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Project No. 35077

Second Amendment to

INTERCONNECTION AGREEMENT

Between

**City of San Antonio
(CPS Energy)**

and

LCRA Transmission Services Corporation

August 2, 2011

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**SECOND AMENDMENT TO
INTERCONNECTION
AGREEMENT**

This Second Amendment wholly replaces the First Amendment entered into on the 19th day of February to the Interconnection Agreement, dated January 12, 2007 between The City of San Antonio acting by and through the City Public Service Board ("CPS Energy") and the LCRA Transmission Services Corporation ("LCRA TSC") (the "Agreement") is made and entered into this 2nd day of August, 2011, between CPS Energy and the LCRA TSC, hereinafter individually referred to as "Party" and collectively referred to as "Parties". In consideration of the mutual promises and undertakings herein set forth, the Parties agree to amend the Agreement as follows:

1. Exhibit "A" attached to the Agreement and the Exhibit "A" attached to the prior First Amendment are deleted in their entirety and the Exhibit "A" attached to this Second Amendment is hereby added to the Agreement in lieu thereof.
2. Revised Facility Schedule No. 3 (including the diagrams attached thereto) attached to this Second Amendment is hereby added to the Agreement. Revised Facility Schedule No. 3 will become effective upon execution of this Second Amendment by the Parties.
3. The Parties agree to interconnect their facilities at the Points of Interconnection in accordance with the terms and conditions, specified on the attached Revised Facility Schedule No. 3.

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 Second Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

THE CITY OF SAN ANTONIO ACTING
BY AND THROUGH THE CITY PUBLIC
SERVICE BOARD

LCRA TRANSMISSION SERVICES
CORPORATION

By: *Elaina L. Ball*

By: *Ray Pefferkorn*

Name: Elaina L. Ball

Name: Ray Pefferkorn, P.E.

Title: Senior Director,
Electric Engineering. & Technical Svcs.
Energy Delivery Services

Title: LCRA Transmission Engineering Manager

Date: 08/02/2011

Date: 8/23/11



**CPS ENERGY – LCRA TRANSMISSION SERVICES CORP.
INTERCONNECTION AGREEMENT**

EXHIBIT A – Amendment No. 2

LIST OF FACILITY SCHEDULES AND POINTS OF INTERCONNECTION

FACILITY SCHEDULE NO	NAME OF POINT OF INTERCONNECTION	INTERCONNECTION VOLTAGE (KV)	Effective Date (Anticipated)
1	Kendall – Cagnon	345	1/12/2007
2	Boerne Cico – Helotes	138	1/12/2007
3	Medina Lake – Talley Road	138	Date of Second Amendment
n/a			
n/a			

**CPS ENERGY - LCRA TRANSMISSION SERVICES CORP.
INTERCONNECTION AGREEMENT – AMENDMENT NO. 2**

REVISED FACILITY SCHEDULE NO. 3

1. **Name:** Medina Lake to Talley Road 138 kV Transmission Line
2. **Point of Interconnection Location:** The Point of Interconnection is located in Medina County at the LCRA TSC transmission line structure #69 where the Medina Lake to Talley Road 138kV transmission line changes ownership between CPS Energy and LCRA TSC along Hwy 1283 approximately 3.4 miles west of the Bexar County and Medina County line. The "Point of Interconnection" shall be defined as the points where LCRA TSC's jumpers connect to CPS Energy's Transmission Line (defined below) which terminates on LCRA TSC's transmission line structure #69. The attached diagram provides details regarding the Point of Interconnection.
3. **Facilities to be furnished by LCRA TSC:** LCRA TSC's facilities associated with the Point of Interconnection shall include, but not be limited to, the following facilities: 138kV circuit breaker, disconnect switches, protective relaying and associated terminal facilities at Medina Lake substation; the 138kV transmission line from Medina Lake Substation to the Point of Interconnection ("LCRA TSC's Transmission Line"), including foundations, structures, insulators, connectors, transmission line conductors, shield wire and associated hardware and assembly to terminate LCRA TSC's Transmission Line on LCRA TSC's transmission line structure #69; jumpers to the Point of Interconnection; and telemetry and communication facilities at Medina Lake Substation, including a Remote Terminal Unit ("RTU") and a four-wire communication circuit from the RTU to the LCRA TSC's control center.
4. **Facilities to be furnished by CPS Energy:** CPS Energy's facilities associated with the Point of Interconnection shall include, but not be limited to, the following facilities: 138kV circuit breakers, disconnect switches, protective relaying and associated terminal facilities at Talley Road substation; the 138kV transmission line from Talley Road Substation to the Point of Interconnection ("CPS Energy's Transmission Line"), including foundations, structures, insulators, connectors, transmission line conductors, shield wire and associated hardware and assembly to terminate CPS Energy's Transmission Line on the LCRA TSC's transmission line structure #69; and telemetry and communication facilities at Talley Road Substation, including an RTU and a communication circuit from the RTU to CPS Energy's designated control center.
5. **Facility Connection Requirements:**

