

Control Number: 35077



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Project No. 35077

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Amendment No. 1 to

INTERCONNECTION AGREEMENT

Between

Lower Colorado River Authority

and

LCRA Transmission Services Company

April 28, 2009

FIRST AMENDMENT TO INTERCONNECTION AGREEMENT

This First Amendment ("Amendment") to the Interconnection Agreement, (the "Agreement"), dated June 14, 2004, between the Lower Colorado River Authority ("Generator") and the LCRA Transmission Services Corporation ("Transmission Service Provider") is made and entered into this $\underline{28}$ day of April 2009, between LCRA ("Generator) and LCRA TRANSMISSION SERVICES CORPORATION (the "Corporation"), as assignee of the LCRA, collectively referred to hereinafter as the Parties. In consideration of the mutual promises and undertakings herein set forth, the Parties agree to amend the Agreement as follows:

- 1. Exhibit "C" Facility Schedule is deleted in its entirety and the Exhibit "C" Facility Schedule attached to this First Amendment is hereby added to the Agreement in lieu thereof.
- 2. Exhibit "C" Facility Schedule attached to this First Amendment will become effective upon execution of this First Amendment by the Parties.

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

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

Lower Colorado River Authority

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Name: Ryan Rowney

Title: Mgr. Dam & Hydro

Date:

LCRA TRANSMISSION SERVICES CORPORATION

By:

Name: Ray Pfefferkorn, P.E

Title: LCRA Transmission Engineering

Manager

Date:



(b)

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Exhibit "C"

Facility Schedule

- 1. Name: Buchanan Plant Existing generation facility
- Point of Interconnection: The point at which the GIF interfaces with the TIF at the Coronado Switchyard is shown in the attached one-line. There is one Point of Interconnection for this Plant and is defined as where the Generator connects to the TSP's 138kV switchyard at the four hole pad on Generator switch 13129.
- 3. Delivery Voltage: 138kV
- 4. <u>Number and size (nominal ratings) of Generating Units</u>: Unit 1: 18MW, Unit 2: 18MW, and Unit 3: 18MW
- 5. Type of Generating Unit: Units 1, 2, and 3: hydro
- 6. Metering and Telemetry Equipment:
 - a. TSP shall design and install EPS Metering Equipment in accordance with TSP's EPS Metering Design Proposal submitted to and approved by ERCOT. This metering equipment will be installed at the TSP's Coronado Switchyard.
 - b. TSP and Generator shall each install such metering and telemetry equipment as may be required to satisfy the operational requirements of the TSP TIF, Plant GIF, and ERCOT's real-time data requirements.

7. Generator Interconnection Facilities

a. Generator-Owned facilities in the Coronado Switchyard include, but are not limited to, the following:

Three - Generator Step-up Transformers T-1, T-2 and T-3 with associated surge arresters

Three - 138kV circuit breakers 13140, 13150 and 13160 and 138 kV isolating switches 13139, 13149 and 13159

One - 138 kV Vertical Air Break Switch 13129

Three - 25 kV switches BU-4, BU-5 and BU-6

- One lot Associated structures, bus work, conductor, connectors, conduit, control cable, and foundations
- One lot All cable and connections to the grounding grid from all Generator-owned equipment located in the Coronado Switchyard.
- b. Generator Owned Support Facilities located in the Plant, including the following facilities:

One lot - The physical building that houses Generator-Owned Support Facilities. This includes, but is not limited to the building structures, lighting, HVAC, fire detection, fire suppression, and fire extinguishing equipment.

