent Letter of Credit. An adverse change in credit rating shall be deemed to have occurred if the issuer of the then current Letter of Credit has a credit rating of less than "A-" by Standard & Poor's or "A3" by Moody's Investor Service. If the issuer of the current Letter of Credit suffers such adverse change in credit rating, it shall no longer be a TSP-approved Bank for purposes of issuing commercially acceptable security for this Agreement until its rating has been increased to at least "A-" by Standard & Poor's or "A3" by Moody's Investor Service.

TSP may, by written notice to Generator, require Generator to increase or replenish the Security Instrument from time to time if TSP determines in its reasonable discretion that the remaining Security Instrument amount is not adequate to cover the costs that TSP then reasonably estimates could become payable pursuant to this Agreement; provided, however, that TSP may not require additional Security Instrument amounts for costs that are caused by TSP's failure to comply with its obligations under this Agreement. Generator will tender any such increase or replenishment of the Security Instrument(s) to TSP within fifteen (15) days of the date of TSP's written notice to Generator of a necessary increase or replenishment.

If at any time during the term of this Agreement, the TSP-approved bank which has issued the then current Letter of Credit(s) suffers a credit rating reduction to less than "A-" by Standard & Poor's or "A3" by Moody's Investor Service, Generator will replace such Letter of Credit with a Security Instrument meeting the requirements of the Security Instrument(s) to TSP within fifteen (15) Business Days of the date of the reduction in bank credit rating.

Failure to deliver the increased, replenished or replacement Security Instrument(s) within the aforementioned time periods shall be deemed a Default under Section 10.6 of the Agreement, notwithstanding any cure period otherwise provided for in Section 10.6. No forbearance or delay on the part of TSP in requiring an increase, replenishment, or replacement of the Security Instrument will be considered a waiver of TSP's right to do so.

If the Security Instrument(s) are set to expire in forty-five (45) days or less and the Generator has not provided alternate security in accordance with the Agreement the TSP is entitled to draw on the available amount of the Security Instrument(s).