VOLTAGE: 138 kV

Determined in accordance with R2.1.3 of CPS Energy Facility Connection Requirements and Section 2.3 of LCRA TSC Facility Connection Requirements.

POWER CAPACITY: 215 MVA - normal continuous static rating

Determined in accordance with R2.1.3 of CPS Energy Facility Connection Requirements and Sections 2.3 and 2.11 of LCRA TSC Facility Connection Requirements.
The capacity of each owner's line section was determined by the Facilities Rating methodology of that Party, and each Party communicates their rating to ERCOT.
Upon request by ERCOT, both Parties will coordinate on dynamic ratings for the overall line.

BREAKER DUTY:

Medina Lake Substation Terminal: 40 kA

Talley Road Substation Terminal: 63 kA

Determined in accordance with R2.1.4 of CPS Energy Facility Connection Requirements and Section 2.4 of LCRA TSC Facility Connection Requirements.

SURGE PROTECTION:

Medina Lake Substation Terminal: 108 kV

Talley Road Substation Terminal: Station Arrestors, 108 kV

LCRA TSC Transmission Line: N/A

CPS Energy Transmission Line: N/A

Determined in accordance with R2.1.4 of CPS Energy Facility Connection Requirements and Section 2.4 of LCRA TSC Facility Connection Requirements.

SYSTEM PROTECTION & COORDINATION

The primary protection scheme for protection of the Medina Lake to Talley Road line shall be directional comparison blocking utilizing on-off power line carrier signal.

Medina Lake Substation Terminal:

Primary Line & Breaker Protection

Protective Functions: Directional Comparison Blocking Protection, Phase and Ground Impedance Protection, Breaker Failure Protection, Instantaneous Ground Over Current Protection, Directional Ground Over Current Protection, Reclosing.

Backup Line & Breaker Protection

Protective Functions: Phase and Ground Impedance Protection, Instantaneous Ground Over Current Protection, Directional Ground Over Current Protection, Breaker Failure Protection.

All manual or automatic synchronization check functions shall be conducted at the Talley Road terminal, prior to closing the transmission line.

To ensure proper coordination and reliability, CPS Energy shall provide LCRA TSC with the following information before the energization of the Medina Lake to Talley Road line:

1. Talley Road Substation Operation One-Line;
2. Talley Road Substation Relay One-Line; and
3. Talley Road Substation Relay Settings for the new line terminal protective relays.

Talley Road Substation Terminal:

Primary Line & Breaker Protection

Protective Functions: Directional Comparison Blocking Protection, Phase and Ground Impedance Protection, Breaker Failure Protection, Reclosing, Synch Check.

Backup Line & Breaker Protection

Protective Functions: Phase and Ground Impedance Protection, Breaker Failure Protection

To ensure proper coordination and reliability, LCRA TSC shall provide CPS Energy with the following information before the energization date of the Medina Lake to Talley Road line:

1. Medina Lake Substation Operation One-Line;
2. Medina Lake Substation Relay One-Line; and
3. Medina Lake Substation Relay Settings for new line terminal protective relays.