8. Transmission Service Provider Interconnection Facilities

TSP - owned facilities located at the Coronado Switchyard include, but are not limited to, the following:

Two - Station Service SS-1 with fuse F-1 and SS-2 with fuse F-2 Eight - 138 kV circuit breakers 13050, 13060, 13070, 13080, 13100, 13110, 13550 and 13560 Seventeen - 138 kV switches 13049, 13051, 13061, 13059, 13071, 13069, 13079, 13081, 13101, 13099, 13109, 13111, 13121, 13549, 13551, 13561 and 13559 One - 138 / 69 kV auto-transformer AUT-1, T-4 with associated surge arresters Two - Bus potential transformers PT-1 and PT-2 One - Single phase current transformer CT-2 One - Metering current transformer CT-1 Five - CCVT's CCVT-1, CCVT-2, CCVT-3, CCVT-6, CCVT-7 Four – 138 kV surge arresters SA4, SA-5, SA-6 and SA-10 One lot - Associated structures, bus work, conductor, connectors, conduit, control cable, and foundations. One lot - Control buildings, panels, batteries and SCADA / communications equipment One lot - All cable and connections to the grounding grid from all TSP-owned equipment.

- 9. <u>Communications Facilities:</u> 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 Generator's Plant with the transmission system. Generator will directly make arrangements to procure and will bear the procurement, installation and ongoing operations and maintenance costs of such facilities. The communications facilities will include, but not be limited to:
 - a. One private line voice circuit in the Generator's Plant control room (an off-premise extension for TSP's PBX);
 - b. One four-wire Bell Standard Type 420 or equivalent data circuit installed from a communications port in Generator's RTU to a location designated by TSP.
 - c. Communications circuit between TSP's multi-ported RTU and the Hydro Operations Control Center.

10. System Protection Equipment:

a. Generator shall own, operate, and maintain its protective relay and control equipment. This equipment includes the current transformers (other than EPS meter CT's), potential transformers, control wiring, and protective relays associated with the leads from the low voltage generator breakers to the main power transformers, main power transformers T-1, T-2, and T-3, high voltage circuit breakers, station service transformers, generator protection relays, generator synchronization, Plant auxiliary systems, and diesel generators associated with the Plant.

- b. TSP shall own, operate, and maintain its protective relay and control equipment. This equipment includes the current transformers, potential transformers, control wiring, protective relays and breakers associated with all transmission line terminals.
- c. The Generator is responsible for providing current transformer signals to the TIF for bus differential relaying and to provide a "breaker-failure" signal to the TIF for conditions where the generator circuit breakers are required to trip, but fail to do so. The TSP owns, operates, and maintains all other equipment associated with the breaker failure relay protection schemes. The TSP will provide a trip signal to the generator breakers for any condition where the entire TIF bus is required to trip.
- 11. Inputs to Telemetry Equipment: Generator shall supply the following data to TSP's RTU.
 - a. Generating unit output three phase megawatts and three phase megavars for each generating unit.
 - b. Generator circuit breaker status Status indication for each generator circuit breaker.
- 12. Supplemental Terms and Conditions:
 - a. Switching and Clearance:
 - a) Generator shall obtain prior approval from TSP before operating any circuit switching apparatus (e.g. switches, circuit breakers, etc.) at the GIF, whether for testing or for operations of the Plant, which approval shall not be unreasonably withheld.
 - b) The TSP shall direct all switching at the Point of Interconnection and coordinate all switching of the GIF. The operators of the GIF or their designated agents shall comply with requirements of the TSP's switching and clearance procedures for actions directly involving the Point of Interconnection. Direction and/or coordination of the switching will be conducted by the TSP.
 - c) The TSP will provide Generator with a copy of the TSP's transmission operations procedure manual ("Red Book") and any subsequent amendments thereto. The TSP will provide transmission switching training to Generator prior to energizing the Point of Interconnection. Generator personnel or their designated agents that are to perform switching of the GIF must be on the TSP's authorized switching list. Generator and TSP agree to conduct all switching operations in accordance with the Red Book, as it may be changed by the TSP from time to time.
 - d) Generator will keep records of maintenance and switching operations of control and protective equipment and will allow TSP reasonable access to inspect such records.

b. No Retail Sale of Electricity to Plant by TSP: The TSP considers the energy and power that the Plant and GIF may from time to time consume from the system through the Point of Interconnection to be a retail transaction and as such, 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 GIF may consume from the system through the Point of Interconnection.

c. 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.

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