Determined in accordance with R2.1.5 of CPS Energy Facility Connection Requirements and Section 2.5 of LCRA TSC Facility Connection Requirements.

METERING

Medina Lake Substation Terminal: N/A for metering. Line Telemetry (MW, MVAR, Volt) provided by protective relays.

Talley Road Substation Terminal: CPS Energy shall install ERCOT Settlement Metering at the Talley Road Substation. Line Telemetry (MW, MVAR, Volt) provided by protective relays. Determined in accordance with R2.1.6 of CPS Energy Facility Connection Requirements and Section 2.6 of LCRA TSC Facility Connection Requirements.

TELECOMMUNICATIONS. INCLUDING PROTECTION COMMUNICATIONS

Medina Lake Substation Terminal: LCRA TSC shall provide all LCRA TSC required communication circuits using Frame Relay Access Device ("FRAD") over a dedicated telephone line. For protection communications, LCRA TSC shall provide wave trap, tuner, and power line carrier equipment to perform directional comparison blocking scheme.

Talley Road Substation Terminal: CPS Energy shall provide all CPS Energy required communication circuits over microwave. For protection communications, CPS Energy shall provide wave trap, tuner, and power line carrier equipment to perform directional comparison blocking scheme.

Determined in accordance with R2.1.6 of CPS Energy Facility Connection Requirements and Section 2.6 of LCRA TSC Facility Connection Requirements.

REMOTE SCADA SYSTEMS

Medina Lake Substation Terminal: RTU for communication of data and control to the LCRA TSC SCADA system.

Talley Road Substation Terminal: RTU for communication of data and control to the CPS Energy SCADA system.

Determined in accordance with R2.1.6 of CPS Energy Facility Connection Requirements and Section 2.6 of LCRA TSC Facility Connection Requirements.

GROUNDING AND SAFETY ISSUES

Medina Lake Substation Terminal: Terminal and incoming static conductor will be connected to the substation ground grid.

Talley Road Substation Terminal: Terminal and incoming static conductor will be connected to the substation ground grid.

LCRA TSC Transmission Line: One Shield Wire, grounded at every structure through an 8' ground rod or grounding loop with Ground Enhancement Material.

CPS Energy Transmission Line: One Shield Wire, grounded at every structure through the foundation footing, except from structure #33 to #95 where static wire is floating.

Determined in accordance with R2.1.7 of CPS Energy Facility Connection Requirements and Section 2.7 of LCRA TSC Facility Connection Requirements.

INSULATION AND INSULATION COORDINATION

Medina Lake Substation Terminal: 650 kV BIL

Talley Road Substation Terminal: 650 kV BIL

LCRA TSC Transmission Line: CFO values: 760kV - polymer insulators, 2500kV - glass/porcelain insulators

CPS Energy Transmission Line: CFO values: 745kV - polymer insulators, 2500Kv glass/porcelain insulators

Coordinated in accordance with R2.1.8 of CPS Energy Facility Connection Requirements and Section 2.8 of LCRA TSC Facility Connection Requirements.

VOLTAGE, REACTIVE POWER, AND POWER FACTOR CONTROL

NA

POWER QUALITY

NA

EQUIPMENT RATINGS

Medina Lake Substation Terminal: 138 kV, 1200 A, 40 kA, 650 kV BIL

Talley Road Substation Terminal: 138 kV, 2000 A, 63 kA, 650 kV BIL

LCRA TSC Transmission Line: 138 kV, 923 A, 220 MVA at 105° F ambient.

CPS Energy Transmission Line: 138 kV, 900 A, 215 MVA

Determined in accordance with R2.1.11 of CPS Energy Facility Connection Requirements and Section 2.11 of LCRA TSC Facility Connection Requirements.

SYNCHRONIZING OF FACILITIES

All manual or automatic synch check functions shall be conducted at the Talley Road terminal, prior to closing the transmission line.

Determined in accordance with R2.1.12 of CPS Energy Facility Connection Requirements and Section 2.12 of LCRA TSC Facility Connection Requirements.

MAINTENANCE COORDINATION

Maintenance Coordination will be performed in accordance with Section 2.7 of the ERCOT Operating Guides and Section 8 of the ERCOT Protocols. If any maintenance outage has the potential to impact the other, the entity that will be affected must be contacted and given approval prior to the device(s) being removed from service.

When switching is required to isolate equipment involving both parties, appropriate switching orders will be issued by each entity. CPS Energy will issue a "Clearance" if protective grounds are to be installed. Otherwise, a "Procedure" will be issued to document the abnormal state. Both parties will install tags and locks on the associated field equipment and install tags on all SCADA

controlled points. Recloser relays may be disabled for the Safety of Field Personnel or System Reliability when agreed to by both Parties. This will be accompanied by the appropriate documentation and tags installed if applicable. In this particular instance, CPS Energy will issue a "Procedure".

The Parties will coordinate, consistent with maintaining good operating practices, their operations to maintain continuity of services to their respective customers to the extent practicable. Planned facility maintenance by either Party that will cause a deviation from the normal power and energy flow at a Point of Interconnection will be scheduled at a mutually agreeable time. No changes will be made in the normal operation of a Point of Interconnection without the mutual agreement of the Parties. The Parties will coordinate, to the extent necessary to support continuity of operations, the operation of protective devices on the facilities they operate in the proximity of the Points of Interconnection which might reasonably be expected to affect the operation of facilities on the other Party's system.

Stated in accordance with R2.1.13 of CPS Energy Facility Connection Requirements and Section 2.13 of LCRA TSC Facility Connection Requirements.

ABNORMAL OPERATING CONDITIONS

See Article 4 of Interconnection Agreement.

Both Parties must operate during abnormal conditions (frequency and voltage) as specified by section 4 of the ERCOT Operating Guides.

Determined in accordance with R2.1.14 of CPS Energy Facility Connection Requirements and Section 2.14 of LCRA TSC Facility Connection Requirements.

INSPECTION REQUIREMENTS FOR EXISTING OR NEW FACILITIES

Each Party has discretion over the inspection requirements of its own facilities, in accordance with good utility practices and the ERCOT Operating Guides.

Each Party reserves the right, upon request, to review the other Party's design schemes, equipment placement and ratings.

Determined in accordance with R2.1.15 of CPS Energy Facility Connection Requirements and Section 2.15 of LCRA TSC Facility Connection Requirements.

COMMUNICATION PROCEDURES DURING NORMAL & EMERGENCY CONDITIONS

Each Party must be registered and in good standings with ERCOT.

Normal and emergency operating procedures must be followed as specified in the ERCOT Guides and ERCOT Protocols. Each Party must provide each other with a 24 hour primary and secondary contact number to discuss any operational issues on a real time basis.

The LCRA TSC Transmission System Operator shall assist CPS Energy in implementing all transmission switching functions as necessary according to this interconnect agreement, good utility practice, and to safely and efficiently operate the transmission bulk system.

The LCRA TSC Transmission System Operator shall notify ERCOT and CPS Energy of any abnormal relaying configuration that may affect reliability.

The LCRA TSC Transmission System Operator shall render available emergency assistance to CPS Energy provided CPS Energy has completed implementation of its own emergency procedures.

These actions by the LCRA TSC Transmission System Operator shall not, however, violate safety, equipment, or regulatory or statutory requirements.

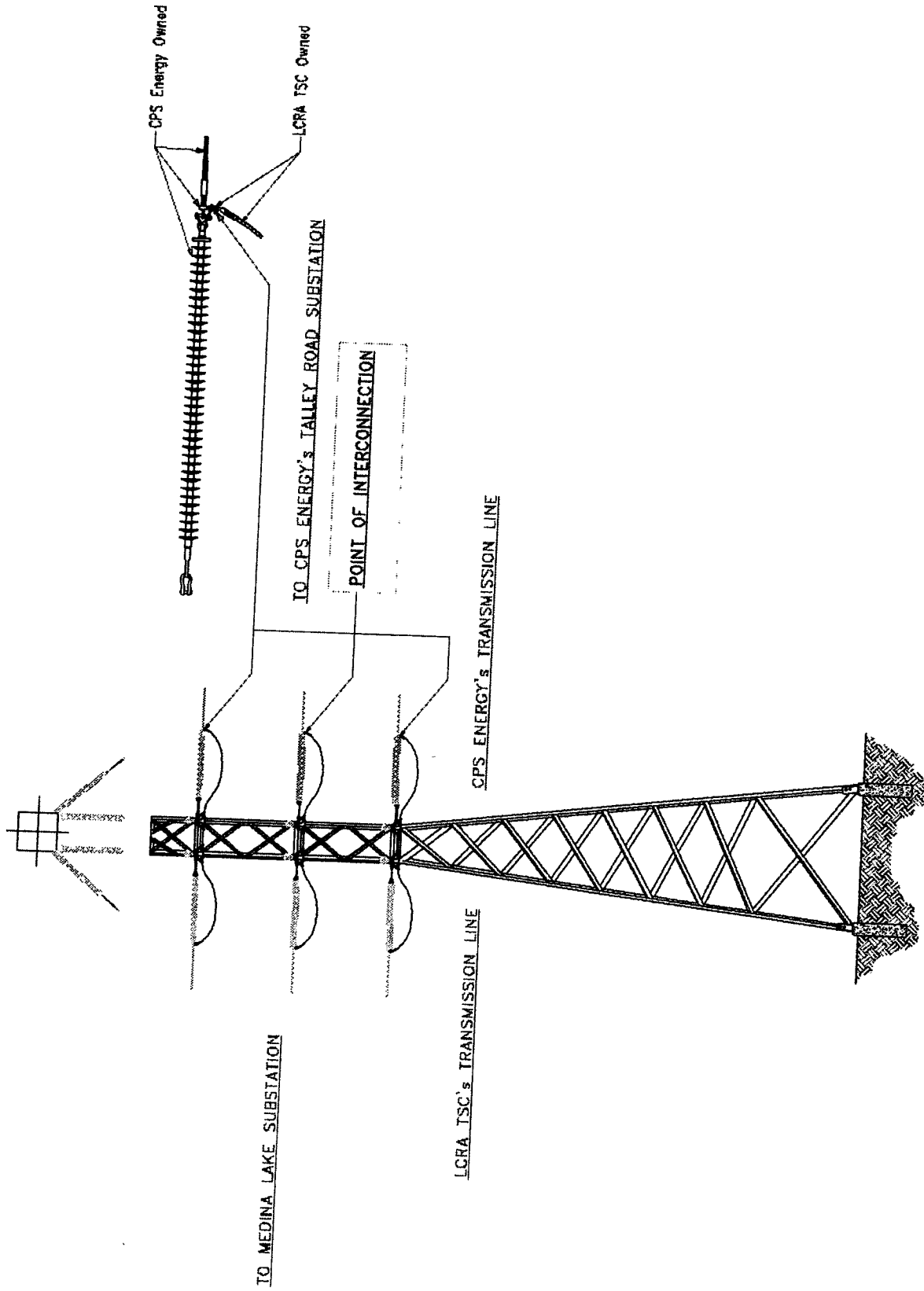
The LCRA TSC Transmission System Operator shall not remove any facilities from service that would burden CPS Energy. If removal is necessary, the LCRA TSC Transmission System Operator shall contact ERCOT and CPS Energy at the earliest possible time and explain the impact of removing such facilities.

Determined in accordance with R2.1.16 of CPS Energy Facility Connection Requirements and Section 2.16 of LCRA TSC Facility Connection Requirements.

SUPPLEMENTAL TERMS AND CONDITIONS:

- Each Party will be responsible for the operation and maintenance of the facilities it owns.
- Each Party will be responsible for all costs each incurs in connection with this Point of Interconnection.
- CPS Energy will be the "TO with TADS Reporting Responsibility" for NERC TADS reporting associated with the Medina Lake to Talley Road 138kV line.

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LCRA TSC's TRANSMISSION LINE STRUCTURE #69